LEGISLATIVE SUMMARY SHEET
Tracking No. 0391-15

DATE: November 9, 2015

TITLE OF RESOLUTION: AN ACTION RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A MORATORIUM ON THE WINDOW ROCK AIRPORT FACILITY UPGRADE AS OUTLINED IN NDOT'S NAVAJO NATION AIRPORT SYSTEM MASTER PLAN

PURPOSE: This resolution if approved will support a resolution passed by St. Michael's Chapter entitled "Supporting and Recommending for the Navajo Nation Department of Transportation, Resources and Development Committee of the Navajo Nation Council, and Navajo Nation Land Administration to place a moratorium on the Window Rock Airport facility upgrade construction and land expansion" and approve a moratorium on the WindowRock airport facility upgrade as outlined in NDOT's Navajo Nation Airport System Master plan.

This written summary does not address recommended amendments as may be provided by the standing committee. The Office of Legislative Counsel requests each committee member to review the proposed legislation in detail.

PROPOSED STANDING COMMITTEE RESOLUTION

23nd NAVAJO NATION COUNCIL – First Year, 2015

INTRODUCED BY

Jonathan Hale

(Prime Sponsor)

TRACKING NO. 0391-15

AN ACTION

RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A MORATORIUM ON THE WINDOW ROCK AIRPORT FACILITY UPGRADE AS OUTLINED IN NDOT'S NAVAJO NATION AIRPORT SYSTEM MASTER PLAN

BE IT ENACTED:

Section One. Findings

A. Pursuant to 2 N.N.C. § 500(A), the Resources and Development Committee is established as a standing committee of the Navajo Nation Council; and

B. Pursuant to 2 N.N.C. § 501(B)(2), the Resources and Development Committee of the Navajo Nation Council has authority to promulgate rules and regulations governing, transportation, community development, local government units, land acquisitions for the Navajo Nation, environmental protection, and the use, sale, exchange, and development of Navajo Nation lands and/or resources, whether held in fee or trust.

C. Pursuant to 2 N.N.C. §§ 500(C); 500(C)(6), the Resources and Development Committee has oversight authority over air transportation, roads and transportation and community development to oversee planning and coordinating of all roads and transportation activities of the Navajo Nation.

D. The Navajo Nation Air transportation and airport facilities are managed by the Navajo Department of Transportation (hereinafter NDOT) Department of Airport Management.

E. The Navajo Nation Airport system is comprised of seven airports with five primary airports located in: Tuba City, AZ; Chinle, AZ; Shiprock, NM; Crownpoint, NM; and WindowRock, AZ. NDOT RDC/HEHSDC Joint Oversight Meeting handout attached as Exhibit "A".

F. NDOT has commissioned a company to prepare for it a study titled Navajo Nation Airport System Master Plan. Navajo Nation Airport System Master Plan Draft Final Report attached as Exhibit "B".

G. ADOT's purpose in the study was to "create a roadmap for future development at these airports and provide opportunities for the general public to participate and collaborate on the important role the airport system plays in their lives." Navajo Nation Airport System Master Plan Draft Final Report, p. 1-1 attached as Exhibit "B".

H. The study included public outreach for comments and suggestions for preparation and completion of the Airport System Master Plan and chapter workshops were held in each of the five chapters where an airport was located. Navajo Nation Airport System Master Plan Draft Final Report, p. 1-2 attached as Exhibit "B".

I. The study states "[m]ost of the community feedback centered on the physical condition of the airports and the need for improvements. Additionally, opportunities to enhance economic development and land withdrawal issues were also mentioned frequently..." Navajo Nation Airport System Master Plan Draft Final Report, p. 1-10 attached as Exhibit "B".

J. The study also states a recurring theme from the communities were: Infrastructure improvements needed; Economic development opportunities; Land withdrawal issues/coordination; Time frame for development; Security issues; Local presence, management, and maintenance possibilities; Participation by the community in airport development; and Create education and training opportunities to add aviation professionals within the Nation. Navajo Nation Airport System Master Plan Draft Final Report, p. 1-11 attached as Exhibit "B".

K. The study states the community input provided valuable insight and "was an essential part of the study and weighed heavily in the facility requirements and

proposed developments…" Navajo Nation Airport System Master Plan Draft Final Report attached as Exhibit "B".

L. The Window Rock airport is located in Fort Defiance Agency, St. Michael's chapter. Navajo Nation Airport System Master Plan Draft Final Report, p. 1-6 attached as Exhibit "B".

M. The study states "[t]he existing airport property totals 96 acres. Based on the proposed development plan, additional land will need to be withdrawn." Navajo Nation Airport System Master Plan Draft Final Report, p. 4-28 attached as Exhibit "B".

N. In fact, the study shows that an additional one-hundred twenty-eight (128) acres is needed for the future development of the Window Rock airport. Navajo Nation Airport System Master Plan Draft Final Report, p. 5-19 attached as Exhibit "B".

O. The St. Michaels Chapter feels that its concerns and community input was not heard by NDOT as reflected in NDOT's Navajo Nation Airport System Master Plan Draft Final Report, so the St. Michael's Chapter passed Resolution 7-19-15-161 attached as Exhibit "C".

P. Resolution 7-19-15-161, entitled "Supporting and Recommending for the Navajo Nation Department of Transportation, Resources and Development Committee of the Navajo Nation Council, and Navajo Nation Land Administration to place a moratorium on the Window Rock Airport facility upgrade construction and land expansion", supports and recommends to the Navajo Nation Resources and Development Committee to place a moratorium on the Window Rock Airport facility upgrade construction and land expansion until terms have been resolved between St. Michael's Chapter and NDOT.

Q. St. Michael's Chapter citizens want NDOT to meet with them to enter into a collective agreement to address: safety issues for local families who live around the airport; address concerns with the Lagoon Road and other residential road infrastructure for local families around the airport; to have NDOT obtain the proper land withdrawals for the proposed expansion; to have NDOT and the

Chapter examine and develop the way the airport will fit into the St. Michael's Chapter's Community Based Land Use Plan.

R. It is in the best interest of the Navajo Nation to support the wishes of St. Michael's Chapter through the Navajo Nation Resources and Development Committee by placing a moratorium on the Window Rock Airport facility upgrade construction and land expansion until a collective agreement has been entered into between St. Michael's Chapter and NDOT addressing the terms in Q.

SECTION TWO. APPROVING A MORATORIUM ON THE WINDOW ROCK AIRPORT FACILITY UPGRADE AS OUTLINED IN NDOT'S NAVAJO NATION AIRPORT SYSTEM MASTER PLAN DRAFT FINAL REPORT

A. The Navajo Nation Council's Resources and Development Committee hereby approves a moratorium on the Window Rock airport facility upgrade as outlined in NDOT's Navajo Nation Airport System Master Plan Draft Final Report, attached as Exhibit "B", until a collective agreement has been entered into between St. Michael's Chapter and NDOT addressing:

1. Safety issues for local families who live around the airport;
2. Concerns with the Lagoon Road and other residential road infrastructure for local families around the airport;
3. NDOT's obtaining the proper land withdrawals for the proposed expansion first before any expansion begins;
4. NDOT assisting the Chapter's examining the way the airport will fit into the St. Michael's Chapter's Community Based Land Use Plan.

NAVAJO NATION **AIRPORTS** *Destination Beauty*

Navajo DOT
Department of Airports Management

EXHIBIT
A
tabbies

RDC / HEHSC Joint Oversight Meeting

September 22, 2015

NAVAJO D.O.T.
Airports Management

NAVAJO NATION AIRPORTS Destination Beauty

NAVAJO D.O.T.
Airports Management

Organizational STATEMENT:

" To advocate for Navajo Nation Airports; To maintain airports with coordination and accountability from the staff and finance for fund availability "

MISSION STATEMENT:

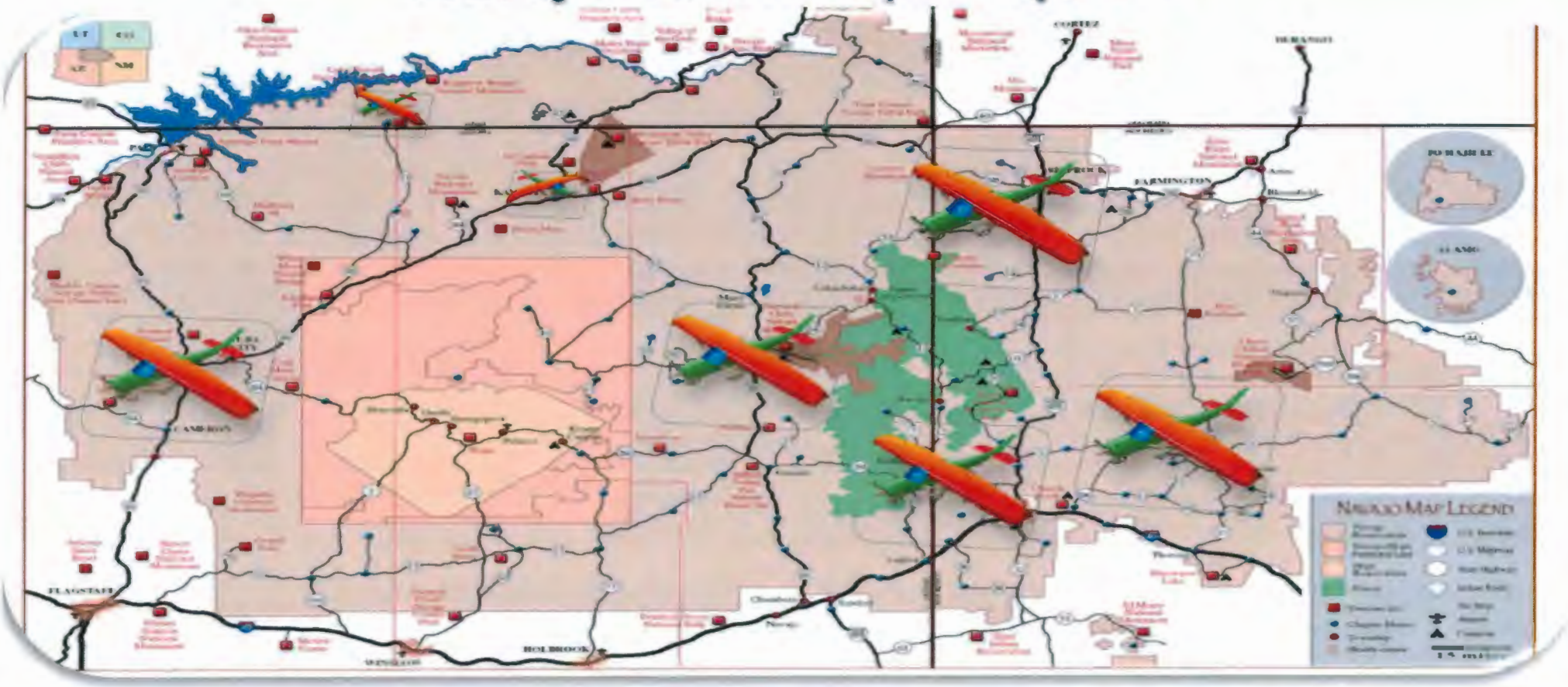
" To be self-determined program by planning future airport development; To maintain Navajo Nation airports in a secure and safe standard; and attain quality customer service"

VISION STATEMENT:

"We envision a well-maintained and equipped airport that encourages economic opportunities, striving towards self-sustainment that enhances safe and secure airport operations"

NAVAJO NATION **AIRPORTS** *Destination Beauty*

Navajo Nation Airport System



The Navajo Nation Airport System is comprised of seven airports. They include five in the FAA's National Plan of Integrated Airport Systems (NPIAS) spread across the boundaries of three FAA regions and three states.

These airports/airstrip provide vital services to the Navajo Nation. Services include air medical evacuation, business transportation, government transportation, search and rescue, tourism and general aviation activity.

These airports currently offer varying levels of facilities and services and are in differing physical conditions.

NAVAJO NATION AIRPORTS *Destination Beauty*

Primary Airports & Characteristics

Western Agency:

Tuba City Airport (T03)

-Runway: 6230' x 75'
-Fuel: n/a
-Parking: Tiedowns
-Ops: avg 100 / month
- 65% air taxi (air med)
-35% transient g.a.

Kayenta Airport (0V7)

managed/operated by Kayenta Township
-Runway: 7140' x 75'
-Fuel: JetA
-Parking: Tiedowns
-Ops: avg 500 +/ month
-55% transient g.a.
-45% air taxi (air med)

Central Agency:

Chinle Airport (E91)

-Runway: 6902' x 60'
-Fuel: JetA
-Parking: Tiedowns
-Ops: avg 1000 + / month
-84% air taxi (air med)
-11% transient g.a.
-5% local g.a.

Northern Agency:

Shiprock Airport(5V5)

-Runway: 4840' x 75'
-Fuel: n/n
-Parking: Tiedowns
-Ops: avg 100 / month
-85% air taxi (air med)
-15% transient g.a.

Eastern Agency:

Crownpoint Airport (0E8)

-Runway: 5820' x 60'
- Fuel: n/a
-Parking: n/a
-Ops: avg 100 / month
-80% air taxi (air med)
-20% transient g.a.

Fort Defiance Agency:

Window Rock Airport (RQE)

managed/operated by Division of General Services
-Runway: 7000' x 75'
-Fuel: JetA
-Parking: Tiedowns
-AWOS
-Ops: avg 1000 + / month
-70% transient g.a.
-30% local g.a.

Historical Snapshot

1999 to 2009 – Airport Maintenance sub-section of Roads; Planning or Compliance
2013 – Department of Airports Management recognized by 22nd NNC
2013 – NN waive NBOA/NPEA to fully accept FAA Funds
2013 – ADOT Recognized Tribes to Partake in ADOT AV FUND

Crownpoint Airport (0E8)

- Initial lease from BIA signed early 1980s
- Paved Airstrip early 1980s
- Pavement seal of Rwy early 1990s
- Allotment leases renewed early 2015

Tuba City Airport (T03)

- Relocated to current location early1980s
- Airport constructed mid 1980s
- Pavement seal of Rwy early 1990s
- Currently ADOT Grant to reconstruct 80% of Rwy late 2014

Chinle Airport (E91)

- Relocated to current location mid 1990s through eminent domain
- Airport constructed mid 1990s

Window Rock Airport (RQE)

- At current location since late 1940s
- Runway constructed mid 1950s
- Airport Constructed early 1980s
- Pavement seal mid 1980s
- Currently FAA Grant to rehab electrical & runway 2009 & 2014

Shiprock Airport(5V5)

- Airport Resolution with Chapter of Shiprock late 1970s
- Runway paved early 1980s
- Pavement sealed late 1980s
- Electric line pulled early 1990s
- Pending NMDOT Grant for Rwy Rehab 2015

Window Rock Airport On-Going Projects/Activities:

- Federal Aviation Projects / Updates
  - 2011 Navajo Nation Airport System Master Plan, ($600,000) – 97% Complete
  - 2009/11 Window Rock Airport Runway Lighting, Signage and Navigational aids Project Design, ($300,000 & $400,000) – 30% Complete
- Airport Stimulus Report, includes Window Rock Airport – 100% complete
- 2014 Long-Range Transportation Plan (LRTP), includes Window Rock Airport – Draft Final

  Airports have been included in the 2015 TTIP; and are in the RIFDS in March 2015

Department Priorities – Window Rock Airport

- Complete FAA Capital Projects; indicating confident performance
- Continue focusing on receiving FAA Entitlements; submitting Discretionary fund requests
- Continue submitting State (ADOT/NMDOT) Grants to address airport rehabilitation and maintenance
- Complete the Window Rock Parking Lot
- Execute the Professional Service Agreement for the Airport Engineering/ARCH/Planning 5-year On-Call Services Contract
- Initiate the following documents: 1) Airport Accident/Incident Response; 2) Airport Snow / Ice Control Document; and 3) Airport Maintenance Control Document

Navajo Nation Airport System Master Plan

www.navajoairports.com

90% FAA Funded

10% Navajo Nation

Total project cost: $632,000.00

95% complete

NAVAJO D.O.T.

NAVAJO D.O.T. Airports Management

Purpose of the Study

- Discuss the role and activities at each airport
- Identify what improvements are needed
- Develop an Airport Layout Plan for each airport
- Prepare a funding plan
- Gain community input and acceptance of the program

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PROGRAM STAKEHOLDERS

Navajo Nation

NAVAJO D.O.T.
Department of Airports Management

PLANNING ADVISORY COMMITTEE (PAC)
Information Group
Technical Subcommittee

CHAPTER REPRESENTATIVES
AZ: Chinle, Tuba City, Window Rock
NM: Crownpoint, Shiprock

Chinle Municipal Airport
Crownpoint Airport
Shiprock Airstrip
Tuba City Airport
Window Rock Airport

CONSULTANT TEAM
Armstrong Consultants, Inc.
The Genesis Consulting Group
J & C Farming Products

NMDOT

ADOT

FEDERAL AVIATION ADMINISTRATION

Phoenix ADO **New Mexico ADO**

Airports in the Study

Arizona:

- Chinle Municipal Airport
- Tuba City Airport
- Window Rock Airport

New Mexico:

- Crownpoint Airport
- Shiprock Airstrip

Hózhǫ́ǫ́jí bee adéest'ą́ą́'

(Beauty Way Vision Statement)

A safe, accessible, and environmentally responsible airport system that enriches sustainability, self-sufficiency and respects our prestigious Navajo Nation culture benefiting future Dine' generations.

Mission Statement

Create a flight plan for aviation development to benefit people living in, working on, and visiting throughout Navajo Nation over the next decade and beyond.

The Goal and Objectives

- Goal
  - Develop and improve the system of airports over time in such a manner that each community's desires are achieved.
- Objectives
  - Prioritize needs and phase development to be in alignment with available funding and operational sustainability
  - Actively seek federal, state,and non-traditional funding sources to develop and enhance the system of airports
  - Establish and develop local partnerships
  - Incorporate airport system plan into CLUPs
  - Establish a Navajo Nation Aviation Advisory Board (NNAAB)

NAVAJO NATION AIRPORTS *Destination Beauty*

Public Outreach

- Chapter Workshops held at:
  - Chinle Chapter House
  - St. Michaels Chapter House
  - Tuba City Chapter House
  - Crownpoint Chapter House
  - Shiprock Chapter House
- Two PAC meetings were held

Public Outreach Feedback

- Feedback from the community
  - Participation by the community in airport development
  - Security
  - Local presence, management, and maintenance
  - Self-sufficiency, education, and training
  - Satisfaction/dissatisfaction with airport's name
  - Chapter resolutions of support

Public Outreach Feedback

- Feedback from the community
  - Economic development opportunities
  - Infrastructure improvements
  - Land withdrawal process and protocol
  - Time frame of study recommendations

Public Outreach

- New information continually updated on:
  - Website: www.navajoairports.com
- Comments are welcomed at:
  - Information line: 1-844-Navajo1 (628-2561)
- Public service announcements (radio/print media)
- Surveys and comment cards

NAVAJO NATION AIRPORTS *Destination Beauty*

Development Plans

- Design Standards
  - Design Aircraft: Beechcraft Super King Air 200
  - Runway Design Code (RDC) for all of the airports will be B-II (75 feet wide)
  - Taxiway Design Group (TDG) for all of the airports will be TDG-2 (35 feet wide)

Airport Improvements

- Runway Reconstruction
- Automated Weather Observing Systems (AWOS)
- Taxiways and aircraft parking aprons
- Airfield lighting and signage
- Visual navigational aids
- Fencing and access control
- Fuel capabilities
- Hangars and terminal buildings

Projected Costs (2014 Dollars)

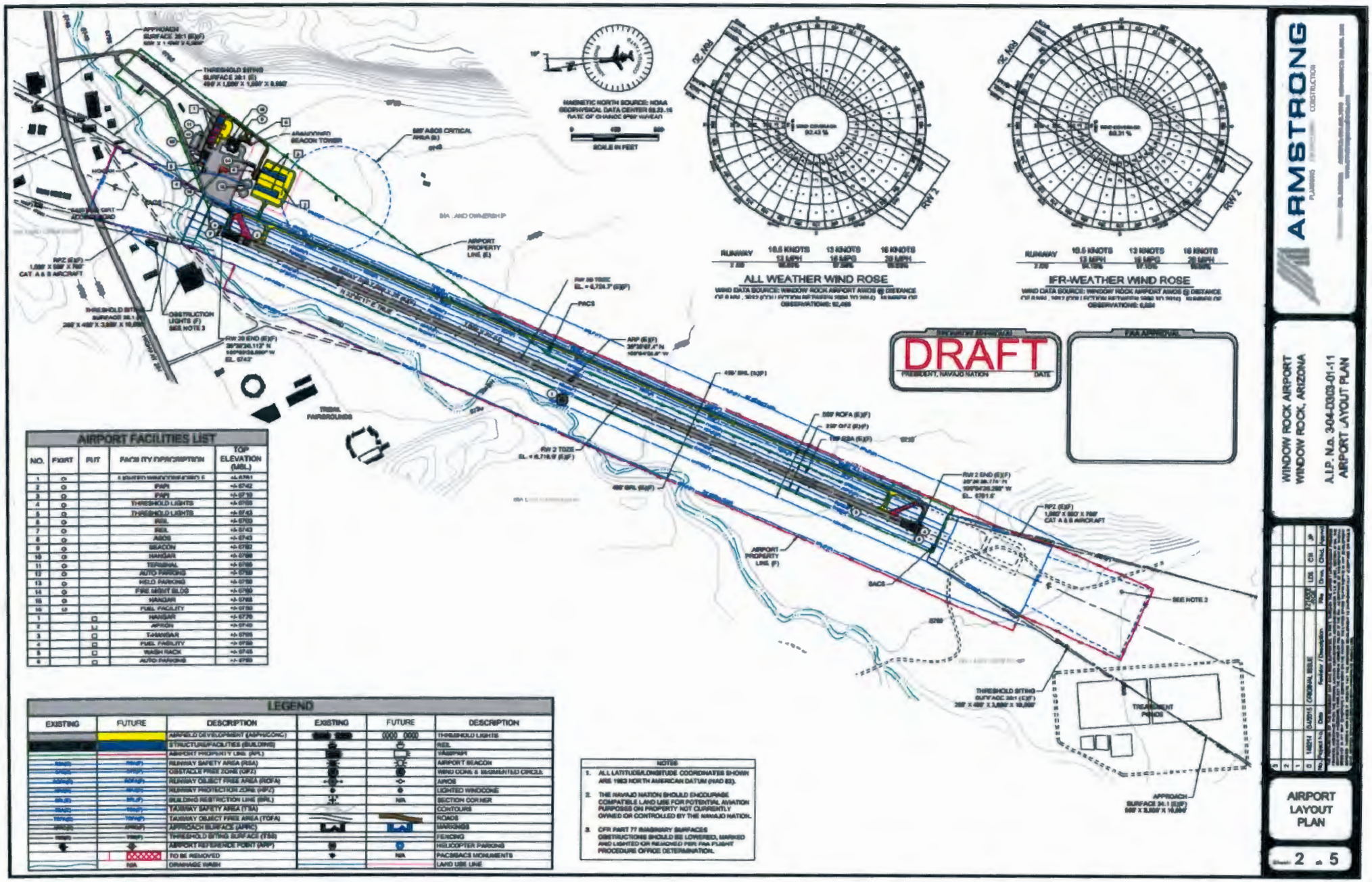
- Chinle Municipal Airport: $12,350,000
- Tuba City Airport: $13,142,000
- Window Rock Airport: $11,850,000
- Crownpoint Airport: $13,000,000
- Shiprock Airstrip: $12,350,000

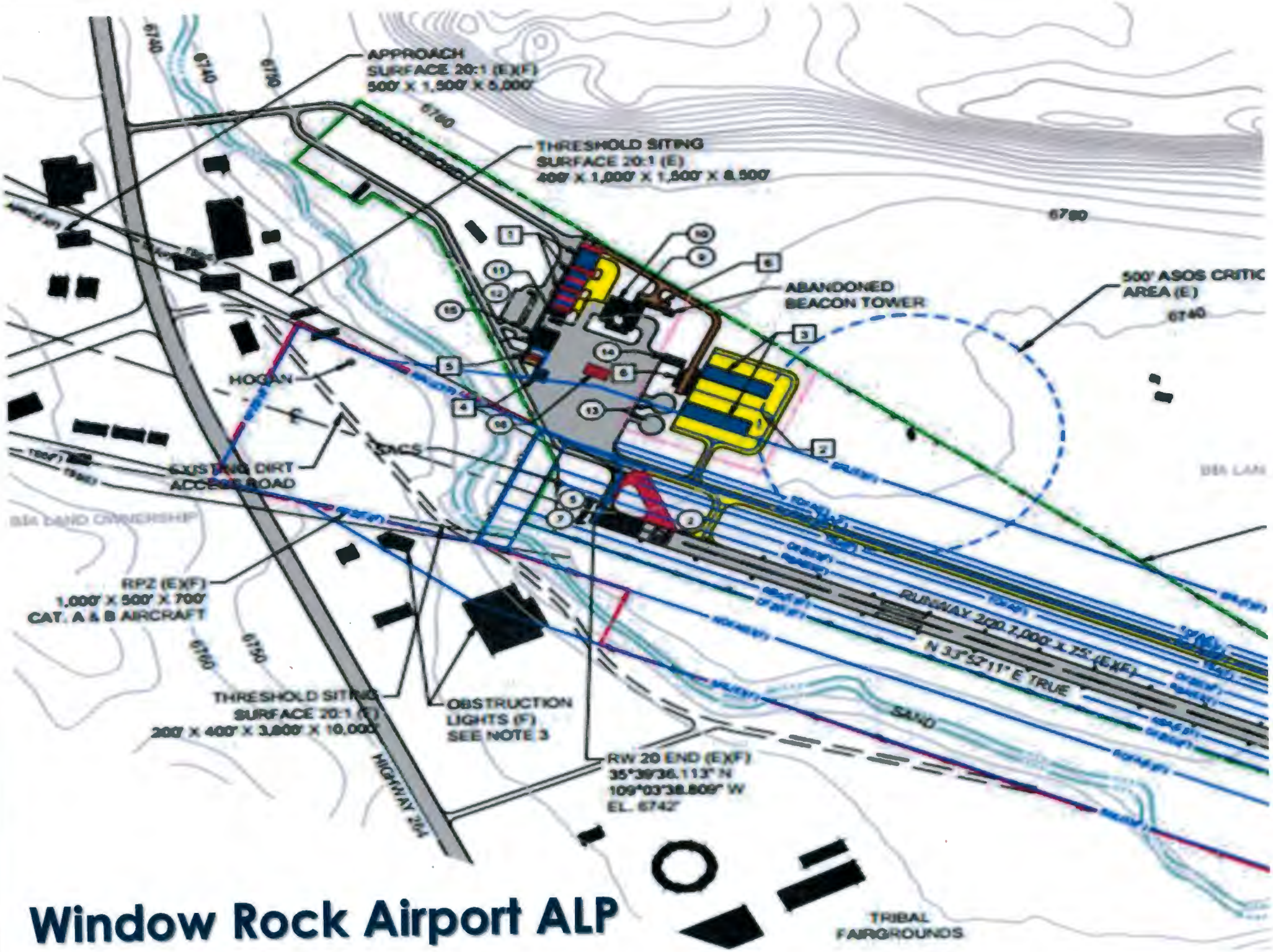
Total Preliminary Costs: $62,872,000

Next Steps

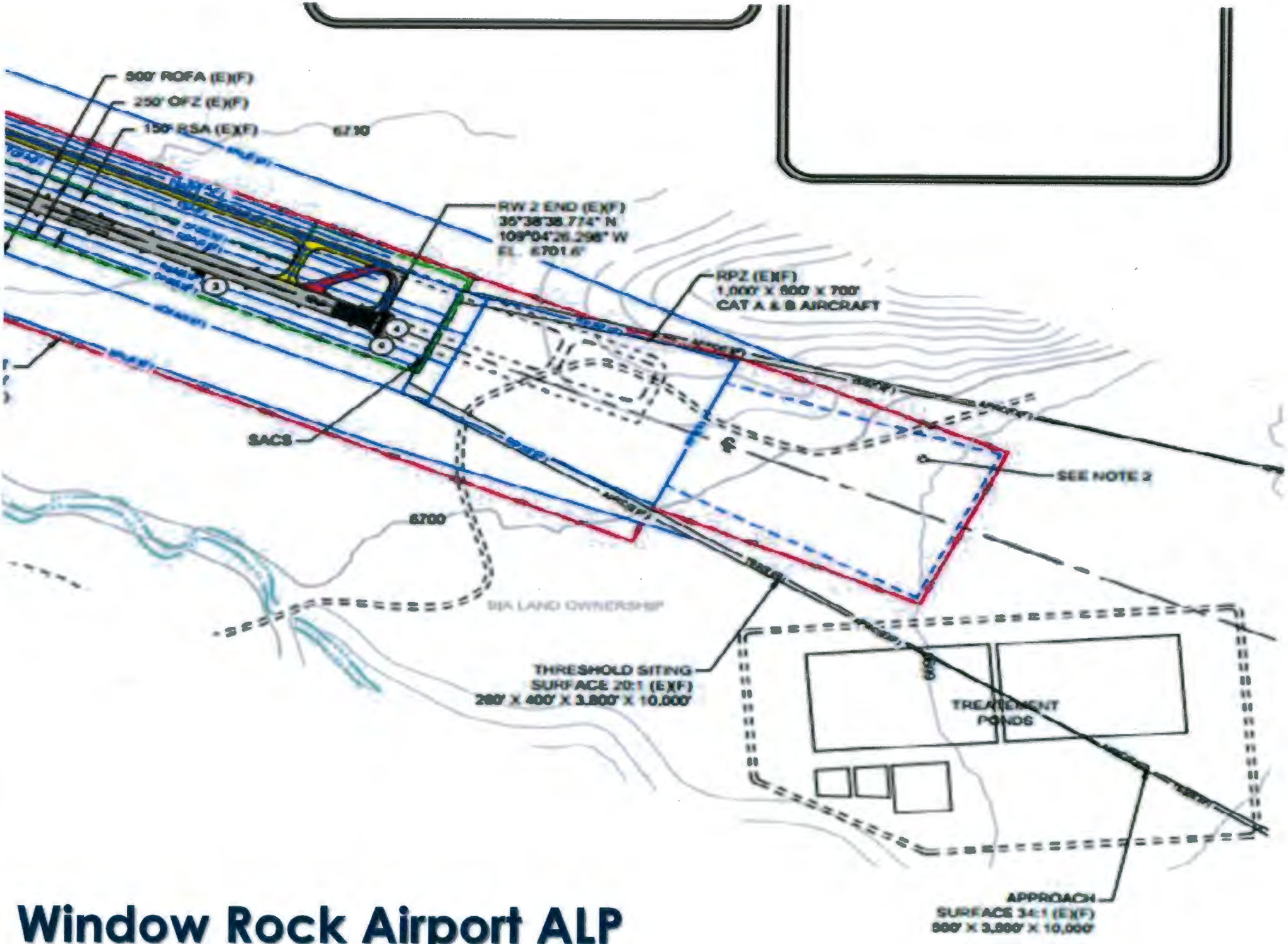
- ✓ Gather feedback from the Quarterly Regional Transportation Meetings
- ✓ Prepare Capital Improvement Plans
- ✓ Conduct a financial feasibility analysis
- ✓ Present findings at the final PAC meeting in the first quarter of 2015
- ✓ Submit Draft Final Report to FAA, ADOT, and NMDOT for review and approval
- Seek Navajo Nation Council approval

Window Rock Airport ALP



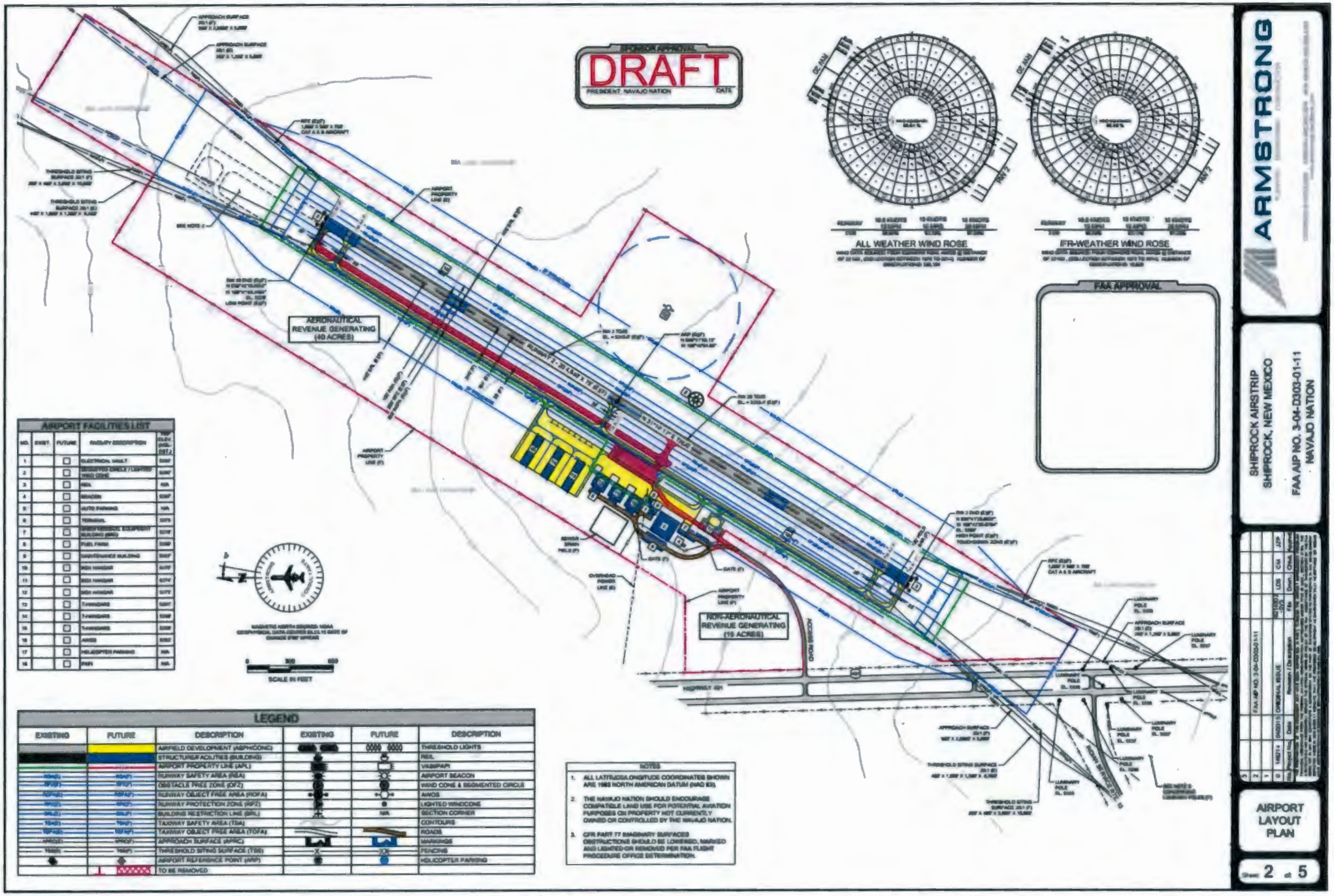


Window Rock Airport ALP

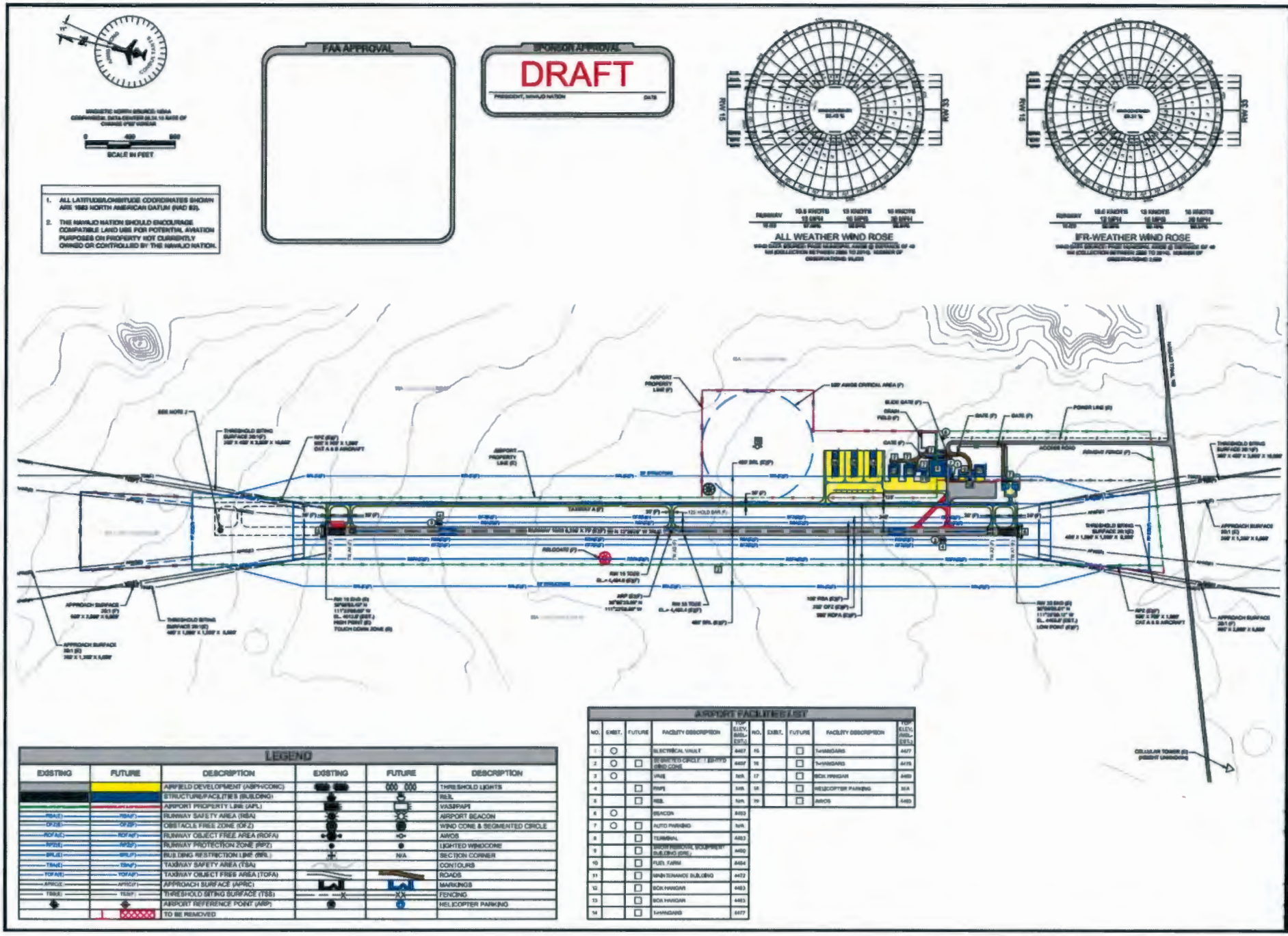


Window Rock Airport ALP

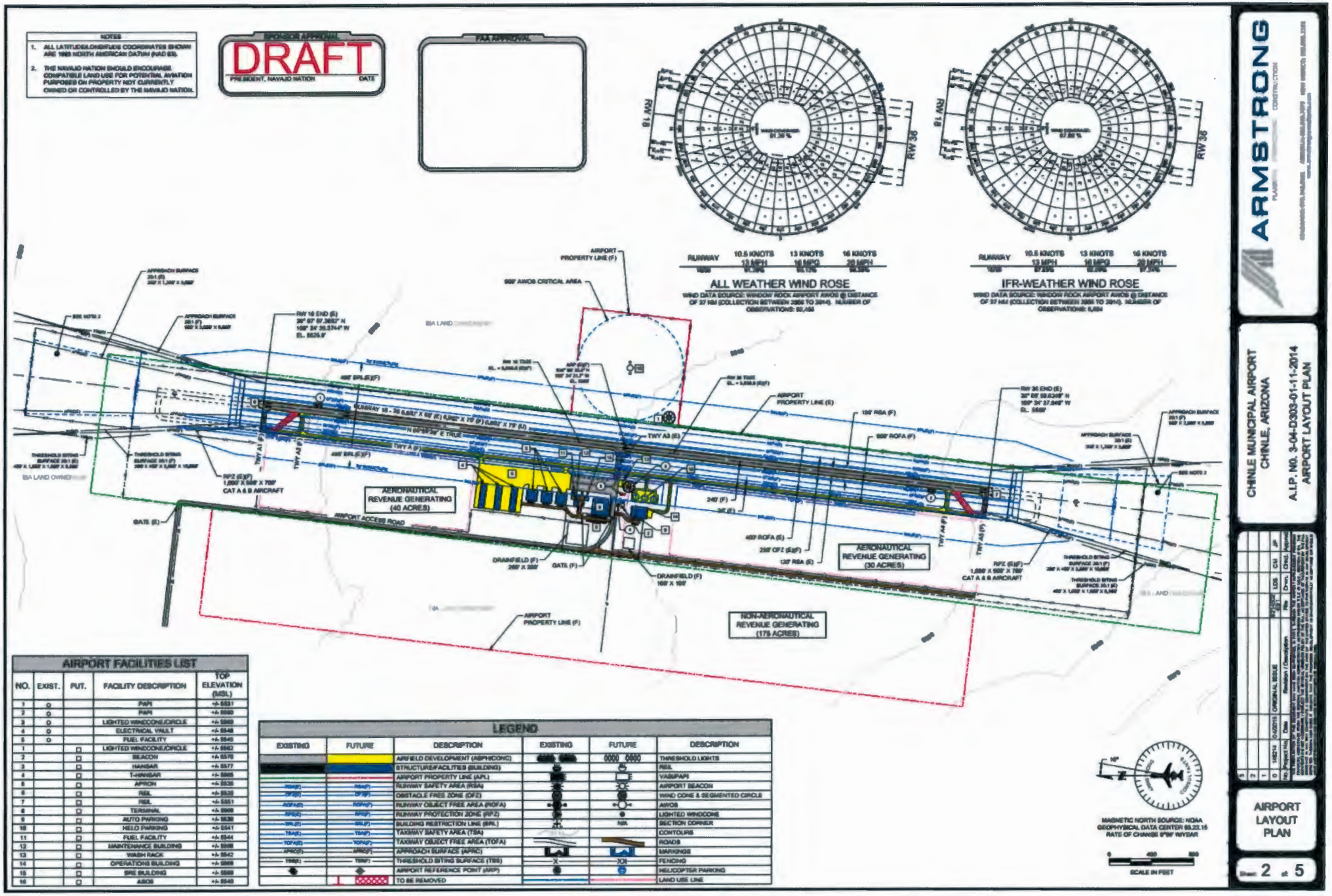
Shiprock Airstrip ALP



Tuba City Airport ALP



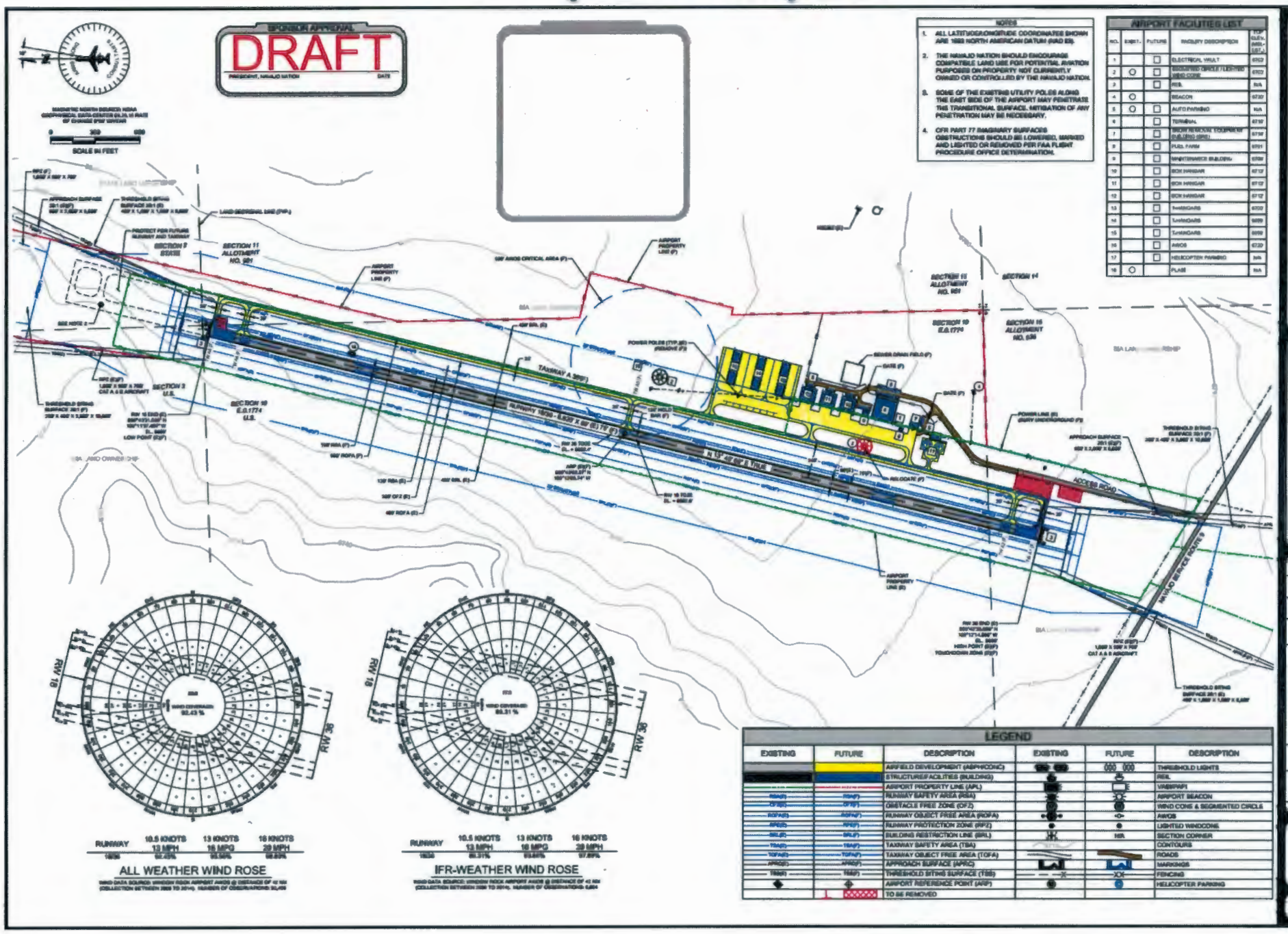
Chinle Municipal Airport ALP



AIRPORT FACILITIES LIST				
NO.	EXIST.	PUT.	FACILITY DESCRIPTION	TOP ELEVATION (MSL)
1	O		PAPI	+/- 5531
2	O		PAPI	+/- 5550
3	O		LIGHTED WINDCONE/CIRCLE	+/- 5569
4	O		ELECTRICAL VAULT	+/- 5548
5	O		FUEL FACILITY	+/- 5546
1		□	LIGHTED WINDCONE/CIRCLE	+/- 5562
2		□	BEACON	+/- 5570
3		□	HANGAR	+/- 5577
4		□	T-HANGAR	+/- 5565
5		□	APRON	+/- 5538
6		□	REIL	+/- 5539
7		□	REIL	+/- 5551
8		□	TERMINAL	+/- 5568
9		□	AUTO PARKING	+/- 5538
10		□	HELO PARKING	+/- 5541
11		□	FUEL FACILITY	+/- 5544
12		□	MAINTENANCE BUILDING	+/- 5568
13		□	WASH RACK	+/- 5542
14		□	OPERATIONS BUILDING	+/- 5568
15		□	SRE BUILDING	+/- 5568
16		□	ASOS	+/- 5540

LEGEND					
EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ABPHICONC)			THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)			CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			LAND USE LINE

Crownpoint Airport ALP



NAVAJO NATION AIRPORTS *Destination Beauty*

Airport Stimulus Report

Three (3) Scenarios:

#1. Navajo Nation Fully Funds

- **Full Build-out in four years**

#2. Partial Funding

- **Full Build-out in 10 years**

#3. Traditional ACIP Funding

- **Full Build-out in 25 years**

Navajo Nation Airport System Development Plan - Funding Scenarios

Scenario 1 - Navajo Nation Funding: Full GA Airport Build Outs

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description
2015-16	$0	$0	$0	$5,000,000	$5,000,000	Design & Bidding
2016-17	$0	$0	$0	$57,000,000	$57,000,000	Construction
2017-18	$3,000,000	$0	$157,895	$157,895	$3,315,789	Airport M-E-U
Total	$3,000,000	$0	$157,895	$62,157,895	$65,815,789	

Full Build-Out of all General Aviation Improvements

- ** Runways-Reconstruct
- ** Lighting, Signage, Visual Aids
- ** Taxiways
- ** Aprons

Fuel Facilities

- ** Snow Removal Equipment & Buildings
- ** Fencing
- ** Weather Observation Systems

Terminal Buildings

- ** Capital improvements essential to the safe operation of the airports

M-E-U: Maintenance, expansion, upgrades

***Unfunded needs after 2017 : $0.00**

Scenario 2 - Navajo Nation Funding: Initial Runway Improvements

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description
2015-16	$0	$0	$0	$2,500,000	$2,500,000	Design & Bidding
2016-17	$0	$0	$0	$25,000,000	$25,000,000	Construction
2017	$3,000,000	$0	$157,895	$157,895	$3,315,789	Rehab Aprons and TWs
2018	$750,000	$0	$39,474	$39,474	$828,947	AWOS & Fuel Facilities
2019	$750,000	$0	$39,474	$39,474	$828,947	Fuel Facilities
2020	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX
2021	$750,000	$0	$39,474	$39,474	$828,947	Fencing
2022	$750,000	$0	$39,474	$39,474	$828,947	Fencing
2023	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings
2024	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings
2025	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX
Total	$9,000,000	$0	$473,684	$27,973,684	$37,447,368	

Reconstruct Runways, Lighting, Signage and Visual Aids

- ** Reconstruct Runways, Install/Replace
- ** Runway Lighting, Signage, Visual Aids

***Unfunded Needs after 2025: $25 million**

Scenario 3 - FAA and State Funding: Reconstruct Runways

Year	FAA Entitlement	** FAA Discretionary	*** State	Local	Total	Description
2015						
2016	$3,000,000	$3,000,000	$157,895	$157,895	$6,315,789	Chinle - RW, Lighting, Signage, Visual Aids, Fence
2017					$0	
2018					$0	
2019	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Tuba City - RW, Lighting, Signage, Visual Aids, Fencing
2020					$0	
2021					$0	
2022	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Shiprock - RW, Lighting, Signage, Visual Aids, Fencing
2023					$0	
2024					$0	
2025	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Crownpoint - RW, Lighting, Signage, Visual Aids, Fencing
2026					$0	
2027					$0	
2028	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Window Rock - RW, Lighting, Signage, Visual Aids, Fencing
Total	$12,000,000	$15,000,000	$631,579	$631,579	$28,263,158	

Runway Rehabilitation

***Unfunded needs after 2028: $34 million**

*** Short fall in State Aircraft Registry and AV fuel sales may limit available funding to NN

** Highly unlikely that funding allocation will target airports

Navajo Nation Airport System Development Plan - Funding Scenarios

Scenario 1 - Navajo Nation Funding: Full GA Airport Build Outs

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description
2015-16	$0	$0	$0	$5,000,000	$5,000,000	Design & Bidding
2016-17	$0	$0	$0	$57,000,000	$57,000,000	Construction
2017-18	$3,000,000	$0	$157,895	$157,895	$3,315,789	Airport M-E-U
Total	$3,000,000	$0	$157,895	$62,157,895	$65,315,789	

Full Build-Out of all General Aviation Improvements

- ** Runways-Reconstruct
- ** Lighting, Signage, Visual Aids
- ** Taxiways
- ** Aprons

Fuel Facilities

- ** Snow Removal Equipment & Buildings
- ** Fencing
- ** Weather Observation Systems

Terminal Buildings

- ** Capital improvements essential to the safe operation of the airports

M-E-U: Maintenance, expansion, upgrades

***Unfunded needs after 2017 : $0.00**

Scenario 2 - Navajo Nation Funding: Initial Runway Improvements

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description
2015-16	$0	$0	$0	$2,500,000	$2,500,000	Design & Bidding
2016-17	$0	$0	$0	$25,000,000	$25,000,000	Construction
2017	$3,000,000	$0	$157,895	$157,895	$3,315,789	Rehab Aprons and TWs
2018	$750,000	$0	$39,474	$39,474	$828,947	AWOS & Fuel Facilities
2019	$750,000	$0	$39,474	$39,474	$828,947	Fuel Facilities
2020	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX
2021	$750,000	$0	$39,474	$39,474	$828,947	Fencing
2022	$750,000	$0	$39,474	$39,474	$828,947	Fencing
2023	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings
2024	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings
2025	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX
Total	$9,000,000	$0	$473,684	$27,973,684	$37,447,368	

Reconstruct Runways, Lighting, Signage and Visual Aids

- ** Reconstruct Runways, Install/Replace
- ** Runway Lighting, Signage, Visual Aids

***Unfunded Needs after 2025: $25 million**

Scenario 3 - FAA and State Funding: Reconstruct Runways

Year	FAA Entitlement	** FAA Discretionary	*** State	Local	Total	Description
2015						
2016	$3,000,000	$3,000,000	$157,895	$157,895	$6,315,789	Chinle - RW, Lighting, Signage, Visual Aids, Fence
2017					$0	
2018					$0	
2019	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Tuba City - RW, Lighting, Signage, Visual Aids, Fencing
2020					$0	
2021					$0	
2022	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Shiprock - RW, Lighting, Signage, Visual Aids, Fencing
2023					$0	
2024					$0	
2025	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Crownpoint - RW, Lighting, Signage, Visual Aids, Fencing
2026					$0	
2027					$0	
2028	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Window Rock - RW, Lighting, Signage, Visual Aids, Fencing
Total	$12,000,000	$15,000,000	$691,579	$691,579	$28,263,158	

Runway Rehabilitation

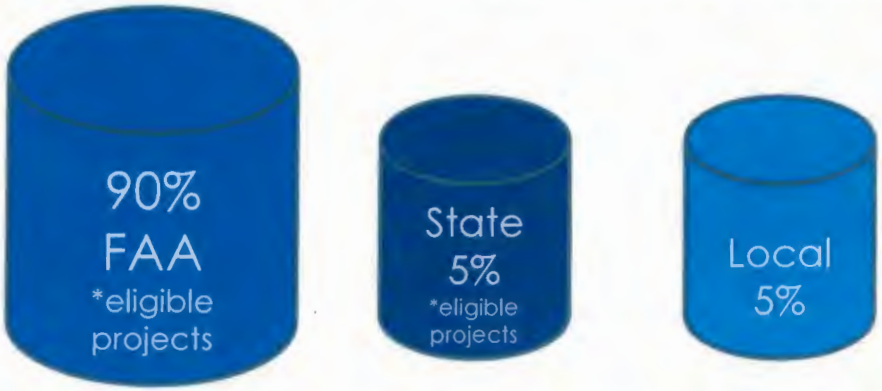
***Unfunded needs after 2028: $34 million**

*** Short fall in State Aircraft Registry and AV fuel sales may limit available funding to NN

** Highly competitive funding allocation with larger airports

NAVAJO NATION **AIRPORTS** *Destination Beauty*

Traditional ACIP Funding Breakdown:



Examples:

Eligible Projects	Ineligible Projects
Runways, Taxiways & Aprons	Mowers
Airfield lighting	Debris sweepers
Airport layout plans Environmental Studies	Landscaping
Access roads located on Airport Property	Airport Vehicles (Trucks, cars)
Removing, lowering, marking and lighting hazards to aviation	Salaries
Drainage Improvements	Office equipment
Weather observation stations (AWOS)	Automobile parking lots
Land acquisition for eligible development	Industrial park infrastructure and buildings
Tree clearing in runway approaches	Business & marketing plans
Maintenance hangars	Training
T-hangars, Terminals	Exclusive Use Improvements
Fuel farms	Supplies

https://www.faa.gov/airports/central/aip/sponsor_guide/media/0100.pdf

****Eligible projects have to compete with other airport eligible projects deemed a priority by the FAA****

Example: Chinle Airport Drainage project will compete with Flagstaff Airport lighting upgrade; FAA will make a decision based on priority.

Snap Shot of Current RQE Conditions

NAVAJO NATION AIRPORTS *Destination Beauty*

EXHIBIT

B





NAVAJO NATION
AIRPORT SYSTEM MASTER PLAN

Draft Final Report

NAVAJO DIVISION OF TRANSPORTATION

WINDOW ROCK, AZ | MAY 2015

ARMSTRONG

Navajo Nation Airport System Master Plan

Draft Final Report

Prepared for

Navajo Division of Transportation

By

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In association with

The Genesis Consulting Group, LLC

J&C Farming Products

May 2015

Navajo DOT - SAS No. 26943

FAA AIP No. 3-04-D303-01-2011

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Table of Contents

List of Tables

List of Figures

List of Exhibits

Chapter One

AIRPORT SYSTEM MASTER PLAN OVERVIEW

CHAPTER 1 - AIRPORT SYSTEM MASTER PLAN OVERVIEW

1.1 INTRODUCTION

The Navajo Division of Transportation (Navajo DOT) has led the effort for an important study of the Navajo Nation airport system. The Navajo Nation Airport System Master Plan (NNASMP) focused on five airports within the Navajo Nation which are currently included in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). The airports included in the study span across two states (Arizona and New Mexico); three are located in Arizona and two in New Mexico.

1.2 PURPOSE OF THE STUDY

The purpose of the study is to create a roadmap for future development at these airports and provide opportunities for the general public to participate and collaborate on the important role the airport system plays in their lives. The study describes and depicts the overall concept for the short-term development of each airport. It presents the concepts in a written report and graphically in the Airport Layout Plan (ALP) drawing set. The study also identifies and prioritizes the improvements and the investments needed to enhance safety at the airports and improve operating conditions. Once identified, the goal is to provide direction for the future airport system development in a financially feasible manner which meets the needs of the Navajo Nation.

1.3 PUBLIC OUTREACH

A comprehensive public outreach program was an essential part of the study. The goal of the outreach program was to listen to the public, collect ideas, and review the input that ultimately was used by the Navajo DOT to drive the preparation and completion of the Airport System Master Plan.

A workshop style methodology was chosen as the preferred format to engage the public for collecting valuable feedback and educating participants about the process. In addition, a Planning Advisory Committee (PAC) was formed comprised of an Information Subcommittee and a Technical Subcommittee. The Information Subcommittee provided a forum for elected officials and appointed Navajo Nation representatives to offer input and guide the preparation of the study, and the Technical Subcommittee included representatives from various divisions and agencies, and others who offered technical expertise at various stages of the process. PAC meetings were held on the following dates:

- PAC meeting number 1 (kick-off meeting for both committees); May 8, 2014; 10:00am to 2:00pm
- PAC meeting number 2 (Informational and Technical advisory subcommittees); October 15, 2014; 9:30am to 2:00pm
- PAC meeting number 3 (Final) (Informational and Technical advisory subcommittees); April 10, 2015; 9:30am to 1:00pm

Chapter workshops were held in each of the five chapters where the existing NPIAS airports are located. The goal of each workshop was to collect ideas from the public and explain the planning process. The Chapter workshops were held on the following dates and times:

- St. Michaels Chapter House – July 30, 2014; 1:00pm to 3:00pm and 5:00pm to 7:00pm
- Chinle Chapter House – July 31, 2014; 10:00 am to 12:00pm and 5:00pm to 7:00pm
- Shiprock Chapter House – August 5, 2014; 1:00pm to 3:00pm and 5:00pm to 7:00pm
- Crownpoint Chapter House – August 6, 2014; 1:00pm to 3:00pm and 6:00pm to 8:00pm
- Tuba City Chapter House – August 19, 2014; 10:00am to 12:00pm and 5:00pm to 7:00pm

To increase the level of input from the communities, presentations were held in Window Rock at the Navajo Nation Quarterly Regional Transportation meetings in December 2014. The presentations included the proposed development plans for the airports in the study. Draft Airport Layout Plans (ALP) were provided for the airports allowing attendees to ask questions and supply feedback to the Navajo DOT. The presentations were held as follows:

- Fort Defiance Agency Regional Meeting – December 15, 2014; 1:00pm to 4:00pm
- Central Agency Regional Meeting – December 16, 2014; 1:00pm to 4:00pm
- Western Agency Regional Meeting – December 17, 2014; 1:00pm to 4:00pm
- Northern Agency Regional Meeting – December 18, 2014; 1:00pm to 4:00pm
- Eastern Agency Regional Meeting – December 19, 2014; 1:00pm to 4:00pm

More information about the public outreach component of the study can be found in **Appendix B**. In addition, all presentations and other public meeting information were made available on the project website (www.navajoairports.com).

Awareness building is a vital part of every public outreach program. In addition to the workshops and PAC meetings, publicity to help raise awareness for the Airport System Master Plan included the following:

- Comment cards
- Brochures
- A dedicated NNASMP website (www.navajoairports.com)
- Public Service Announcements (print and radio media)
- A toll-free information help line

FIGURE 1-1 CHINLE CHAPTER HOUSE WORKSHOP

Source: Armstrong Consultants, Inc. (ACI), August 2014

1.3.1 ESTABLISHMENT OF THE CHAPTER HOUSE WITHIN THE NAVAJO NATION

There are five airports included in the NNASMP, each residing in different Navajo Nation Chapters. To provide context and clarity for the study, it is important that the history and culture of each of the communities associated with each airport be explored and presented in a way that respects the Navajo people. This greater understanding results in a more meaningful development plan.

The Navajo Nation extends into the states of Utah, Arizona, and New Mexico covering over 27,000 square miles. Diné Bikéyah, or Navajoland, is larger than 10 of the 50 states in America. According to the Navajo Tourism Office, "Today the Navajo Nation is striving to sustain a viable economy for an ever increasing population that now surpasses 250,000. In years past, Navajoland often appeared to be little more than a desolate section of the Southwest, but it was only a matter of time before the Navajo Nation became known as a wealthy nation in a world of its own."

The discovery of oil on Navajoland in the early 1920s promoted the need for a more systematic form of government. Chapter government is a branch of the Navajo Nation government which exercises varied delegated powers and governmental authority in accordance with Navajo statutory, regulatory, and common law. John G. Hunter, who became the superintendent of the Leupp Agency, is generally given credit for the establishment of the Chapter system starting in 1927 in an effort to bolster Navajo self-determination and local governance. Later the Chapter became the basic political subdivision of Navajo Tribal Government. The Chapters elect representatives to the Navajo Tribal Council, the legislative branch of Navajo government. Today, the Navajo Nation is comprised of 110 Chapters.

To strengthen government accountability at the local level, the Navajo Nation Council enacted the Local Governance Act (LGA) in April 1998. Under the LGA, all chapters are required to adopt and operate a five management system which includes accounting, procurement, filing, personnel, and property. After in depth review and approval by the Office of the Auditor General, a Chapter may become LGA Certified. Upon governance certification, the Chapter is delegated governmental authority with respect to local

matters, such as land-use planning, zoning, taxation, economic development, amongst others. This local authority is significant, as it cultivates ownership and pride in the Chapter's community while still enhancing the Nation as a whole.

1.3.2 Associated Chapter House

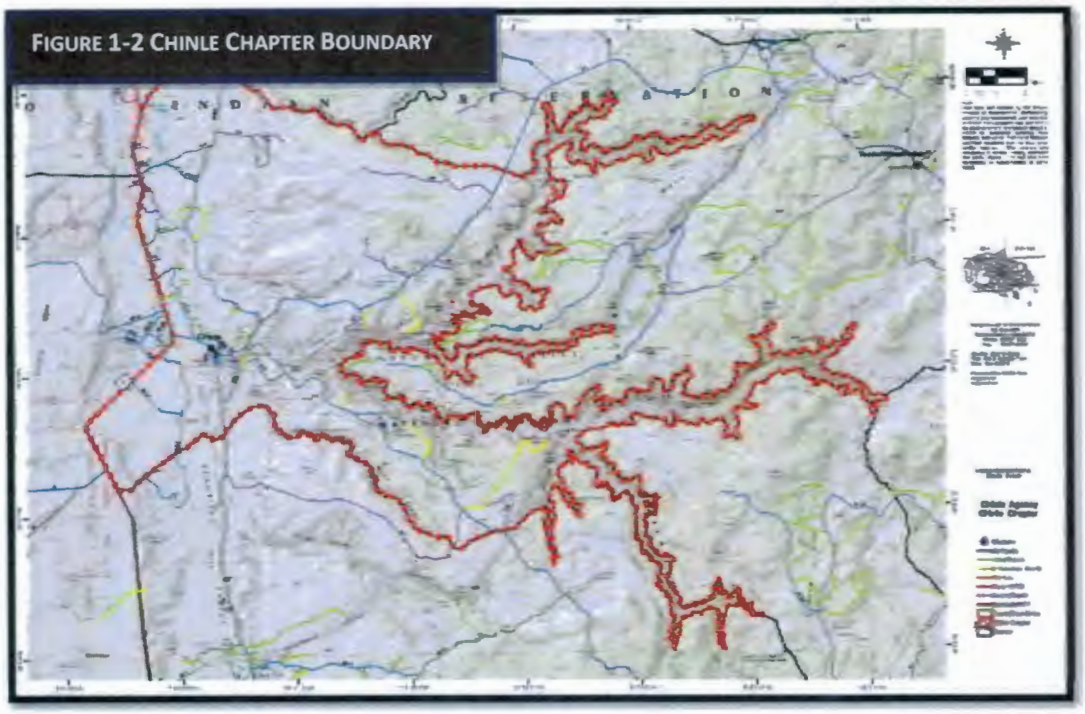
The Chapter House and its members play a large role in the development of the local community. Each Chapter is unique in its location and in its wants and desires. This ultimately holds true for the airports located within the Chapters; each Chapter has specific ideas and desires for the development of their airport. The following is meant to illustrate the unique and significant role that each Chapter plays within the Navajo Nation.

1.3.2-1 Chinle Chapter

The Navajo name for Chinle is Ch'ini'li, meaning "flowing out," like how a stream might flow from the mouth of a canyon. Chinle Chapter is situated in the center of the Navajo Nation near the scenic area Canyon De Chelly. The Canyon De Chelly National Monument, Spider Rock and Del Muerto provide a steady influx of tourism into the community throughout the year. In the late 1800s and early 1900s, Chinle was known for its agriculture and grazing activities; these trades are still practiced by the local Navajo farmers influencing nearby areas such as Many Farms and the Chinle Valley.

The Chinle Chapter government was established under the Navajo Nation on February 14, 1956; it is the 32nd Chapter to be certified as one of the 110 Navajo Nation Chapters. On December 21, 2010, the Chinle Chapter became a Local Governance Act Certified Chapter. Chinle Chapter is one of the larger Chapters on the Navajo Nation, which includes a service area of Chinle, Arizona and smaller surrounding communities such as Kinlichee, Tsaile, and Valley Store, to name a few. **Figure 1-2** illustrates the location and boundary of the Chinle Chapter.

FIGURE 1-2 CHINLE CHAPTER BOUNDARY

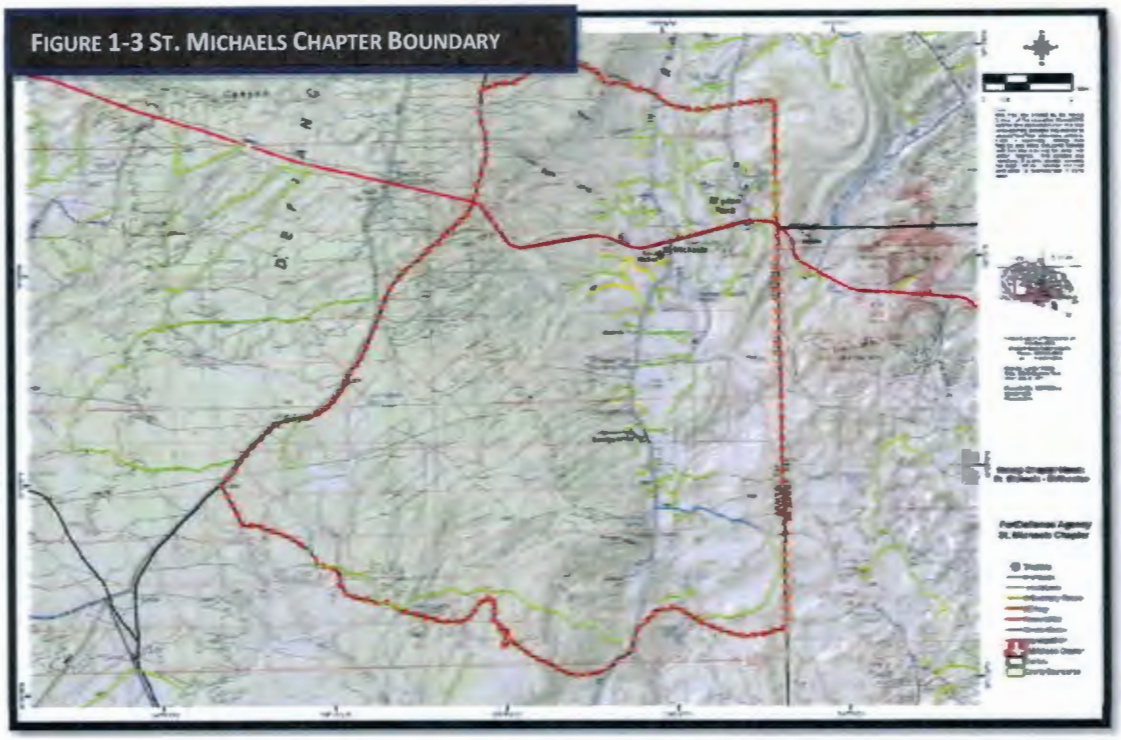


Source: Retrieved from http://www.navajodot.org, August 2014

1.3.2-2 ST. MICHAELS CHAPTER

The St. Michaels Chapter was named after the Catholic mission of St. Michael, established by Mother Katharine Drexel in 1898. The Navajo name for this area is Ts'ihootso, meaning "green meadow." The Nation's capital of Window Rock is located within the Chapter. Also located within the St. Michaels Chapter boundary are the Window Rock Navajo Tribal Park, the Veterans' Memorial, Navajo tribal offices, the Navajo Nation Museum, and the Navajo Nation Zoological and Botanical Garden. The Chapter also contains two hotels, multiple restaurants, two grocery stores, several service stations, a thriving daily community flea market, and a host of small businesses. A number of employment opportunities, both public and private, are available within the St. Michaels Chapter, and the potential for continued development is very probable. **Figure 1-3** illustrates the location and boundary of the St. Michaels Chapter.

FIGURE 1-3 ST. MICHAELS CHAPTER BOUNDARY



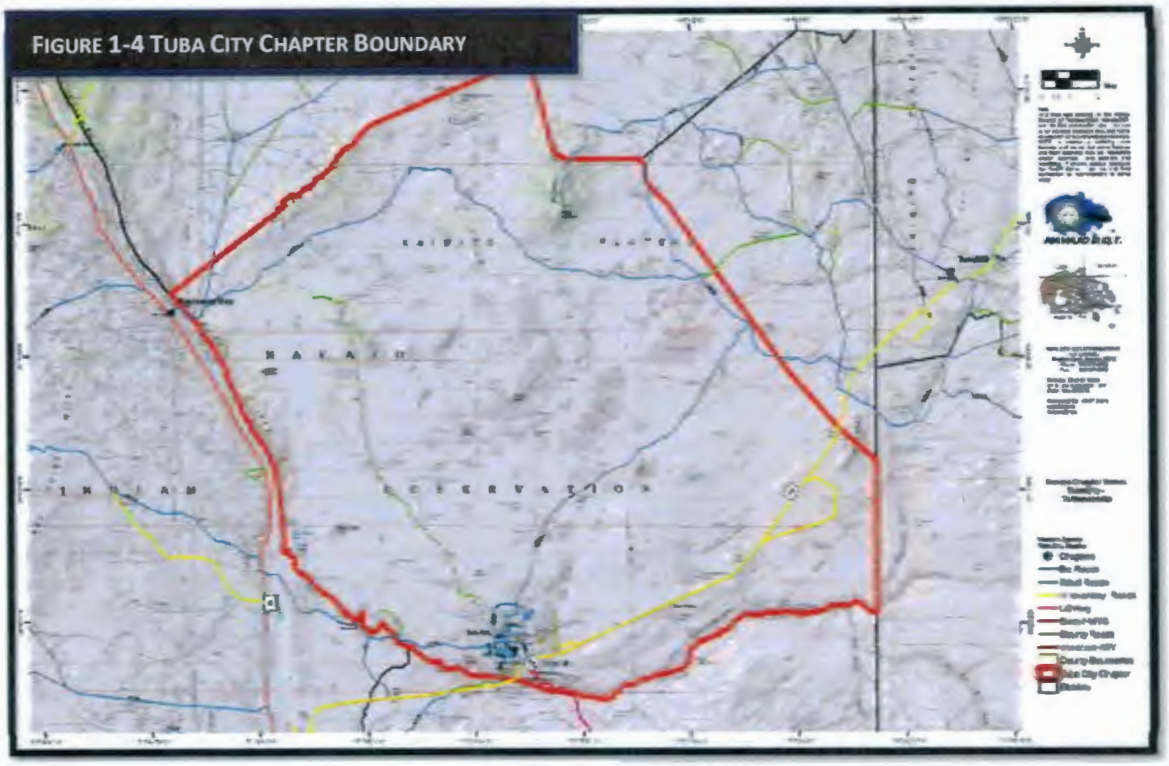
Source: Retrieved from http://www.navajodot.org, August 2014

1.3.2-3 TUBA CITY CHAPTER

Tuba City was founded by the Mormons in 1872. The name of the town honors Tuuvi, a Hopi headman from Oraibi who converted to Mormonism. The Navajo name for Tuba City, *Tó Naneesdizí* translates as "tangled waters," which most likely refers to the many springs below the surface of the ground which are the source of several reservoirs. Tuba City drew Hopi, Navajo, and Paiute Indians to the area because of its natural springs. In 1956, Tuba City became a uranium boomtown; the regional office for the Rare Metals Corporation and the Atomic Energy Commission were both located here.

To'Nanees'Dizi Local Government (formerly known as Tuba City Chapter) is located within the western edge of the Navajo Nation within the Painted Desert region. It is the Navajo Nation's largest community, and the headquarters of the Western Navajo Agency. Area attractions include the Explore Navajo Interactive Museum, Coal Mine Canyon, and Hahonogeh Canyon. **Figure 1-4** illustrates the location and boundary of the Tuba City Chapter.

FIGURE 1-4 TUBA CITY CHAPTER BOUNDARY



Source: Retrieved from http://www.navajodot.org, August 2014

1.3.2-4 CROWNPOINT CHAPTER

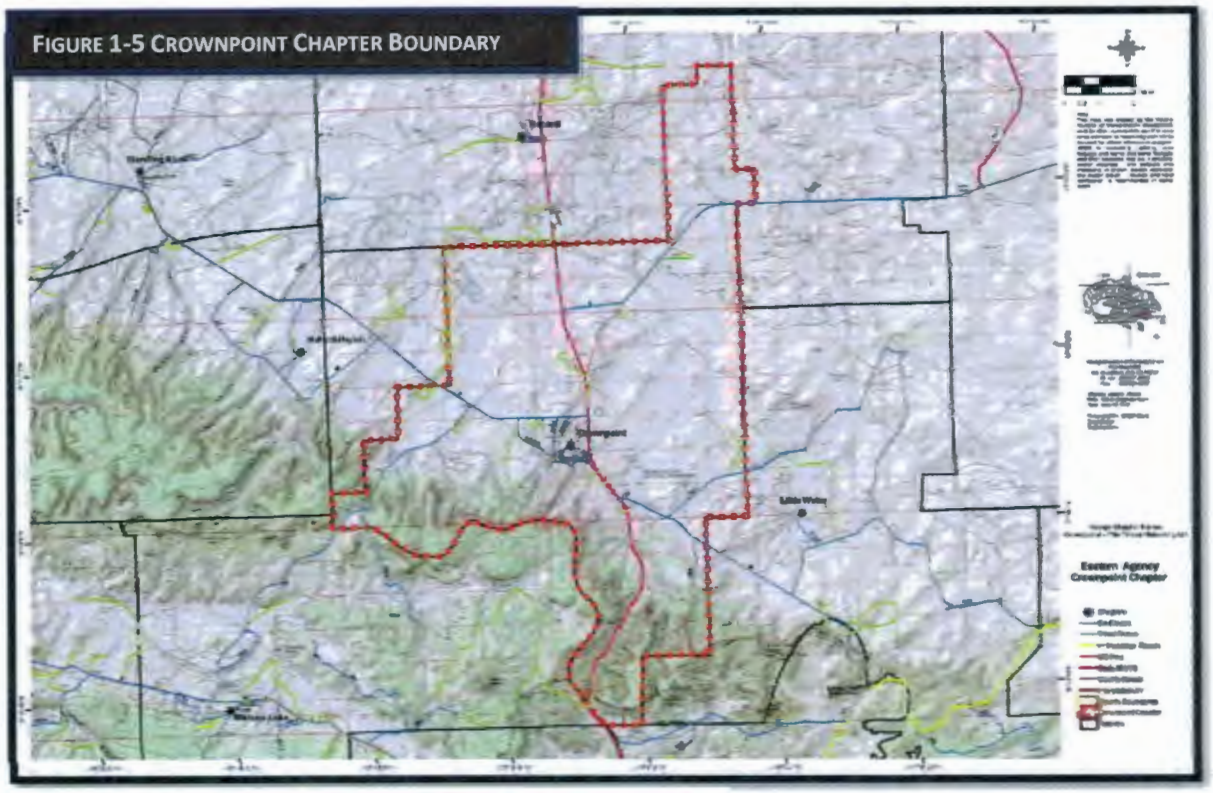
The history of Crownpoint goes back to the first inhabitants, the Anasazi, and then later the Dine, who lived in the local area. They called this area T'iis ts'ooz nideeshgiizh, which means "narrow trees in the canyon," because of the greasewood and cottonwood trees which grew in the back canyons. After relocating to the Crownpoint area from Idaho in 1910, Samuel F. Stacher established the first Eastern Navajo Agency and became the Agency's first Superintendent. Around the same time, he also established the Pueblo Bonito Boarding School. The community continued to grow, and shortly after a trading post, a church, and other residential housing were built in the area.

The Crownpoint community is located in the Northwestern region of New Mexico approximately 55 miles northeast of Gallup, New Mexico. The New Mexico State Vietnam Veterans Memorial Highway 371 travels through Crownpoint, connecting it with Farmington (82 miles to the north) and Thoreau, New Mexico (24 miles to the south). Since its completion in 1980, the highway has increased traffic volume in the area by 125 percent. This highway is also a part of the Scenic Byway, which connects tourists to cultural and historic scenic areas within the Navajo Nation.

The Crownpoint Chapter was established in 1965. Currently the Chapter is working on its Chapter Certification in compliance with the Local Governance Act. The Crownpoint Chapter Community Land-use Planning Committee was certified on December 30, 2004, and is working diligently to assist with the

development of the community thru economic development. **Figure 1-5** illustrates the location and boundary of the Crownpoint Chapter.

FIGURE 1-5 CROWNPOINT CHAPTER BOUNDARY



Source: Retrieved from http://www.navajodot.org, August 2014

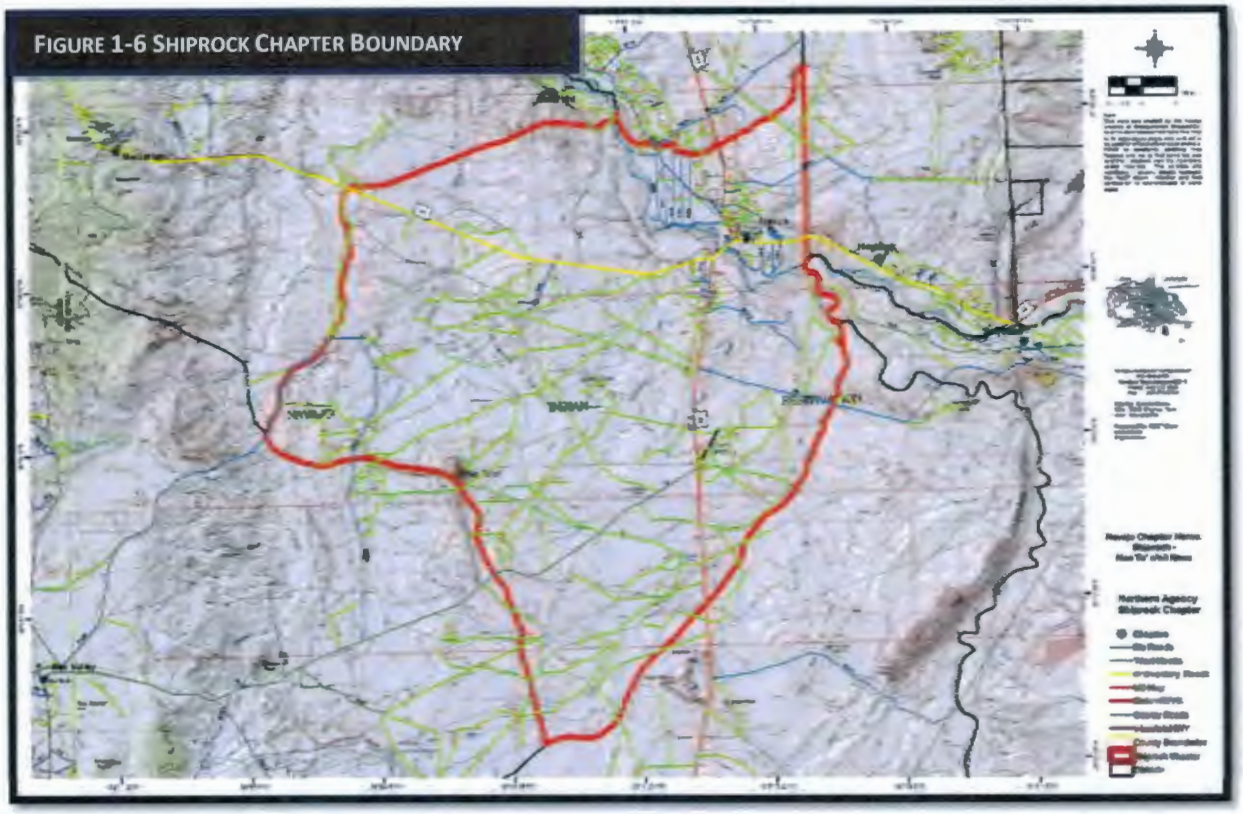
1.3.2-5 SHIPROCK CHAPTER

The community of Shiprock was originally named Naat'áanii Nééz, meaning "tall Chief," after Superintendent William T. Shelton, who founded Shiprock as a government settlement for the San Juan School and Agency in 1903. Now known as Tse' Bit' ai', meaning "the winged rock," Shiprock is named after the nearby rock formation which resembles a ship.

Shiprock is the largest Navajo community on the Navajo Nation and is located 28 miles west of Farmington, New Mexico. The community is home to the annual Northern Navajo Fair held every October. Since 1984, the community has been the host of the Shiprock Marathon and Relay. Shiprock is also home to a campus of Diné College, a tribally controlled community college with seven other campuses across the Nation. Also found within the community are a Chapter House, a Bureau of Indian Affairs agency, an Indian Health Service hospital, and a branch of Farmington Public Library. Shiprock is a key road junction for truck traffic and tourists visiting the Four Corners, Mesa Verde, Shiprock, and the Grand Canyon. The town lies at the intersection of U.S. Highway 64 and U.S. Highway 491.

The Shiprock Chapter conducts monthly meetings to keep residents informed and to decide matters concerning the Chapter. **Figure 1-6** illustrates the location and boundary of the Shiprock Chapter.

FIGURE 1-6 SHIPROCK CHAPTER BOUNDARY



Source: Retrieved from http://www.navajodot.org, August 2014

1.4 AIRPORT SYSTEM VISION, MISSION, GOAL, AND OBJECTIVES

Understanding the local Chapter governments and each of their unique perspectives assisted with the development of the airport system vision, which provided the overall framework for the development of the airport system as a whole. To provide context and to help guide the decision making process, the Navajo DOT and the Planning Advisory Committee (PAC), along with the community, were asked to support a vision for their airport system. The following is the vision statement developed by the PAC and agreed to by the Navajo DOT:

hózhǫ́ǫ́jí bee adéest'íí'

(Beauty Way Vision Statement)

A safe, accessible, and environmentally responsible airport system that enriches sustainability, self-sufficiency and respects our prestigious Navajo Nation culture benefiting future Dine' generations.

With consensus around a vision for the airport system, the next step was to develop a mission statement, goals, and objectives that support the vision. A meaningful mission statement, along with

focused goals and objectives formed the basis for the proposed development for the Navajo Nation system of airports. As a result of the second PAC meeting, the following mission statement was developed by the PAC and the Navajo DOT:

Create a flight plan for aviation development to benefit people living in, working on, and visiting throughout the Navajo Nation over the next decade and beyond.

A specific goal and set of objectives for the system of airports were also established by the PAC with input and guidance from the Navajo DOT. They provide guidance on how the Navajo DOT will develop their system of airports to be in alignment with the vision they have set out for themselves. The goal and objectives developed by the PAC and agreed to by the Navajo DOT include the following:

- Goal
  - Develop and improve the system of airports over time in such a manner that each community's desires are achieved.

- Objectives
  - Prioritize needs and phase development to be in alignment with available funding and operational sustainability;
  - Actively seek funding from federal, state, and non-traditional sources to develop and enhance the system of airports;
  - Establish and develop local partnerships;
  - Incorporate the airport system plan into Community Land-Use Plans (CLUP); and
  - Establish a Navajo Nation Aviation Advisory Board (NNAAB)

This goal and set of objectives are the starting point, and over time the Navajo DOT may add, revise, or modify the above goal/objectives as necessary to meet their needs.

1.5 Chapter Workshop Outcomes

A major goal of the workshops was to understand how the community feels about their airport. Using questionnaires and comment cards, the team asked all Chapter House participants to provide their input on the most important functions of their airport, their thoughts on priorities, and suggestions for improvements at their airports.

The questionnaire also asked the community about their satisfaction with their airport's name. The name of an airport can be very important to a community, and sometimes renaming an airport is necessary in order to reflect this importance. Based on the feedback received from the communities and discussion with the Navajo DOT, some of the airport names may be modified and new suggestions will be included in the final report.

Most of the community feedback centered on the physical condition of the airports and the need for improvements. Additionally, opportunities to enhance economic development and land withdrawal issues were also mentioned frequently. Each workshop exhibited these recurring themes. The following is a summary of the common themes received from the communities with regard to the improvement and development of each airport:

- Infrastructure improvements needed
- Economic development opportunities
- Land withdrawal issues/coordination
- Time frame of development
- Security issues
- Local presence, management, and maintenance possibilities
- Participation by the community in airport development
- Create education and training opportunities to add aviation professionals within the Nation

While each of these common themes are significant, it is important to note that economic development opportunities and the need for improvements were the most significant comments received from the workshops. Within each of the Chapter communities, everything from tourism, health care, and other community infrastructure development is tied to the improvement of the airport, locally and as a whole throughout the Nation. Additional information regarding the public outreach component of the study can be found in **Appendix B**.

1.6 SUMMARY

Ultimately, the goal of the Navajo Nation Airport System Plan is to provide direction for the future airport system development in a financially feasible manner which meets the needs of the Navajo Nation. In order to accomplish this goal, a greater understanding of each Chapter community with ties to an airport in the study was needed. Thus, an extensive public outreach program was developed in order to solicit and collect the wants and needs from each of the study airport communities. The establishment of the PAC committees and the Chapter workshops provided the vision, mission, goal and objectives for the study, and also provided other valuable insights such as the priority of needs for each community, satisfaction or dissatisfaction with the airport name, and other general feedback. This feedback from both the local communities and the higher echelons of the Navajo Nation government was an essential part of the study and weighed heavily in the facility requirements and proposed development that is outlined in the following chapters.

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Chapter Two

NAVAJO NATION AIRPORT SYSTEM

CHAPTER 2 - NAVAJO NATION AIRPORT SYSTEM

2.1 NAVAJO NATION AIRPORTS

2.1.1 FEDERAL IDENTIFICATION

The FAA's Airport/Facility Directory (A/FD) is a listing of data on record with the FAA on all open-to-the-public airports, seaplane bases, heliports, military facilities, and selected private use airports specifically requested by the Department of Defense (DOD). They contain VFR airport sketches, navigational aids, communications data, weather data sources, airspace, special notices, and operational procedures, as well as data that cannot be readily depicted in graphic form, such as type of fuel available or hours of operation. According to the latest A/FD dated November 2014, numerous airports are located on Native American tribal lands in the states of Arizona, New Mexico, and Utah. Six airports are located on the Navajo Nation. These airports include the following:

Arizona

- Chinle Municipal Airport
- Kayenta Airport
- Tuba City Airport
- Window Rock Airport

New Mexico

- Shiprock Airstrip
- Crownpoint Airport

Utah

- No airports appear in the Directory

2.1.2 STATE IDENTIFICATION

Many aeronautics divisions within a state's Department of Transportation also maintain their own airport system plans. Overall, these state aviation system plans identify airports and heliports that perform an essential role in the economic and social development within the state. Furthermore, they provide guidelines to help planners determine how to maximize the return on investment of public funds and identify what capital improvements would best serve the state's aviation needs. The Navajo Nation airports identified in state aviation system plans include:

Arizona

- Chinle Municipal Airport
- Kayenta Airport
- Window Rock Airport

- Ganado Airport (closed)
- Rock Point Airport (closed)
- Shonto Airport (closed)
- Pinon Airport (closed)
- Lukachukai Airport (closed)
- Rocky Ridge Airport (closed)
- Pine Springs Airport (closed)

New Mexico

- Shiprock Airstrip
- Crownpoint Airport

2.1.3 Navajo Nation Classification

According to the 2009 Navajo Nation Long Range Transportation Plan (LRTP), the Navajo Nation airport system consists of approximately 33 airports/airstrips located within the states of Arizona, New Mexico, and Utah. The airports/airstrips found on the Navajo Nation are classified as either primary, secondary, or private.

There are eight primary airports owned and maintained by the Navajo Nation. These airports are located within the Navajo Nation primary growth centers and are open for public use. The airports are predominantly used for medical emergencies, and secondarily for tribal business, with occasional use by tourists and general aviation enthusiasts. The Navajo Nation primary airports are:

Arizona

- Chinle Municipal Airport
- Ganado Airport (closed)
- Kayenta Airport
- Tuba City Airport
- Window Rock Airport

New Mexico

- Crownpoint Airport
- Shiprock Airstrip

Utah

- Oljato Airstrip (closed)

Construction of Shiprock Airstrip, Tuba City Airport, Crownpoint Airport, and Chinle Municipal Airport was completed between 1998 and 2003. Also during this time period, the Kayenta Airport had improvements made to the runway, parking area, and electrical components. Kayenta Airport management and operations are now administered by the Kayenta Township.

Ganado Airport is currently closed, but is planned to re-open sometime in 2015. When the airport was in operation, the most prominent service included emergency medical transportation to and from the Sage

Memorial Hospital. It is anticipated that once the airport is re-opened, the primary use of the airport will again be emergency medical transportation.

Window Rock Airport had some limited improvements made in 2009. It is the only primary airport with a general aviation terminal building. Window Rock is operated by the Navajo Nation Department of Air Transportation under the Division of General Services, which provides charter flight services to the Navajo Nation President and other tribal officials. Other private air transportation services are also available at Window Rock Airport.

Again, according to the 2009 Navajo Nation LRTP, the Navajo Nation airport system also consists of twenty airports classified as secondary airports. They consist of unpaved/dirt runways and do not have any types of support facilities. Many of the airports are closed and in poor condition. For the most part, these airports are used for medical emergencies and emergency landings only. Six of the Navajo Nation secondary airports are included in the Arizona State Aviation System Plan (ASASP), however they are listed as closed facilities not likely to open in the foreseeable future. None of the remaining secondary airports are included in either the Arizona, New Mexico, or Utah state aviation system plans.

Finally, there are five privately owned and maintained airports on the Navajo Nation according to the 2009 Navajo Nation LRTP. These include the following:

- Goulding's Airport
- Thoreau Airport
- Lake Valley
- Klagetoh Airport
- Black Mesa Airport

Over the last couple of years, the Navajo Nation has been exploring the possibility of developing a new airport in the Western Agency adjacent to the Twin Arrow Casino Resort located east of Flagstaff, Arizona. The airport would provide services to attract visitors to the casino and surrounding natural parks. The development of an airport at the Twin Arrow Casino Resort is the highest priority for new airport development on the Navajo Nation. The Navajo Nation is also considering new airports in the Eastern Agency near Ramah, New Mexico and in the Northern Agency near Aneth, Utah.

2.2 Study Airports

The five Navajo Nation airports included in this study are Chinle Municipal, Tuba City, Window Rock (located in Arizona) and Crownpoint and Shiprock (located in New Mexico). These airports were selected for inclusion in the study because they are included in the National Plan of Integrated Airport Systems (NPIAS), and therefore are eligible to receive airport development grants from the FAA. Furthermore, they are airports located within primary growth centers within the Navajo Nation. **Figure 2-1** depicts the location of the airports included in the study.

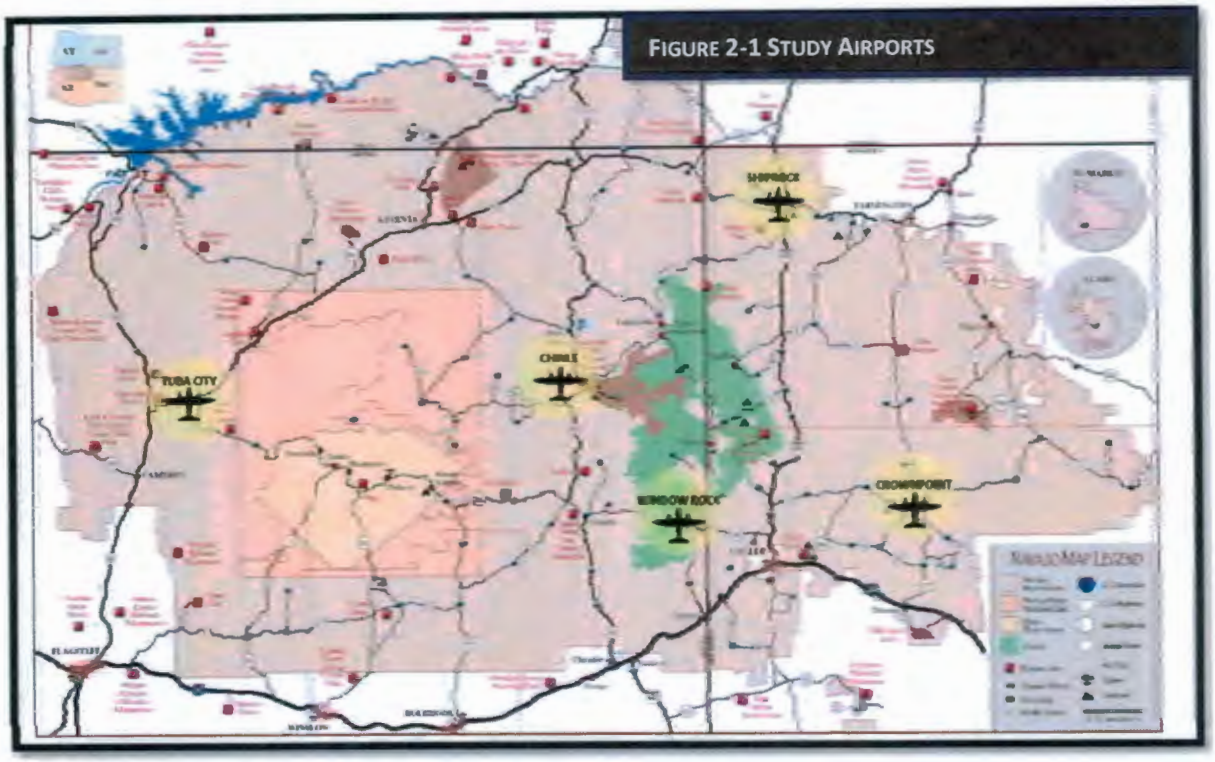

FIGURE 2-1 STUDY AIRPORTS

Source: 2009 Navajo Nation Long Range Transportation Plan, August 2014

2.3 AIRPORT SERVICE LEVEL/ROLE

Airport service levels/roles are often defined similarly from a national and state perspective. This section will define the different roles the Federal Aviation Administration (FAA) and the Arizona and New Mexico Department of Transportation (DOT) Aeronautics/Aviation Divisions have established for the study airports as contained within the NPIAS and the state aviation system plans. Additionally, the types of aeronautical activities most closely associated with the airport roles will be defined.

2.3.1 FEDERAL SERVICE LEVEL/ROLE

Since 1970, the FAA has classified a subset of the 5,400 public-use airports in the United States as being vital to serving the public needs for air transportation, either directly or indirectly, and therefore eligible for federal funding to maintain their facilities. These airports are classified within the NPIAS, where the airport service level reflects the type of public use the airport provides. The service level also reflects the funding categories established by Congress to assist in airport development. The categories of airports listed in the NPIAS are:

Commercial Service - public airports that accommodate scheduled air carrier service provided by the world's certificated air carriers. Commercial service airports are either:

- Primary – a public-use airport that enplanes more than 10,000 passengers annually

- Non-primary - a public-use airport that enplanes between 2,500 and 10,000 passengers annually.

Reliever - an airport designated by the FAA as having the function of relieving congestion at a commercial service airport by providing more general aviation access. These airports comprise a special category of GA airports and are generally located within a relatively short distance of primary airports. Privately owned airports may also be identified as reliever airports.

General Aviation (GA) – airports used exclusively by private and business aircraft not providing scheduled air carrier passenger service. There are many GA airports that are not included in the NPIAS, however, one criterion for inclusion is that the airport has at least 10 based aircraft and is located at least 20 miles away from the nearest NPIAS airport.

In May of 2012, the FAA published a report entitled *General Aviation Airports: A National Asset*. As part of the 18-month effort, the FAA documented the important airport roles and aeronautical functions these facilities provide to their communities and the national airport system. These functions include emergency preparedness and response, direct transportation of people and freight, commercial applications such as agricultural spraying, aerial surveying and oil exploration, and many others. Many of these functions cannot be supported efficiently or economically at primary airports. General aviation facilities were divided into four categories based on existing activity measures (e.g., the number and types of based aircraft and volume and types of flights). A follow-up study was published in March of 2014 entitled *ASSET 2: In-Depth Review of the 497 Unclassified Airports*. As a result of this study, the FAA was able to re-evaluate these unclassified airports and successfully re-classify 212 airports into one of the four GA categories. It was noted that Shiprock and Window Rock airports were a part of the 212 that were re-classified as a result of the ASSET 2 report.

For the purpose of this study, only the category which applies to the study airports needs explanation. All of the study airports are classified as basic. According to the original report, airports which fall into the basic category support general aviation activities, often serving critical aeronautical functions within the local community such as emergency response and access to remote communities. These airports have moderate levels of activity with an average of 10 propeller-driven based aircraft and no jets.

2.3.2 State Service Level/Role

At the state level, the Arizona Department of Transportation, Multimodal Planning Division, Aeronautics Group (ADOT–MPD Aeronautics) has long recognized the importance of planning as a proactive approach to ensuring aviation continues its role in the statewide transportation system. They created a similar plan to the FAA's NPIAS in 1978 called the Arizona State Airports System Plan (ASASP). The purpose of the ASASP is to provide a framework for the integrated planning, operation, and development of Arizona's aviation assets. The most current version of the ASASP was published in 2008. Likewise, the New Mexico Department of Transportation Aviation Division also publishes a similar plan called the New Mexico Airport System Plan (NMASP) which serves to assess the needs of the State's airport system, justify funding for needed airport improvements, and provide information for governmental and other entities concerning the value, use, and needs of New Mexico's system of airports. The most current version of the NMASP is the 2009 Update; an update to the 2009 version began in July 2014.

The ASASP and NMASP also classify airports into service roles. According to the ASASP, Chinle Municipal, Tuba City, and Window Rock are categorized as GA rural airports. The ASASP defines a GA rural airport as an airport that serves a supplemental role in local economies, primarily serving smaller business, recreational, and personal flying. According to the NMASP, Crownpoint and Shiprock Airstrip are categorized as low activity GA airports. The NMASP defines a low activity GA airport as an airport which plays a limited role in contributing to the local economy due to the limited activity. These airports primarily provide emergency or remote access, with some recreational and personal flying activities. A summary of the NPIAS and state aviation system plan GA categories are illustrated in **Table 2-1**.

TABLE 2-1 FEDERAL AND STATE GA CATEGORY CLASSIFICATION

Associated City	Airport Name	FAA ID	NPIAS Classification	SASP Classification
Chinle, AZ	Chinle Municipal	E91	GA - Basic	GA - Rural
Tuba City, AZ	Tuba City	T03	GA - Basic	GA - Rural
Window Rock, AZ	Window Rock	RQE	GA - Basic	GA - Rural
Crownpoint, NM	Crownpoint	0E8	GA - Basic	Low Activity GA
Shiprock, NM	Shiprock Airstrip	5V5	GA - Basic	Low Activity GA

Sources: FAA National Plan of Integrated Airport Systems (2013-2017) Report; 2008 Arizona State Aviation System Plan; New Mexico Airport System Plan Update 2009; July 2014.

2.4 AERONAUTICAL ACTIVITIES

The role of a general aviation airport lends itself to specific aeronautical activities. The types of aeronautical activities that may be associated with the study airports include the following:

Air Medical Evacuation Services: The air medical evacuation (medevac) services provide quick and efficient transportation in emergency situations when time is of the essence, resulting in countless lives saved. The most common aircraft operated in this user category include turbine-engine rotorcrafts and multi-engine piston or turbo-props.

Business Transportation: Business aviation users must travel to or from commerce centers to conduct activities in a single day, without requiring an overnight stay or extensive ground travel time. This includes travel by state and federal government agency officials (including Navajo Nation government officials). Generally, single-engine and multi-engine piston or turbo-prop aircraft are used by local or small business travelers; large corporations may utilize a wide variety of jet aircraft.

Recreational and Tourism: This category includes transient pilots and passengers flying into the region to visit recreational and tourist attractions. Single-engine piston aircraft are the most common aircraft used within this category; however, a small percentage of multi-engine piston or turbo-prop aircraft

may be used. Other types of aircraft in this category include home-built, experimental aircraft, gliders, and ultralights.

Flight Training: Local and itinerant flights conducted in order to meet flight proficiency requirements for obtaining FAA pilot certifications are included in this category. These flights include touch-and-go operations, day and night local and cross-country flights, and practice instrument approaches. The most common aircraft operating in this category include single- or multi-engine piston or turbo-prop aircraft.
Military: Military operations are those conducted by U.S. or foreign military aircraft and personnel for the purposes of national security and defense. Almost all military operations taking place within U.S. airspace are training or proficiency related activities. A wide range of aircraft may be used for these operations, including multi-engine piston or turbo-prop, turbo-jet, jet, or rotary aircraft.

Aerial Firefighting: State and Federal fire-fighting professionals working to control or extinguish wild fires located within the general vicinity or geographic region of the airport fall within this category. These operations may be greater during the Arizona and New Mexico wildfire season of May through July. Large rotary aircraft, multi-engine aerial tankers, and single-engine patrol aircraft are the most common types of aircraft included within this category.

2.5 Evaluation of Existing Aeronautical Activities

One goal of this study was to verify if the types of aeronautical activities associated with the airports are accurate, and if not, identify aeronautical uses that have not been captured. During the first Chapter House workshops held as part of this study, the community members in attendance were asked what types of aeronautical activities were most commonly associated with their airport. They were also asked to identify which activities they felt were the most important. The methodology used to ultimately define the roles and types of aeronautical activities for each airport in the study had a more qualitative rather than a quantitative approach.

Table 2-2 depicts a summary of the associated aeronautical activities for each study airport as professed by the local community members in attendance. Only three airports were perceived to have all of the activities mentioned occurring at the airport. Furthermore, the most commonly perceived activities to occur at *all* airports according to the community members present are air medical evacuation (medevac), business transportation, and aerial firefighting. Of the total completed questionnaires that were returned from all workshops, 84 percent indicated that air medical evacuation services are the most important to the community; the second and third most important are business transportation and recreational and tourism activities (both tied at 8 percent).

TABLE 2-2 SUMMARY OF PERCEIVED AERONAUTICAL ACTIVITIES BY COMMUNITY

Airport Name	Agency	Chapter	Associated City	Airport Aeronautical Activities					
				Medevac	Recreational and Tourism	Business (including government use)	Flight Training	Aerial Firefighting	Military
Arizona Airports									
Chinle Municipal Airport	Chinle	Chinle	Chinle	✓	✓	✓	✓	✓	✓
Tuba City Airport	Western	Tuba City	Tuba City	✓	✓	✓	✓	✓	✓
Window Rock Airport	Ft. Defiance	St. Michaels	Window Rock	✓		✓		✓	
New Mexico Airports									
Crownpoint Airport	Eastern	Crownpoint	Crownpoint	✓	✓	✓		✓	
Shiprock Airstrip	Northern	Shiprock	Shiprock	✓	✓	✓	✓	✓	✓

Source: ACI, September 2014

2.6 SURROUNDING AIRPORTS

A comparison of several other neighboring airports in the vicinity of the study airports was conducted in order to provide an overall picture of the types of aeronautical facilities available to the surrounding communities. These neighboring airports may or may not fall within the Navajo Nation boundary, however were still included for informational purposes. This type of comparison is typically performed in order to define an airport's service area. An airport service area is defined by the communities and surrounding areas served by the airport facility. For example, factors such as the airport's surrounding topographical features (mountains, rivers, etc.), proximity to its users, quality of ground access, required driving time to the airport, and the proximity of the facility to other airports that offer the same or similar services, can all affect the size of a particular airport's service area. **Tables 2-3** through **2-7** describe the airports surrounding the study airports.

TABLE 2-3 AIRPORTS IN VICINITY OF CHINLE MUNICIPAL AIRPORT (E91)

Airport	Location	Airport Type	Ownership/Use	Distance from E91 (nm) and Direction	Runway Information	Instrument Approaches	Aviation Fuel Available
Kayenta Airport (0V7)	Kayenta, Arizona	GA	Public/Public	48 Northwest	5-23 (Asphalt) 7,101' x 75'	None	No
Peabody Bedard Field Airport (38AZ)	Kayenta, Arizona	GA	Private/Private	46 Northwest	2-20 (Asphalt) 7,500' x 75'	None	No
Polacca Airport (P10)	Polacca, Arizona	GA	Public/Public	45 Northwest	4-22 (Asphalt) 4,200' x 50'	None	No
Rocky Ridge Airport (50AZ)	Rocky Ridge, Arizona	GA	Public/Private	49 West	3-21 (Dirt) 2,500' x 45'	None	No
Window Rock Airport (RQE)[1]	Window Rock, Arizona	GA	Public/Public	37 Southeast	2-20 (Asphalt) 7,500' x 75'	RNAV, GPS, VOR/DME	Yes (private)

Source: Retrieved from www.Airnav.com, July 2014. [1]Airport included as one of the five study airports within this report. Acronyms: Area Navigation (RNAV), General Aviation (GA), Global Positioning System (GPS), Nautical Mile (nm), Very High Frequency Omni-Directional Range (VOR), Distance Measuring Equipment (DME)

TABLE 2-4 AIRPORTS IN VICINITY OF TUBA CITY AIRPORT (T03)

Airport	Location	Airport Type	Ownership/Use	Distance from T03 (nm) and Direction	Runway Information	Instrument Approaches	Aviation Fuel Available
Grand Canyon National Park (GCN)	Grand Canyon, Arizona	Commercial Service - Primary	Public/Public	38 West	3-21 (Asphalt) 8,999' x 150'	ILS, LOC DME, GPS, VOR	Yes
Kayenta Airport (0V7)	Kayenta, Arizona	GA	Public/Public	67 Northeast	5-23 (Asphalt) 7,101' x 75'	None	No
Page Municipal Airport (PGA)	Page, Arizona	Commercial Service - Primary	Public/Public	50 North	15-33 (Asphalt) 5,950' x 150' 7-25 (Asphalt) 2,201' x 75'	RNAV, VOR	Yes
Polacca Airport (P10)	Polacca, Arizona	GA	Public/Public	50 East	4-22 (Asphalt) 4,200' x 50'	None	No
Peabody Bedard Field Airport (38AZ)	Kayenta, Arizona	GA	Private/Private	52 North-Northeast	2-20 (Asphalt) 7,500' x 75'	None	No

Source: Retrieved from www.Airnav.com, July 2014. Acronyms: Area Navigation (RNAV), General Aviation (GA), Global Positioning System (GPS), Instrument Landing System (ILS), Nautical Mile (nm), Very High Frequency Omni-Directional Range (VOR), Localizer (LOC), Distance Measuring Equipment (DME)

TABLE 2-5 AIRPORTS IN VICINITY OF WINDOW ROCK AIRPORT (RQE)

Airport	Location	Airport Type	Ownership/ Use	Distance from RQE (nm) and Direction	Runway Information	Instrument Approaches	Aviation Fuel Available
Chinle Municipal Airport (E91)[1]	Chinle, Arizona	GA	Public/Public	37 Northwest	18-36 (Asphalt) 6,902' x 60'	None	Yes (private)
Crownpoint Airport (0E8)[1]	Crownpoint, New Mexico	GA	Public/Public	42 East	18-36 (Asphalt) 5,820' x 60'	None	No
Gallup Municipal Airport (GUP)	Gallup, New Mexico	GA	Public/Public	16 Southeast	6-24 (Asphalt) 7,316' x 100'	RNAV, LOC, VOR	Yes
Holbrook Municipal Airport (P14)	Holbrook, Arizona	GA	Public/Public	68 Southwest	3-21 (Asphalt) 6,698' x 75' 11-29 (Dirt) 3,202' x 120'	None	Yes
Polacca Airport (P10)	Polacca, Arizona	GA	Public/Public	50 East	4-22 (Asphalt) 4,200' x 50'	None	No

Source: Retrieved from www.Airnav.com, July 2014. [1]Airport included as one of the five study airports within this report. Acronyms: Area Navigation (RNAV), General Aviation (GA), Nautical Mile (nm), Very High Frequency Omni-Directional Range (VOR), Localizer (LOC)

TABLE 2-6 AIRPORTS IN VICINITY OF CROWNPOINT AIRPORT (0E8)

Airport	Location	Airport Type	Ownership /Use	Distance from 0E8 (nm) and Direction	Runway Information	Instrument Approaches	Aviation Fuel Available
Aztec Municipal Airport (N19)	Aztec, New Mexico	GA	Public/ Public	68 North	8-26 (Asphalt) 4,314' x 60' 4-22 (Asphalt) 2,850' x 40'	None	Yes
Black Rock Airport (ZUN)	Zuni Pueblo, New Mexico	GA	Public/ Public	48 Southwest	6-24 (Asphalt) 4,807' x 50'	RNAV, GPS, VOR/DME	No
Gallup Municipal Airport (GUP)	Gallup, New Mexico	GA	Public/ Public	31 Southwest	6-24 (Asphalt) 7,316' x 100'	RNAV, LOC, VOR	Yes
Grants-Milan Municipal Airport (GNT)	Grants, New Mexico	GA	Public/ Public	36 Southeast	13-31 (Asphalt) 7,172' x 75'	RNAV, GPS	Yes
Window Rock Airport (RQE)[1]	Window Rock, Arizona	GA	Public/ Public	42 West	2-20 (Asphalt) 7,500' x 75'	RNAV, GPS, VOR/DME	Yes (private)

Source: Retrieved from www.Airnav.com, July 2014. [1]Airport included as one of the five study airports within this report. Acronyms: Area Navigation (RNAV), General Aviation (GA), Global Positioning System (GPS), Nautical Mile (nm), Very High Frequency Omni-Directional Range (VOR), Distance Measuring Equipment (DME), Localizer (LOC)

TABLE 2-7 AIRPORTS IN VICINITY OF SHIPROCK AIRSTRIP (5V5)

Airport	Location	Airport Type	Ownership/ Use	Distance from 5V5 (nm) and Direction	Runway Information	Instrument Approaches	Aviation Fuel Available
Aztec Municipal Airport (N19)	Aztec, New Mexico	GA	Public/ Public	33 East	8-26 (Asphalt) 4,314' x 60' 4-22 (Asphalt) 2,850' x 40'	None	Yes
Four Corners Regional Airport (FMN)	Farmington, New Mexico	GA	Public/ Public	23 East	7-25 (Asphalt) 6,704' x 100' 5-23 (Asphalt) 6,500' x 150'	ILS/LOC, RNAV, GPS, VOR/DME, VOR	Yes
Cortez Municipal Airport (CEZ)	Cortez, Colorado	GA	Public/ Public	37 North	3-21 (Asphalt) 7,205' x 100'	RNAV, GPS, VOR	Yes
Kayenta Airport (0V7)	Kayenta, Arizona	GA	Public/ Public	74 West	5-23 (Asphalt) 7,101' x 75'	None	No
Window Rock Airport (RQE)[1]	Window Rock, Arizona	GA	Public/ Public	65 South-Southwest	2-20 (Asphalt) 7,500' x 75'	RNAV, GPS, VOR/DME	Yes (private)

Source: Retrieved from www.Airnav.com, July 2014. [1]Airport included as one of the five study airports within this report. Acronyms: Area Navigation (RNAV), General Aviation (GA), Instrument landing System (ILS), Localizer (LOC) Global Positioning System (GPS), Nautical Mile (nm), Very High Frequency Omni-Directional Range (VOR), Distance Measuring Equipment (DME)

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Chapter Three

CURRENT FUNDING POLICIES

CHAPTER 3 - CURRENT FUNDING POLICIES

3.1 INTRODUCTION

The purpose of this chapter is to summarize the current funding policies pertaining to the Navajo Nation airports at the federal and state levels. Each of the following policies impact the Nation's airport system and are critical to its long-term development and sustainability.

Current Policies:

- Federal funding policies
- Arizona Revised Statutes (A.R.S.) Title §28, Chapter 25 - Aviation
- Arizona State Transportation Board Policies (Revised November 8, 2013)
- Arizona Department of Transportation, Five-Year Airport Capital Improvement Program Guidelines
- New Mexico State Grant Program

3.2 FEDERAL FUNDING POLICIES

The FAA reauthorization legislation enacted on February 14, 2012, authorized appropriations to the FAA from fiscal year 2012 through fiscal year 2015. The legislation also seeks to improve aviation safety and capacity of the national airspace system, provide a framework for integrating new technology safely into our airspace, provide a stable funding system, and advance the implementation of the Next Generation Air Transportation System (NextGen).

According to the FAA Airport Improvement Program Handbook dated September 30th, 2014, the FAA Airport Improvement Program (AIP) provides grants to public agencies and, in some cases, to private owners and entities for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). A public-use airport is an airport open to the public that also meets the following criteria:

- Publicly owned, or
- Privately owned but designated by FAA as a reliever, or
- Privately owned but having scheduled service and at least 2,500 annual enplanements.

Further, to be eligible for a grant, an airport must be included in the NPIAS. The NPIAS, which is prepared and published every 2 years, identifies public-use airports that are important to public transportation and contribute to the needs of civil aviation, national defense, and the Postal service.

Recipients of grants are referred to as "sponsors." The description of eligible grant activities is described in the authorizing legislation and relates to capital items serving to develop and improve the airport in areas of safety, capacity, and noise compatibility. In addition to these basic principles, a sponsor must be

legally, financially, and otherwise able to carry out the assurances and obligations contained in the project application and grant agreement.

Eligible projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. In general, sponsors can use AIP funds on most airfield capital improvements or repairs and in some specific situations, for terminals, hangars, and non-aviation development. Any professional services that are necessary for eligible projects, such as planning, surveying, and design, are eligible. Aviation demand at the airport must justify the projects, which must also meet Federal environmental and procurement requirements.

Projects related to airport operations and revenue-generating improvements are typically not eligible for funding. Operational costs, such as salaries, equipment, and supplies, are also not eligible for AIP grants.

For large and medium primary hub airports, the grant covers 75 percent of eligible costs (or 80 percent for noise program implementation). For small primary, reliever, and general aviation airports, the grant covers a range of 90-95 percent of eligible costs, based on statutory requirements.

3.3 Arizona Revised Statutes A.R.S. Title §28, Chapter 25 - Aviation

The Arizona Revised Statutes (A.R.S.) are laws established by the state of Arizona. The current A.R.S. have more than 49 titles, including Title §28 which addresses transportation. Chapter 25 establishes the guidelines and requirements for the Aeronautics Division and the Director of Aviation to follow in order to encourage and advance the safe and orderly development of aviation in the state. The Director uses the statutes, along with the State Transportation Board Aviation Policies, to develop programs and procedures to fulfill the mandates and direct staff to implement and maintain the programs.

A.R.S. Title §28, Chapter 25 includes eight articles that address issues such as:

- General Provisions
- Aeronautics Division
- Aircraft Operation
- Aircraft Registration and Taxation
- Aircraft Dealers
- Airports in General
- Airport Zoning and Regulation
- Joint-Power Airport Authorities

An important piece of legislation impacting the Navajo Nation Airport System was signed by the Governor on June 14, 2013. A.R.S. Title §28, Chapter 25, Article 1 was amended via Senate Bill 1317 and was a landmark bill for the Navajo Nation airport system. In brief, SB 1317 authorizes ADOT to fund the planning, design, development, acquisition of interests in land, construction, and improvement of publicly owned and operated airport facilities in counties, incorporated cities, and towns on Native American reservations. The bill in its entirety can be reviewed in **Appendix E**.

3.4 Arizona State Transportation Board Policies

The Arizona State Transportation Board (STB) revised November 8, 2013, is responsible for developing rules to administer the Arizona Revised Statutes and create statewide transportation policies. There are six STB policies that are applicable to the state airports system. The purpose of the policies is to maximize funding resources and advance the safe and orderly development of the airport system. The STB policies are updated on a regular basis to address specific issues brought to the attention of ADOT and aviation in general that are within the statutory authority of the division.

Of the current 43 STB policies, the following are related to aviation:

37. State Airport System Policy
38. State Airports System Plan (SASP) Policy
39. Airport Development Program Policy
40. Resource Allocation Policy
41. Project Selection and Prioritization Criteria Policy
42. Adequate Funding Policy
43. Regional and National Cooperative Planning and Best Practices Policy

3.5 ADOT Five-Year Airport Capital Improvement Program Guidelines

The purpose of the Five-Year Airport Capital Improvement Program (ACIP) is to maximize the effective use of state dollars for the development of airports while maximizing FAA Airport Improvement Program (AIP) funds for Arizona airports. The ADOT Multimodal Planning Division - Aeronautics Group develops a five-year ACIP program that is reviewed and approved annually by the State Transportation Board in conjunction with the STB Policies.

The ACIP allocates funds for eligible projects from the State Aviation Fund and distributes these funds across three major funding categories:

- Airport Development Grants Program
- Airport Loan Program
- Arizona Pavement Preservation Program (APPP)/Airport Pavement Management System (APMS)

3.6 New Mexico State Grant Program

The New Mexico Department of Transportation Aviation Division administers State grant programs for funding airport planning, construction, and maintenance projects. Matching grant funds for FAA AIP grants, state, and local only grants are also provided by the New Mexico Aviation Division. The Division establishes the overall policy and procedures for the development and funding of capital improvements. General fund appropriations, aviation fuel taxes, and registration fees on aircraft based in New Mexico are the primary sources of funding used by the Division. The revenue generated from these taxes and fees are deposited into a restricted account. The Aviation Division also receives a general fund appropriation from the New Mexico State Legislature.

3.7 Summary

As presented in this chapter, the Navajo Nation has funding sources available from the FAA, ADOT, and NMDOT for the development of the airports included in the study. The FAA provides general aviation airports across the country with the majority of funding for eligible development projects. Both ADOT and NMDOT also have funding programs that airports in Arizona and New Mexico may take advantage of.

Provided the current federal and state programs continue to be funded at their current levels, the Navajo Nation may benefit from each of these programs. Most of the projects depicted on the proposed Airport Layout Plans (ALPs) are eligible for funding. In general, projects are eligible for funding provided they are not revenue generating development projects. Projects such as runways, taxiways, aprons, and navigational aids are eligible for funding, whereas hangars that generate revenue are not. The Financial Feasibility Analysis chapter will discuss in more detail what projects are eligible and how the funding can be phased over the planning period.

Chapter Four

INVENTORY OF AIRPORT SYSTEM ASSETS

CHAPTER 4 - INVENTORY OF AIRPORT SYSTEM ASSETS

4.1 INTRODUCTION

The purpose of this chapter is to identify and depict existing conditions at the Navajo Nation airports using tables, charts, and graphics. An accurate and thorough inventory of existing airport assets is necessary to ensure the results of the Navajo Nation Airport System Master Plan (NNASMP) are factual, and most importantly, implementable. The inventory portion of the study serves as the primary source of data for analysis. Additional data gathered from other sources is included where applicable. The data presented in the chapter is organized as follows:

- Data collection methods
- Grant history and financial data
- Airport planning documents
- Airport activity
- Airspace structure and components
- Instrument approach capabilities
- Runway wind coverage
- Existing airside facility inventory
- Existing landside facility inventory
- Navajo Nation lands and leases
- Compatible land use
- Environmental considerations
- Airport sustainability

4.2 DATA COLLECTION METHODS

Data for this study was obtained from a variety of sources including on-site visits to the airports. Members of the consultant team reviewed all available records and conducted field observations and measurements. In addition to the on-site visits, other sources of information including FAA, Navajo DOT, and ADOT/NMDOT Aeronautics Division databases were used. Previous studies for individual airports provided additional information regarding the Navajo Nation airport system. The following specific sources of information were used to supplement data gathered during the inventory process:

- Airport Master Plans
- Airport Layout Plans
- Record drawings and reports
- FAA Terminal Area Forecasts (TAF)
- FAA Airport Master Record Form 5010-1
- Arizona State Airports System Plan 2008
- New Mexico Airport System Plan Update 2009

- Navajo Nation Long Range Transportation Plan 2009

4.3 Grant History and Financial Data

4.3.1 Grant History

The Federal grant history for the Navajo Nation is presented in **Table 4-1**. It contains the FAA Airport Improvement Program (AIP) grants received within the last five years.

Table 4-1 FAA AIP Grant History for Study Airports in Arizona and New Mexico

Federal Fiscal Year	Federal Grant Number	Project Description	Federal Grant Amount
2010	-	-	-
2011	3-04-D303-01-11	Master Plan	$600,000
	3-04-D303-XX-11	Window Rock Airport Runway Rehabilitation	$841,700
2012	-	-	-
2013	-	-	-
2014	-	-	-
Total amount			**$1,341,700**

Source: Retrieved from http://www.faa.gov/airports/aip/grant_histories/, July 2014

4.3.2 Airport Financial Data

Financial data was gathered for the Navajo Nation Airports System Master Plan directly from the Nation's Finance Department. The five-year Capital Improvement Program (CIP) for each of the study airports was obtained and validated against the current conditions of each facility and future needs. Additionally, current funding sources and projected amounts were identified, along with an understanding of how such funding sources will be allocated against the operations and facility needs of each of the study airports.

Members of the consultant team met with the Finance Department in order to gather information pertaining to the prior year's budget history, operating agreements, and leasing revenue history for each airport in order to establish a baseline for future financial forecasting. From this data, a comprehensive picture of the current financial structure of the Navajo Nation Airports System was created. This served

as the basis for development of the future financial structure necessary to support and operate each of the airports within the system.

4.4 Airport Planning Documents

A few of the airports included in the study have had master plans and airport layout plans prepared (see **Table 4-2**). In order for an airport to be eligible for federal and state funding, the FAA requires that airports have an airport master plan or airport layout plan approved and on file with the FAA and the state DOT. Projects are not eligible for FAA or state DOT funds if they are not identified in an airport master plan and shown on an approved airport layout plan.

The completion dates of master plans and airport layout plans at the airports included in this study are summarized in **Table 4-2**. The FAA approval date of the ALP is also shown.

Table 4-2 Study Airports' Airport Master Plans and Airport Layout Plans

Airport Name	Associated City	FAA ID	Master Plan	ALP	FAA ALP Approval Date
Arizona Airports					
Chinle Municipal Airport	Chinle	E91	N/A	1992	1992
Tuba City Airport	Tuba City	T03	2005	2005	2009
Window Rock Airport	Window Rock	RQE	1998	1998	2001
New Mexico Airports					
Crownpoint Airport	Crownpoint	0E8	N/A	N/A	N/A
Shiprock Airstrip	Shiprock	5V5	N/A	N/A	N/A

Sources: 2008 Arizona State Airports System Plan; New Mexico Airport System Plan Update 2009
Note: N/A = not applicable

4.5 Airport Activity

There are various federal, state, and local sources available for determining existing activity levels at an airport. These include, but are not limited to, FAA 5010-1 Form, FAA Terminal Area Forecast (TAF), an on-site inventory, and airport management records.

The FAA *Airport Master Record*, Form 5010-1, is the official record kept by the FAA to document airport physical conditions and other pertinent information. The data is typically collected from the airport sponsor and includes an annual estimate of aircraft activity as well as the number of based aircraft. The accuracy of the data contained in the 5010-1 Form varies directly with the airport manager's record keeping system and the date of its last revision.

The TAF is a historical record and contains forecast projections of based aircraft and annual operations. The TAF is maintained and utilized by the FAA for planning and budgeting purposes. The TAF data may not accurately reflect the based aircraft and operations numbers, as it is dependent on when it was last updated by the FAA. Furthermore, it is difficult to accurately record aircraft operations at airports that are not equipped with an air traffic control tower. Normally, operations are recorded by air traffic controllers and reported to the FAA. In this instance, none of the airports in the study have an air traffic control tower.

An on-site inventory of airport facilities is also a valuable method of collecting data. This data collection process was performed by members of the consultant team for each airport. The airport inventories were conducted June through August 2014. In addition to the on-site inventories, data was also collected from Navajo DOT Airports Management personnel.

The existing aircraft operations and based aircraft for each airport are displayed in **Table 4-15** found at the end of this chapter.

4.6 Airspace Structure and Components

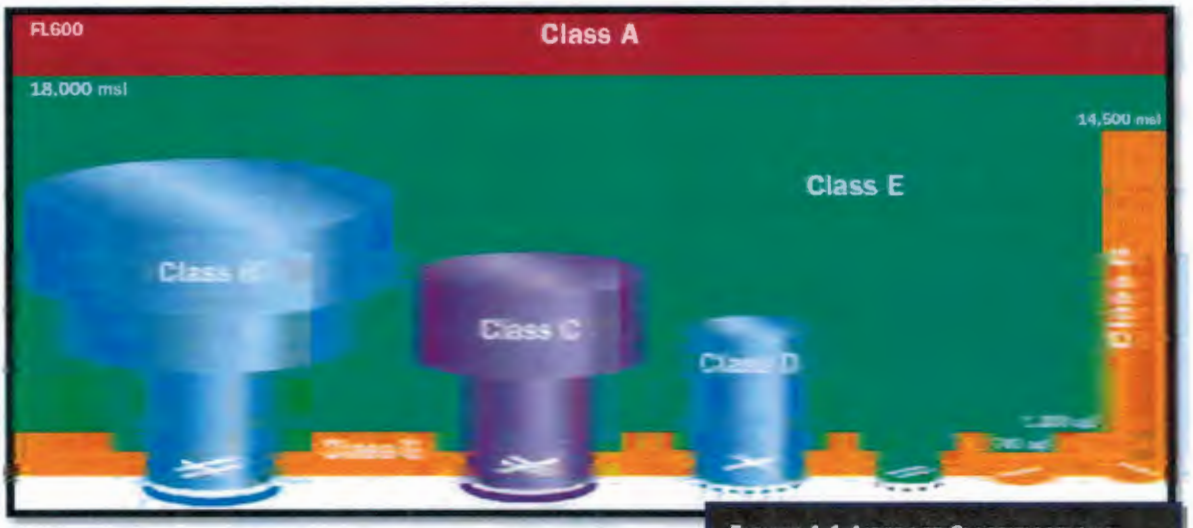
4.6.1 Airspace Classifications

The National Airspace System (NAS) consists of various classifications of airspace that are regulated by the FAA. Airspace is either controlled or uncontrolled. Pilots flying in controlled airspace are subject to Air Traffic Control (ATC) and must follow either Visual Flight Rules (VFR) or Instrument Flight Rules (IFR) requirements. These requirements include combinations of operating rules, aircraft equipment and pilot certification, and vary depending on the Class of airspace. These rules are described in Federal Aviation Regulations (FAR) Part 71, *Designation of Class A, Class B, Class C, Class D and Class E Airspace Areas; Airways; Routes; and Reporting Points* and FAR Part 91, *General Operating and Flight Rules*. A graphical representation of the different airspace classes is shown in **Figure 4-1**. General definitions of the classes of airspace are provided below:

- **Class A Airspace** - Airspace from 18,000 feet MSL up to and including Flight Level (FL) 600.
- **Class B Airspace** - Airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements.
- **Class C Airspace** - Generally, airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower.
- **Class D Airspace** - Airspace from the surface up to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports with an operational control tower.
- **Class E Airspace** - Generally, controlled airspace that is not Class A, Class B, Class C, or Class D.
- **Class G Airspace** - Generally, uncontrolled airspace that is not designated Class A, Class B, Class C, Class D, or Class E.

- **Victor Airways** - These airways are low altitude flight paths between ground based VHF Omnidirectional Range receivers (VORs).

A Victor Airway is a special kind of Class E airspace and is like a "highway" in the sky. Many powered aircraft follow these routes. The routes connect VOR stations that radiate a signal in all directions. These stations are usually located at or near airfields. North-South Victor Airways have odd numbers while East-West airways have even numbers. These federal or Victor Airways are used by both IFR and VFR aircraft. The airspace set aside for a Victor Airway is eight miles wide with a floor at 1,200 feet AGL and extend up to FL 180 (18,000 feet MSL). Victor Airways 208 and 210 (V-208 and V-210) can be used for navigational purposes from Tuba City Airport. Increased air traffic can be expected in and around Victor Airways and the originating and terminating VOR.



Source: Aircraft Owners and Pilots Association (AOPA), retrieved 2014

FIGURE 4-1 AIRSPACE CLASSIFICATIONS

Chinle Municipal and Window Rock Airports are situated in Class E airspace with a floor 700 feet above the surface that laterally abuts 1,200 feet or higher Class E airspace. Tuba City, Crownpoint, and Shiprock Airports are situated in Glass G airspace from the surface up to 14,500 feet mean sea level (MSL). Pilots should check Notices to Airmen (NOTAMs) or the Airport/Facility Directory (A/FD) for additional information regarding airspace surrounding the airports.

4.6.2 AIRSPACE JURISDICTION

Crownpoint and Window Rock Airports are located within the jurisdiction of the Albuquerque Air Route Traffic Control Center (ARTCC): Chinle Municipal, Tuba City, and Shiprock Airstrip are located within the jurisdiction of the Denver ARTCC. The altitude of radar coverage by the Albuquerque and Denver ARTCC may vary as a result of the FAA navigational/radar facilities in operation, weather conditions, and surrounding terrain. Pilots at Chinle Municipal, Tuba City, and Window Rock Airports may obtain additional weather data and other pertinent information from the Prescott Flight Service Station (FSS). Similarly, pilots at Crownpoint and Shiprock may use the services of the Albuquerque FSS.

4.6.3 Airspace Restrictions

Military Operation Areas (MOAs) and Military Training Routes (MTRs) are established for the purpose of separating certain military training activities, which routinely necessitate acrobatic or abrupt flight maneuvers, from Instrument Flight Rules (IFR) traffic. IFR traffic can be cleared through an active MOA if IFR separation can be provided by Air Traffic Control (ATC), otherwise ATC will reroute or restrict the IFR traffic. Restricted areas are defined as "airspace designated under FAR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency." Restricted areas are typically associated with military operations and indicate the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery or guided missiles.

Tuba City Airport is located approximately 5 nautical miles (nm) north of the northern border of the Sunny MOA. The Sunny MOA begins at 12,000 feet MSL and extends up to Flight Level (FL) 180 (18,000 feet MSL). It is activated by issuing a NOTAM and is monitored by the Albuquerque Center. None of the other four study airports are located in the vicinity of a MOA.

Special Conservation Areas are also located in the vicinity of several of the study airports. This type of airspace surrounds many national parks, wildlife refuges, and other noise sensitive areas. Pilots are requested to avoid flight below 2,000 feet AGL in these areas. Chinle Municipal Airport is located approximately 3 nm from the western edge of the Canyon de Chelly National Monument area. Likewise, Crownpoint Airport is located approximately 20 nm southwest of the Chaco Culture National Historic Park area. Finally, and most notably, Tuba City Airport is located approximately 10 nm east of the eastern portion of the Grand Canyon National Park Special Flight Rules Area.

According to the National Park Service, the 1987 National Parks Overflights Act (Public Law 100-91) requires restoration of natural quiet and visitor experience in Grand Canyon National Park. In March 1987, the FAA established a Special Flight Rules Area (SFRA) and other flight restrictions in the vicinity of Grand Canyon National Park to "reduce the impact of aircraft noise on the park." In April of 2000, Congress passed the National Parks Air Tour Management Act (Public Law 106-181) to affirm the requirement to achieve substantial restoration of natural quiet in the Grand Canyon National Park and required FAA to designate reasonably achievable requirements for fixed-wing aircraft and helicopters to employ quiet-aircraft technology. The Act also called on FAA, in consultation with the National Park Service and the Grand Canyon Working Group, to create incentive routes for commercial air-tour operators and develop recommendations for proposed actions to meet the statutory mandate contained in the 1987 Overflights Act. As of this writing, a draft Environmental Impact Statement was prepared in February 2011 by the National Park Service to substantially restore natural quiet in the vicinity of the Grand Canyon National Park.

During the Chapter workshops, the topic of considering special flight rules was mentioned for Canyon De Chelly National Monument, Window Rock Navajo Tribal Park & Veteran's Memorial, and the Chaco Culture National Historical Park. The Navajo DOT will need to decide if implementing special flight rules in the vicinity of these national parks is feasible. The special flight rules for the Grand Canyon National Park should be considered by the Navajo DOT as a framework for moving forward. All future approach procedure development for the airports included in the study should also consider the potential for having special flight rules implemented over the above mentioned national monument/parks.

4.6.4 Radio Navigational Aids

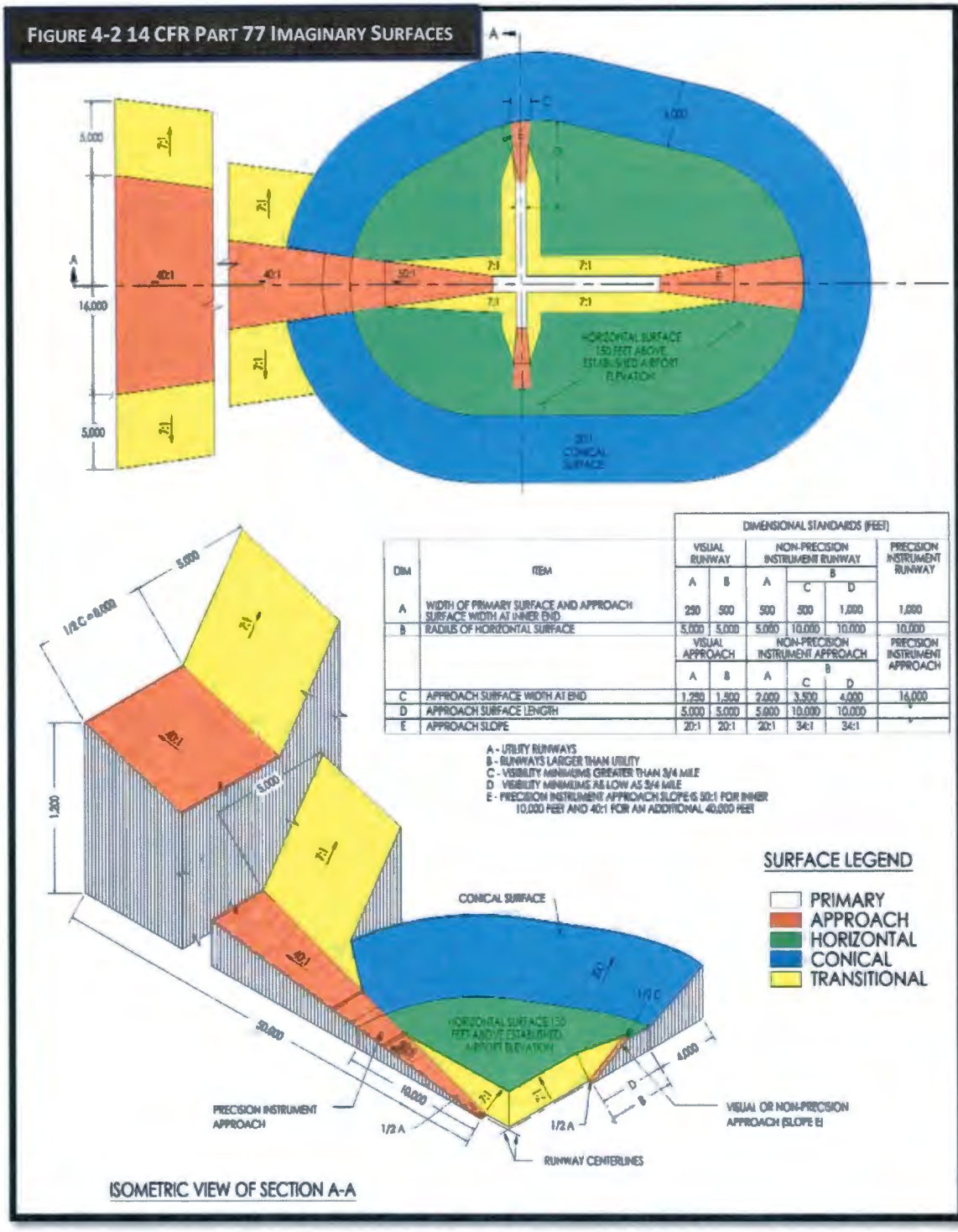
A Navigational Aid (NAVAID) is any ground based visual or electronic device used to provide course or altitude information to pilots. Radio NAVAIDs include Very High Omnidirectional Range (VORs), Very High Frequency Omnidirectional Range with Tactical Information (VOR-TACs), Nondirectional Beacons (NDBs), and Tactical Air Navigational Aids (TACANs), as examples.

Several of the study airports have radio navigational aids located nearby. The Tuba City VORTAC is located approximately 6 nm west, and the Grand Canyon VOR/DME is located approximately 38 nm southwest of the Tuba City Airport. The Gallup VORTAC is located approximately 14 nm southeast of the Window Rock Airport and approximately 36 nm southwest of the Crownpoint Airport. Finally, the Rattlesnake VORTAC is located approximately 14 nm east of the Shiprock Airstrip.

4.6.5 Title 14, Code of Federal Regulations (14 CFR) Part 77 Imaginary Surfaces

The 14 CFR Part 77 *Safe, Efficient Use, and Preservation of Navigable Airspace* establishes several imaginary surfaces that are used as a guide to provide a safe and unobstructed operating environment for aviation. These surfaces, which are typical for civilian airports, are shown in **Figure 4-2**. The primary, approach, transitional, horizontal, and conical surfaces identified in 14 CFR Part 77 are applied to each runway at both existing and new airports on the basis of the type of approach procedure available or planned for that runway and the specific 14 CFR Part 77 runway category criteria. For the purpose of this section, a utility runway is a runway that is constructed for and intended for use by propeller driven aircraft of a maximum gross weight of 12,500 pounds or less. A larger than utility runway is a runway constructed for and intended for the use of aircraft of a maximum gross weight of 12,500 pounds or greater. A visual runway is a runway intended for the operation of aircraft of any gross weight, but used only for visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, a military service approved military airport layout plan, or by any planning document submitted to the FAA by competent authority. A non-precision instrument runway is a runway with an approved or planned straight-in instrument approach procedure.

FIGURE 4-2 14 CFR PART 77 IMAGINARY SURFACES



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B C	B D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B C	B D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
E - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

Source: 14 CFR, Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace*, 2014

4.6.5-1 PRIMARY SURFACE

The primary surface is an imaginary surface of specific width, longitudinally centered on a runway. The primary surface extends 200 feet beyond each end of the paved surface of runways, but does not extend past the end of soft field runways. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width is 1,000 feet for precision runways, 500 feet for visual, larger-than-utility runways, and 250 feet for visual-utility runways.

4.6.5-2 APPROACH SURFACE

The approach surface is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based upon the type of approach available or planned for that runway, with approach gradients of 20:1, 34:1, or 50:1. The inner edge of the surface is the same width as the primary surface. It expands uniformly to a width corresponding to the 14 CFR Part 77 runway classification criteria.

4.6.5-3 TRANSITIONAL SURFACE

The transitional surface extends outward and upward at right angles to the runway centerlines from the sides of the primary and approach surfaces at a slope of 7:1 and end at the horizontal surface.

4.6.5-4 HORIZONTAL SURFACE

The horizontal surface is considered necessary for the safe and efficient operation of aircraft in the vicinity of an airport. As specified in 14 CFR Part 77, the horizontal surface is a horizontal plane 150 feet above the established airport elevation. The airport elevation is defined as the highest point of an airport's useable runways, measured in feet above mean sea level. The perimeter is constructed by arcs of specified radius from the center of each end of the primary surface of each runway. The radius of each arc is 5,000 feet for runways designated as utility or visual, and 10,000 feet for all other runways.

4.6.5-5 CONICAL SURFACE

The conical surface extends outward and upward from the periphery of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

4.6.5-6 PENETRATIONS TO IMAGINARY SURFACES

A preliminary review of the airspace around each airport included in the study was performed based on available information. It's important to note that actual elevations of potential penetrations to the imaginary surfaces were not obtained. The following are potential penetrations that should be further evaluated by FAA to determine if mitigation is necessary.

- **Chinle Airport** - No known penetrations appear to exist.
- **Tuba City Airport** – No known penetrations appear to exist.

- **Window Rock Airport** – There are two existing buildings that appear to penetrate the 35-foot Building Restriction Line on the west side of the airfield near the end of Runway 20. Both buildings are single story structures and are estimated to be 40 to 50 feet tall.

- **Crownpoint Airport** – There is an existing overhead electrical line and four utility poles that appear to penetrate the 35-foot Building Restriction Line on the east side of Runway 18-36. The utility poles are estimated to be 35 to 40 feet tall.

- **Shiprock Airstrip** - There are eight existing aerial light poles along Highway 491 that appear to penetrate the Runway 2 Approach Slope. The known elevations of the light poles are shown on the ALP.

4.6.5-7 Summary of Dimensional Criteria

The 14 CFR Part 77 imaginary surfaces depicted in **Tables 4-3** and **4-4** represent the existing dimensions for each of the airports included in the study. These surfaces will be used to determine if any existing or potential obstacles exists depending on the planned development at each airport. Any changes to the existing dimensions based on the selection of a different RDC for an airport will be noted on the Airport Data Table included on the Airport Layout Plan. Obstacles will be identified on the Airport Layout Plan and any proposed mitigation will also be identified, such as obstruction marking or the recommended removal of an obstacle.

Table 4-3 14 CFR Part 77 Imaginary Surfaces for Four Study Airports

14 CFR Part 77 Imaginary Surfaces for: • Chinle Municipal Airport (Runway 18-36) • Tuba City Airport (Runway 15-33) • Crownpoint Airport (Runway 18-36) • Shiprock Airstrip (Runway 2-20)	
Visual Utility Runway	
Primary Surface width	250'
Primary Surface beyond RWY end	200'
Horizontal Surface	150' above airport elevation
Approach Surface dimensions	Both ends (250' x 1,250' x 5,000')
Approach Surface slope	Both ends (20:1)
Transitional Surface slope	7:1
Conical Surface	20:1

Source: 14 CFR, Part 77 *Safe, Efficient Use, and Preservation of Navigable Airspace*, 2014

TABLE 4-4 14 CFR PART 77 IMAGINARY SURFACES FOR WINDOW ROCK AIRPORT

CFR 14 Part 77 Imaginary Surfaces for: • Window Rock Airport (Runway 2-20)	
Non-precision Instrument Larger-than-Utility Runway	
Primary Surface width	500'
Primary Surface beyond RWY end	200'
Horizontal Surface	150' above airport elevation
Approach Surface dimensions	R/W 2 (500' x 3,500' x 10,000') R/W 20 (500' x 1,500' x 5,000')
Approach Surface slope	R/W 2 (34:1) R/W 20 (20:1)
Transitional Surface slope	7:1
Conical Surface	20:1

Source: 14 CFR, Part 77 *Safe, Efficient Use, and Preservation of Navigable Airspace*, 2014

4.7 INSTRUMENT APPROACH CAPABILITIES

Airport safety and capacity are greatly enhanced at airports where instrument approach procedures (IAP) are available during times of inclement weather. As the ceiling and visibility around an airport decreases, electronic guidance provided by specialized equipment to aircraft (also equipped with specialized equipment) allows pilots to safely operate and land in weather where visibility is restricted. Additionally, the availability of instrument approach capabilities at an airport increases capacity by allowing continued use of the airport by aircraft equipped to fly instrument procedures because they can still land at the airport while aircraft which can only fly during visual conditions cannot.

The instrument approach capabilities of an airport are arranged into three categories: precision, non-precision, and visual. Precision instrument approach procedures provide very accurate electronic lateral and vertical guidance to aircraft. Non-precision instrument approach procedures also provide electronic guidance to aircraft, but the accuracy is less refined and is mainly limited to lateral guidance only. The type and accuracy of an instrument approach is highly dependent upon the airspace obstructions in the vicinity of the airport. Runways with no instrument approach capabilities are considered visual runways. Airports with published instrument approach procedures are known as Instrument Flight Rules (IFR) airports, while airports with no published instrument approach procedures are considered Visual Flight Rules (VFR) airports.

The most common type of precision approach in use today is the Instrument Landing System (ILS). Non-precision approach capabilities have been greatly increased by the evolution of satellite technology, specifically Global Positioning System (GPS). The FAA has recently developed new approach procedures know as Localizer/Lateral Performance with Vertical Guidance (LPV). This new capability utilizes the Wide Area Augmentation System (WAAS). While not considered a precision approach, LPV provides vertical guidance to aircraft to "near precision" accuracy. Another type of instrument approach is area navigation (RNAV). This is a method of instrument flight rules (IFR) navigation that allows an aircraft to choose any course within a network of navigation beacons, rather than navigating directly to and from the beacons. RNAV can be defined as a method of navigation that permits aircraft operation on any desired course within the coverage of station-referenced navigation signals or within the limits of a self-

contained system capability, or a combination of these. This can conserve flight distance, reduce congestion, and allow flights into airports without beacons.

Instrument approach procedures are developed by the FAA. GPS/RNAV and/or LPV approaches require no ground based equipment; thus, the FAA can now develop approach procedures at airports where it was previously not economically feasible. Combined with evolving technology, more and more aircraft are able to safely operate in more airport environments.

Of the five airports in the study, only Window Rock Airport (RQE) has a published instrument approach. Runway 2 has a published GPS approach; approach minimums include an 800 foot decision height with 1 mile visibility. Runway 20 has a published GPS and VOR/DME (circling) approach; approach minimums include a 1,000 foot decision height with 1 ¼ visibility. Window Rock Airport is also the only airport in the study with automated weather capabilities located on the airfield; an automated surface observing system (ASOS) is located on the northeast side of the airfield and broadcasts on the radio frequency 118.325.

4.8 Runway Wind Coverage

Wind direction and speed determine the desired alignment and configuration of the runway system. Aircraft land and takeoff into the wind and therefore can tolerate only limited crosswind components (the percentage of wind perpendicular to the runway centerline). The ability to land and takeoff in crosswind conditions varies according to pilot proficiency and aircraft type.

FAA Advisory Circular 150/5300-13A, *Airport Design*, recommends that a runway should yield 95 percent wind coverage under stipulated crosswind components. If one runway does not meet this 95 percent coverage, then construction of an additional runway may be advisable. The crosswind component of wind direction and velocity is the resultant vector, which acts at a right angle to the runway. It is equal to the wind velocity multiplied by the trigonometric sine of the angle between the wind direction and the runway direction. The allowable crosswind component for each Runway Design Code is shown in **Table 4-6**.

Table 4-6 Crosswind Component

Allowable Crosswind	Runway Design Code
10.5 knots	A-I & B-I
13 knots	A-II & B-II
16 knots	A-III, B-III & C-I through D-III
20 knots	A-IV through D-VI, E-I through E-VI

Source: FAA AC 150/5300-13A, *Airport Design*

Historical wind data gathered for this study was obtained from the National Oceanic and Atmospheric Administration (NOAA). NOAA is able to collect and archive wind data from an automated weather reporting system, such as an Automated Surface Observing System (ASOS) or Automated Weather Observing System (AWOS), over a long period of time. As previously mentioned, Window Rock Airport is

the only airport in the study with an ASOS located on the airfield. All wind data pertaining to the runway at Window Rock Airport was obtained from the ASOS on the airfield. The other four airports (Chinle Municipal, Tuba City, Crownpoint, and Shiprock Airstrip) had to rely on wind data from other ASOS facilities located nearby. The other ASOS locations were chosen based upon their proximity to the study airport and how closely the runway orientation where the ASOS is located mirrored that of the study airport. The location airport of the ASOS used for the study airports and other general information regarding the wind data is depicted in **Table 4-7**.

TABLE 4-7 NAVAJO AIRPORTS WIND DATA (GENERAL INFORMATION)

	RWY True Bearing	ASOS Used	Distance to ASOS	VFR Observations	IFR Observations	Dates of Observation
Arizona Airports						
Chinle	7.1730	RQE	37 NM	92,456	6,664	2006-2014
Tuba City	346.2030	PGA	49 NM	95,633	2,589	2006-2014
Window Rock	214.0342	RQE	0 NM	92,456	6,664	2006-2014
New Mexico Airports						
Crownpoint	13.4005	RQE	42 NM	92,456	6,664	2006-2014
Shiprock	211.1434	FMN	22 NM	336,104	10,608	1973-2014

Note: ASOS data obtained from Window Rock Airport (RQE), Page Municipal Airport (PGA), and Four Corners Regional Airport (FMN).
Source: NOAA, July 2014

The historical wind data collected from each ASOS facility was used to determine the wind coverage percentage for the runways at each study airport. The allowable crosswind component and corresponding wind coverage percentages using all-weather data and IFR weather data for each airport are shown in **Table 4-8** and **Table 4-9**.

TABLE 4-8 NAVAJO AIRPORTS WIND DATA (ALL-WEATHER)

Arizona Airports	10.5 Knots	13.0 Knots	16.0 Knots
Chinle	91.29%	95.12%	98.38%
Tuba City	97.66%	98.94%	99.84%
Window Rock	95.66%	97.98%	99.53%
New Mexico Airports			
Crownpoint	92.43%	95.96%	98.80%
Shiprock	88.64%	93.10%	97.30%

Note: There is only one runway at each airport (single-runway configuration).
Source: NOAA, July 2014

TABLE 4-9 NAVAJO AIRPORTS WIND DATA (IFR WEATHER)

Arizona Airports	10.5 Knots	13.0 Knots	16.0 Knots
Chinle	87.83%	92.69%	97.24%
Tuba City	96.96%	98.16%	99.34%
Window Rock	94.19%	97.10%	99.06%
New Mexico Airports			
Crownpoint	89.31%	93.86%	97.89%
Shiprock	88.59%	93.12%	97.20%

Note: There is only one runway at each airport (single runway configuration).
Source: NOAA, July 2014

When determining if a runway has adequate wind coverage, the first factor to consider is the source of the wind data. The second factor to consider is the appropriate Runway Design Code (RDC). The wind data for this study was obtained from nearby airports for all of the airports except for Window Rock Airport; thus, it is prudent not to rely too heavily on the results of the wind analysis for the remaining airports. In general, wind coverage is adequate for Window Rock for the types of aircraft likely to continue using the airport (A-I through B-II aircraft) because the coverage is greater than 95 percent for both 10.5 and 13.0 knots. The remaining airports wind analysis reveals that the wind coverage for 10.5 and 13.0 knots ranges from approximately 88 percent to 97 percent based on wind data from another source. Although not conclusive from the results of the wind analysis, it appears that all of the remaining airports may have adequate wind coverage. Therefore, the need to plan for potential crosswind runways at each of the airports will not be necessary.

4.9 EXISTING AIRSIDE FACILITY INVENTORY

The definition of airside is that portion of the airport within the public safety and security fenced perimeter, in which aircraft, support vehicles, and equipment are located, and in which aviation-specific operational activities take place. The inventory of airside facilities provides the basis for the determination of any facility change requirements that might be identified. At the end of the chapter, **Table 4-14** summarizes the existing airside facilities for each of the airports in the study. **Exhibits A1 – A5** are also located at the end of this chapter; they illustrate the type and location of each existing airside facility and/or component on the airfield. Additional photographs and descriptions from the on-site airport inventories can be found in **Appendix F**.

Some of the unique physical constraints and/or apparent FAA design standard concerns at each airport are identified herein. It is important to note that no subsurface investigations or topographic surveys were performed as part of this study or inventory. Furthermore, any physical constraints identified are based on visual observations made only during onsite-visits to each airport.

4.9.1 AIRFIELD PAVEMENTS

Airfield pavements consist of runways, taxiways/taxilanes, and aircraft aprons. The pavements are essentially the skeleton of the airport, supporting and connecting airside activities to landside facilities. The maintenance and preservation of an airport's system of pavement is essential in order to provide safe and efficient operational capabilities. The on-site inventories at each of the study airports reveled

that the airfield pavements at every airport is in need of some type of reconstruction and/or rehabilitation. A description of the existing pavement conditions for each airport is described below.

4.9.1-1 RUNWAYS

The airports included in the study consist of single runway configurations; there are no crosswind or parallel runways at any of the airports included in the study. The runway lengths vary from 4,840 to 7,000 feet, and are either 60 or 75 feet wide. Runway pavements are marked as either visual or non-precision. None of the runways were noted as having grooved pavement. In general, all of the runways appear to have adequate land surrounding them to allow for potential growth of the airfield. The only exception is Window Rock Airport; some residential and commercial properties are located at the north and west areas of the airport.

4.9.1-2 TAXIWAY SYSTEM

The taxiway systems for the airports in the study consists of either a connector taxiway to an aircraft parking apron, a taxiway turn-around, or a partial parallel taxiway. The taxiway pavement at each of the airports appears to be in worse condition than the adjacent runway. From field observations, the airports with taxiway turn-arounds do not appear to meet current FAA design standards. The Airport Layout Plan for each airport will depict any needed modifications to the existing taxiway configurations, along with any proposed new taxiway pavement configurations, such as a parallel taxiway.

4.9.1-3 AIRCRAFT APRON

Each airport in the study has an existing aircraft parking apron. The size, configuration, and overall pavement condition varies at each airport. In general, the aircraft aprons appear to meet the current demand based on visual observations, although additional aircraft apron may be proposed on the Airport Layout Plans based on discussions with the Navajo Nation and existing or prospective users.

4.9.1-4 EXISTING AIRFIELD PAVEMENT CONDITIONS AT CHINLE MUNICIPAL AIRPORT

Based on a visual inspection of the pavements, the runway (18-36), taxiways, and apron areas have been crack and fog sealed in years past. However, many of the cracks have re-emerged and are filled with dirt and vegetation causing further deterioration. Additionally, a number of new runway shoulder areas have cracked and failed as well. Due to the numerous amounts of cracking and vegetation growth, the runway, taxiway, and apron are in fair condition.

There are no apparent constraints to future development of the runway. Adequate land exists at both ends of the runway and parallel to the runway to accommodate reasonable development such as parallel taxiways, aircraft parking aprons, etc. Any additional land identified in the planning process that is needed to accommodate future development will be identified on the Airport Layout Plan.

4.9.1-5 EXISTING AIRFIELD PAVEMENT CONDITIONS AT TUBA CITY AIRPORT

Based on a visual inspection of the pavements, the runway (15-33), taxiway, and apron pavement areas have all been crack and fog sealed in past years. However, many of the pavement cracks have re-

emerged and are filled with dirt and vegetation propagating further pavement deterioration. As such, the runway is in poor condition, and the taxiway and apron are in fair condition.

Besides several large cracks and the growth of vegetation, the runway is considered in poor condition due to an area located approximately 1,500 feet from the north end of the runway that has cracked and heaved as a likely result of unstable soils and/or sub-grade underneath the asphalt. There is an active Notice to Airman (NOTAM) regarding rough and uneven runway pavement. Addressing this area of the runway will be further discussed in the Facility Requirements chapter. Based on information obtained from the most recent ADOT APMS, the first 600 feet of Runway 33 and the first 1,100 feet of Runway 15 has a pavement strength of 12,500 lbs. The remainder of the runway pavement needs reconstruction.

There are no apparent constraints to future development of the runway. Adequate land exists at both ends of the runway and parallel to the runway to accommodate reasonable development such as parallel taxiways, aircraft parking aprons, etc. Any additional land identified in the planning process that is needed to accommodate future development will be identified on the Airport Layout Plan.

4.9.1-6 Existing Airfield Pavement Conditions at Window Rock Airport

Based on a visual inspection of the pavements, the runway (2-20), taxiway, and apron pavement areas have all been crack and fog sealed in past years. However, many of the pavement cracks have re-emerged and are filled with dirt and vegetation propagating further pavement deterioration. As such, the runway, taxiways, and apron are in poor condition.

There are no apparent constraints to future development of the runway except to the south where Logan Road would be impacted. Adequate land exists parallel to the runway to accommodate reasonable development such as parallel taxiways, aircraft parking aprons, etc. Any additional land identified in the planning process that is needed to accommodate future development will be identified on the Airport Layout Plan.

4.9.1-7 Existing Airfield Pavement Conditions at Crownpoint Airport

Based on a visual inspection of the pavements, the runway (18-36), taxiway, and apron areas have been crack and fog sealed in years past. However, many of the cracks have re-emerged and are filled with dirt and vegetation causing further deterioration. Additionally, a number of new runway shoulder areas have cracked and failed as well. Due to the numerous amounts of cracking and vegetation growth, the runway, taxiway, and apron are in fair condition.

There are no apparent constraints to future development of the runway. Adequate land exists at both ends of the runway and parallel to the runway to accommodate reasonable development such as parallel taxiways, aircraft parking aprons, etc. Any additional land identified in the planning process that is needed to accommodate future development will be identified on the Airport Layout Plan.

4.9.1-8 Existing Airfield Pavement Conditions at Shiprock Airstrip

Based on a visual inspection of the pavements, the runway (2-20), taxiway, and apron areas have been crack and fog sealed in years past. However, many of the cracks have re-emerged and are filled with dirt and vegetation causing further deterioration. Additionally, a number of new runway shoulder areas

have cracked and failed as well. Due to the numerous amounts of cracking and vegetation growth, the runway, taxiway, and apron are in fair condition.

In addition to several large cracks and the growth of vegetation, evidence of significant erosion and drainage issues was observed adjacent to the north end of Runway 20 and the taxiway. When reconstruction or rehabilitation of the existing parallel taxiway and/or the existing runway takes place, correcting the drainage in this area will be necessary.

There are no apparent constraints to future development of the runway. Adequate land exists at both ends of the runway and parallel to the runway to accommodate reasonable development such as parallel taxiways, aircraft parking aprons, etc. Based on the planning process, if additional land is needed to accommodate the planned development, the Airport Layout Plan will show what land will be needed secured in the future.

4.9.2 Runway Pavement Strength

According to FAA guidance on pavement strength, the aircraft types and the critical aircraft expected to use the airport during the planning period are used to determine the required pavement strength, or weight bearing capacity, of airfield surfaces. The required pavement design strength is an estimate based on average levels of activity and is expressed in terms of aircraft landing gear type and configurations. Pavement design strength is not the maximum allowable weight; limited operations by heavier aircraft other than the critical aircraft may be permissible. It is important to note that frequent operations by heavier aircraft will shorten the lifespan of the pavement. The existing runway pavement composition and strength ratings for each airport are illustrated in **Table 4-10**.

Table 4-10 Runway Pavement Composition and Strength

Airport Name	Associated City	Pavement Composition	Existing Pavement Strength (Landing gear configuration in thousands of pounds)	Pavement Classification Number (PCN)
Arizona Airports				
Chinle Municipal	Chinle	Asphalt	12.5 - SW	**2/F/D/Y/T**[4] (6,170 lbs. SW)
Tuba City	Tuba City	Asphalt	12.5[1] - SW	**3/F/B/Y/T**[4] (10,100 lbs. SW); **0/F/D/Y/T**[4] (> 2,000 lbs. SW)
Window Rock	Window Rock	Asphalt	30.0 – SW; 45.0 – DW; 75.0 - DTW	**19/F/D/Y/T**[4] (53,000 lbs. DW)
New Mexico Airports				
Crownpoint	Crownpoint	Asphalt	12.5[2] – SW 11.0[3] - SW	Not available[5]
Shiprock Airstrip	Shiprock	Asphalt	12.5[2] – SW 11.0[3] - SW	Not available[5]

Sources: ADOT MPD – Aeronautics Group, 2014; [1] According to ADOT's most recent APMS, the first 600 feet of Runway 33 and the first 1,100 feet of Runway 15 meet this pavement strength. The remainder of the runway needs reconstruction. [2]New Mexico Airport System Plan Update 2009; [3]FAA Airport Master Record, August 2014; [4]According to ADOT's most recent PCN report dated October 2014; [5]According to NMDOT's most recent PCN report dated May 2014, PCNs were unable to be determined due to incomplete data. Abbreviations: SW = single-wheel landing gear, DW = dual-wheel landing gear, DWT = dual-wheel tandem landing gear

4.9.3 Pavement Condition Index (PCI)

The PCI procedure is the standard used by the aviation industry to visually assess pavement condition. It was developed to provide engineers with a consistent, objective, and repeatable tool to represent the overall pavement condition. During a PCI survey, visible signs of deterioration within a selected sample area are identified, recorded, and analyzed. Pavement surveys are typically conducted using the procedure as documented in the following publications:

- The FAA's Advisory Circular 150/5380-6B, *Guidelines and Procedures for Maintenance of Airport Pavements*.
- The American Society for Testing and Material's (ASTM's) standard D-5340, *Standard Test Method for Airport Pavement Condition Index Surveys*.

The results of a PCI evaluation provide an indication of the structural integrity and functional capabilities of the pavement. However, it should be recognized that during a PCI inspection only the top layer of the pavement is examined and that no direct measure is made of the structural capacity of the pavement system. Nevertheless, the PCI does provide an objective basis for determining maintenance and repair needs as well as for establishing rehabilitation priorities in the face of constrained resources. Furthermore, the results of repeated PCI monitoring over time can be used to determine the rate of deterioration and to estimate the time at which certain rehabilitation measures can be implemented. Both the Arizona Department of Transportation (ADOT) and the New Mexico Department of Transportation (NMDOT) have developed an airport pavement preservation program, each with its own set of guidelines and measurement tools.

4.9.3-1 ADOT's Pavement Preservation Program

According to ADOT, the airport system in Arizona is a multimillion dollar investment of public and private funds that must be protected and preserved. The Arizona Pavement Preservation Program (APPP) has been established to assist in the preservation of the Arizona airport system infrastructure. Every year ADOT's Multimodal Planning Division (MPD) - Aeronautics Group, using the Airport Pavement Management System (APMS), identifies airport pavement maintenance projects eligible for funding for the upcoming five years. These projects will appear in the state's Five-Year Airport Improvement Program. Once a project has been identified and approved for funding by the State Transportation Board, the airport sponsor may elect to accept a state grant for the project and not participate in the APPP, or the airport sponsor may sign an inter-government agreement (IGA) with the Aeronautics Group to participate in the APPP.

The ADOT APMS program is provided to give the airport sponsor sound pavement repair recommendations and is accepted by the FAA as complying with Public Law 103-305's requirement regarding airport pavement maintenance management as related to AIP funding eligibility. The Airport Pavement Preservation Program (APPP)/APMS is not meant to replace a sponsor's efforts for preserving the pavement infrastructure at the airport, but to assist the sponsor in prioritizing and scheduling pavement maintenance and reliable actions. The airport sponsor is expected to provide routine inspections, monitoring, and routine maintenance as part of this joint effort.

Pavement defects are characterized in terms of type of distress, severity level of distress, and amount of distress. This information is then used to develop a composite index (PCI number) that represents the

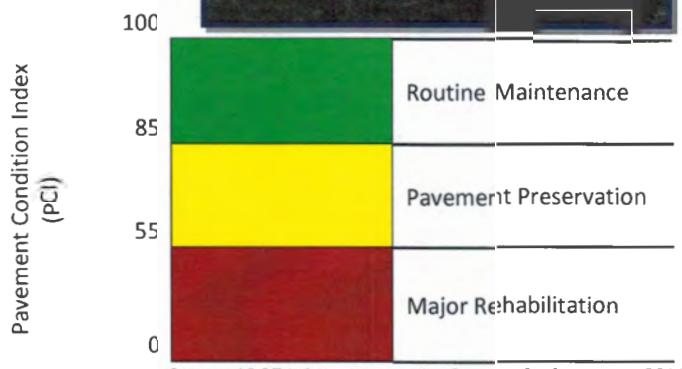
overall condition of the pavement in numerical terms, ranging from 0 (failed) to 100 (excellent). According to ADOT's PCI index, pavements above a PCI of 85 that are not exhibiting significant load-related distress will benefit from routine maintenance actions, such as periodic crack sealing or patching. Pavements with a PCI of 56 (65 for PCC pavements) to 85 may require pavement preservation, such as a surface treatment, thin overlay, or PCC joint resealing. Often, when the PCI is 55 or less, major rehabilitation, such as a thick overlay, or reconstruction are the only viable alternatives due to the substantial damage to the pavement structure. **Figure 4-3** depicts how the appropriate repair type varies with the PCI of a pavement section. **Table 4-11** depicts the most recent PCI inspection reported in the Arizona 2013 APMS report.

TABLE 4-11 ARIZONA STUDY AIRPORTS' 2013 PCI RATING

Airport	2013 PCI		
	Runway	Taxiway	Apron
Chinle Airport	45	60/64/24	40
Tuba City Airport	49/63	54	50
Window Rock Airport	21	24/11	23/15

Note. Multiple PCI numbers indicate multiple test sections of pavement.
Source: ADOT MPD – Aeronautics Group, Arizona APMS Web Application, July 2013

FIGURE 4-3 ARIZONA PCI REPAIR SCALE



Source: ADOT MPD – Aeronautics Group, APMS program, 2014

4.9.3-2 NMDOT'S PAVEMENT PRESERVATION PROGRAM

The New Mexico Department of Transportation Aviation Division also proactively plans for its pavement preservation and has an Airport Pavement Management System (APMS) in order to monitor the condition of the pavements within the New Mexico aviation system. In May 2014, the NMDOT published the results of their study that included both Crownpoint Airport and Shiprock Airstrip. The airports were assessed in August 2013 using similar criteria described above for the ADOT program. NMDOT's pavement condition index (PCI) scale is illustrated in **Figure 4-4**, which also depicts how the appropriate

repair type varies with the PCI of a pavement section. **Table 4-12** depicts the most recent PCI inspection reported in the New Mexico 2013 airport pavement management reports.

TABLE 4-12 NEW MEXICO STUDY AIRPORTS' 2013 PCI RATING

Airport	2013 PCI		
	Runway	Taxiway	Apron
Crownpoint Airport	51	30	42
Shiprock Airstrip	38/50	14	18

Note: Multiple PCI numbers indicate multiple test sections of pavement.
Source: NMDOT Aviation Division, *Crownpoint Airport Pavement Management Report* and *Shiprock Airstrip Pavement Management Report*, May 2014

FIGURE 4-4 NEW MEXICO PCI REPAIR SCALE

Source: NMDOT Aviation Division, APMS program, 2014

4.9.4 AIRFIELD LIGHTING, SIGNAGE, AND VISUAL AIDS

Airfield lighting, signage, and visual aids are used at airports to assist pilots while navigating near and on the airfield; these aids are especially important during periods of inclement weather and for nighttime operations. Visual aids such as rotating beacons, wind cones, and segmented circles are used by pilots during daytime and nighttime operations to determine airport location, wind direction, and traffic pattern information on the airfield prior to landing. Lighting on the runway and taxiways, along with airfield signage, helps guide pilots while maneuvering on the airfield. Pavement markings also help identify the type of runway and delineate pavement edges, centerlines, and other important safety functions, e.g. runway hold short lines.

4.9.4-1 AIRFIELD LIGHTING

Runway edge lighting was observed at Chinle Municipal, Tuba City, Window Rock, and Crownpoint Airports. No runway edge lighting is present at Shiprock Airstrip. The runway edge lighting is in good overall condition at Chinle Municipal, Tuba City Airport, and Crownpoint Airport. The medium intensity runway edge lighting system at Window Rock Airport is in poor condition primarily due to the infestation of prairie dogs in the area. Numerous lights were tilted and misaligned do to prairie dogs burrowing around them. Also, the runway edge lights at Crownpoint appear to have the wrong wattage bulbs installed. It was observed that 25-watt incandescent bulbs have been installed, making the edge lighting a low intensity system rather than the published medium intensity system.

Taxiway edge lighting was observed at Window Rock and Tuba City Airports. The taxiway edge lighting at Window Rock Airport is in poor condition for the same reason as the runway edge lights (prairie dog infestation). Tuba City's is in overall good condition. Taxiway edge retro-reflectors were observed at Chinle Airport; they are in fair condition.

Runway threshold lights were observed at all airports except for Shiprock. Overall they appeared to be in good to fair condition. The Runway End Identifier Lights (REIL) system at the Window Rock Airport (Runway 2) is damaged, and therefore is in poor condition. It was observed that the lens is cracked and the unit appears to be improperly aligned. According to the manufacturer's name plate located on the unit, it was installed in 2006. A REIL system was not in place at any of the other airports.

Visual glide scope indicators (VGSI) were present at all airports except for Shiprock. These lighting aids are used by pilots as they approach the airport in either the daytime or nighttime. The lighting systems provide vertical guidance by way of light beams, either white or red, to alert pilots of their relative position on the approach slope to the runway end. The most common types of VGSI found on airfields are Precision Approach Path Indicators (PAPI) and Visual Approach Slope Indicator (VASI); a less common type is the Pulse Light Approach Slope Indicators (PLASI).

A two-box PAPI system was observed at both ends of Runway 18-36 at Chinle Municipal Airport; a two-box PAPI is also in place at the end of Runway 2 at Window Rock Airport. The PAPIs at Chinle appear to be relatively new and in good condition. On the other hand, the PAPI at Window Rock is very dated and is reaching the end of its useful lifecycle; thus, it is in poor condition.

A two-box VASI system was observed at both ends of Runway 15-33 at Tuba City Airport. Both appear to be in good condition. A PLASI was observed at the end of Runway 18 at Crownpoint Airport. It appeared to be slightly outdated, but in working condition. Recommendations for the replacement of these VGSI systems will be further discussed in Chapter 5.

According to the FAA Form 5010-1 and airnav.com, all runway edge lighting and PAPI/VASI/PLASI (with the exception of Shiprock Airstrip) can be controlled by pilots for operation at night by using the airport's published Common Traffic Advisory Frequency (CTAF). It should be noted that verification of the pilot-controlled lighting was not performed during the on-site airport inventory due to the lack of access to a radio capable of performing this task.

4.9.4-2 SIGNAGE

As previously mentioned, airfield signs help inform and direct pilots while maneuvering on the runways, taxiways, and other airfield pavements. All of the airports in the study are severely lacking in all types of airfield signage. Window Rock and Tuba City Airports were the only airports observed during the on-site inventory to have any airfield signage; runway hold signs were noted at both airports. Recommendations for the installation of various airfield signs will be discussed further in Chapter 5.

4.9.4-3 VISUAL AIDS

The airport wind cones at Chinle Municipal, Tuba City, Crownpoint, and Shiprock Airstrip are in good condition; however, the two wind cones at the Window Rock Airport are in poor condition and should be replaced. Due to the lack of power at Shiprock Airstrip, the wind cone is not lit and it does not have a red obstruction light mounted on the top of the wind cone assembly. Additionally, according to the FAA Form 5010-1 and airnav.com, Crownpoint's wind cone light is out of service indefinitely.

The segmented circles at all the airports are in relatively good condition. Some were slightly obstructed by brush, which should be removed. Although each segmented circle is in good condition physically, it is not known if each meets FAA design standards as set forth in Advisory Circular (AC) 150-5340-5D, *Segmented Circle Airport Marker System*. Recommendations for the upgrading of each airport's segmented circle will be discussed further in Chapter 5.

Rotating beacons were observed at Chinle Municipal, Tuba City, Window Rock, and Crownpoint Airports; Shiprock Airstrip does not currently have a rotating beacon. All beacons are in good to fair condition; however, more energy efficient models could replace the existing ones at some point in the future if warranted by the Navajo DOT. The manner in which the beacon at Crownpoint Airport is mounted (on a wooden utility pole) does not comply with FAA standards and should be replaced to allow for a safer method of maintaining the rotating beacon. In addition, the self-support tower for the beacon at Chinle Municipal Airport needs to be repainted in order also to comply with FAA standards.

Pavement markings such as runway end numbers and centerlines, taxiway centerlines, and other essential pavement markings at all the airports are in fair to poor condition, with only a few exceptions in some areas. Overall the paint is faded, cracked, and/or missing on the majority of the painted surface. Recommendations for the rehabilitation of pavement markings at all airports will be further discussed in Chapter 5.

4.9.5 WEATHER REPORTING SYSTEMS

Automated airport weather stations are automated sensor suites which are designed to serve aviation and meteorological observing needs for safe and efficient aviation operations, weather forecasting and climatology. There are several types of automated airport weather reporting stations. These include the Automated Weather Observing System (AWOS), the Automated Surface Observing System (ASOS), and the Automated Weather Sensor System (AWSS). These units are operated and controlled cooperatively in the United States by the National Weather Service (NWS), the FAA and the Department of Defense (DOD). These systems generally report at hourly intervals, but also report special observations if weather conditions change rapidly and cross aviation operation thresholds. They generally report all the parameters of the AWOS-III (barometric pressure, altimeter setting, wind speed and direction,

temperature and dew point in degrees Celsius, density altitude, visibility, and cloud ceiling), while also having the additional capabilities of reporting temperature and dew point in degrees Fahrenheit, present weather, icing, lightning, sea level pressure and precipitation accumulation. Data dissemination is usually via an automated VHF airband radio frequency (108-137 MHz) at each airport, broadcasting the automated weather observation. This is often via the Automatic Terminal Information Service (ATIS). Most automated weather stations also have discrete phone numbers to retrieve real-time observations over the phone or through a modem.

During the inventory of Window Rock Airport, it was observed that the airport has an Automated Surface Observing System (ASOS); it is in excellent condition. Automated weather information can be obtained from the VHF radio frequency of 118.325, or by calling 928-871-3421. None of the remaining four airports included in the study have either an AWOS or ASOS located on the airfield.

4.10 Existing Landside Facility Inventory

The definition of landside is that portion of the airport designed to serve passengers or other airport users typically located outside of the public safety and security fenced perimeter; landside facilities include terminal buildings, parking areas, entrance roadways, and other buildings that may not necessarily conduct aviation related activities. The inventory of landside facilities provides the basis for the determination of any facility change requirements that might be identified. At the end of the chapter, **Table 4-14** summarizes the existing landside facilities for each of the airports in the study. **Exhibits A1 – A5**, also located at the end of this chapter, illustrate the type and location of each existing landside facility (if applicable) and/or component on the airfield. Additional photographs and descriptions from the on-site airport inventories can be found in **Appendix F**.

4.10.1 Terminal Building

The only airport in the study that has a terminal building is Window Rock Airport. Any proposed recommendations for future development of a terminal building at the remaining four airports will be discussed in Chapter 5.

4.10.2 Hangars

The only airport in the study that has aircraft storage hangar facilities is Window Rock Airport. In general, the existing hangars are in excellent condition and appear to be adequate. Some minor damage to the exterior metal siding was noted on the existing storage hangar adjacent to the terminal building and vehicle parking area. Any proposed recommendations for future hangar development will be discussed in Chapter 5.

4.10.3 Airport Services/Fixed Base Operator

A Fixed Base Operator (FBO) is usually a private or commercial enterprise that leases land from the airport sponsor on which to provide services to based and transient aircraft. The extent of the services provided varies from airport to airport. These services frequently include aircraft fueling, minor maintenance and repair, aircraft rental and/or charter services, flight instruction, pilot lounge and flight planning facilities, and aircraft tiedown and/or hangar storage. There are currently no FBOs with the

types of services mentioned above present at any of the airports. The only services similar to those found at an FBO are found at the Window Rock Airport terminal building; a lounge area, small flight planning area, restrooms, and telephone are available for public use. Any proposed recommendations for the future development of a FBO at any of the airports will be discussed in Chapter 5.

4.10.4 Aviation Fuel Facilities

The only airports that have aviation fuel facilities are Window Rock and Chinle Municipal Airports. The fuel facilities at both of the airports are not available to the general public. The fuel at the Window Rock Airport is for the exclusive use of the Navajo DOT. The fuel facility at the Chinle Municipal Airport is for the exclusive use of the emergency medical transport aircraft based at the airport. Both fuel facilities appear to be in good condition. The location on the airfield of both facilities may not be the best in the long-term. The Window Rock Airport fuel facility is located in the middle of the aircraft parking apron requiring the fuel truck to traverse the active apron to refill the tanks. The Chinle Municipal Airport fuel facility is located on the south edge of the existing aircraft parking apron and unless relocated, the fuel facility will prevent further expansion of the aircraft parking apron to the south. The Airport Layout Plans for both airports will make recommendations for relocating the fuel facilities if necessary to allow for future development of the airports.

4.10.5 Other Miscellaneous Buildings

The existing electrical building at the Chinle Municipal Airport is in fair condition, but will require renovation in the future. The existing concrete block walls appear structurally sound, but the existing wood-truss, metal roofing, and soffits are reaching the end of their useful life and will need replacement in the future. Portions of the existing soffit are missing, revealing the existing wood fascia that is in poor condition. The exterior block walls of the electrical building also need painting. It was noted during the site visit that the existing back-up generator and floor mounted automatic transfer switch are reaching the end of their useful life. Maintenance personnel indicated that the relays in the transfer switch have been problematic for many years. Replacement of the generator and transfer switch with a smaller wall mounted transfer switch will be required in the future.

The existing electrical building at the Tuba City Airport is in fair condition, but will require renovation in the future. The existing concrete block walls and flat, pre-cast concrete roof appear structurally sound. The adjacent generator addition concrete block walls are also in fair condition. However, the corrugated metal roof is in poor condition and needs to be replaced. Both structure's paint has faded.

4.10.6 Access Roads and Signage

All of the airports included in the study have access roads leading from the public roads to the airfields. The access roads are all generally adequate and in fair condition. The Navajo DOT has recently installed airport informational signs at the entrance to each airport. Speed limit signs were not observed on any of the airport access roads (except for the entrance to Window Rock Airport). Cattle guards were observed at each of the airport entrances. The two existing cattle guards at the entrance to Crownpoint Airport are in poor condition. There is a significant grade difference from the edge of the highway and the entrance road to the airport. Replacement of the cattle guards and modification of the grades will be depicted on the Airport Layout Plan for Crownpoint Airport. It was also observed at Tuba City Airport that water had flooded the entrance road near the intersection of the highway due to recent monsoon

storms. Modifications to the existing access roads or the construction of new access roads at any of the study airports will be done in accordance with 25 CFR Part 170, *Indian Reservation Roads Program* and will be discuss in more detail in Chapter 5.

4.10.7 Automobile Parking

Vehicle parking is available at all of the airports included in the study. Recommendations for additional parking will be depicted on each Airport Layout Plan. With the exception of Chinle Municipal Airport, the pavement condition for all the vehicle parking areas is poor. The parking areas either consist of asphalt or gravel. The vehicle parking area at Chinle Municipal Airport is asphalt and is in excellent condition.

4.10.8 Utilities

The Navajo Tribal Utility Authority is the supplier for electricity, water, natural gas, wastewater treatment, photovoltaic, and telecommunication services to businesses and residents throughout the Navajo Nation. All of the airports included in the study have some utilities on-site or nearby. The following represents what utilities are available at, or in the close proximity of, each airport:

- Chinle Municipal Airport
  - Three-phase electrical power
- Window Rock Airport
  - Three-phase electrical power
  - Municipal water
  - Septic
  - Internet/phone
- Tuba City Airport
  - Single-phase electrical power
- Crownpoint Airport
  - Single-phase electrical power
- Shiprock Airstrip
  - Single-phase electrical power

Based on the proposed development plans for each airport, additional utilities will be required at many of the airports. The ability of the Navajo DOT to provide the necessary utilities to the airports will have an impact on the potential for the airports and the surrounding lands to be developed. The Airport Layout Plans will identify what additional utilities will be needed to support the proposed development at each airport.

4.10.9 Fencing and Security

Separating vehicles and fixed wing aircraft is very important at all airports. Window Rock Airport is the only airport that has fencing and gates to separate vehicles from aircraft (separation of airside from landside). New fencing should consist of 6-foot high chain link fence with barbed wire in this area. This type of fencing will reduce inadvertent entry on the airports and will allow for the installation of more secure access gates. The Airport Layout Plans will depict the recommended areas where fencing and gates are necessary to separate vehicles and aircraft.

Airport perimeter fencing is present at all airports and consists of five-strand barbed wire livestock fence. Overall, the fencing at each airport is in fair condition. Additional recommendations regarding perimeter fencing at each airport will be discussed further in Chapter 5.

4.10.10 Airport Support and Maintenance

Currently the Navajo DOT provides all necessary maintenance to each of the airports included in this study. Consideration should be given to the potential of transferring some or all of the airport support and maintenance to the local communities. Maintaining the airports is an on-going effort and will become even more important as the airports are further developed.

Airfield maintenance equipment, such as a tractor with mower attachment and a sweeper, are used at all the study airports. At the time of the on-site inventory, the tractor was observed at Chinle Municipal and Tuba City Airports, and the sweeper was observed at Chinle Municipal Airport.

4.11 Navajo Nation Lands and Leases

The Navajo Nation is comprised of various types of land interests with over 17 million acres of land spanning across Arizona, New Mexico, and Utah. Each type of land interest is important to the planning process because the airports included in the study reside on various types of land. The Airport Layout Plan will reflect the types of land interest for each airport and the surrounding lands based on information provided by the Navajo DOT. Depending on the proposed development at each airport, modifications to the existing land interests may be required. The composition of land interests within the Navajo Nation are depicted in **Table 4-13**.

Table 4-13 Navajo Nation Land Composition

	Arizona	New Mexico	Utah	Total
Navajo Nation Trust Land	10,158,784.82	2,795,416.26	1,223,933.96	14,178,137.04
Navajo Nation Fee Land	585,169.98	347,553.21	424.90	933,148.09
Individual Indian Allotment Land	81,936.81	671,043.50	9,741.80	762,749.11
State Lands Lease	256,905.79	126,760.10	0.00	383,665.89
BLM Leases	0.00	150,002.23	0.00	150,002.23
U.S. Forest Service Permits	174,000.00	0.00	0.00	174,000.00
Government E.O. PLO & School Tract	-	91,838.89	5.99	91,844.98
New Lands	345,032.00	0.00	0.00	345,032.00
Total	11,601,856.40	4,182,616.29	1,234,106.65	17,018,579.34

Source: Navajo Land Department, as of 02/03/05

4.11.1 Land Withdrawal

Land withdrawal is a management tool used to implement resource management planning prescriptions or as a means to transfer administrative jurisdiction from one federal agency to another. A withdrawal creates a title encumbrance on the land restricting an agency's ability to manage its lands under multiple use management principles. The restrictions generally segregate the lands from some or all the public land laws and some or all of the mining and mineral leasing laws for a specific period of time, generally 20 years for post Federal Land Policy and Management Act withdrawals.

According to the U.S. Department of the Interior, Bureau of Land Management (BLM), there are four major categories of formal withdrawals:

1. Administrative
2. Presidential Proclamations
3. Congressional
4. Federal Power Act (FPA) or Federal Energy Regulatory Commission (FERC)

Also according to the BLM, withdrawals must accomplish one or more of the following:

- Transfer total or partial jurisdiction of Federal land between Federal agencies;
- Close (segregate) Federal land to operation of all or some of the public land laws and/or mineral laws; and/or
- Dedicate Federal land to a specific public purpose.

Additional land withdrawals will be required at the Chinle Airport, Tuba City Airport, Window Rock Airport, and Shiprock Airstrip to accommodate the planned development as presented herein. In general, the land withdrawal process will require that an environmental clearance document be prepared, local chapter resolution of support be obtained, and a legal description of the proposed land to be withdrawn be prepared.

4.11.2 Existing Airport Property Overview

The following provides a brief overview of existing airport property acreage and the airports' property history, if applicable, as well as identifies any additional land needs for proposed future development for each airport included in the study. Additional land needed for proposed future development at each airport is also summarized in **Table 5-5**, found in Chapter 5.

Chinle Airport:

On August 3, 1993, the Resource Committee of the Navajo Nation Council, by Resolution No RCAU-170-93, approved the prior resolution by the Transportation and Roads Committee and voted to withdraw 356.37 acres of land for the construction of the airport access road. Ultimately, the land was secured through the President of the Navajo Nation using his authority to impose eminent domain under 16 N.T.C. Sections 1401, 1402, and 1403 for the withdrawal of the proposed land. Today, the existing airport property encompasses approximately 320 acres. Based on the proposed development plan contained within this document, additional land will need to be withdrawn. The ALP shows the limits of

the additional land needed. There is no allotment land in the vicinity of the airport; therefore, modification to allotment leases will not be necessary.

Tuba City Airport:

The existing airport property totals 148 acres. Based on the proposed development plan, additional land will need to be withdrawn. The ALP shows the limits of the additional land needed. There is no allotment land in the vicinity of the airport; therefore, modification to allotment leases will not be necessary.

Window Rock Airport:

The existing airport property totals 96 acres. Based on the proposed development plan, additional land will need to be withdrawn. The ALP shows the limits of the additional land needed. There is no allotment land in the vicinity of the airport; therefore, modification to allotment leases will not be necessary.

Crownpoint Airport:

The Navajo Nation and the United States Department of the Interior, Bureau of Indian Affairs (BIA), is in the process of renewing a Use Permit for the majority of the property known as Crownpoint Airport. Currently, the airport encompasses a total of 108 acres. The permit includes a designated area of approximately 68.98 acres of Executive Order 1774 land and is subject to any existing rights and easement in or over the land. Executive Orders (EOs) are legally binding orders given by the President, acting as the head of the Executive Branch, to Federal Administrative Agencies. Executive Orders are generally used to direct federal agencies and officials in their execution of congressionally established laws or policies. President Woodrow Wilson signed the following EO on May 18, 1911:

> *It is hereby ordered that Section 10 of Township 17 North, Range 13 West, of the New Mexico Principal Meridian in New Mexico, be, and the same is hereby reserved from all forms of settlement, entry or other disposal, and set aside for use of Navajo Indians living in the vicinity of Crownpoint, New Mexico, provided that this withdrawal is subject to any prior valid right or claim of any persons to the land withdrawn, and to New Mexico coal land withdrawal No.6, by Executive Order of May 18, 1911.*

To accommodate the planned development on the airport, the Navajo DOT will need to request that the boundary described in the expired Use Permit be revised and expanded to encompass all future planned development as shown on the proposed ALP.

The remainder of airport infrastructure resides on allotment land identified as Allotments No. 935 and No. 901. Portions of the existing Runway 18 safety area, object free zone, object free area, and runway protection zone are located on State land and other BIA land that is not part of the Executive Order 1774 land. No additional land will need to be withdrawn beyond what has already been via EO 1774.

Shiprock Airstrip:

The existing airport property totals 68 acres. Based on the proposed development plan, additional land will need to be withdrawn. The ALP shows the limits of the additional land needed. There is no allotment land in the vicinity of the airport; therefore, modification to allotment leases will not be necessary.

4.12 Compatible Land Use

Land use compatibility conflicts are a common problem around many airports, including smaller general aviation facilities. In urban areas, as well as some rural settings, airport owners find that essential expansion to meet the demands of airport traffic is difficult to achieve due to the nearby development of incompatible land uses. Aircraft noise is generally a deterrent to residential development and other noise sensitive uses.

Conflicts may also exist in the protection of runway approach/departure and transition zones to ensure the safety of both the flying public and the adjacent property owners. Adequate land for this use should be either owned in fee or controlled in easements, as recommended on the Airport Layout Plan for each airport included in the study.

A possible constraint to development on or around the airports in the study may be the existence of grazing permits. Although land is abundant around the airports, it has constraints that can impede economic development. The majority of Navajo Nation land is held in trust by the Bureau of Indian Affairs (BIA). When the Nation needs to use it for a specific purpose, it has to be withdrawn from the BIA, and this process can take many years to complete. Grazing permits were developed by the BIA in the early 1930's in an effort to prevent overgrazing and to control erosion. The permits were issued to use the grass and other surface plants for grazing. Over the years, the grazing permits were used and treated as land use permits, which was not the original intent. The situation has given the grazing permit holders a sense of ownership, and their permission is needed to pursue any economic development project on or near areas they claim as their land. According to the Navajo Nation's 2009-2010 Comprehensive Economic Development Strategy, many economic development projects have failed to become a reality because the grazing permit holders did not consent to any development in their grazing areas. To the extent possible, grazing permits will be identified on surrounding properties adjacent to the study airports.

4.13 Environmental Considerations

A comprehensive environmental inventory was not completed as part of this study. However, due to the significant presence of cultural resources that are often found on the Navajo Nation, a review of the available archeological reports provided by the Navajo DOT for each airport in the study was conducted. The following is a summary of the reports and the associated resources that pertain to each airport. Also included in this section is a brief description on airport sustainability policies. Many airport sponsors are incorporating sustainability into their airport's master plans; the Navajo Nation is encouraged to also consider incorporating sustainability efforts into their future plans at their airports.

4.13.1 Cultural Resource Impacts

Although an environmental inventory is not part of the study, a cursory review of available archaeological reports revealed that archaeological sites exist at some of the airports included in this study. The following is a summary of the sites where cultural resources are known to be present:

4.13.1-1 Chinle Municipal Airport

Prior to the construction of the Chinle Municipal Airport, a cultural resource inventory was conducted in 1992. According to the findings of the inventory, archaeological sites and an isolated occurrence were identified. No further inventories have taken place since the construction of the airport.

4.13.1-2 Tuba City Airport

Based on a cultural resource inventory conducted in 1994 encompassing approximately 24 acres, an isolated occurrence was identified within the vicinity of the airport. The inventory did not survey the entire airport property; therefore, other cultural resources may exist.

4.13.1-3 Window Rock Airport

According to a cultural resources inventory completed on June 24, 1993, cultural resources were located in close proximity of the airport infrastructure, and an isolated occurrence of cultural material was identified.

One of the cultural properties appears to be eligible for the National Register of Historic Places (AZ-P-24-62) and appears to possess integrity, meets the general 50-year guideline, and appears to meet criterion "d" for registration consideration according to the cultural resources inventory abstract.

4.13.1-4 Crownpoint Airport

According to an archaeological survey conducted in June 1984, archaeological sites and isolated occurrences are present on the airport. The majority of the sites represent apparently seasonal and temporary site locations associated with the Muddy River Chacoan outlier community. One site is a probable historic component of Navajo cultural affiliation.

According to an archaeological report addendum dated August 5, 1987, some isolated occurrences were severely disturbed as part of the aircraft parking apron and entrance road construction projects and the status of the other isolated occurrences is unknown but considered insignificant according to the report.

4.13.1-5 Shiprock Airstrip

No sites, isolated occurrences, or traditional cultural properties are located on the airport according to a cultural resources inventory dated April 22, 1993, (NNAD 93-047).

4.13.2 Environmental Clearance Documentation

The above summary does not replace the need for further environmental clearance documentation, such as an environmental assessment (EA) or an environmental impact statement (EIS), which may be required for implementation of the proposed projects resulting from this study. To obtain environmental clearance for any proposed project, documentation is required to be prepared in accordance with United States Department of Transportation (USDOT) policy, FAA Order 5050.4B, FAA Order 1050.1E, and CEQ Regulations.

FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures,* describes the types of impacts and thresholds that determine if an impact is considered to be significant. The proposed development projects will require a determination to be made regarding which of the following environmental clearance documents would be required prior to project implementation. These environmental clearance documents include the following:

Categorical Exclusions – Projects or actions that are found, based on past experience with similar projects, or actions, that do not normally require an EA or EIS because they do not individually or cumulatively have a significant effect on the environment.

Environmental Assessment (EA) – Preparation of a concise document used to describe a proposed project's anticipated environmental impacts and mitigation measures.

Environmental Impact Statement (EIS) – Preparation of a clear, concise, and appropriately detailed document that provides the agency, decision makers, and the public with a full and fair discussion of significant environmental impacts of the proposed project and reasonable alternatives.

Ultimately, the FAA will determine whether a proposed development project constitutes a major federal action subject to NEPA, or whether it is a Categorical Exclusion from NEPA because it is not expected to have a significant adverse effect on the environment.

4.13.3 Airport Sustainability

The FAA began focusing on sustainability at airports in 2010, and has said that their objective is to make sustainability a core objective in airport planning. The FAA has provided airports across the United States with funding to develop comprehensive sustainability planning documents. These documents, called sustainability master plans and airport sustainability plans, include initiatives for reducing environmental impacts, achieving economic benefits, and increasing integration with local communities. To date, the FAA has funded 45 airports across the United States.

The FAA Reform and Modernization Act of 2012, Section 133 of H.R. 658, requires airport master plans to address the feasibility of solid waste recycling at an airport, minimizing the generation of waste, operation and maintenance requirements, the review of waste management contracts, and the potential for cost savings or revenue generation. The FAA is in the process of crafting guidance for airport sponsors to use in developing a recycling program at their airport as part of an airport master plan. Solid waste is being collected from the terminal building and disposed of by a waste collection company, however, it is not known if any recycling is taking place by any of the airport tenants. Recommendations for ways to implement a recycling program and other sustainability practices will be discussed in Chapter 5.

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TABLE 4-14 SUMMARY OF EXISTING AIRSIDE AND LANDSIDE FACILITIES

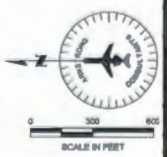
				Airside Facilities													Landside Facilities				
Airport Name	Agency	Chapter	Associated City	Runway Orientation	Length (feet)	Width (feet)	ARC	Runway Lighting	Taxiway Lighting	Pavement Markings	Known Obstructions	Other Navigational Aids	PAPI/ PLASI/VASI	REIL	Taxiway Type	Cultural Resources Present	Aircraft Apron (sy)	Fuel	Hangars	GA Terminal	Access Road
Arizona Airports																					
Chinle Municipal Airport	Chinle	Chinle	Chinle	18-36	6,902	60	B-I	MIRL	Retro-reflectors	Non-precision	No	Pilot control rwy lighting, beacon, lighted wind cone, segmented circle	Y/Y (PAPI)	N/N	Turn-around (both ends) and Connector	Y	7,500 sy	Yes (private)	No	No	Yes
Tuba City Airport	Western	Tuba City	Tuba City	15-33	6,230	75	B-II	MIRL	MITL	Non-precision	Yes – RWY 15 & 33	Pilot control rwy lighting, beacon, lighted wind cone, segmented circle	Y/Y (VASI)	N/N	Connector	N	7,500 sy	No	No	No	Yes
Window Rock Airport	Ft. Defiance	St. Michaels	Window Rock	2-20	7,000	75	B-II	MIRL	MITL	Non-precision	Yes – RWY 2	Pilot control rwy lighting, beacon, lighted wind cone, segmented circle, ASOS	Y/N (PAPI)	Y/N	Connector	Y	16,000 sy	Yes (private)	3	Yes	Yes
New Mexico Airports																					
Crownpoint Airport	Eastern	Crownpoint	Crownpoint	18-36	5,820	60	B-I	MIRL	None	Basic	Yes – RWY 18 & 36	Pilot control rwy lighting, beacon, wind cone, segmented circle	Y/N (PLASI)	N/N	Connector	Y	5,000 sy	No	No	No	Yes
Shiprock Airstrip	Northern	Shiprock	Shiprock	2-20	4,840	75	B-II	None	None	Basic	Yes – RWY 2	Wind cone, segmented circle	N/N	N/N	Partial Parallel	N	5,600 sy	No	No	No	Yes

Note. Aircraft apron size is approximate and shown in square yards; it is not based on survey information.
Sources: ACI field observations July/August 2014; 2008 Arizona State Airports System Plan; New Mexico Airport System Plan Update 2009; 2009 Navajo Nation Long Range Transportation Plan; FAA Airport Master Record, August 2014

TABLE 4-15 EXISTING AIRCRAFT OPERATIONS AND BASED AIRCRAFT

				Aircraft Operations					Based Aircraft							
Airport Name	Agency	Chapter	Associated City	Air Taxi	GA Local	GA Itinerant	Military	Total	Single Engine	Multi-Engine	Jets	Helicopters	Gliders	Ultralights/ Other	Military	Total Based Aircraft
Arizona Airports																
Chinle Municipal Airport	Chinle	Chinle	Chinle	5,800	400	1,600	0	7,800	0	1	0	0	0	0	0	1
Tuba City Airport	Western	Tuba City	Tuba City	0	0	250	0	250	0	0	0	0	0	0	0	0
Window Rock Airport	Ft. Defiance	St. Michaels	Window Rock	0	1,500	3,500	0	5,000	1	3	0	0	0	2	0	6
New Mexico Airports																
Crownpoint Airport	Eastern	Crownpoint	Crownpoint	300	0	200	0	500	0	0	0	0	0	0	0	0
Shiprock Airstrip	Northern	Shiprock	Shiprock	0	0	500	0	500	0	0	0	0	0	0	0	0

Source: FAA Airport Master Record, Form 5010-1, August 2014



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CHINLE AIRPORT
CHINLE, ARIZONA

No	Project No	Date	Revision / Description	File	Drwn	Chkd	Approved
3							
2							
1							
0	1-90214	09/2014	ORIGINAL ISSUE	90214003 dwg	LDB	CM	ZP

AIRPORT COMPONENTS

EXHIBIT A1

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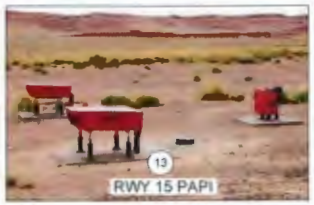

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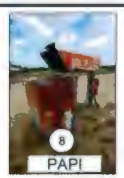
TUBA CITY AIRPORT
TUBA CITY, ARIZONA

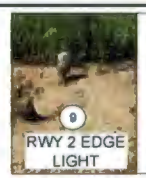
AIRPORT COMPONENTS

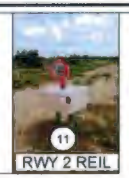
EXHIBIT A2

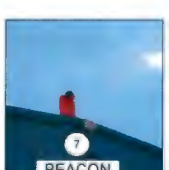
No	Project No	Date	Revision / Description	File	Drwn	Chkd	Appvd
0	146214	09/2014	ORIGINAL ISSUE	8x11 EXH	LDS	CM	JEP
1							
2							
3							

PLOT DATE May 1, 2015 FILENAME L:\PROJECTS\BARZONA\146214 NAVAJO NATION\TUBA CITY\TUBA CITY EXHIBITS\146214002_T03 EXHIBIT.DWG









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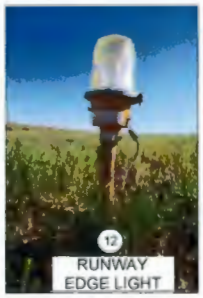
WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

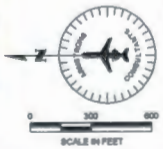
No	Project No	Date	Revision / Description	File	Dwn	Chkd	Approved
0	1-98214	11/12/14	ORIGINAL ISSUE	R14-0200-2002	LDB	CM	JZP

AIRPORT COMPONENTS

EXHIBIT A3

PLOT DATE: May 1, 2015 FILE NAME: L:\PROJECT\SAWZ\DWG\198214 NAVAJO NATION\WINDOW ROCK\WINDOW ROCK EXHIBIT\198214R02_R02E EXHIBIT.DWG





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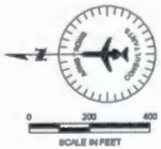
CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

No	Project No	Date	Revision / Description	File	Drwn	Chkd	Appvd
3							
2							
1							
0	1-46214	09/2014	ORIGINAL ISSUE	521.6002-2B	LDB	CM	JDP

AIRPORT
COMPONENTS

EXHIBIT A4

PLOT DATE September 5, 2014 FILE NAME L:\PROJECTS\ARIZONA\NAVAJO NATION\CROWNPOINT NM ALP\14621-6002_SEB.DWG



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SHIPROCK AIRPORT
SHIPROCK, NEW MEXICO

No	Project No	Date	Revision / Description	File	Drwn	Chkd	Apprvd
3							
2							
1							
0	1-482-14	08/2014	ORIGINAL ISSUE	8X11-600 JPG	LDS	CM	JBP

AIRPORT COMPONENTS

EXHIBIT A5

PLOT DATE: September 5, 2014 FILE NAME: L:\PROJECTS\RIZO\PAGO\DWG\AVIA\C\MATCH\SHIPROCK NM ALP\1482\1482_SVA.DWG

Chapter Five

FACILITY REQUIREMENTS AND NEEDS ASSESSMENT

CHAPTER 5 - FACILITY REQUIREMENTS AND NEEDS ASSESSMENT

This chapter assesses and identifies the requirements needed for airfield and landside facilities to accommodate existing and anticipated demand levels at each of the airports included in the study. The facility requirements are based on information derived from information from FAA advisory circulars and design standards, the Navajo DOT's vision of the future of the airports, the condition and functionality of existing facilities, and other pertinent information.

Facility requirements have been developed for the various airport functional areas listed below:

- General aviation requirements
- Support facilities
- Ground access, circulation, and parking requirements
- Infrastructure and utilities
- Land use compatibility and control

The time frame for addressing development needs usually involves short-term (up to five years), medium-term (six to ten years), and long-term (eleven to twenty years) planning periods. Long-term planning primarily focuses on the ultimate role of the airport and is related to development. Medium-term planning focuses on a more detailed assessment of needs, while the short-term analysis focuses on immediate action items. Most important to consider is that a good plan is one that is based on actual demand at an airport rather than time-based predictions. Actual activity at the airport will vary over time and may be higher or lower than what is anticipated. Using the three planning milestones (short-term, medium-term, and long-term) the airport sponsor can make an informed decision regarding the timing of development based on the actual demand. This approach results in a financially responsible and demand-based development of the airports included in the study.

5.1 DESIGN STANDARDS

Airport design standards provide basic guidelines for a safe, efficient, and economic airport system. The standards cover the wide range of size and performance characteristics of aircraft that are anticipated to use an airport. Various elements of airport infrastructure and their functions are also covered by these standards. Choosing the correct aircraft characteristics for which the airport will be designed needs to be done carefully so that future requirements for larger and more demanding aircraft are taken into consideration, while remaining mindful that designing for large aircraft that will never serve the airport is not economical. The existing runway design standards for each airport are summarized in **Table 5-3**, and can be found at the end of this section. The existing design standards for each airport are also illustrated in **Exhibits B1 – B5**, and can be found at the end of this chapter.

5.1.1 Design Aircraft

According to FAA AC 150/5300-13A, *Airport Design*, planning a new airport or improvement to an existing airport requires the selection of one or more "design aircraft." In most cases, the design aircraft (for the purpose of airport geometric design) is a composite aircraft representing a collection of aircraft classified by the following parameters:

- Aircraft Approach Category (AAC)
- Airplane Design Group (ADG)
- Taxiway Design Group (TDG)

For the purpose of selecting a design aircraft, the FAA recommends that the most demanding aircraft, or family of aircraft, which makes at least 500 operations per year at the airport be chosen as the design aircraft(s). Additionally, when an airport has more than one active runway, a design aircraft is selected for each runway.

Based on existing aircraft activity records kept by the Navajo DOT, the aircraft which makes at least 500 operations at the majority of the study airports is the Beechcraft Super King Air 200 (B200). Thus, this aircraft has been selected as the design aircraft for all study airports and will be discussed and referenced throughout the remainder of this chapter, specifically as the design aircraft relates to the study airports' runway design code (RDC) and airport reference code (ARC).

5.1.2 Runway Design Code (RDC)

To arrive at the RDC, the AAC, ADG and approach visibility minimums are combined to form the RDC of a particular runway. The RDC provides the information needed to determine certain design standards that apply. The first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to the aircraft wingspan or tail height (physical characteristics). The final component relates to the visibility minimums expressed by runway visual range (RVR) values in feet of 1,200, 1,600, 2,400, 4,000 and 5,000. If a runway is used for visual approaches only, the term "VIS" is listed as the third component. The FAA AC 150/5300-13A, *Airport Design*, RDC requirements are illustrated in **Table 5-1**.

TABLE 5-1 RUNWAY DESIGN CODE

Aircraft Approach Category	Approach Speed	
Category A	less than 91 knots	
Category B	91 to 120 knots	
Category C	121 knots to 140 knots	
Category D	141 knots to 165 knots	
Category E	165 knots or more	
Airplane Design Group	**Wingspan**	**Tail Height**
Group I	< 49 feet	<20 feet
Group II	49 to 78 feet	20 to 29 feet
Group III	79 to 117 feet	30 to 44 feet
Group IV	118 to 170 feet	45 to 59 feet
Group V	171 to 213 feet	60 to 65 feet
Group VI	214 to 261 feet	66 to 79 feet
Runway Visual Range (ft.)	**Flight Visibility Category (statute mile)**	
VIS	Visual approaches only	
5000	Not lower than 1 mile	
4000	Lower than 1 mile but not lower than 3/4 mile	
2400	Lower than 3/4 mile but not lower than 1/2 mile (CAT-I PA)	
1600	Lower than 1/2 mile but not lower than 1/4 mile (CAT-II PA)	
1200	Lower than 1/4 mile (CAT-III PA)	

Source: FAA Advisory Circular 150/5300-13A, *Airport Design*

As previously mentioned, from discussions with the Navajo DOT and airports users, and a review of historical data, it was discovered that the most predominate aircraft type using the airports on a regular basis are various models of a Beechcraft King Air (e.g. B200). Most of the activity is related to emergency medical transportation and government travel by Navajo Nation officials.

Recommendation: Due to the existing aircraft activity at the airports, it is reasonable to predict that the current aircraft fleet mix will remain relatively the same for the future and the design aircraft mentioned above (Beechcraft Super King Air 200) will remain the most demanding aircraft using the airports. On the contrary, aircraft which fall into the A-I, A-II, and B-I design standards are also known to frequent one or more of the study airports. However, they do not make up the majority of aircraft operations, and thus, the RDC for all airports in the study should follow B-II design standards.

Examples of various aircraft meeting the design standards for a RDC of A-I and B-I are illustrated on **Table 5-2A**, and examples of aircraft with a RDC of A-II and B-II are depicted in **Table 5-2B**. For the purpose of this Chapter, examples of the remaining Airplane Design Group (ADG) categories of C, D, and E aircraft and their corresponding approach categories (I, II, III, etc.) are not depicted due to their infrequent use of the Airport; the sample aircraft provided below are those that are likely to use the Airport on a regular basis.

TABLE 5-2A RDC OF A-I OR B-I (SAMPLE AIRCRAFT)

Aircraft	Approach Speed (kts)	Wingspan (ft)	Tail Height (ft)	Max Take Off Weight (lbs)
Beech Baron 58P	101	37.8	9.1	6,200
Beech Bonanza V35B	70	33.5	6.6	3,400
Beech King Air B100	111	45.9	15.3	11,799
Cessna 150	55	33.3	8.0	1,670
Cessna 172	60	36.0	9.8	2,200
Cessna 177	64	35.5	8.5	2,500
Cessna 182	64	36.0	9.2	2,950
Cessna 340	92	38.1	12.2	5,990
Cessna 414	94	44.1	11.5	6,750
Cessna Citation I	108	47.1	14.3	11,850
Gates Learjet 28/29	120	42.2	12.3	15,000
Mitsubishi MU-2	119	39.1	13.8	10,800
Piper Archer II	86	35.0	7.4	2,500
Piper Cheyenne	110	47.6	17.0	12,050
Rockwell Sabre 40	120	44.4	16.0	18,650
Swearingen Merlin	105	46.3	16.7	12,500
Raytheon Beechjet	105	43.5	13.9	16,100
Eclipse 500 Jet	90	37.9	13.5	5,920

Source: FAA AC 150/5300-13A, *Airport Design*

TABLE 5-2B RDC OF A-II OR B-II (SAMPLE AIRCRAFT)

Aircraft	Approach Speed (kts)	Wingspan (ft)	Tail Height (ft)	Max Take Off Weight (lbs)
Air Tractor 802F	105	58.0	11.2	16,000
Beech King Air C90-1	100	50.3	14.2	9,650
Beech Super King Air B200	**103**	**54.5**	**14.1**	**12,500**
Cessna 441	100	49.3	13.1	9,925
Cessna Citation II	108	51.6	15.0	13,300
Cessna Citation III	114	50.6	16.8	17,000
Dassault Falcon 50	113	61.9	22.9	37,480
Dassault Falcon 200	114	53.5	17.4	30,650
Dassault Falcon 900	100	63.4	24.8	45,500
DHC-6 Twin Otter	75	65.0	19.5	12,500
Embraer Phenom 300	**117**	**52.2**	**16.9**	**17,968**
Grumman Gulfstream I	113	78.5	23.0	35,100
Pilatus PC-12	85	52.3	14.0	9,920

Source: FAA AC 150/5300-13A, *Airport Design*

Based on discussions with the Navajo DOT, the Nation is considering replacing one of their King Air aircraft with an Embraer Phenom 300. Although the timing and ultimate decision to acquire the Embraer Phenom 300 has not been determined, it's important to note that the Embraer Phenom 300 is also a B-II aircraft and would not change the RDC for the airports if acquired.

5.1.3 Taxiway Design Group (TDG)

To arrive at the best TDG, the undercarriage dimensions of the aircraft are used. The TDG design standards are based on the overall Main Gear Width (MGW) and the Cockpit to Main Gear (CMG) distance. Taxiway/taxilane width and fillet standards, and in some instances, runway to taxiway and taxiway/taxilane separation requirements, are determined by the TDG. The FAA advises that it is appropriate for a series of taxiways on an airport to be built to a different TDG standards based on anticipated use.

For airports with two or more active runways, it is advisable to design all airport elements to meet the requirements of the most demanding RDC and Taxiway Design Group (TDG). However, it may be more practical and economical to design some airport elements such as a secondary runway to standards associated with a lesser demanding RDC and TDG. For example, it would not be prudent for an air carrier airport that has a separate general aviation runway, or a crosswind runway for general aviation traffic, to design that element for air carrier traffic.

Recommendation: With the exception of the connector taxiway at Chinle Municipal Airport, the overall pavement condition of all the existing taxiways, taxiway turn-arounds, and connector taxiways appear to be in poor condition. Recognizing that the taxiway pavements will all likely need reconstruction in the future, it is recommended that they be reconstructed to meet TDG-2 design standards in order to accommodate the most demanding aircraft currently using the airports or anticipated to use the airports.

5.1.4 Airport Reference Code (ARC)

An Airport Reference Code (ARC) is not a design standard, rather is an airport designation that signifies an airport's highest Runway Design Code (RDC), minus the third (visibility) component of the RDC. The ARC is used for planning purposes only, and does not limit the aircraft that may be able to operate safely on the airport.

Recommendation: Based upon the proposed design standards described above, it is recommended that the ARC for all of the study airports be recognized as B-II. Examples of the types of design aircraft and their corresponding ARC are depicted in **Figure 5-1**.

FIGURE 5-1 TYPICAL DESIGN AIRCRAFT AND CORRESPONDING ARC

Source: ACI, 2013

5.1.5 SAFETY AREAS

Runway and taxiway safety areas (RSAs and TSAs) are defined surfaces surrounding the runway and taxiway prepared specifically to reduce the risk of damage to aircraft in the event of an undershot, overshot, or excursion from the runway or taxiway. The safety areas must be:

- Cleared and graded and have no potentially hazardous surface variations;
- Drained so as to prevent water accumulation;
- Capable, under dry conditions, of supporting snow removal equipment, ARFF equipment and the occasional passage of aircraft without causing structural damage to the aircraft; and
- Free of objects, except for objects that need to be located in the runway or taxiway safety area because of their function.

Recommendation: It was observed at all the airports that the existing safety areas were not adequately graded to meet current design standards. Specific runway safety areas that have erosion include Chinle Airport and Shiprock Airstrip. Potential terrain obstructions were also noted at Crownpoint Airport due to the insufficient grading of the runway safety area to comply with current design standards. In general, it was observed that the safety areas at all of the airports require some level of re-grading to comply with current design standards. Therefore, it is recommended as part of future pavement rehabilitation/reconstruction projects, safety areas be re-graded.

5.1.6 Obstacle Free Zone (OFZ) and Object Free Area (OFA)

The OFZ is a three dimensional volume of airspace which supports the transition of ground to airborne aircraft operations. The clearing standard precludes taxiing and parked airplanes and object penetrations, except for frangible visual Navigational Aids (NAVAIDs) that need to be located in the OFZ because of their function. The OFZ is similar to the 14 CFR Part 77 Primary Surface insofar that it represents the volume of space longitudinally centered on the runway. It extends 200 feet beyond the end of each runway. The Runway Object Free Area (ROFA) is a two-dimensional ground area surrounding the runway. The ROFA standard precludes parked airplanes, agricultural operations and objects, except for objects that need to be located in the ROFA for air navigation or aircraft ground maneuvering purposes.

5.1.7 Runway Protection Zone (RPZ)

The Runway Protection Zone (RPZ) is trapezoidal in shape and centered about the extended runway centerline. The RPZ dimension for a particular runway end is a function of the type of aircraft and approach visibility minimum associated with that runway end. The existing, as well as any future RPZ dimensions, can be seen on the Airport Layout Plans for each airport.

5.1.8 Summary of Design Standards

A majority of the design standards discussed in the preceding sections are summarized in **Table 5-3**. The table includes the existing runway design standards for each airport. As previously mentioned, the existing design standards are also illustrated at the end of this chapter on **Exhibits B1 – B5**.

TABLE 5-3 SUMMARY OF EXISTING RUNWAY DESIGN STANDARDS

FAA Runway Design Standards	Airport: Chinle Municipal Crownpoint	Airport: Tuba City Shiprock Airstrip Window Rock
Runway Design		
AAC and ADG	B-I	B-II
Visibility Minimums	Visual	Visual (Tuba City, Shiprock) Not lower than 1 sm (Window Rock)
RDC[1]	B-I-VIS	B-II-VIS (Tuba City, Shiprock) B-II-5000 (Window Rock)
Length	Varies per design aircraft	Varies per design aircraft
Width	60 feet	75 feet
Crosswind Component	10.5 knots	13 knots
Runway Protection		
RSA length beyond departure surface	240 feet	300 feet
RSA width	120 feet	150 feet
ROFA length beyond runway end	240 feet	300 feet
ROFA width	400 feet	500 feet
ROFZ length	200 feet	200 feet
ROFZ width	250 feet	250 feet
Approach/Departure RPZ length	1,000 feet	1,000 feet
Approach/Departure RPZ inner width	500 feet	500 feet
Approach/Departure RPZ outer width	700 feet	700 feet
Runway Separation – *Runway centerline to:*		
Holding position	200 feet	200 feet
Parallel taxiway/taxilane centerline	225 feet	240 feet
Aircraft parking apron	200 feet	250 feet

Definitions: Aircraft Approach Category (AAC), Airplane Design Group (ADG), Runway Design Code (RDC), Runway Safety Area (RSA), Runway Object Free Area (ROFA), Runway Object Free Zone (ROFZ), Runway Protection Zone (RPZ), statute mile (sm)
Note. [1] The AAC and ADG combined with the visibility minimums of a runway form the RDC; visibility minimums are expressed as the runway visual range (RVR) in feet – see Table 1-3 in AC 150/5300-13A
Source: ACI per FAA Advisory Circular 150/5300-13A, *Airport Design*

5.2 AIRSIDE FACILITY REQUIREMENTS

All airports are comprised of both airside and landside facilities as presented in Chapter 1. Airside facilities consist of those facilities that are related to aircraft arrival, departure, and ground movement, along with all associated navigational aids, airfield lighting, pavement markings, and signage.

5.2.1 RUNWAY LENGTH COMPARISON

A relative comparison between airport elevations, temperatures, and runway lengths for the study airports is depicted in **Table 5-4**. The runway length required at each study airport was based on the recommended runway length criteria found in FAA Advisory Circular (AC) 150/5325-4B, *Runway Length Requirements for Airport Design,* and FAA AC 150/500-13, *Airport Design*. The FAA family grouping of aircraft used for the study airports was that of *small aircraft*, as defined by AC 150/5325-4, because the identified design aircraft, the Beechcraft Super King Air 200, falls within this classification having a

MTOW of 12,500 pounds. The runway length required in order to accommodate both 95 and 75 percent of small aircraft at each airport is also illustrated in **Table 5-4**.

TABLE 5-4 RUNWAY LENGTH COMPARISON FOR STUDY AIRPORTS

Airport Name	Associated City	Airport Elevation (MSL)	Average Temperature (degrees F) (July)	Existing Runway Length (feet)	Small Aircraft, 95% of Fleet (feet)	Small Aircraft, 75% of Fleet (feet)	Adequate Runway Length Available (95% & 75%)
Arizona Airports							
Chinle Municipal Airport	Chinle	5,550	91	6,902	6,980	4,920	No/Yes
Tuba City Airport	Tuba City	4,513	93	6,230	5,750	4,370	Yes/Yes
Window Rock Airport	Window Rock	6,742	85	7,000	8,100	5,720	No/Yes
New Mexico Airports							
Crownpoint Airport	Crownpoint	6,696	86	5,820	8,110	5,730	No/Yes
Shiprock Airstrip	Shiprock	5,270	95	4,840	6,710	4,850	No/No[1]

Note. Temperature data from Western Regional Climate Center, retrieved August 2014 from www.wrcc.dri.edu. The design aircraft for each airport, the Beechcraft Super King Air 200, falls within the small aircraft category as defined by the FAA. [1] The difference between the existing runway length and the required runway length to accommodate 75 percent of the small aircraft fleet at Shiprock Airstrip is considered insignificant (10 feet) to justify additional runway construction.
Source: ACI, 2014

Although **Table 5-4** indicates that adequate runway length is available at each airport (Shiprock Airstrip is only 10 feet short of accommodating the 75 percent) for 75 percent of small aircraft using the airports, it is important to explain what is taken into consideration when determining runway length. When establishing the necessary runway length for an airport, there are a number of variables to consider. The information required to determine the runway length includes airfield elevation, mean maximum temperature of the hottest month, and the effective gradient for the runway. Also, the performance characteristics and operating weight of an aircraft impacts the amount of runway length needed.

Recommendation: A prudent planning practice is to provide adequate runway length for 75 percent of the existing and forecasted fleet of aircraft. For economic reasons, airports do not typically development runway lengths to satisfy the need of 95 percent of the fleet. In other words, this means that 25 percent of the fleet would be somewhat constrained during the hottest months of the year. To remedy this, the aircraft would need to reduce its weight (fuel and/or cargo) to operate. The remainder of the year they would not be constrained. If the Navajo Nation wants to provide adequate runway length for **more than** 75 percent of the existing or anticipated fleet, then the following airports will need to consider additional runway length as part of the planning process:

- Chinle Municipal Airport

- Window Rock Airport
- Crownpoint Airport
- Shiprock Airstrip

Recommendation: When determining runway length requirements for an airport, it is also necessary to consider the design aircraft's respective takeoff distance requirements. The MTOW and elevation above sea level can adversely affect the amount of runway required to land. Therefore, if the Navajo Nation decides to increase the runway length at any of the airports mentioned above, it is recommended that the takeoff distance requirements for the existing design aircraft or any future design aircraft (i.e. the Embraer Phenom 300) be made part of the design process.

5.2.2 Runway Width

The required runway width is a function of airplane approach category, airplane design group, and the approach minimums for the design aircraft expected to use the runway on a regular basis. The existing runway pavement widths of 75 feet at Tuba City, Window Rock, and Shiprock Airstrip meet the existing and future FAA design standards and should be maintained over the planning period.

Recommendation: Although Chinle Municipal and Crownpoint Airports both meet the existing FAA design standards established for runways widths for a RDC of B-I (see **Table 4-14**), the earlier recommendation to establish all airports at a RDC of B-II would require the runway at each of these airports to be widened to 75 feet. The recommended runway width requirements can be seen on each airport's Airport Layout Plan.

5.2.3 Runway Pavement Strength

According to FAA guidance on pavement strength, the aircraft types and the critical aircraft expected to use the airport during the planning period are used to determine the required pavement strength, or weight bearing capacity, of airfield surfaces. The required pavement design strength is an estimate based on average levels of activity and is expressed in terms of aircraft landing gear type and configurations. Pavement design strength is not the maximum allowable weight; limited operations by heavier aircraft other than the critical aircraft may be permissible. It is important to note that frequent operations by heavier aircraft will shorten the lifespan of the pavement.

Recommendation: The existing pavement strength for each airport's runway was displayed in **Table 4-10**. Based upon the existing and planned RDCs for each runway and the aircraft most likely to use the airport on a regular basis (illustrated in **Tables 5-2A and 5-2B**), the pavement strength ratings for all runways appear adequate. As previously mentioned in Chapter 4, each runway's condition is described as fair to poor, and it is likely that all runways will need some type of rehabilitation and/or reconstruction in the short-term planning period. If and when each runway is reconstructed and/or rehabilitated, the pavement strength should be constructed to a rating of at least 12,500 pounds single-wheel gear (or the existing rating at Window Rock Airport of 30,000 pound single-wheel gear) or greater.

5.2.4 Taxiway and Taxilane Requirements

By definition, a taxiway is a defined path established for the taxiing of aircraft from one part of an airport to another. A taxilane is a taxiway designated for low speed and precise taxiing. Taxilanes are usually, but not always, located outside the movement area, providing access from taxiways to aircraft parking positions, hangars, and terminal areas.

FAA AC 150/5300-13A, *Airport Design*, provide planners with guidance on recommended taxiway and taxilane layouts to avoid runway incursions and to enhance the overall safety at the airport. According to the FAA, a runway incursion is "any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft."

According to *Airport Design*, "good airport design practices keep taxiway intersections simple by reducing the number of taxiways intersecting at a single location and allows for proper placement of airfield markings, signage, and lighting." Existing taxiway geometry should be improved whenever feasible with emphasis on "hot spots," and to the extent practical, the removal of existing pavement to correct confusing layouts is advisable.

Recommendations: As previously mentioned in Section 5.1.3, Taxiway Design Group (TDG), it is recommended that all future taxiways at each of the airports should meet TDG-2 design standards based on the design aircraft of the Beechcraft Super King Air 200 (and potentially the Embraer Phenom 300) and the RDCs for each runway. Various taxiway and taxilane layout configurations to improve access to and from the aprons, hangars, and the terminal building will be depicted on the Airport Layout Plan for each airport.

5.2.5 Aircraft Apron

An aircraft apron is typically located in the non-movement area of an airport near or adjacent to the terminal area. The function of an apron is to accommodate aircraft during loading and unloading of passengers and/or cargo. Activities such as fueling, maintenance, and short to long-term parking take place on an apron. The layout and size of an apron depends on aircraft and ground vehicle circulation needs and specific aircraft clearance requirements. There are several types of aircraft aprons:

Terminal/itinerant aircraft apron – These aprons are adjacent to the terminal where passengers board and deplane from the aircraft. The apron also accommodates multiple activities such as fueling, maintenance, limited aircraft service, etc. Itinerant aprons handle itinerant aircraft activities which are usually only on the airport for a few days. At general aviation airports, this type of apron can also provide some tie-down locations for both itinerant and based aircraft.

Tie-down apron – An apron area for both short-term and long-term aircraft parking (based and itinerant aircraft).

Other services apron – Apron areas that will accommodate aircraft servicing, fueling, and the loading/unloading of cargo.

Hangar aprons – This is an area on which aircraft move into and out of a storage hangar.

FAA AC 150/5300-13A, *Airport Design*, provides design criteria to assist in apron layout and capacity. For the purpose of calculating the aircraft apron size, the following planning criterions were used:

- 800 square yards of apron per aircraft for single-engine and multi-engine aircraft
- 1,500 square yards per aircraft for turboprops and business jets
- 5,000 square yards per aircraft for larger fire fighting aircraft
- 20% of single-engine based aircraft will require apron parking
- 10% of multi-engine based aircraft will require apron parking
- Itinerant aircraft apron requirements are based on the design hour operations

Recommendation: Based on the above criterion, a review was made of the existing aircraft parking apron available at each airport. It was determined that the sizes of the existing aircraft aprons appear adequate for the near future at the following airports:

- Window Rock Airport
- Tuba City Airport
- Crownpoint Airport
- Shiprock Airstrip

However, additional aircraft apron is recommended at Chinle Airport because of the current emergency medical personnel and aircraft which occupy the majority of the existing apron. As additional itinerant or based aircraft use the airport, additional aircraft apron will likely be needed. Consideration should be given to provide adequate apron space for emergency medical and firefighting helicopters at each airport. In the short-term, one parking spot for helicopters should be sufficient at each airport.

The Airport Layout Plan for each airport will show where additional apron can be constructed. The actual size and timing of additional aircraft parking apron will be based on demand, but showing the additional apron on the ALP allows the airport to adapt to the growing and changing needs of the airport and surrounding community.

5.2.6 Instrument Aids to Navigation

As discussed in Chapter 4, Inventory of Airport System Assets, having instrument approach capabilities at each airport is very important; an instrument approach at each airport would provide enhanced safety and utility during hours of darkness and adverse weather conditions. Each of the airports will benefit from having an approach and will be especially important for air ambulance, physician transport, and business flights.

Recommendation: Development of a GPS approach procedure with Area Navigation (RNAV) with one mile visibility minimums for the primary runway end are recommended for each airport. Visibility minimums of lower than ¾-mile are not recommended for any of the airports at this time. The cost of installing and maintaining the Medium-Intensity Approach Lighting System (MALSR) required for lower visibility minimums is prohibitive as the benefit from the lower visibility minimums is not anticipated to outweigh the costs.

5.2.7 Airfield Lighting, Signage, Markings, and Visual Aids to Navigation

An overview of the general conditions and constraints at each airport was included in Chapter 4. Based on the findings from the on-site visits conducted at each airport, the availability and reliability of the airfield lighting, signage, markings, and visual aids to navigation vary.

Recommendations: In general, each airport should have runway and taxiway edge lighting and signage, a precision approach path indicator (PAPI) and runway end identifier lights (REIL) at each runway end, a rotating beacon, a lighted wind cone, and a segmented circle. In addition, each airport should have non-precision pavement markings.

To facilitate the installation of the recommended airfield lighting and visual aids, new or potentially modified electrical service entrances will be required at many of the airports, along with the construction of electrical buildings to house the required constant current regulators.

Table 5-6 at the end of this chapter depicts the priority and specific recommendations for airfield lighting, signage, markings, and visual aids to navigation for each of the airports included in the study.

5.2.8 Weather Aids

Presently, only Window Rock Airport has an on-airport weather aid. The Automated Surface Observing System (ASOS) is in excellent condition and provides the necessary weather information to pilots.

Recommendation: Based on conversations with medical, government, and private pilots who actively use all of the airports, and from feedback at the Chapter House workshops, the need for reliable weather information is very important. Therefore, it is recommended that all of the remaining airports have an Automated Weather Observing System (AWOS) or an ASOS installed as soon as possible.

5.3 Landside Facility Requirements

Landside facilities are another important aspect of any airport as they handle aircraft and passengers while on the ground at the airport. Landside facilities serve as the processing interface between two modes of transportation - air and ground. Likewise, landside facilities also offer travelers the first impression of the airport and the local community.

5.3.1 Hangar Facilities

Based on existing aircraft operations, an immediate need for new or additional hangars at the study airports are not necessarily needed. However, as aircraft operations increase in the future, a desire for hangar facilities may develop. As such, hangars have been proposed the study airports, and will be depicted on each airport's Airport Layout Plan (see **Table 5-6** at the end of this chapter).

If hangar development is desired at the airports in the future, prefabricated conventional and T-hangar units are available from a variety of manufacturers throughout the United States. Storage space for based aircraft was determined using guidelines suggested in manufacturer's literature. Typical aircraft sizes were also reviewed in light of the evolution of business aircraft sizes. These standards include the following:

Conventional hangar:

- 1,200 square feet for single-engine aircraft
- 1,400 square feet for multi-engine aircraft
- 1,800 square feet for turboprop or turbojet aircraft

T-hangar:

- 1,400 square feet for single- and multi-engine aircraft

Recommendation: Window Rock Airport is the only airport included in the study that has existing aircraft storage hangars. Additional hangars will likely be needed to accommodate future growth at the remaining airports. The above criterion will provide guidance when planning for the addition of hangars at each airport. Additional or new hangars will be shown on the Airport Layout Plans for each airport. Consequently, hangars are also a good source of revenue generation for the airport. As always, the size and timing of the hangars will be based on actual demand.

5.3.2 Aviation Fuel Facilities

As discussed in Chapter 4, only Window Rock Airport and Chinle Municipal Airport have aviation fuel available on the airfield. However, the fuel is for private use and is not readily available to the general public (Navajo Nation at Window Rock and Eagle Air Med at Chinle Municipal own and operate the fuel storage tanks at the airports).

Recommendations: The capability to sell fuel at airports is one way to generate airport revenue. One feature that should be included with any new fuel facility is a self-service system with a credit card reader. Self-service systems are very common at general aviation airports and they are becoming more of an expectation by pilots using small GA airports. In the short-term, self-service fueling with a credit card payment option for use by the general public is recommended at Window Rock and Chinle Airports. Additionally, the Nation should consider adding the same self-fueling capabilities mentioned above for the remaining three study airport at some point in the future. The Airport Layout Plans for each airport depict where future fuel facilities should be installed.

Additional fuel storage capacity should be planned when the airport is unable to maintain an adequate supply and reserve. For general aviation airports such as the airports included in the study, typically a 14 day supply is common. The presence of a Fixed Based Operator (FBO) on the airport would help in determining when additional fuel storage may be needed. As the need for additional fuel storage becomes necessary, additional tanks should be added in 10,000 or 12,000 gallon increments. These increments will be the most economical to install.

5.3.3 Security

There are several programs designed to increase general aviation airport security. For example, the Aircraft Owners and Pilots Association (AOPA) Airport Watch program created an around the clock telephone hotline answered by federal authorities for pilots and other airport users to report suspicious activity at GA airports. Also, the Transportation Security Administration's (TSA) *Security Guidelines for General Aviation Airports* provides a set of federally-endorsed recommendations to enhance security for municipalities, owners, operators, sponsors and other entities charged with oversight of general aviation airports. The TSA's guidance provides nationwide consistency with regard to security at general aviation facilities, as well as a rational method for determining when and where these enhancements may be

appropriate based upon the operational profile of differing airports. The guidelines offer an extensive list of options, ideas, suggestions and proven best practices for the airport operator, sponsor, tenant and/or user to choose from when considering security enhancements. The TSA's guidelines are updated and modified as new security enhancements are developed and as input from the general aviation community is received.

Recommendation: It is recommended that the Navajo DOT review the latest version of the TSA's *Security Guidelines for General Aviation Airports* in order to assess the suggested security enhancements for the five airports included in this study.

5.3.4 Fencing

According to FAA AC 150/5300-13A, *Airport Design*, the primary purpose of airport fencing is to restrict inadvertent entry to the airport by unauthorized people and wildlife. There are several types of airport fencing that are eligible for FAA funding as part of the AIP program depending on the airport's classification (commercial service, GA, etc.) and fencing needs. The different types include wire fencing (with wooden or steel posts), chain-link fencing with steel posts, and wildlife deterrent fencing. Wildlife deterrent fencing usually consists of installing chain-link fence fabric along an existing chain-link fence and constructing concrete pads at existing fence gates.

Recommendations: Based on the conditions of the perimeter fencing as described in Chapter 4, Navajo DOT may want to consider an upgrade to either six-foot or eight-foot high chain-link fencing with three-strand barbed wire in the future. If wildlife in the area becomes an issue, wildlife deterrent fencing may also be an option. The specific location, extent, type, and height of wildlife deterrent fencing shall be designed for the purpose intended based on and in general conformance with accepted guidelines and recommendations of the Arizona Game and Fish Department or other recognized public wildlife specialists for preventing intrusion of the specific targeted animals known to inhabit the area.

Also mentioned in Chapter 4, four of the five study airports currently do not have any type of fencing which prohibits access to the AOA (Air Operations Area). The airports are not required to have security fencing in place to separate the AOA from the landside portions of the airfield because it does not conform to FAR Part 139 and Title 49 CFR, Part 1542. However, in order to enhance safety on the airfield and prevent unauthorized access to aircraft and other airside facilities, it is recommended that chain-link fencing and electrified, mechanical access gates be installed in the vicinity of the landside and other nearby public areas.

5.3.5 Snow Removal Equipment (SRE) and Storage Building

Based on the feedback at the Chapter workshops and from conversations with airport users, the need for snow removal equipment is needed at each of the airports. Currently, the Navajo DOT has to dispatch plows to the airports to remove snow. Not having equipment located at the airport reduces the reliability of the airports; this may largely impact emergency medical flights that would not be able to use the airport during inclement weather.

Recommendation: In order to remedy this problem, it is recommended that each airport in the study obtain its own adequate snow removal equipment and erect a storage building on the airfield. The equipment will be dedicated for use on the airports only.

5.3.6 Aircraft Rescue and Fire Fighting (ARFF) Equipment & Storage Building

According to FAA guidance, operators of Part 139 certificated airports must provide Aircraft Recue and Fire Fighting (ARFF) services. Because the airports included in the study are not Part 139 certificated airports, ARFF equipment is not required. Local municipal or volunteer fire departments typically provide fire protection to general aviation airports in their district. On the Navajo Nation, the Department of Fire & Rescue Services provides fire protection to the airports.

Recommendations: Procedures should be in place to ensure emergency response in case of an accident or emergency at the airports. Although statistically very safe, the most likely emergency situations at general aviation airports are an aircraft accident, fuel or aircraft fire, or a hazardous material (fuel) spill. The level of protection recommended in FAA AC 150/5210-6D, *Aircraft Fire and Rescue Facilities and Extinguisher Agents*, for small general aviation airports is 190 gallons of aqueous film forming foam (AFFF) supplemented with 300 pounds of dry chemical. Proximity suits should be utilized for fire fighter protection. Aviation rated fire extinguishers should be immediately available in the vicinity of the aircraft apron and fueling facilities. It is recommended that the Department of Fire and Rescue maintain compliance with the recommendations contained in FAA AC 150/5210.6D, *Aircraft Fire and Rescue Facilities and Extinguishing Agent*, if they are currently noncompliant.

5.3.7 Airport Access and Vehicle Parking

As mentioned in Chapter 4, all of the airports included in the study have access roads leading from the public roads to the airfields. The access roads are all generally adequate and in fair condition. Speed limit signs were not observed on any of the airport access roads (except for the entrance to Window Rock Airport). Vehicle parking is also available at all of the airports included in the study. The parking areas either consist of asphalt or gravel, and with the exception of Chinle Municipal Airport, the pavement condition or gravel for all vehicle parking areas is poor.

Recommendations: Speed limit signs should be installed on the entrance roads in accordance with Navajo DOT specifications in addition to the upkeep and maintenance of the entrance roads themselves. The two existing cattle guards at the entrance to Crownpoint Airport need replacement. Furthermore, there is a significant grade difference from the edge of the highway and the entrance road to the airport. Replacement of the cattle guards and modification of the grades will be depicted on the Airport Layout Plan for Crownpoint Airport. Recommendations for additional parking will also be depicted on each Airport Layout Plan. At airports where pavement exists, it should be rehabilitated or reconstructed in the near future.

From discussions with Navajo DOT, the development of a new vehicle parking lot for Window Rock Airport has already been approved. Approximately 2,000 square yards of new asphalt pavement with a total of 48 vehicle parking spaces is anticipated to begin construction in the fall of 2014; completion of the project is projected for sometime in the spring of 2015.

5.3.8 Infrastructure Needs

Chapter 4 indicated that additional utilities will be required at many of the airports. It is assumed that upgrades to the existing electric, water, and telecommunication utilities will be needed to some degree for each existing facility.

Recommendation: Upgrades and improvements to the existing utilities are recommended, as needed, in order to accommodate recommended development. The need for additional utilities, or modifications to existing utilities, will be identified on the Airport Layout Plans for each airport.

5.3.9 Miscellaneous Airport Development

During the Chapter workshops, and from discussions with the Navajo DOT staff, it was discovered that some of the study airports have miscellaneous airport development plans already in the works. Perhaps the most notable and likely to occur are those plans for Window Rock Airport. Planned facilities on or adjacent to the airport include the following:

- A planned recreational vehicle park located northwest of the existing runway and southeast of the Navajo Nation Fairgrounds.

- Construction of a helitack facility on approximately 6 acres of withdrawn land located on the airport property for use by the Bureau of Indian Affairs (BIA) Navajo Region, Branch of Wildlife Fire and Aviation. The proposed facility will consist of two helicopter parking pads and a fire management helitack building approximately 1,600 square feet in size.

No time table has been set for the construction of the recreational vehicle park. Consideration as to where the park will be potentially located will be important to the planning process. A new park will need to remain outside of certain FAA design standard surfaces and applicable 14 CFR Part 77 imaginary surfaces.

Construction of the helitack facility has been in the planning process since 2008. The planned location, size, and needs of the facility will be taken into consideration as future airside infrastructure is proposed i.e., taxiway, aprons, etc.

5.3.10 Airport Zoning

Airport zoning ordinances should include height restrictions and land use compatibility regulations. Development around airports can pose certain hazards to air navigation if appropriate steps are not taken to ensure that existing, as well as future, buildings and other types of structures do not penetrate 14 CFR Part 77 imaginary surfaces. The FAA therefore recommends that airport sponsors implement height restrictions in the vicinity of the airport to protect these surfaces.

Based on the physical inspection of each airport, there currently appears to be no incompatible land uses in the vicinity of the airports. A review of the Chapter Houses' Comprehensive Land Use Plans (CLUP) corresponding to their associated airports was conducted as part of the inventory process; a summary of the type(s) of zoning found at each airport is described below:

Chinle Municipal Airport:

- According to the Chinle Chapter Comprehensive Land Use Plan, the airport is located in an industrial zone.

Tuba City Airport:

- According to the Tuba City Chapter Comprehensive Land Use Plan, the airport does not appear to be located in an existing or future land area within a specific category. The CLUP also indicates that proposed development is planned to the east of the existing airport. Development in this area will need to be compatible with the airport.

Window Rock Airport:

- According to the St. Michaels Chapter Community Land Use Plan, the airport does not appear to be located in an existing or future land area within a specific category.

Crownpoint Airport:

- The Crownpoint Chapter Comprehensive Community-Based Land Use Plan indicates that the airport is located in area designated as Community Facilities.

Shiprock Airstrip:

- A review of the Shiprock Chapter Master Land Use Plan reveals that the airport is located outside of a designated zoned area.

Recommendations: The Airport Layout Plan for the airports included in the study will show areas where height restrictions will be necessary. Likewise, the Airport Layout Plans will also show where non-compatible land uses may exist related to existing and future development.

5.3.11 Additional Land Needs

As previously discussed in Chapter 4, Section 4.11.2, Existing Airport Property Overview, the need for additional land withdrawal to increase the existing airport property boundary is necessary to some extent at each of the study airports. A summary of the additional land requirements needed in order to accommodate future airport development is displayed in **Table 5-5**.

Recommendation: The Navajo DOT should continue to work with the appropriate federal, state, and local agencies on the land withdrawal needs and processes for each individual airport. The Airport Layout Plan for the study airports will identify areas where additional acreage is needed for airport property for future airport development projects.

TABLE 5-5 SUMMARY OF EXISTING AND ADDITIONAL FUTURE LAND NEEDS

Airport Name	Existing Airport Property Acreage [1]	Additional Airport Property Acreage Needed	Additional Land Withdrawal Needed	Total Future Airport Property Acreage
Arizona Airports				
Chinle Municipal Airport	320	188	Yes	508
Tuba City Airport	148	53	Yes	201
Window Rock Airport	96	128	Yes	224
New Mexico Airports				
Crownpoint Airport	108	86	Yes	194
Shiprock Airstrip	68	161	Yes	229

Note.[1] Existing acreage is approximate.
Source: ACI, 2015

5.3.12 SUSTAINABLE PRACTICES

As discussed in Chapter 4, development of the Navajo Nation airports will present multiple opportunities to implement more sustainable infrastructure and practices. For example, for both the medium intensity taxiway lights (MITL) and medium intensity runway lights (MIRL), preference is given to light-emitting diode (LED) fixtures as they will significantly reduce energy costs and have superior light quality over incandescent or quartz bulbs. LED fixtures for taxiways and runways (MIRL only) are FAA approved, although it is important to note that LED fixtures do have higher initial costs. Lighting is just one component of the overall goal to improve airport sustainability; Navajo DOT also has options in this area with regards to any new buildings constructed on the airfield.

Recommendations: During the design phase of a lighting project, the Navajo DOT along with the FAA and the design engineer can evaluate what type of light fixture (incandescent, quartz, or LED) best meets the needs of the Navajo DOT. New buildings could either be constructed via conventional construction, pre-fabrication, or modular methods. Each building type has advantages and disadvantages and varying costs to consider. Any new building should be designed with at least a 20-year lifespan with minimal renovation and upgrades needed. Attention should be given in the design phase to ensure the building's functionality throughout the entire planning period is met. New buildings will also allow the opportunity to incorporate numerous sustainable features such as a high-energy efficient heating and cooling system, solar hot water, rainwater harvesting, LED lighting, drought tolerant landscaping, and the use of low volatile organic compounds (VOC) and recycled materials in the construction of the building.

It is not recommended that the Navajo DOT seek a LEED rating on new buildings less than 25,000 square feet. LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites

and credits differ for each rating system, and teams choose the best fit for their project. However, steps should be taken to ensure that all new buildings are designed to LEED guidelines as much as practical. Seeking a LEED rating on a new building is more practical for larger buildings (25,000 square feet or more) due to the cost of administering the LEED rating process.

5.4 Summary of Proposed Facility Requirements

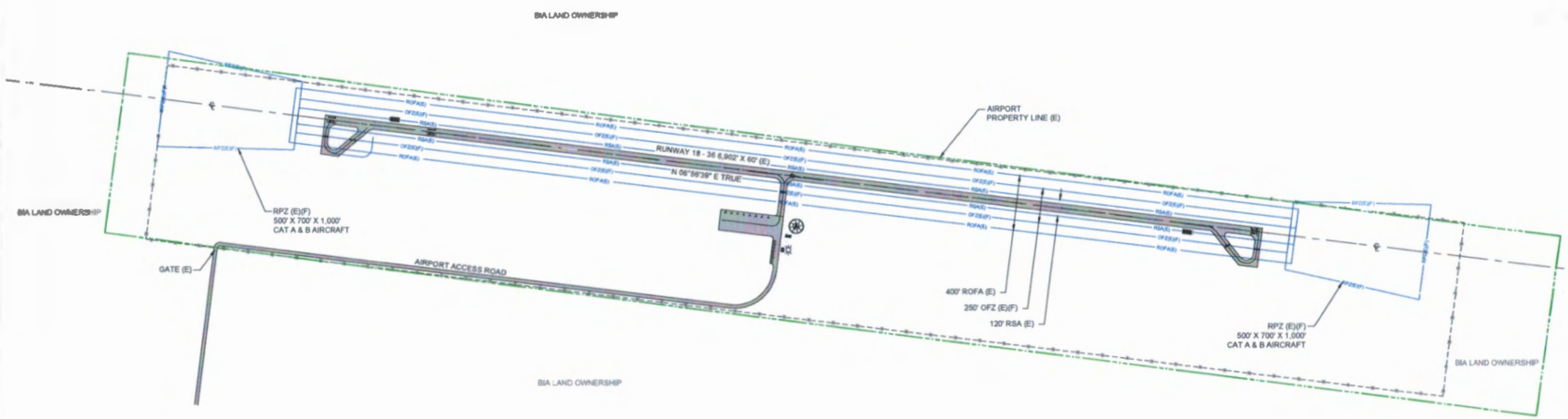
The facility requirements for the Navajo Nation Airport System Master Plan are summarized on **Table 5-6**. The recommendations are based on the types and volume of aircraft currently using, and expected to use, the airport in the short and long-term time frames. The proposed improvements and developments are organized into three categories: basic facility needs, all-weather capabilities, and aeronautical services. Within these categories, each proposed improvement or development is assigned a priority rating. Priorities have been ranked high, medium, or low. The recommended facilities will enable the airport to continue to serve its current and future users in a safe and efficient manner.

In the next chapter, Airport Development Plans and Costs, the various airside and landside improvements will be presented and evaluated. An Airport Layout Plan (ALP) will be created to visually depict and communicate the Nation's vision for each airport in the study.

TABLE 5-6 PROPOSED AIRPORT IMPROVEMENTS AND DEVELOPMENT

Priority Ranking ● High ■ Medium ▸ Low	Basic Facility Needs							All Weather Capabilities			Aeronautical Services				
	Airfield Pavements (Runways, Taxiways, Apron)	Airfield Lighting	Airfield Signage	Airfield Pavement Markings	Visual Navigational Aids (Glide Scope Indicator, Wind Cone, Rotating Beacon, Segmented Circle, REIL)	Fencing and Access Control	Access Road	Automated Weather Source	Instrument Approach Procedures	Snow Removal Equipment and Storage Building	Fixed Base Operator (FBO)	Fuel Capabilities	Hangars	GA Terminal Building	Ground Transportation Service
Arizona Airports															
Chinle Municipal Airport	Reconstruct/ Rehabilitate/ Widen ●	Upgrade MIRL/MITL ●	Install ●	Maintain non-precision (runway); Repaint all ●	▸ GSI: Maintain existing PAPI Runways 18 & 36 ● Rotating Beacon: Replace ▸ Wind cone: Maintain existing ● Segmented Circle: Replace ● REIL: Install Runways 18 & 36	Upgrade perimeter fencing/install automatic access control gate to AOA ●	No immediate concerns ■	Install AWOS III ●	Proposed GPS/RNAV Runway: TBD ●	Obtain equipment; construct building ●	Proposed ■	Self-Serve ●	Proposed ▸	Proposed ▸	Proposed (long-term) ■
Tuba City Airport	Reconstruct/ Rehabilitate ●	Upgrade MIRL/MITL ●	Upgrade /Install ●	Maintain non-precision (runway); Repaint all ●	● GSI: Replace VASI/Install PAPI Runways 15 & 33 ▸ Rotating Beacon: Maintain existing ● Wind cone: Replace ● Segmented Circle: Replace ● REIL: Install Runways 15 & 33	Upgrade perimeter fencing/install automatic access control gate to AOA ●	No immediate concerns ■	Install AWOS III ●	Proposed GPS/RNAV Runway: TBD ●	Obtain equipment; construct building ●	Proposed ■	Self-Serve ●	Proposed ▸	Proposed ▸	Proposed (long-term) ■
Window Rock Airport	Reconstruct/ Rehabilitate ●	Upgrade MIRL/MITL ●	Upgrade /Install ●	Maintain non-precision (runway); Repaint all ●	● GSI: Replace/Install PAPI Runways 2 & 20 ▸ Rotating Beacon: Maintain existing ● Wind cone: Replace ● Segmented Circle: Replace ● REIL: Replace Runway 2/Install Runway 20	Upgrade perimeter fencing/upgrade automatic access control gate to AOA ●	Rehabilitate ●	Existing ASOS maintained by the FAA	Maintain existing ●	Obtain equipment; construct building ●	Proposed ■	Self-Serve ●	Proposed ▸	Maintain existing ▸	Proposed (long-term) ■
New Mexico Airports															
Crownpoint Airport	Reconstruct/ Rehabilitate/ Widen ●	Upgrade MIRL/MITL ●	Install ■	Upgrade to non-precision (runway); Repaint all ●	● GSI: Replace PLASI/Install PAPI Runways 18 & 36 ● Rotating Beacon: Replace ▸ Wind cone: Maintain existing ▸ Segmented Circle: Maintain existing ● REIL: Install Runways 18 & 36	Upgrade perimeter fencing/install automatic access control gate to AOA ●	Rehabilitate ●	Install AWOS III ●	Proposed GPS/RNAV Runway: TBD ●	Obtain equipment; construct building ●	Proposed ▸	Self-Serve ▸	Proposed ▸	Proposed ▸	Not proposed
Shiprock Airstrip	Reconstruct/ Rehabilitate ●	Install MIRL/MITL ●	Install ■	Upgrade to non-precision (runway); Repaint all ●	● GSI: Install PAPI Runways 2 & 20 ● Rotating Beacon: Install ● Wind cone: Replace ● Segmented Circle: Replace ● REIL: Install Runways 2 & 20 ● Pilot-controlled lighting: Install	Upgrade perimeter fencing/install automatic access control gate to AOA ●	Rehabilitate ●	Install AWOS III ●	Proposed GPS/RNAV Runway: TBD ●	Obtain equipment; construct building ■	Proposed ▸	Self-Serve ▸	Proposed ▸	Proposed ▸	Not proposed

Definitions: Air Operations Area (AOA), Automated Surface Observing System (ASOS), Automated Weather Observing System (AWOS), Glide Scope Indicator (GSI), Medium Intensity Runway Lighting (MIRL), Medium Intensity Taxiway Lighting (MITL), Not Applicable (N/A), Precision Approach Path Indicator (PAPI), Pulse Light Approach Slope Indicator (PLASI), Runway (Rwy), Runway End Identifier Lights (REIL), To be determined (TBD), Visual Approach Slope Indicator (VASI)
Source: ACI, 2014



0 400 800
SCALE IN FEET

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)			THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (R&A)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			LAND USE LINE

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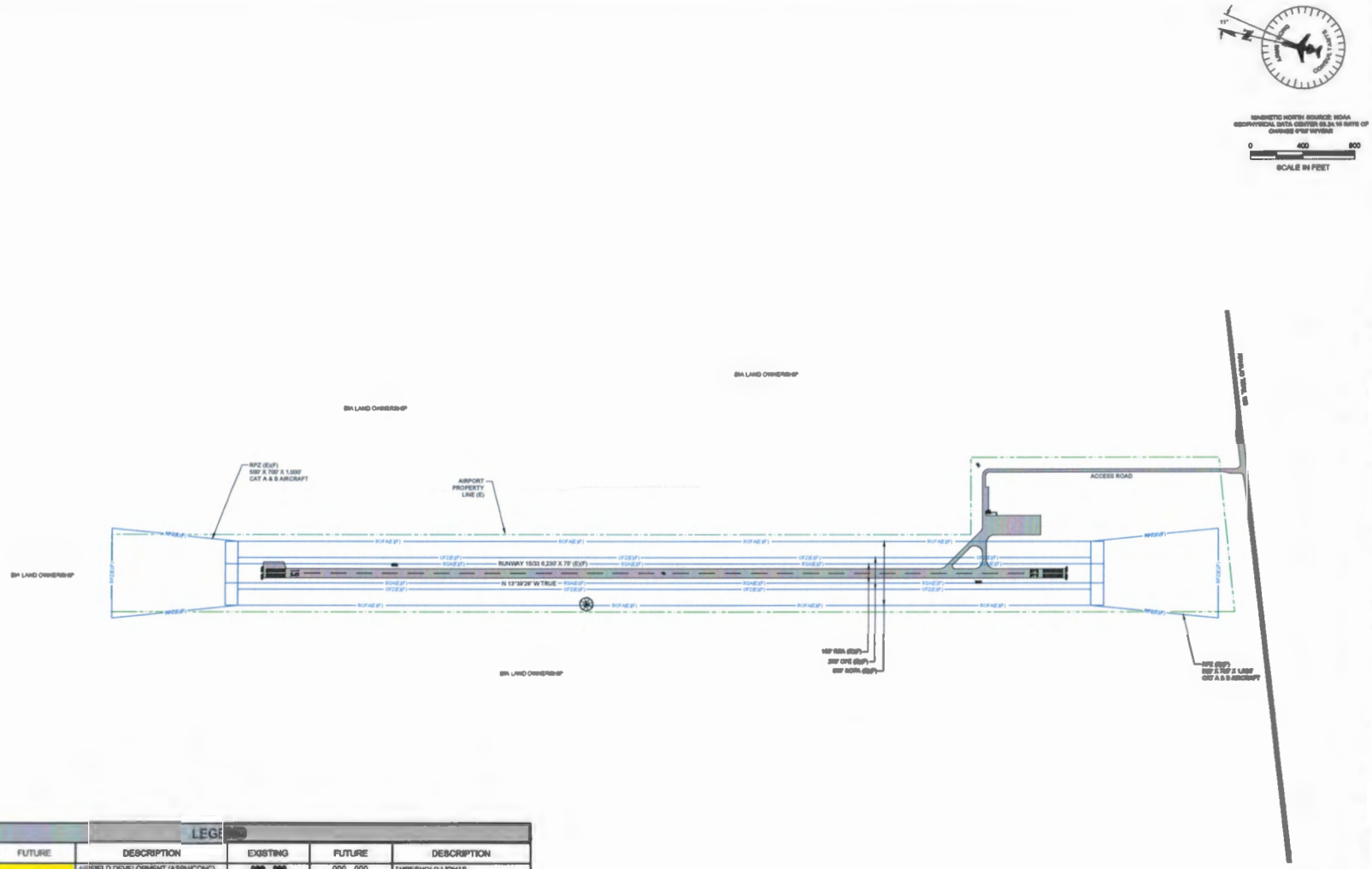
CHINLE MUNICIPAL AIRPORT
CHINLE, ARIZONA

A.I.P. NO. 3-04-0303-01-11-2014
AIRPORT LAYOUT PLAN

No	Project No.	Date	Revision / Description	File	Drwn	Chkd	Approved
3							
2							
1							
0	140214	04/2015	ORIGINAL ISSUE	42-2015 EB	LDB	CM	JP

EXISTING DESIGN STANDARDS

EXHIBIT B1



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		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	5710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
SSS' (E)	SSS' (F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			

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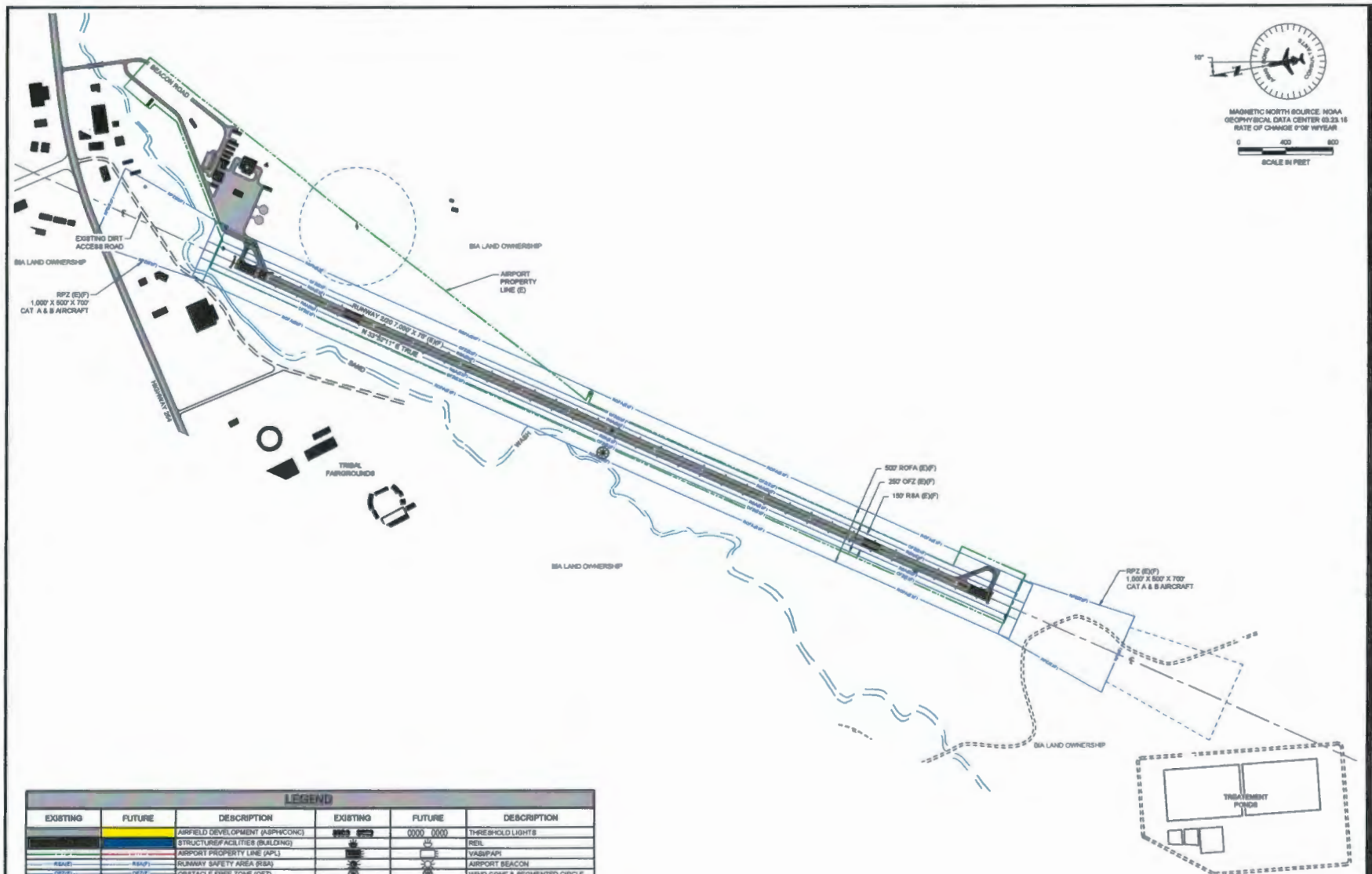
TUBA CITY AIRPORT
TUBA CITY, ARIZONA

AIP NO. 3-04-D303-01-11
NAVAJO NATION

No	Project No	Date	Revision Description	Dwn	Chkd	Approved
3						
2						
1						
0	1.462.14	04/2015	ORIGINAL ISSUE	151/05/ 1.05.005	CM	ZP

EXISTING DESIGN STANDARDS

EXHIBIT B2



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		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	5/10		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED		N/A	PACS/SACS MONUMENTS
	N/A	DRAINAGE WASH			LAND USE LINE

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WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

A.I.P. No. 3-04-0303-01-11
AIRPORT LAYOUT PLAN

No	Project No.	Date	Revision / Description	Drawn	Chkd	Approved
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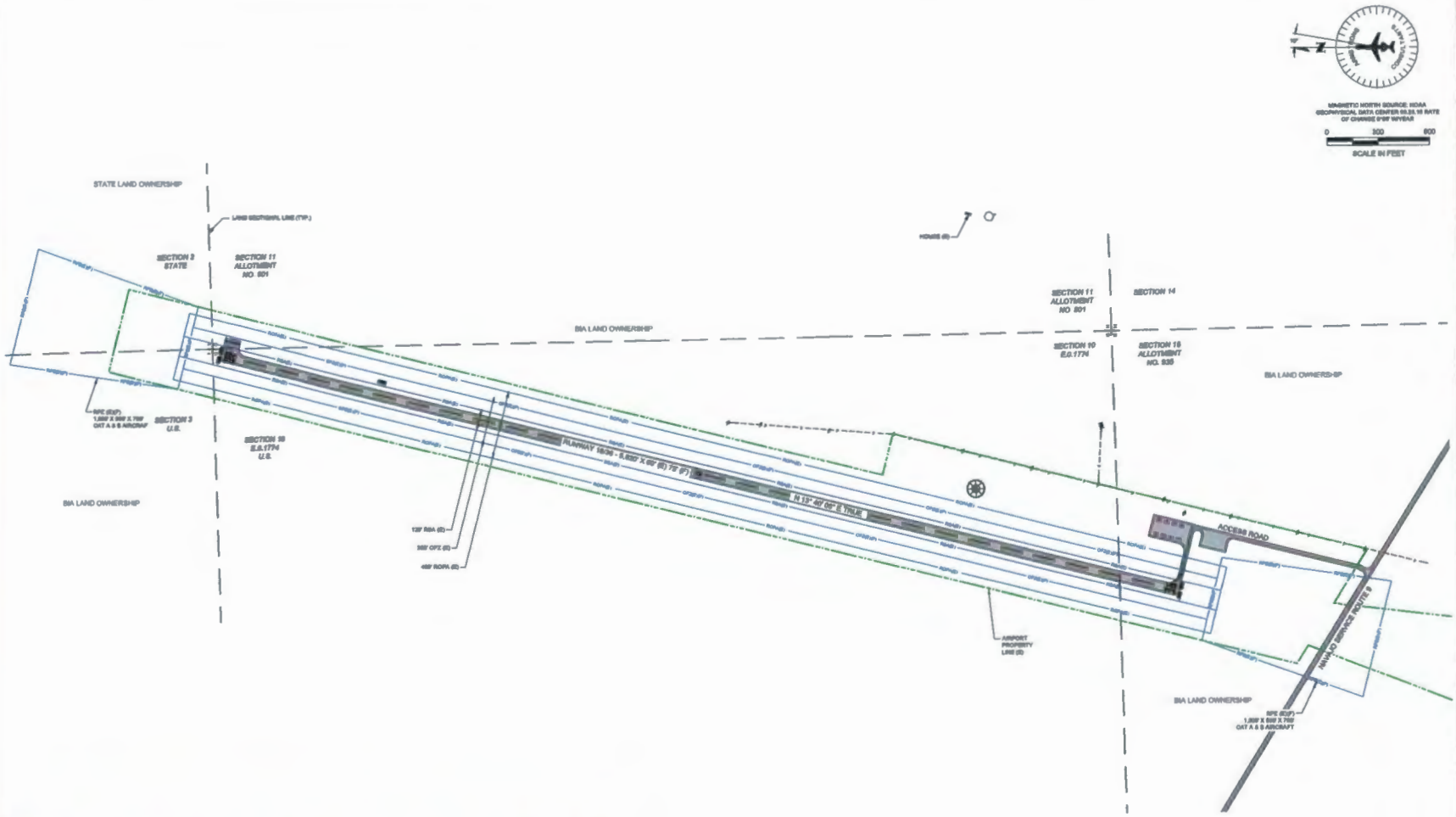
EXISTING DESIGN STANDARDS

EXHIBIT B3



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EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
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		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD STRING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			

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CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

AIP NO. 3-04-D303-01-11
NAVAJO NATION

No	Project No	Date	Revision / Description	Drwn	Chkd	Apprvd
0	1-46214	04/2015	ORIGINAL ISSUE	DC/JRC/JB/CDE/JB/JG	CM	DAC

EXISTING DESIGN STANDARDS

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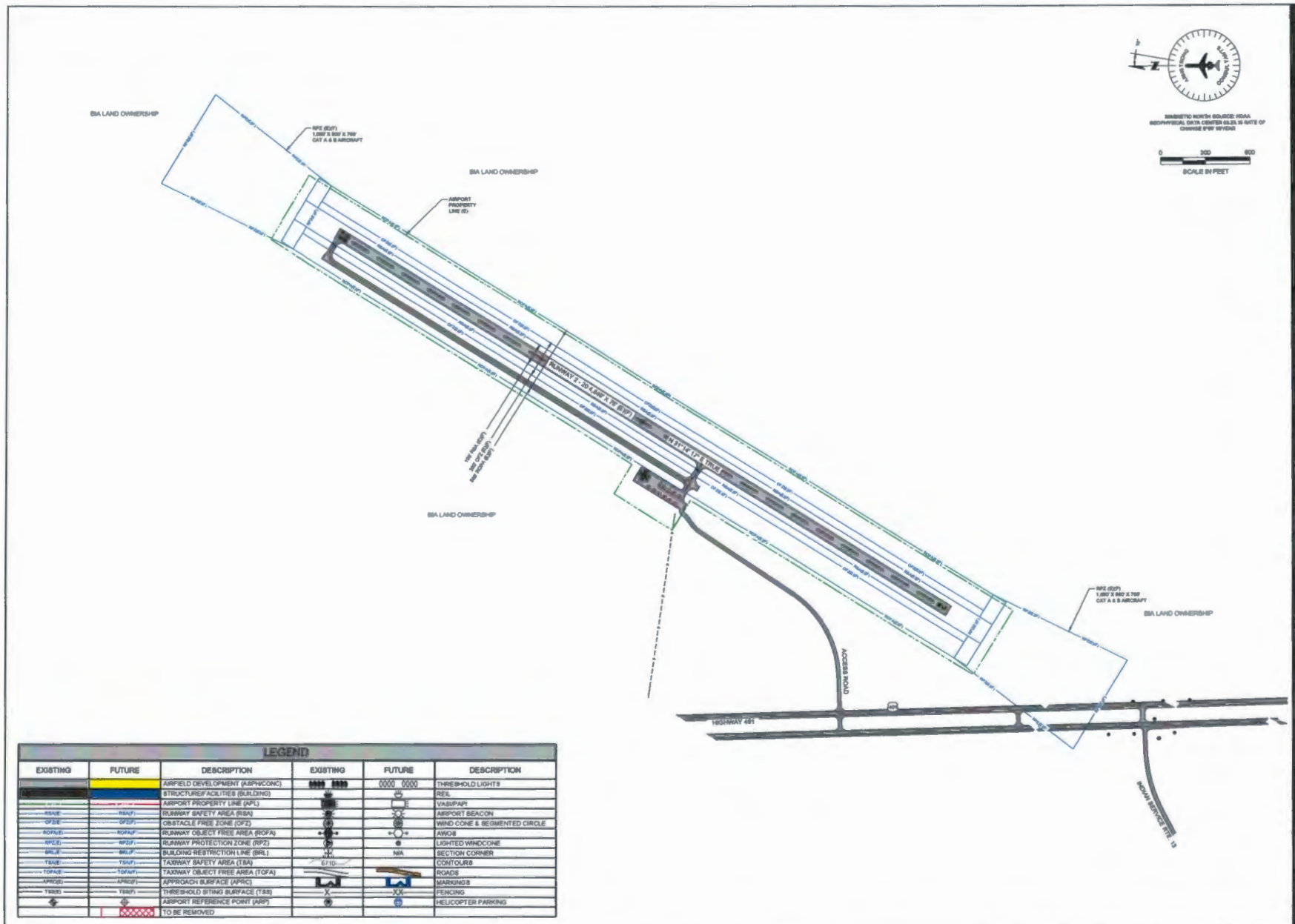

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)			THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)	X	XX	FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			

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SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

FAA AIP NO. 3-04-D303-01-11
NAVAJO NATION

No	Project No	Date	Revision / Description	Dwn	Chkd	Appvd
5						
2			FAA AIP NO. 3-04-D303-01-11			
1						
0	1-482114	04/28/15	ORIGINAL ISSUE	KZ/JDP/SVS	LDS	DM	JDP

EXISTING DESIGN STANDARDS

EXHIBIT B5

Chapter Six

AIRPORT DEVELOPMENT PLANS AND COSTS

CHAPTER 6 – AIRPORT DEVELOPMENT PLANS AND COSTS

6.1 INTRODUCTION

The short and long-term financial commitment required for the development of the airports included in this study is significant. As such, the Navajo DOT will be seeking funding support from a variety of sources. In order for the Navajo DOT to have confidence in the amount of funding requested, it is important that reasonable planning level costs be established for the proposed projects at each airport. This chapter presents a summary of the reasonable costs anticipated for the proposed projects at each airport.

This chapter also contains the *draft* Airport Layout Plan (ALP) drawing set for the airports included in the study. These drawings adhere to the current guidelines set forth in the FAA's Standard Operating Procedures entitled *FAA Review and Approval of Airport Layout Plans* (ARP SOP 2.00). The ALP and Terminal Area Drawing (TAD) graphically display, amongst other things, future proposed development at an airport. The basis for the costs associated for the proposed projects at each airport correspond to the proposed development on these drawings, thus the reason behind their inclusion within this chapter.

6.2 DEVELOPMENT PLANS

The development plans created for each airport were the result of a collaborative effort with the Navajo DOT, input from the PAC membership, and feedback from the community in each chapter where the airports reside. In addition, for some airports feedback was also received from surrounding chapters.

The focus of the development plans was to provide Navajo DOT a reasonable roadmap whereby each airport can be developed in a practical manner to accommodate growth over time. In addition, short-term critical navigational aids and support systems, such as an Automated Weather Observing System (AWOS), are recommended based on the immediate need for increased reliability during periods of low visibility and inclement weather to support emergency transportation services at each airport.

Growth at the airports will be driven by many factors. Each Airport Layout Plan is flexible and can adapt to the changing demands moving forward. With the exception of the Window Rock Airport, adequate land is available in the vicinity of each airport to allow for additional development beyond what is currently planned. The Window Rock Airport is somewhat constrained because of the existing wastewater treatment facility to the south and the existing highway and residential housing to the north. The Window Rock Airport should be able to meet the needs of the Navajo Nation for the foreseeable future until such time that more demanding aircraft are based at the airport and the operations of the more demanding aircraft increase to such a level that the runway needs to be extended.

Another important component for the development plans was to identify land that can be made available for revenue generating aeronautical and non-aeronautical development. A key objective for the Navajo DOT is for each airport to be in a position to generate revenue. Therefore, the development plans reflect where potential development should take place. The identified land should be adequate for the foreseeable future at each airport.

CROWNPOINT AIRPORT

CROWNPOINT, NEW MEXICO

AIRPORT LAYOUT PLANS

PREPARED BY:

ARMSTRONG CONSULTANTS, INC.

FAA AIP NO. 3-04-D303-01-11

A.C.I. PROJECT NO. 146214_0E8

DATE: MAY, 2015

LOCATION MAP

VICINITY MAP

INDEX TO SHEETS

(E = EXISTING, F = FUTURE)

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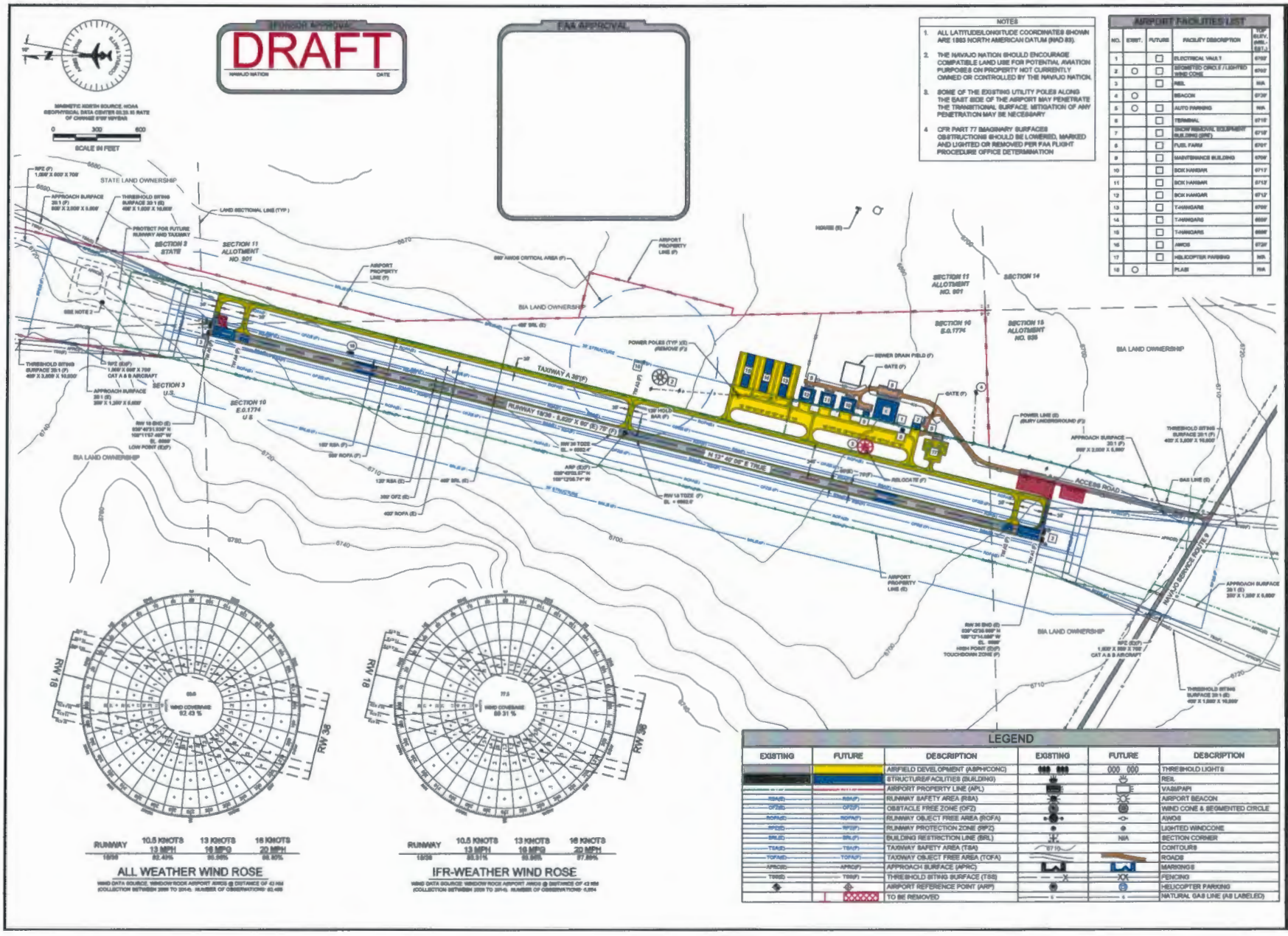

NOTES
1. ALL LATITUDES/LONGITUDE COORDINATES SHOWN ARE 1983 NORTH AMERICAN DATUM (NAD 83).
2. THE NAVAJO NATION SHOULD ENCOURAGE COMPATIBLE LAND USE FOR POTENTIAL AVIATION PURPOSES ON PROPERTY NOT CURRENTLY OWNED OR CONTROLLED BY THE NAVAJO NATION.
3. SOME OF THE EXISTING UTILITY POLES ALONG THE EAST SIDE OF THE AIRPORT MAY PENETRATE THE TRANSITIONAL SURFACE. MITIGATION OF ANY PENETRATION MAY BE NECESSARY
4. CFR PART 77 IMAGINARY SURFACES OBSTRUCTIONS SHOULD BE LOWERED, MARKED AND LIGHTED OR REMOVED PER FAA FLIGHT PROCEDURE OFFICE DETERMINATION

AIRPORT FACILITIES LIST

NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL-BRL)
1		☐	ELECTRICAL VAULT	6710'
2	○	☐	SEGMENTED CIRCLE / LIGHTED WIND CONE	6710'
3		☐	REIL	N/A
4	○		BEACON	6730'
5	○	☐	AUTO PARKING	N/A
6		☐	TERMINAL	6710'
7		☐	SNOW REMOVAL EQUIPMENT BUILDING (SRE)	6710'
8		☐	FUEL FARM	6700'
9		☐	MAINTENANCE BUILDING	6700'
10		☐	BOX HANGAR	6717'
11		☐	BOX HANGAR	6713'
12		☐	BOX HANGAR	6713'
13		☐	T-HANGARS	6700'
14		☐	T-HANGARS	6690'
15		☐	T-HANGARS	6690'
16		☐	AWOS	6730'
17		☐	HELICOPTER PARKING	N/A
18	○		PLASI	N/A

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPHYCONC)			THRESHOLD LIGHTS
		STRUCTURES/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)	N/A		SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			NATURAL GAS LINE (AS LABELED)

RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 16 MPG	16 KNOTS 20 MPH
18/36	82.43%	92.43%	98.80%

ALL WEATHER WIND ROSE

WIND DATA SOURCE: WINDOW ROCK AIRPORT AWOS @ DISTANCE OF 43 NM (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 83,489

RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 16 MPG	16 KNOTS 20 MPH
18/36	83.31%	89.98%	97.89%

IFR-WEATHER WIND ROSE

WIND DATA SOURCE: WINDOW ROCK AIRPORT AWOS @ DISTANCE OF 43 NM (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 4,894

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CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

AIP NO. 3-04-0303-01-11
NAVAJO NATION

No	Project No	Date	Revision / Description	By	Drwn	Chkd	Appvd
0	1-462-14	05/20/15	ORIGINAL ISSUE	SC / KRC / JDR	JDP		
1							
2							
3							

AIRPORT LAYOUT PLAN

Sheet 2 of 5

RUNWAY DATA

ITEM		RW 18/36- EXISTING (E)		RW 18/36 - FUTURE (F)	
RUNWAY IDENTIFICATION		18	36	18	36
RUNWAY DESIGN CODE (RDC) / RUNWAY VISUAL RANGE (RVR)		B-I/VIS	B-I/VIS	B-II/5000	B-II/5000
DEPARTURE REFERENCE CODE (DPRC)		N/A	N/A	B-II/5000	B-II/5000
SURFACE MATERIAL, PAVEMENT STRENGTH & MATERIAL TYPE	SURFACE MATERIAL	ASPHALT		ASPHALT	
	STRENGTH BY WHEEL LOADING (LSB)	11,000 SWG		12,500 SWG	
	PCN (FOR BEARING STRENGTH OF 12,500 LBS OR GREATER)	UNAVAILABLE		UNAVAILABLE	
	SURFACE TREATMENT	NONE		NONE	
RUNWAY GRADIENT	EFFECTIVE (%)	0.1%		0.1%	
	MAXIMUM (%)	0.1%		0.1%	
	LINE OF SIGHT MET (Y OR N)	Y		Y	
PERCENT WIND COVERAGE	All / B-I - 10.5 KTS	92.43%		92.43%	
	All / B-II - 13 KTS	95.99%		95.99%	

RUNWAY DIMENSIONS

ITEM		RW 18/36- EXISTING (E)		RW 18/36 - FUTURE (F)	
RUNWAY DIMENSIONS (FT)		5,820 X 60		5,820 X 75'	
RUNWAY SAFETY AREA (RSA)	WIDTH (FT)	120		150	
	LENGTH BEYOND RUNWAY END (FT)	240	240	300	300
RUNWAY COORDINATES (NAD 83)	RUNWAY END LATITUDE	N 035° 43' 31.535"	N 035°42' 35.609"	N 035° 43' 31.535"	N 035°42' 35.609"
	RUNWAY END LONGITUDE	W 108° 11' 57.407"	W 108° 12' 14.089"	W 108° 11' 57.407"	W 108° 12' 14.089"
	DISPLACED THRESHOLD LAT	N/A	N/A	N/A	N/A
	DISPLACED THRESHOLD LONG	N/A	N/A	N/A	N/A
RUNWAY ELEVATIONS (NAVD 88)	RUNWAY END (FT)	6,688	6,688	6,688	6,688
	DISPLACED THRESHOLD (FT)	N/A	N/A	N/A	N/A
	TOUCHDOWN ZONE (TDZ) (FT)	N/A	N/A	6,692.6	6,692.4
	HIGH POINT (FT)	6,688		6,688	
	LOW POINT (FT)	6,688		6,688	
RUNWAY LIGHTING TYPE		MIRL		MIRL	
RUNWAY PROTECTION ZONE (RPZ) (FT)		500 X 1,000 X 700	500 X 1,000 X 700	500 X 1,000 X 700	500 X 1,000 X 700
RUNWAY MARKING TYPE		BASIC	BASIC	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SURFACES	APPROACH TYPE	VISUAL	VISUAL	NON-PRECISION (GPS)	NON-PRECISION (GPS)
	VISIBILITY MINIMUMS (FT)	VIS	VIS	5,000	5,000
	APPROACH SLOPE DIMENSIONS (FT)	250 X 1,250 X 5,000	250 X 1,250 X 5,000	500 X 2,000 X 5,000	500 X 2,000 X 5,000
	APPROACH CATEGORY (SLOPE)	20:1	20:1	20:1	20:1
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH		NONE		NON-VERTICAL	
RUNWAY DEPARTURE SURFACE (YES OR N/A)		N/A	N/A	N/A	N/A
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH (FT)	400		800	
	LENGTH BEYOND RUNWAY END (FT)	240	240	300	300
OBSTACLE FREE ZONE (OFZ)	WIDTH (FT)	250		250	
	LENGTH BEYOND RUNWAY END (FT)	200	200	200	200
THRESHOLD SITING SURFACE (TSS)	DIMENSIONS (FT)	400 X 1,000 X 10,000'	400 X 1,000 X 10,000'	400 X 3,800 X 10,000	400 X 3,800 X 10,000
	SLOPE	20:1	20:1	20:1	20:1
	PENETRATIONS	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION
VISUAL AND INSTRUMENT NAVAIDS		PLAIS	NONE	PAPI, REIL, RNAV/GPS	PAPI, REIL, RNAV/GPS

TAXIWAY AND TAXILANE DIMENSIONS

TAXIWAYS AND TAXILINES	EXISTING (ALL)	FUTURE (ALL)
TAXIWAY AND TAXILANE DESIGN GROUP (TDG)	1	2
TAXIWAY AND TAXILANE WIDTH (FT)	35	35
TAXIWAY AND TAXILANE SAFETY AREA (FT)	49	79
TAXIWAY AND TAXILANE OBJECT FREE AREA (FT)	89	131
TAXIWAY AND TAXILANE SEPARATION (FT)	46 / 40	66 / 58
TAXIWAY AND TAXILANE LIGHTING	NONE	MITL

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (DAD 83), VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). RUNWAY END COORDINATES AND ELEVATIONS FROM FAA 5010 DATA

AIRPORT DATA

ITEM		EXISTING (E)	FUTURE (F)
AIRPORT REFERENCE CODE (ARC)		B-I	B-II
MEAN MAX. TEMP OF HOTTEST MONTH (°F) (JULY)		89°	89°
AIRPORT ELEVATION (MSL, FT) (NAVD 88) *		6688'	6688'
AIRPORT NAVIGATIONAL AIDS		MIRL, BEACON, WIND CONE, SEGMENTED CIRCLE, PLAIS	MIRL, BEACON, WIND CONE, SEGMENTED CIRCLE, PAPI, REIL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	N 35° 43' 03.57"	N 35° 43' 03.57"
	LONGITUDE	W 108° 12' 05.74"	W 108° 12' 05.74"
MISCELLANEOUS FACILITIES		NONE	NONE
ARC AND CRITICAL AIRCRAFT	ARC	B-I	B-II
	AIRCRAFT	BEECH 60 DUKE	BEECHCRAFT B200
	WINGSPAN (FT)	39.4	54.5
	UNDERCARRIAGE (FT)	8	16.3
	APPROACH SPEED (KTS)	86	103
AIRPORT MAGNETIC VARIATION	VARIATION	10° E	TO BE DETERMINED
	DATE	2015	TO BE DETERMINED
	SOURCE	NOAA	NOAA
NPIAS SERVICE LEVEL		GA - BASIC	GA - BASIC
STATE EQUIVALENT SERVICE		LOW ACTIVITY GA	LOW ACTIVITY GA

* ELEVATIONS FROM FAA 5010 DATA. NOT BASED ON SURVEY DATA.

MODIFICATION TO STANDARDS APPROVAL

DESCRIPTION	STANDARD TO BE MODIFIED	EXISTING	PROPOSED	PROPOSED ACTION	AIRSPACE CASE NO.	APPROVAL DATE
NONE						

DECLARED DISTANCES

ITEM	EXISTING		FUTURE		FAA APPROVAL DATE
	RW 18	RW 36	RW 18	RW 36	
TAKEOFF RUN AVAILABLE (TORA) (FT)	5,820	5,820	5,820	5,820	
TAKEOFF DISTANCE AVAILABLE (TODA) (FT)	5,820	5,820	5,820	5,820	
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) (FT)	5,820	5,820	5,820	5,820	
LANDING DISTANCE AVAILABLE (LDA) (FT)	5,820	5,820	5,820	5,820	

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PLANNING ENGINEERING CONSTRUCTION
COLORADO STATE LICENSE: ARMSTRONG CO, INC. NEW MEXICO: 505-325-3326
WWW.ARMSTRONGCONSULTANTS.COM

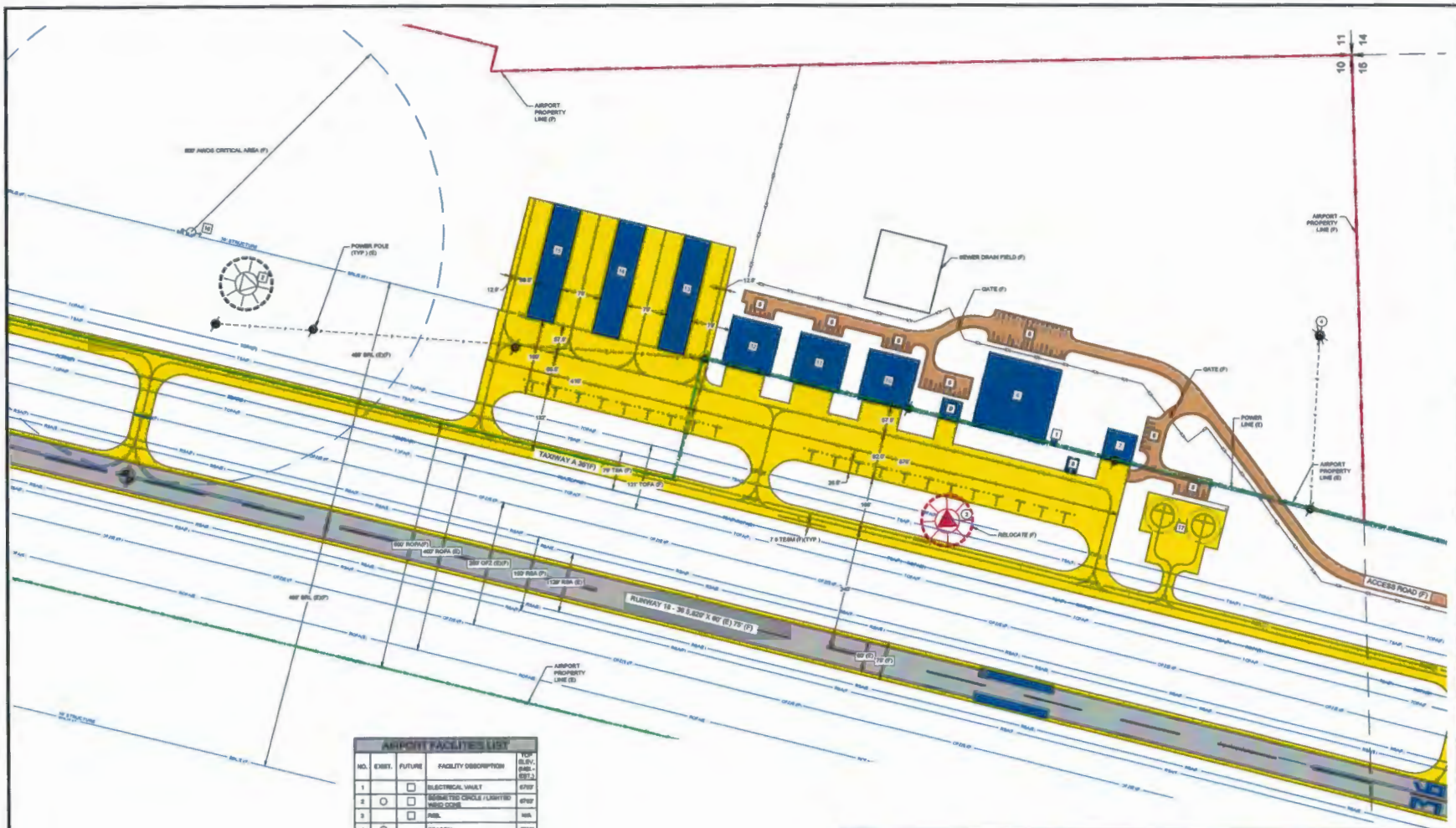
CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

AIP NO. 3-04-0303-01-11
NAVAJO NATION

No	Project No	Date	Revision / Description	File	Drwn	Chkd	Appvd
3							
2							
1							
0	140214	05/23/15	ORIGINAL ISSUE	140214 CROWN PT.dwg	LDR/CJB	CJB	JDP

AIRPORT DATA SHEET

Sheet 3 of 5



AIRPORT FACILITIES LIST

NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL - EST.)
1		☐	ELECTRICAL VAULT	6700'
2	○	☐	SEGMENTED CIRCLE / LIGHTED WIND CONE	6700'
3		☐	ARBL	N/A
4	○		BEACON	6720'
5	○	☐	AUTO PARKING	N/A
6		☐	TERMINAL	6716'
7		☐	SNOW REMOVAL EQUIPMENT BUILDING (SRE)	6716'
8		☐	FUEL FARM	6700'
9		☐	MAINTENANCE BUILDING	6700'
10		☐	BOX HANGAR	6713'
11		☐	BOX HANGAR	6713'
12		☐	BOX HANGAR	6713'
13		☐	T-HANGARS	6700'
14		☐	T-HANGARS	6699'
15		☐	T-HANGARS	6699'
16		☐	AWOS	6720'
17		☐	HELICOPTER PARKING	N/A
18	○		FLAGS	N/A

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPHICONC)			THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	8710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSB(E)	TSB(F)	THRESHOLD BITING SURFACE (TSB)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			NATURAL GAS LINE (AS LABELED)

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CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

AIP NO. 3-04-0303-01-11
NAVAJO NATION

No	Project No	Date	Revision / Description	Drwn	Chkd	Approved
0	14/4214	05/2019	ORIGINAL ISSUE	CM/JM/JB	CM	JZP

TERMINAL AREA DRAWING

Sheet 4 of 5

PHOTOGRAPHY DATE UNKNOWN

TYPICAL
0 100 200 400
SCALE IN FEET

BEARINGS NORTH ASSUMED NORTH ASSUMED
GEOGRAPHICAL MAPS CENTER 35 15 N 108 55 W
(2) GRAPHIC SCALE
(1) ARROW

No	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Approvd.
3							
2							
1							
0	146214	05/2015	ORIGINAL ISSUE	6214820 JZP 8.1	LDB/JOB	CM	JZP

THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM (AIP) GRANTS FROM THE FEDERAL AVIATION ADMINISTRATION. THE PRESENCE OF THIS "FAA" IN THE "SEAL" BELOW, THE ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE OR WOULD HAVE JUSTIFICATION IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

Sheet 5 of 5

AERIAL PHOTOGRAPH

CROWNPOINT AIRPORT
CROWNPOINT, NEW MEXICO

AIP NO. 3-04-D303-01-11
NAVAJO NATION

ARMSTRONG
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CHINLE MUNICIPAL AIRPORT

CHINLE, ARIZONA

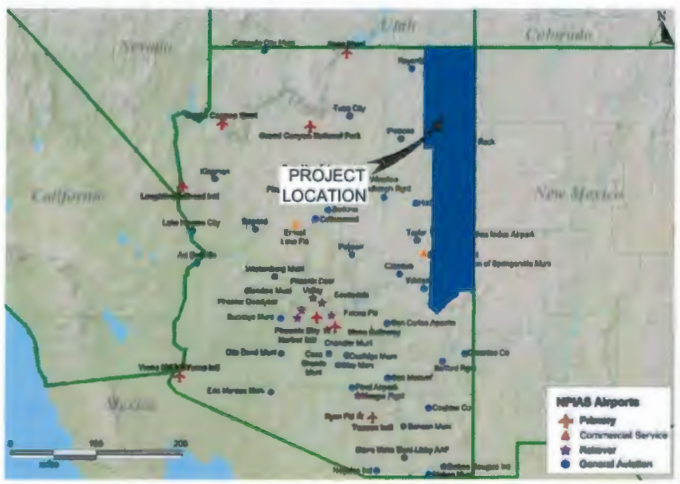
AIRPORT LAYOUT PLANS

PREPARED BY:

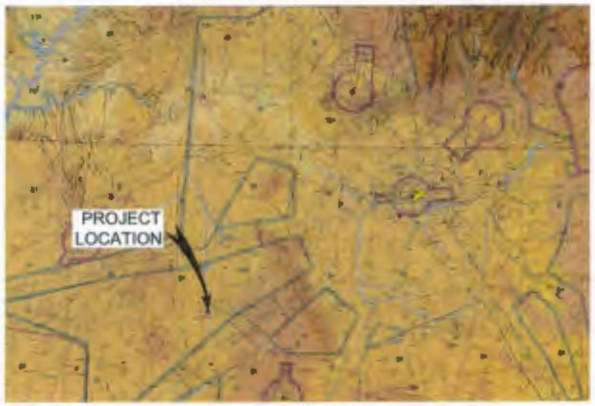
ARMSTRONG CONSULTANTS, INC.

A.I.P. No. F-04-D303-01-11
A.C.I. PROJECT NO. 146214_E91
DATE: MAY, 2015

Arizona



LOCATION MAP



VICINITY MAP

INDEX TO SHEETS

DRAWING	SHEET	REVISION DATE
COVER SHEET	1	05/2015
AIRPORT LAYOUT PLAN	2	05/2015
AIRPORT DATA SHEET	3	05/2015
TERMINAL AREA DRAWING	4	05/2015
AERIAL PHOTOGRAPH	5	05/2015

(E = EXISTING, F = FUTURE)

NAVAJO D.O.T.

NAVAJO D.O.T.

No.	Project No.	Date	Revision / Description	File	Dwn.	Chkd.	Approved
0	MEYH	05/2015	ORIGINAL ISSUE				

ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

COLORADO: 970.243.0201 ARIZONA: 602.860.7079 NEW MEXICO: 505.808.2192
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NOTES

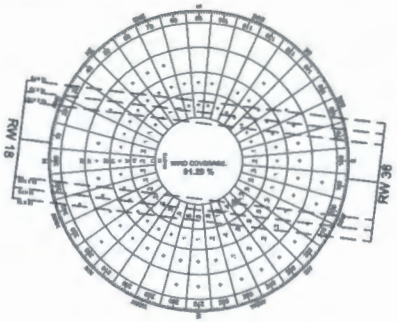
1. ALL LATITUDE/LONGITUDE COORDINATES SHOWN ARE 1983 NORTH AMERICAN DATUM (NAD 83).
2. THE NAVAJO NATION SHOULD ENCOURAGE COMPATIBLE LAND USE FOR POTENTIAL AVIATION PURPOSES ON PROPERTY NOT CURRENTLY OWNED OR CONTROLLED BY THE NAVAJO NATION.

SPONSOR APPROVAL

DRAFT

NAVAJO NATION DATE

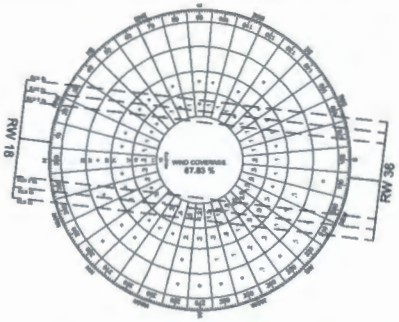
FAA APPROVAL



RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 15 MPG	16 KNOTS 20 MPH
18/36	91.39%	95.12%	98.36%

ALL WEATHER WIND ROSE

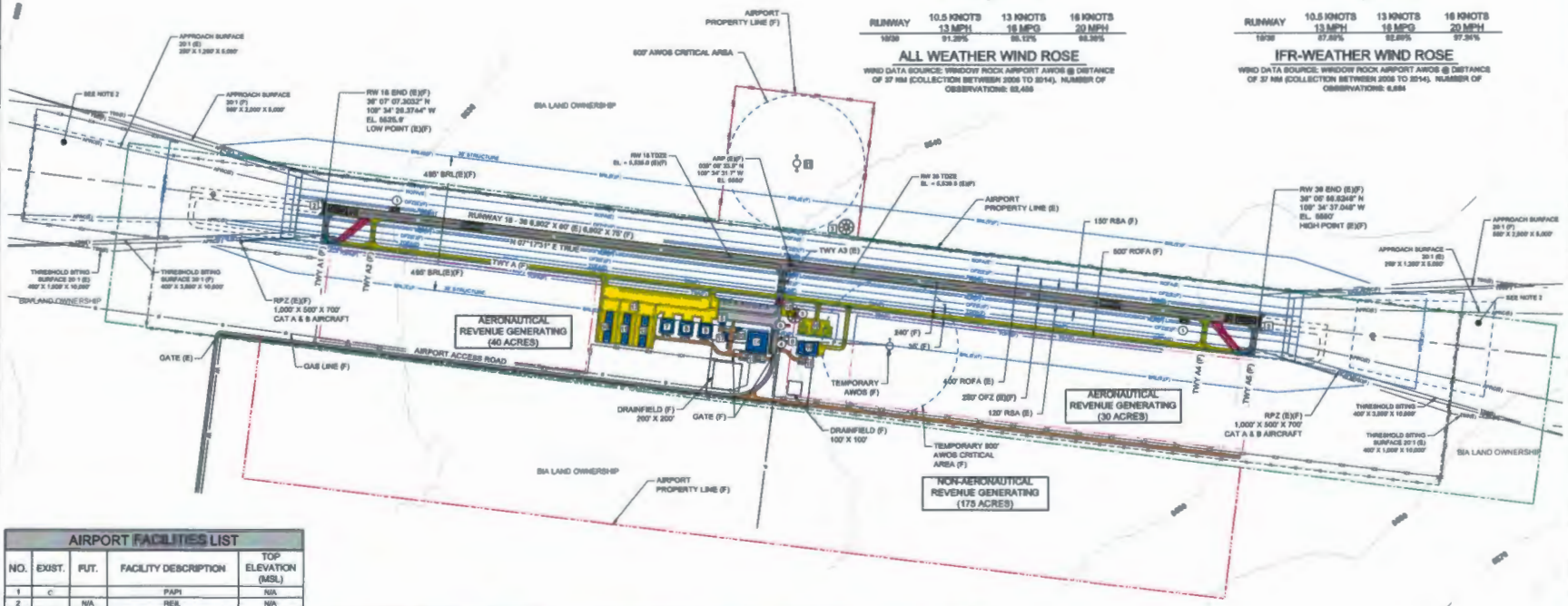
WIND DATA SOURCE: WINDOW ROCK AIRPORT AWOS @ DISTANCE OF 37 NM (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 85,459



RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 15 MPG	16 KNOTS 20 MPH
18/36	97.85%	98.89%	97.34%

IFR-WEATHER WIND ROSE

WIND DATA SOURCE: WINDOW ROCK AIRPORT AWOS @ DISTANCE OF 37 NM (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 6,684



AIRPORT FACILITIES LIST				
NO.	EXIST.	FUT.	FACILITY DESCRIPTION	TOP ELEVATION (MSL)
1	C		PAPI	N/A
2		N/A	REIL	N/A
3	O	□	LIGHTED WINDCONE/CIRCLE	+/- 5680
4	O		ELECTRICAL VAULT	+/- 5648
5	O		FUEL FACILITY	+/- 5648
6		□	BEACON	+/- 5670
7		□	HANGAR	+/- 5677
8		□	HANGAR	+/- 5677
9		□	HANGAR	+/- 5677
10		□	T-HANGAR	+/- 5685
11		□	T-HANGAR	+/- 5685
12		□	T-HANGAR	+/- 5685
13		□	APRON	+/- 5635
14		□	TERMINAL	+/- 5688
15		□	AUTO PARKING	N/A
16		□	HELO PARKING	+/- 5641
17		□	MAINTENANCE BUILDING	+/- 5688
18		□	WASH RACK	+/- 5642
19		□	OPERATIONS BUILDING	+/- 5688
20		□	SRE BUILDING	+/- 5688
21		□	ASOS	+/- 5640

LEGEND					
EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)		0000 0000	THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	5710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(P)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			NATURAL GAS LINE (AS LABELED)
		TO BE REMOVED			LAND USE LINE

MAGNETIC NORTH SOURCE: NOAA GEOPHYSICAL DATA CENTER 03.23.15
RATE OF CHANGE 0°06' W/YEAR

0 400 800
SCALE IN FEET

ARMSTRONG
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CHINLE MUNICIPAL AIRPORT
CHINLE, ARIZONA

A.I.P. NO. 3-04-0303-01-11-2014
AIRPORT LAYOUT PLAN

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd	Approvd.
0	144214	05/2015	ORIGINAL ISSUE	02-LAYOUT PLAN	LDS	CM	JZP

AIRPORT LAYOUT PLAN

Sheet 2 of 5

RUNWAY DATA

ITEM		RW 18 - 36 EXISTING (E)		RW 18 - 36 FUTURE (F)	
RUNWAY IDENTIFICATION		18	36	18	36
RUNWAY DESIGN CODE (RDC) / RUNWAY VISUAL RANGE (RVR)		B-IVSB	B-IVSB	B-II 5000	B-II 5000
DEPARTURE REFERENCE CODE (DPRC)		N/A	N/A	B-II 5000	B-II 5000
SURFACE MATERIAL, PAVEMENT STRENGTH & MATERIAL TYPE	SURFACE MATERIAL	ASPHALT		ASPHALT	
	STRENGTH BY WHEEL LOADING (LBS)	12,500 SWG		12,500 SWG	
	PCN (FOR BEARING STRENGTH OF 12,500 LBS OR GREATER)	36/F/D/Y/T		N/A	
	SURFACE TREATMENT	NONE		NONE	
RUNWAY GRADIENT	EFFECTIVE (%)	0.35		0.35	
	MAXIMUM (%)	0.35		0.35	
	LINE OF SIGHT MET (Y OR N)	Y		Y	
PERCENT WIND COVERAGE	A / B-I - 10.5 KTS	91.29%		91.29%	
	A / B-II - 13 KTS	95.12%		95.12%	
RUNWAY DIMENSIONS					
RUNWAY DIMENSIONS (FT)		6,902 x 60		6,902 x 75	
RUNWAY SAFETY AREA (RSA)	WIDTH (FT)	120		150	
	LENGTH BEYOND RUNWAY END (FT)	240	240	300	300
RUNWAY COORDINATES (NAD 83)	RUNWAY END LATITUDE	36°07'07.3032" N	36°06'58.6346" N	36°07'07.3032" N	36°06'58.6346" N
	RUNWAY END LONGITUDE	109°34'26.3744" W	109°34'37.0480" W	109°34'26.3744" W	109°34'37.0480" W
	DISPLACED THRESHOLD LAT.	N/A	N/A	N/A	N/A
	DISPLACED THRESHOLD LONG.	N/A	N/A	N/A	N/A
RUNWAY ELEVATIONS (FT) (NAVD 88)	RUNWAY END	5,535.5'	5,520'	5,535.5'	5,520'
	DISPLACED THRESHOLD	N/A	N/A	N/A	N/A
	TOUCHDOWN ZONE (TDZ)	5,530.0'	5539.5'	5,530.0'	5,539.5'
	HIGH POINT	5,560'		5,560'	
	LOW POINT	5,525.5'		5,525.5'	
RUNWAY LIGHTING TYPE		MIRL		MIRL	
RUNWAY PROTECTION ZONE (RPZ) (FT)		1,000 x 600 x 700	1,000 x 600 x 700	1,000 x 800 x 700	1,000 x 800 x 700
RUNWAY MARKING TYPE		NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SURFACES	APPROACH TYPE	VISUAL	VISUAL	NON-PRECISION (OPS)	NON-PRECISION (OPS)
	VISIBILITY MINIMUMS (FT)	VIS	VIS	5,000	5,000
	APPROACH SLOPE DIMENSIONS (FT)	250 X 1,250 X 5,000	250 X 1,250 X 5,000	500 x 2,000 x 3,500	500 x 2,000 x 5,000
	APPROACH CATEGORY (SLOPE)	20:1	20:1	20:1	20:1
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH		NONE		NON-VERTICAL	
RUNWAY DEPARTURE SURFACE (YES OR N/A)		N/A	N/A	YES	YES
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH (FT)	400		500	
	LENGTH BEYOND RUNWAY END (FT)	240	240	300	300
OBSTACLE FREE ZONE (OFZ)	WIDTH (FT)	250		250	
	LENGTH BEYOND RUNWAY END (FT)	200	200	200	200
THRESHOLD SITING SURFACE (TSS)	DIMENSIONS (FT)	400 X 1,000 X 10,000	400 X 1,000 X 10,000	400 X 3,800 X 10,000	400 X 3,800 X 10,000
	SLOPE	20:1	20:1	20:1	20:1
	PENETRATIONS	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION
VISUAL AND INSTRUMENT NAVAIDS		PAPI		PAPI, REIL	

TAXIWAY AND TAXILANE DIMENSIONS

TAXIWAYS AND TAXILINES	EXISTING (ALL)	FUTURE (ALL)
TAXIWAY AND TAXILANE DESIGN GROUP (TDG)	2	2
TAXIWAY AND TAXILANE WIDTH (FT)	35	35
TAXIWAY AND TAXILANE SAFETY AREA (FT)	79	79
TAXIWAY AND TAXILANE OBJECT FREE AREA (FT)	131	131
TAXIWAY AND TAXILANE SEPARATION (FT)	66 / 56	66 / 56
TAXIWAY AND TAXILANE LIGHTING	MITL	MITL

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD 83); VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). EXISTING ELEVATIONS & RUNWAY END COORDINATES FROM FAA AIRPORT DATA BASE DATED 12/31/2014.

AIRPORT DATA

ITEM		EXISTING (E)	FUTURE (F)
AIRPORT REFERENCE CODE (ARC)		B-I	B-II
MEAN MAX. TEMP OF HOTTEST MONTH (°F) (JULY)		91°	91°
AIRPORT ELEVATION (MSL, FT) (NAVD 88) *		5,560	5,560
AIRPORT NAVIGATIONAL AIDS		MIRL, BEACON, LIGHTED WIND CONE, SEGEMENTED CIRCLE, PAPI, REIL	MIRL, BEACON, LIGHTED WIND CONE, SEGEMENTED CIRCLE, PAPI, REIL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	36°08'33.8" N	36°08'33.8" N
	LONGITUDE	109°34'31.7" W	109°34'31.7" W
MISCELLANEOUS FACILITIES		NONE	NONE
ARC AND CRITICAL AIRCRAFT	ARC	B-I	B-II
	AIRCRAFT	BEECH 60 DUKE	BEECHCRAFT B200
	WINGSPAN (FT)	39.4	54.80
	UNDERCARRIAGE (FT)	8	16.30
	APPROACH SPEED (KTS)	98	103
AIRPORT MAGNETIC VARIATION	VARIATION	10° E	TO BE DETERMINED
	DATE	2015	TO BE DETERMINED
	SOURCE	NOAA	NOAA
NPIAS SERVICE LEVEL		GA-BASIC	GA-BASIC
STATE EQUIVALENT SERVICE		GA-RURAL	GA-RURAL

* ELEVATIONS FROM FAA AIRPORT DATA BASE DATED 12/31/2014.

MODIFICATION TO STANDARDS APPROVAL

DESCRIPTION	STANDARD TO BE MODIFIED	EXISTING	PROPOSED	PROPOSED ACTION	AIRSPACE CASE NO.	APPROVAL DATE
NONE						

DECLARED DISTANCES

ITEM	EXISTING		FUTURE		FAA APPROVAL DATE
	RW 18	RW 36	RW 18	RW 36	
TAKEOFF RUN AVAILABLE (TORA) (FT)	6,902	6,902	6,902	6,902	
TAKEOFF DISTANCE AVAILABLE (TODA) (FT)	6,902	6,902	6,902	6,902	
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) (FT)	6,902	6,902	6,902	6,902	
LANDING DISTANCE AVAILABLE (LDA) (FT)	6,902	6,902	6,902	6,902	

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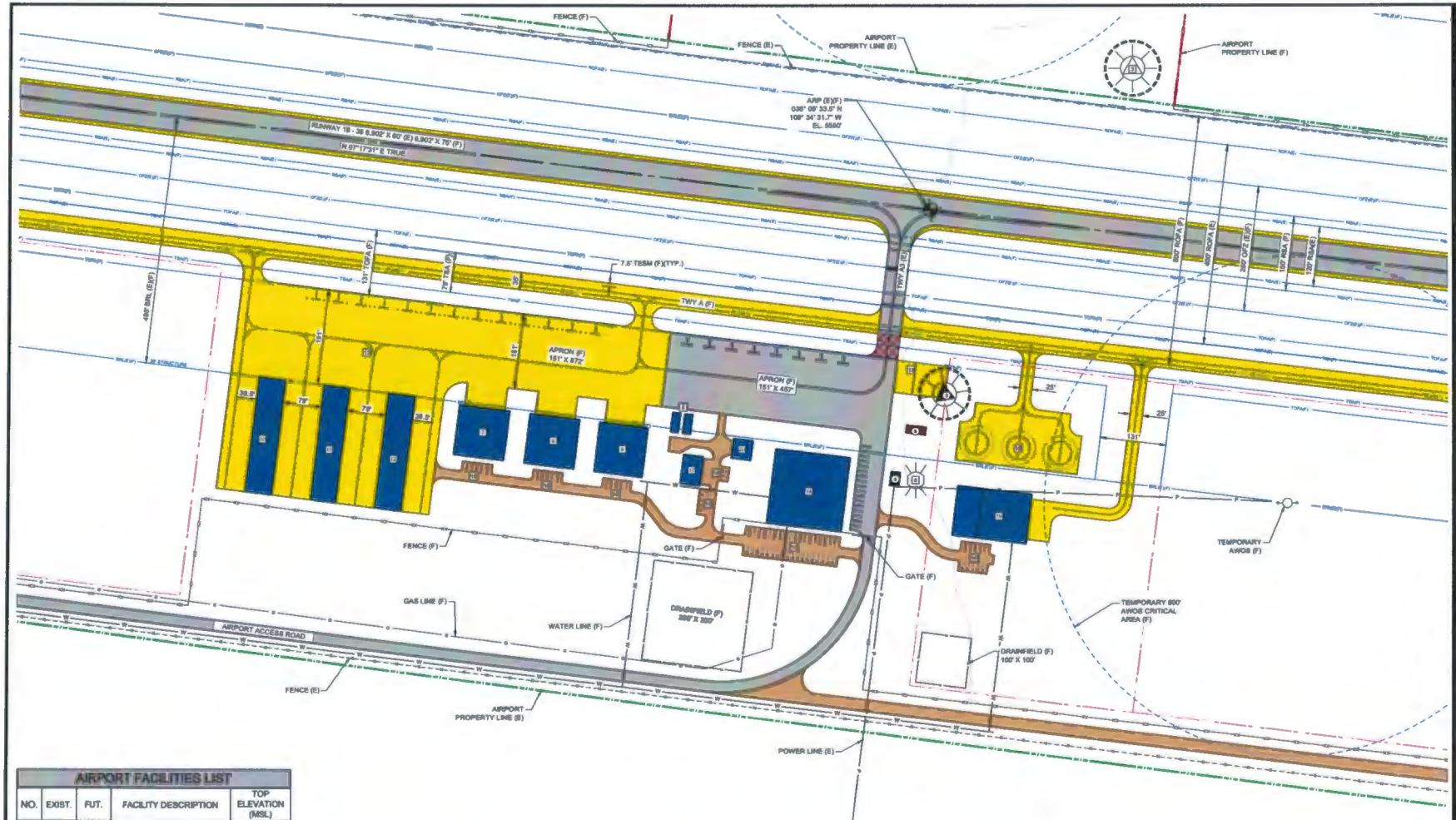
CHINLE MUNICIPAL AIRPORT
CHINLE, ARIZONA

A.I.P. NO. 3-04-0303-01-11-2014
AIRPORT LAYOUT PLAN

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Approved
3							
2							
1							
0	148214	06/26/15	ORIGINAL ISSUE	8214002-251	LDS	CM	JJP

AIRPORT DATA SHEET

Sheet 3 of 5



AIRPORT FACILITIES LIST

NO.	EXIST.	FUT.	FACILITY DESCRIPTION	TOP ELEVATION (MSL)
1	O		PAPI	N/A
2		N/A	REIL	N/A
3	O	□	LIGHTED WINDCONE/CIRCLE	+/- 5580
4	O		ELECTRICAL VAULT	+/- 5548
5	O		FUEL FACILITY	+/- 5546
6		□	BEACON	+/- 5570
7		□	HANGAR	+/- 5577
8		□	HANGAR	+/- 5577
9		□	HANGAR	+/- 5577
10		□	T-HANGAR	+/- 5586
11		□	T-HANGAR	+/- 5586
12		□	T-HANGAR	+/- 5586
13		□	APRON	+/- 5535
14		□	TERMINAL	+/- 5560
15		□	AUTO PARKING	N/A
16		□	HELO PARKING	+/- 5541
17		□	MAINTENANCE BUILDING	+/- 5560
18		□	WASH RACK	+/- 5542
19		□	OPERATIONS BUILDING	+/- 5560
20		□	SRE BUILDING	+/- 5560
21		□	ASOS	+/- 5540

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ABPH/CONC)		0000 0000	THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	5' 10		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			NATURAL GAS LINE (AS LABELED)
		TO BE REMOVED			LAND USE LINE

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CHINLE MUNICIPAL AIRPORT
CHINLE, ARIZONA

A.I.P. NO. 3-04-0303-01-11-2014
AIRPORT LAYOUT PLAN

No.	Project No.	Date	Revision / Description	REVISION BY	LDB	Ckd.	JZP
0	145214	09/02/15	ORIGINAL ISSUE	File	Drwn.	Chkd.	Apprvd.

TERMINAL AREA DRAWING

Sheet 4 of 5

0 400 800
SCALE IN FEET

10° WEST
ARRIVE
DEPARTS
COMMUNITY

Sheet 5 of 5

AERIAL PHOTOGRAPH

No	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Approvd.
3							
2							
1							
0	148214	05/2015	ORIGINAL ISSUE	8214502 -B01	LDB	CM	JZP

THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER TITLE 49 U.S.C., SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE OR WOULD BE ELIGIBLE FOR ASSISTANCE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

CHINLE MUNICIPAL AIRPORT
CHINLE, ARIZONA

A.I.P. N0. 3-04-D303-01-11-2014
AIRPORT LAYOUT PLAN

ARMSTRONG
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SHIPROCK AIRSTRIP

SHIPROCK, NEW MEXICO

AIRPORT LAYOUT PLANS

PREPARED BY:

ARMSTRONG CONSULTANTS, INC.

FAA AIP NO. 3-04-D303-01-11

A.C.I. PROJECT NO. 146214_5V5

DATE: MAY, 2015

LOCATION MAP

VICINITY MAP

INDEX TO SHEETS

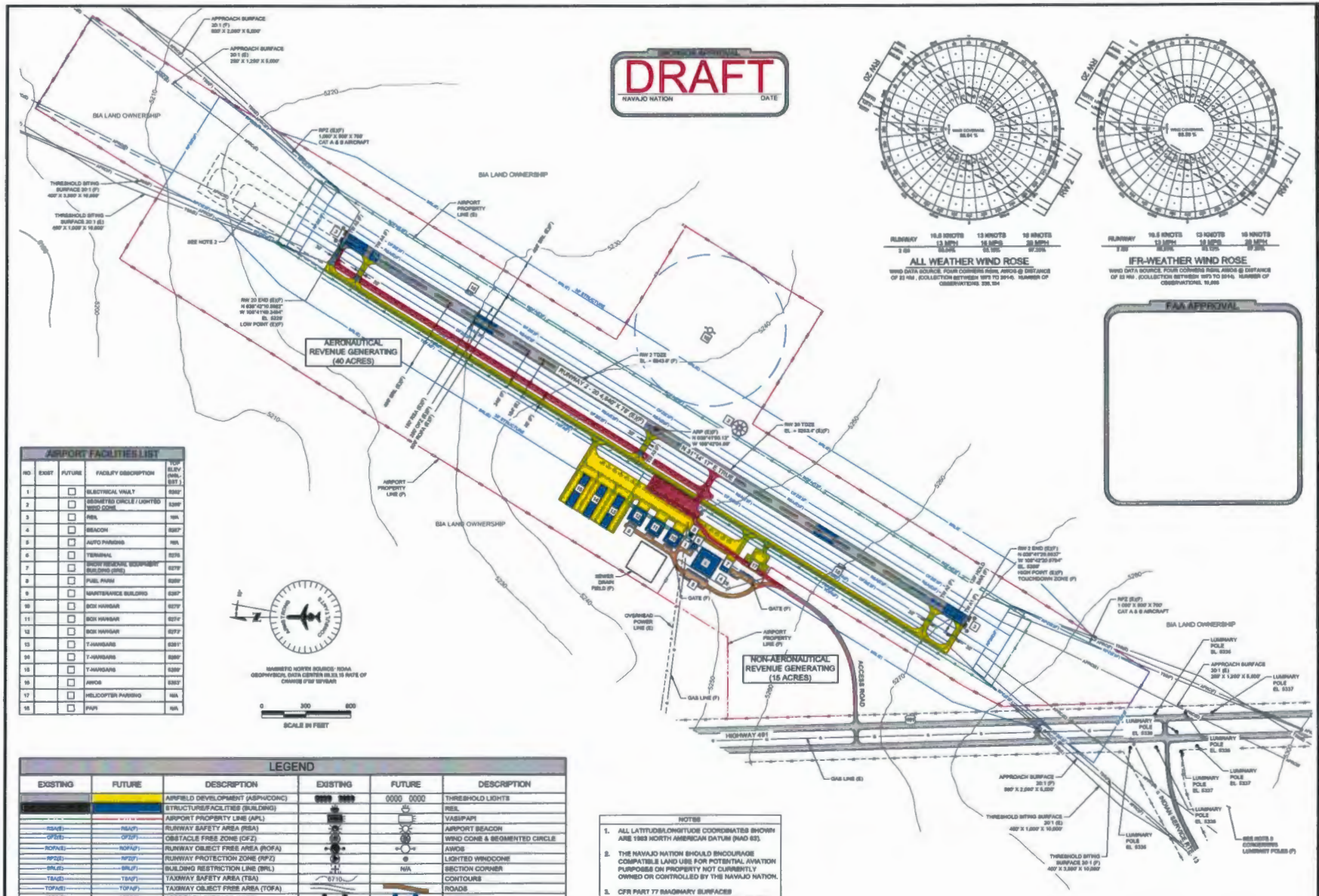
(E = EXISTING, F = FUTURE)

ARMSTRONG

PLANNING ENGINEERING CONSTRUCTION

DRAFT

NAVAJO NATION DATE



AIRPORT FACILITIES LIST

NO	EXIST	FUTURE	FACILITY DESCRIPTION	TOP ELEV (MSL, EST.)
1		☐	ELECTRICAL VAULT	5242'
2		☐	SEGMETED CIRCLE / LIGHTED WIND CONE	5299'
3		☐	PBL	N/A
4		☐	BEACON	5267'
5		☐	AUTO PARKING	N/A
6		☐	TERMINAL	5275
7		☐	SHOP SEASNAL BEDHANGAR BUILDING (SRB)	5279'
8		☐	FUEL FARM	5289'
9		☐	MAINTENANCE BUILDING	5287'
10		☐	BOX HANGAR	5279'
11		☐	BOX HANGAR	5274'
12		☐	BOX HANGAR	5272'
13		☐	T-HANGARS	5281'
14		☐	T-HANGARS	5289'
15		☐	T-HANGARS	5289'
16		☐	AWOS	5353'
17		☐	HELICOPTER PARKING	N/A
18		☐	PAPI	N/A

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)	0000 0000	0000 0000	THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			NATURAL GAS LINE (AS LABELED)

NOTES

1. ALL LATITUDES/LONGITUDE COORDINATES SHOWN ARE 1983 NORTH AMERICAN DATUM (NAD 83).
2. THE NAVAJO NATION SHOULD ENCOURAGE COMPATIBLE LAND USE FOR POTENTIAL AVIATION PURPOSES ON PROPERTY NOT CURRENTLY OWNED OR CONTROLLED BY THE NAVAJO NATION.
3. CFR PART 77 IMAGINARY SURFACES OBSTRUCTIONS SHOULD BE LOWERED, MARKED AND LIGHTED OR REMOVED PER FAA FLIGHT PROCEDURE OFFICE DETERMINATION.

ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

FAA AIP NO. 3-04-0303-01-11
NAVAJO NATION

AIRPORT LAYOUT PLAN

Sheet 2 of 5

RUNWAY DATA

ITEM		RW 2/20- EXISTING (E)		RW 2/20 - FUTURE (F)	
RUNWAY IDENTIFICATION		2	20	2	20
RUNWAY DESIGN CODE (RDC) / RUNWAY VISUAL RANGE (RVR)		B-IV/VIS	B-IV/VIS	B-III/5000	B-III/5000
DEPARTURE REFERENCE CODE (DPRC)		N/A	N/A	B-III/5000	B-III/5000
SURFACE MATERIAL, PAVEMENT STRENGTH & MATERIAL TYPE	SURFACE MATERIAL	ASPHALT		ASPHALT	
	STRENGTH BY WHEEL LOADING (LBS)	11,000 SWG		12,500 SWG	
	PCN (FOR BEARING STRENGTH OF 12,500 LBS OR GREATER)	UNAVAILABLE		UNAVAILABLE	
	SURFACE TREATMENT	NONE		NONE	
RUNWAY GRADIENT	EFFECTIVE (%)	0.0%		0.0%	
	MAXIMUM (%)	0.0%		0.0%	
	LINE OF SIGHT MET (Y OR N)	Y		Y	
PERCENT WIND COVERAGE	All / B-I - 10.5 KTS	99.04%		99.04%	
	All / B-II - 13 KTS	93.10%		93.10%	
RUNWAY DIMENSIONS					
RUNWAY DIMENSIONS (FT)		4,840 X 75		4,840 X 75	
RUNWAY SAFETY AREA (RSA)	WIDTH (FT)	150		150	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
RUNWAY COORDINATES (NAD 83)	RUNWAY END LATITUDE	N 36° 41' 29.8837"	N 36° 42' 10.5922	N 36° 41' 29.8837"	N 36° 42' 10.5922
	RUNWAY END LONGITUDE	W 108° 42' 20.0784"	W 108° 41' 49.3484"	W 108° 42' 20.0784"	W 108° 41' 49.3484"
	DISPLACED THRESHOLD LAT.	N/A	N/A	N/A	N/A
	DISPLACED THRESHOLD LONG.	N/A	N/A	N/A	N/A
RUNWAY ELEVATIONS (NAVD 88)	RUNWAY END (FT)	5,209	5,226	5,209	5,226
	DISPLACED THRESHOLD (FT)	N/A	N/A	N/A	N/A
	TOUCHDOWN ZONE (TDZ) (FT)	N/A	N/A	5,343.5	5,343.4
	HIGH POINT (FT)	5209		5209	
	LOW POINT (FT)	5226		5226	
RUNWAY LIGHTING TYPE		NONE		MIRL	
RUNWAY PROTECTION ZONE (RPZ) (FT)		500 X 1,000 X 700	500 X 1,000 X 700	500 X 1,000 X 700	500 X 1,000 X 700
RUNWAY MARKING TYPE		BASIC	BASIC	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SURFACES	APPROACH TYPE	VISUAL	VISUAL	NON-PRECISION (GPS)	NON-PRECISION (GPS)
	VISIBILITY MINIMUMS (FT)	VIS	VIS	5,000	5,000
	APPROACH SLOPE DIMENSIONS (FT)	250 X 1,250 X 5,000	250 X 1,250 X 5,000	500 X 2,000 X 5,000	500 X 2,000 X 5,000
	APPROACH CATEGORY (SLOPE)	20:1	20:1	20:1	20:1
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH		NONE		NON-VERTICAL	
RUNWAY DEPARTURE SURFACE (YES OR N/A)		N/A	N/A	YES	YES
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH (FT)	800		800	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
OBSTACLE FREE ZONE (OFZ)	WIDTH (FT)	250		250	
	LENGTH BEYOND RUNWAY END (FT)	200	200	200	200
THRESHOLD SITING SURFACE (TSS)	DIMENSIONS (FT)	400 X 1,000 X 10,000	400 X 1,000 X 10,000	400 X 3,000 X 10,000	400 X 3,000 X 10,000
	SLOPE	20:1	20:1	20:1	20:1
	PENETRATIONS	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION
VISUAL AND INSTRUMENT NAVAIDS		PLASI	NONE	PAPI, REIL, RNAV/GPS	PAPI, REIL, RNAV/GPS
TAXIWAY AND TAXILANE DIMENSIONS					
TAXIWAYS AND TAXILINES		EXISTING (ALL)		FUTURE (ALL)	
TAXIWAY AND TAXILANE DESIGN GROUP (TDG)		TW A, 2	TW B, 1	2	
TAXIWAY AND TAXILANE WIDTH (FT)		35	25	35	
TAXIWAY AND TAXILANE SAFETY AREA (FT)		79	49	79	
TAXIWAY AND TAXILANE OBJECT FREE AREA (FT)		131	89	131	
TAXIWAY AND TAXILANE SEPARATION (FT)		66 / 58	45 / 40	66 / 58	
TAXIWAY AND TAXILANE LIGHTING		NONE	NONE	MITL	

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (DAD 83); VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). RUNWAY END COORDINATES AND ELEVATIONS FROM FAA 5010 DATA .

AIRPORT DATA

ITEM		EXISTING (E)	FUTURE (F)
AIRPORT REFERENCE CODE (ARC)		B-II	B-II
MEAN MAX. TEMP OF HOTTEST MONTH (°F) (JULY)		95°	95°
AIRPORT ELEVATION (MSL, FT) (NAVD 88) *		5,209'	5,209'
AIRPORT NAVIGATIONAL AIDS		WIND CONE, SEGMENTED CIRCLE	MIRL, BEACON, LIGHTED WIND CONE, SEGMENTED CIRCLE, PAPI, REIL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	N 36° 41' 50.13"	N 36° 41' 50.13"
	LONGITUDE	W 108° 42' 04.66"	W 108° 42' 04.66"
MISCELLANEOUS FACILITIES		NONE	NONE
ARC AND CRITICAL AIRCRAFT	ARC	B-II	B-II
	AIRCRAFT	BEECHCRAFT B300	BEECHCRAFT B300	
	WINGSPAN (FT)	54.5	54.5
	UNDERCARRIAGE (FT)	16.3	16.3
	APPROACH SPEED (KTS)	103	103
AIRPORT MAGNETIC VARIATION	VARIATION	10° E	TO BE DETERMINED
	DATE	2015	TO BE DETERMINED
	SOURCE	NOAA	NOAA
NPIAS SERVICE LEVEL		GA - BASIC	GA - BASIC
STATE EQUIVALENT SERVICE		LOW ACTIVITY GA	LOW ACTIVITY GA

* ELEVATIONS FROM FAA 5010 DATA. NOT BASED ON SURVEY DATA.

MODIFICATION TO STANDARDS APPROVAL

DESCRIPTION	STANDARD TO BE MODIFIED	EXISTING	PROPOSED	PROPOSED ACTION	AIRSPACE CASE NO.	APPROVAL DATE
NONE						

DECLARED DISTANCES

ITEM	EXISTING		FUTURE		FAA APPROVAL DATE
	RW 2	RW 20	RW 2	RW 20	
TAKEOFF RUN AVAILABLE (TORA) (FT)	4,840	4,840	4,840	4,840	
TAKEOFF DISTANCE AVAILABLE (TODA) (FT)	4,840	4,840	4,840	4,840	
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) (FT)	4,840	4,840	4,840	4,840	
LANDING DISTANCE AVAILABLE (LDA) (FT)	4,840	4,840	4,840	4,840	

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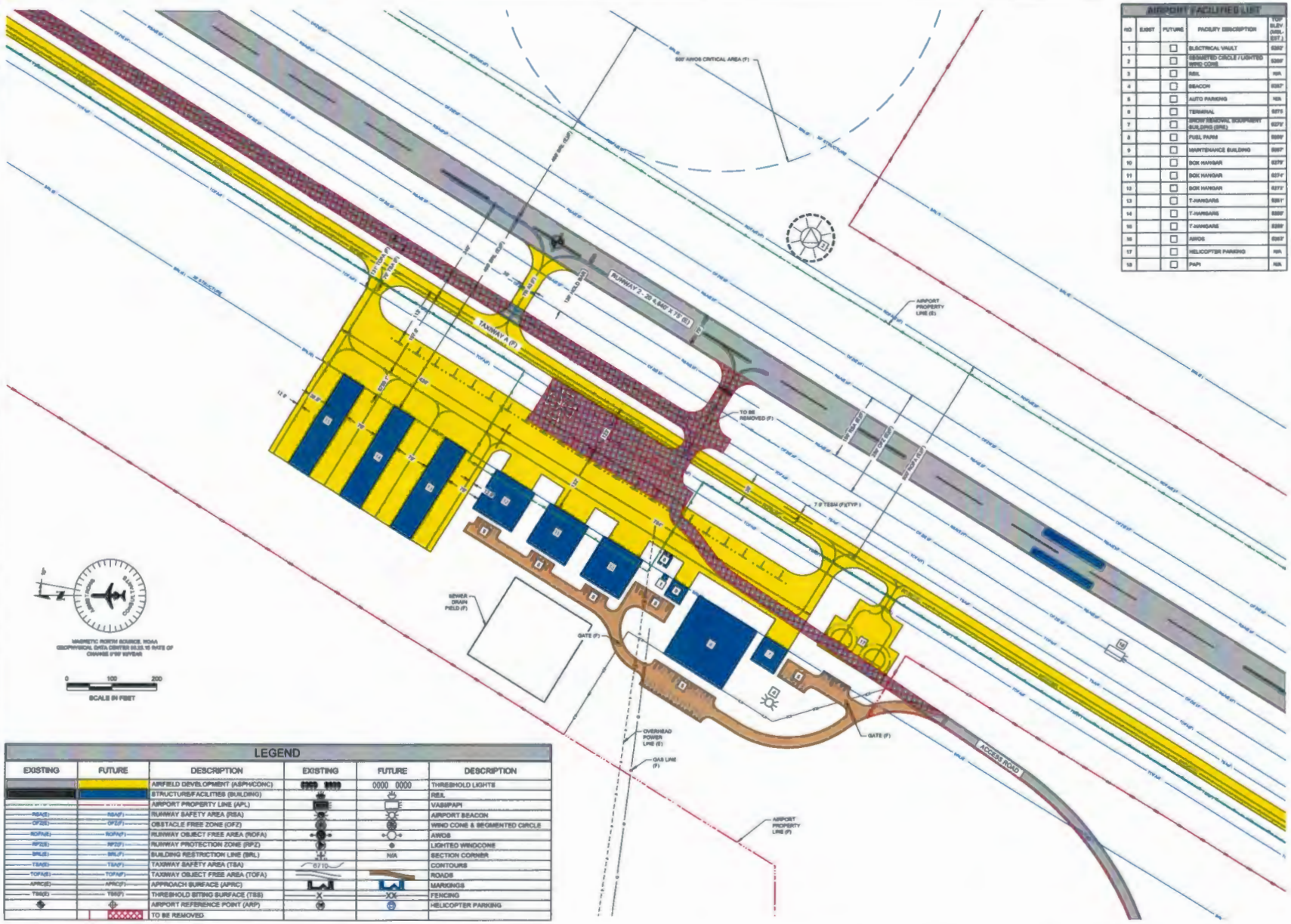
SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

FAA AIP NO. 3-04-0303-01-11
NAVAJO NATION

No.	Project No.	Date	Revision / Description	File	Dwn.	Chkd.	Apprvd.
0	144214	05/2015	ORIGINAL ISSUE			CM	JCP
1			REVISED PER FAA				
2							
3							

AIRPORT DATA SHEET



AIRPORT FACILITIES LIST

NO	EXIST	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL, EST.)
1		☐	ELECTRICAL VAULT	6262'
2		☐	SEGMENTED CIRCLE / LIGHTED WIND CONE	6260'
3		☐	REIL	N/A
4		☐	BEACON	6262'
5		☐	AUTO PARKING	N/A
6		☐	TERMINAL	6273
7		☐	SNOW REMOVAL EQUIPMENT BUILDING (SRE)	6273'
8		☐	FUEL FARM	6269'
9		☐	MAINTENANCE BUILDING	6267
10		☐	BOX HANGAR	6279'
11		☐	BOX HANGAR	6274'
12		☐	BOX HANGAR	6273'
13		☐	T-HANGARS	6261'
14		☐	T-HANGARS	6269'
15		☐	T-HANGARS	6269'
16		☐	AWOS	6263'
17		☐	HELICOPTER PARKING	N/A
18		☐	PAPI	N/A

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)		0000 0000	THRESHOLD LIGHTS
		STRUCTURES/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			

ARMSTRONG
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SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

FAA AIP NO. 3-04-0303-01-11
NAVAJO NATION

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Approvd.
0	140214	05/2015	ORIGINAL ISSUE	11 LOCK 24 BLOCK	NDP	JZP	JCP
1							
2							
3							

TERMINAL AREA DRAWING

Sheet: 4 of 5

No	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Apprvd.
3							
2							
1							
0	146214	05/2015	ORIGINAL ISSUE	6214502 -SVS	NOP	CM	JZP

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AERIAL PHOTOGRAPH

Sheet 5 of 5

SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

FAA AIP NO. 3-04-D303-01-11
NAVAJO NATION

ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

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TUBA CITY AIRPORT

TUBA CITY, ARIZONA

AIRPORT LAYOUT PLANS

PREPARED BY:

ARMSTRONG CONSULTANTS, INC.

FAA AIP NO. 3-04-D303-01-11

A.C.I. PROJECT NO. 146214_T03

DATE: MAY, 2015

LOCATION MAP

VICINITY MAP

INDEX TO SHEETS

DRAWING	SHEET	REVISION DATE
COVER SHEET	1	05/2015
AIRPORT LAYOUT PLAN	2	05/2015
AIRPORT DATA SHEET	3	05/2015
TERMINAL AREA DRAWING	4	05/2015
AERIAL PHOTOGRAPH	5	05/2015

(E = EXISTING, F = FUTURE)

ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

MAGNETIC NORTH SOURCE: NOAA GEOPHYSICAL DATA CENTER BLM 1L RATE OF CHANGE 0°49' W/YEAR

0 400 800

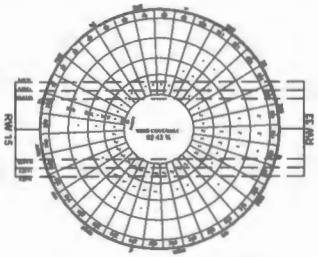
SCALE IN FEET

1. ALL LATITUDE/LONGITUDE COORDINATES SHOWN ARE 1983 NORTH AMERICAN DATUM (NAD 83).
2. THE NAVAJO NATION SHOULD ENCOURAGE COMPATIBLE LAND USE FOR POTENTIAL AVIATION PURPOSES ON PROPERTY NOT CURRENTLY OWNED OR CONTROLLED BY THE NAVAJO NATION.

FAA APPROVAL

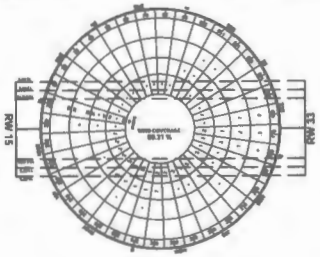
DRAFT

NAVAJO NATION DATE



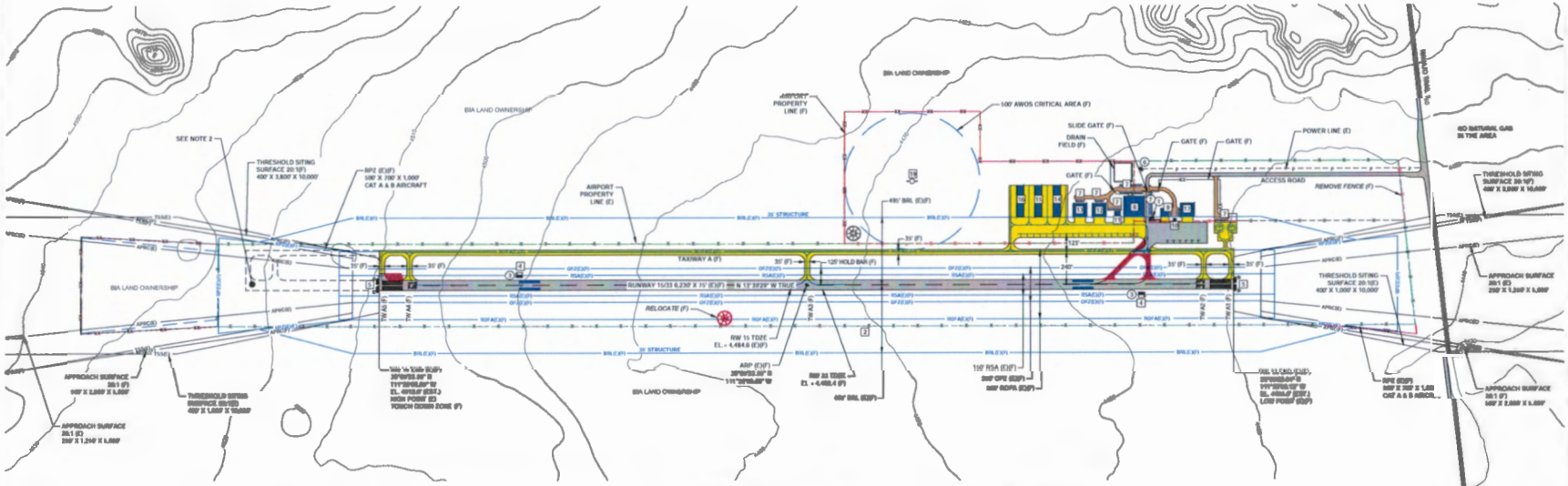
ALL WEATHER WIND ROSE

WIND DATA SOURCE: PAGE MUNICIPAL AWOS @ DISTANCE OF 49 NM (COLLECTION BETWEEN 2000 TO 2014). NUMBER OF OBSERVATIONS: 16,833



IFR-WEATHER WIND ROSE

WIND DATA SOURCE: PAGE MUNICIPAL AWOS @ DISTANCE OF 49 NM (COLLECTION BETWEEN 2000 TO 2014). NUMBER OF OBSERVATIONS: 2,989



LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)	000 000	000 000	THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED			

AIRPORT FACILITIES LIST

NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL-EST.)	NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL-EST.)
1	○		ELECTRICAL VAULT	4487	15		□	T-HANGARS	4477
2	○	□	SEGMETED CIRCLE / LIGHTED WIND CONE	4487	16		□	T-HANGARS	4476
3	○		VASI	N/A	17		□	BOX HANGAR	4469
4		□	PAPI	N/A	18		□	HELICOPTER PARKING	N/A
5		□	REIL	N/A	19		□	AWOS	4465
6	○		BEACON	4468					
7	○	□	AUTO PARKING	N/A					
8		□	TERMINAL	4465					
9		□	SNOW REMOVAL EQUIPMENT BUILDING (SRE)	4465					
10		□	FUEL FARM	4464					
11		□	MAINTENANCE BUILDING	4472					
12		□	BOX HANGAR	4463					
13		□	BOX HANGAR	4463					
14		□	T-HANGARS	4477					

ARMSTRONG PLANNING ENGINEERING CONSTRUCTION

COLORADO: 970.242.8181 ARIZONA: 928.855.7079 NEW MEXICO: 505.466.3268
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TUBA CITY AIRPORT
TUBA CITY, ARIZONA

AIP NO. 3-04-0303-01-11
NAVAJO NATION

No.	Project No.	Date	Description	Dwn.	Chk.	Appvd.
0	148314	06/30/15	ORIGINAL ISSUE	CMJ/JDP	CMJ	JZP

AIRPORT LAYOUT PLAN

Sheet 2 of 5

RUNWAY DATA

ITEM		RW 15/33- EXISTING (E)		RW 15/33 - FUTURE (F)	
RUNWAY IDENTIFICATION		15	33	15	33
RUNWAY DESIGN CODE (RDC) / RUNWAY VISUAL RANGE (RVR)		B-II/VIS	B-II/VIS	B-II 5,000	B-II 5,000
DEPARTURE REFERENCE CODE (DPRC)		NONE	NONE	B-II 5,000	B-II 5,000
SURFACE MATERIAL, PAVEMENT STRENGTH & MATERIAL TYPE	SURFACE MATERIAL	ASPHALT		ASPHALT	
	STRENGTH BY WHEEL LOADING (LBS)	12,500 SWG		12,500 SWG	
	PCN (FOR BEARING STRENGTH OF 12,500 LBS OR GREATER)	0/F/D/Y/T 3/F/B/Y/T		N/A	
	SURFACE TREATMENT	NONE		NONE	
RUNWAY GRADIENT	EFFECTIVE (%)	0.91%		0.91%	
	MAXIMUM (%)	0.91%		0.91%	
	LINE OF SIGHT MET (Y OR N)	Y		Y	
PERCENT WIND COVERAGE	All / B-I - 10.5 KTS	97.68%		97.68%	
	All / B-II - 13 KTS	98.94%		98.94%	
RUNWAY DIMENSIONS					
RUNWAY DIMENSIONS (FT)		6,230 X 75		6,230 X 75	
RUNWAY SAFETY AREA (RSA)	WIDTH (FT)	150		150	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
RUNWAY COORDINATES (NAD 83)	RUNWAY END LATITUDE	036°06'03.49" N	036°06'03.61" N	36°06'03.49" N	36°06'03.61" N
	RUNWAY END LONGITUDE	111°22'08.05" W	111°22'50.12" W	111°22'08.05" W	111°22'50.12" W
	DISPLACED THRESHOLD LAT.	N/A	N/A	N/A	N/A
	DISPLACED THRESHOLD LONG.	N/A	N/A	N/A	N/A
RUNWAY ELEVATIONS (NAVD 88)	RUNWAY END (FT)	4512	4455	4512	4455
	DISPLACED THRESHOLD (FT)	N/A	N/A	N/A	N/A
	TOUCHDOWN ZONE (TDZ) (FT)	N/A	N/A	4,484.6	4,482.4
	HIGH POINT (FT)	4,512		4,512	
	LOW POINT (FT)	4,455		4,455	
RUNWAY LIGHTING TYPE		MIRL		MIRL	
RUNWAY PROTECTION ZONE (RPZ) (FT)		500 x 700 x 1,000	500 x 700 x 1,000	500 x 700 x 1,000	500 x 700 x 1,000
RUNWAY MARKING TYPE		NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SURFACES	APPROACH TYPE	VISUAL	VISUAL	NON-PRECISION (GPS)	NON-PRECISION (GPS)
	VISIBILITY MINIMUMS (FT)	VIS	VIS	5,000	5,000
	APPROACH SLOPE DIMENSIONS (FT)	250 X 1,250 X 5,000	250 X 1,250 X 5,000	500 X 2,000 X 5,000	500 X 2,000 X 5,000
	APPROACH CATEGORY (SLOPE)	20:1	20:1	20:1	20:1
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH		NONE		NON-VERTICAL	
RUNWAY DEPARTURE SURFACE (YES OR N/A)		N/A	N/A	YES	YES
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH (FT)	500		500	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
OBSTACLE FREE ZONE (OFZ)	WIDTH (FT)	250		250	
	LENGTH BEYOND RUNWAY END (FT)	200	200	200	200
THRESHOLD SITING SURFACE (TSS)	DIMENSIONS (FT)	400 X 1,000 X 10,000	400 X 1,000 X 10,000	400 X 3,800 X 10,000	400 X 3,800 X 10,000
	SLOPE	20:1	20:1	20:1	20:1
	PENETRATIONS	NONE	NONE	NONE	NONE
VISUAL AND INSTRUMENT NAVAIDS					
TAXIWAY AND TAXILANE DIMENSIONS					
TAXIWAYS AND TAXILINES		EXISTING (ALL)		FUTURE (ALL)	
TAXIWAY AND TAXILANE DESIGN GROUP (TDG)		1		2	
TAXIWAY AND TAXILANE WIDTH (FT)		25		35	
TAXIWAY AND TAXILANE SAFETY AREA (FT)		49		79	
TAXIWAY AND TAXILANE OBJECT FREE AREA (FT)		89		131	
TAXIWAY AND TAXILANE SEPARATION (FT)		46 / 40		66 / 58	
TAXIWAY AND TAXILANE LIGHTING		MITL		MITL	

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (DAD 83); VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). RUNWAY END COORDINATES FROM 5010 DATA AND ELEVATIONS FROM GOOGLE EARTH. NOT BASED ON SURVEY DATA. AVN OR FAA FORM 5010 ELEVATION DATA UNAVAILABLE.

AIRPORT DATA

ITEM		EXISTING (E)	FUTURE (F)
AIRPORT REFERENCE CODE (ARC)		B-II	B-II
MEAN MAX. TEMP OF HOTTEST MONTH (°F) (JULY)		95	95
AIRPORT ELEVATION (MSL. FT) (NAVD 88) *		4512	4512
AIRPORT NAVIGATIONAL AIDS		MIRL, BEACON, LIGHTED WINDCONE, SEGMENTED CIRCLE, VASI	MIRL, BEACON, LIGHTED WINDCONE, SEGMENTED CIRCLE, PAPI, REIL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	36°06'33.55" N	36°06'33.55" N
	LONGITUDE	111°22'50.08" W	111°22'50.08" W
MISCELLANEOUS FACILITIES		NONE	NONE
ARC AND CRITICAL AIRCRAFT	ARC	B-II	B-II
	AIRCRAFT	BEECHCRAFT B200	BEECHCRAFT B200
	WINGSPAN (FT)	54.5	54.5
	UNDERCARRIAGE (FT)	16.30	16.30
	APPROACH SPEED (KTS)	103	103
AIRPORT MAGNETIC VARIATION	VARIATION	11° E	TO BE DETERMINED
	DATE	03.24.15	TO BE DETERMINED
	SOURCE	NOAA	NOAA
NPIAS SERVICE LEVEL		GA - BASIC	GA - BASIC
STATE EQUIVALENT SERVICE		GA - RURAL	GA - RURAL

* ELEVATIONS FROM GOOGLE EARTH AND NOT BASED ON SURVEY DATA. AVN OR FAA FORM 5010 ELEVATION DATA UNAVAILABLE.

MODIFICATION TO STANDARDS APPROVAL

DESCRIPTION	STANDARD TO BE MODIFIED	EXISTING	PROPOSED	PROPOSED ACTION	AIRSPACE CASE NO.	APPROVAL DATE
NONE						

DECLARED DISTANCES

ITEM	EXISTING		FUTURE		FAA APPROVAL DATE
	RW 15	RW 33	RW 15	RW 33	
TAKEOFF RUN AVAILABLE (TORA) (FT)	6,230	6,230	6,230	6,230	
TAKEOFF DISTANCE AVAILABLE (TODA) (FT)	6,230	6,230	6,230	6,230	
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) (FT)	6,230	6,230	6,230	6,230	
LANDING DISTANCE AVAILABLE (LDA) (FT)	6,230	6,230	6,230	6,230	

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TUBA CITY AIRPORT
TUBA CITY, ARIZONA
AIP NO. 3-04-D303-01-11
NAVAJO NATION

No.	Project No.	Date	Revisions / Description	File	Dwn.	Chkd.	Approvd.
0	144214	05/20/15	ORIGINAL ISSUE	05/20/15 DESIGN	CM		JZP
1							
2							
3							

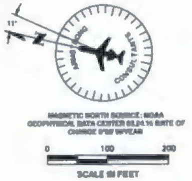
AIRPORT DATA SHEET

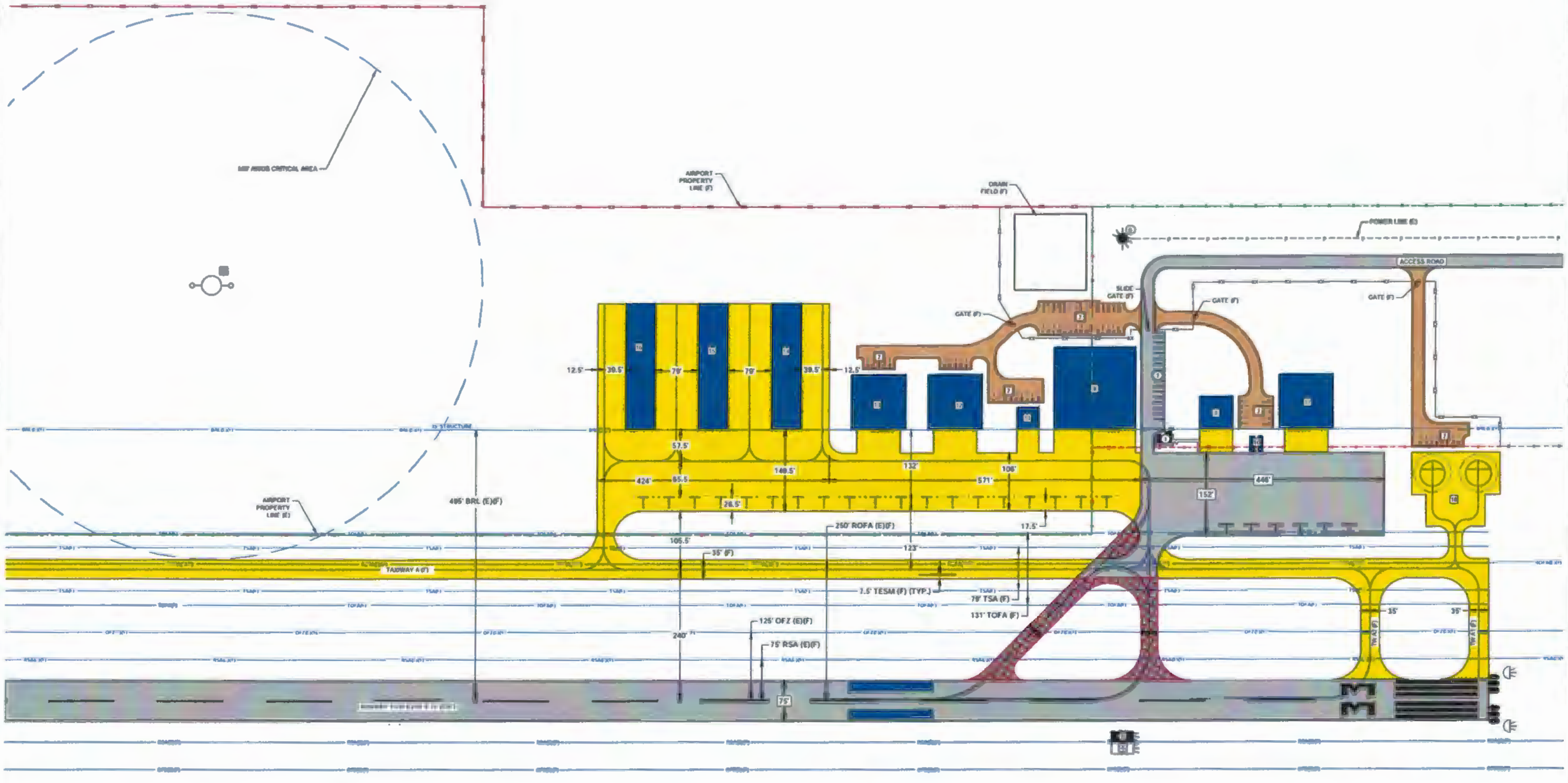
LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
⬜	🟨	AIRFIELD DEVELOPMENT (ASPH/CONC)	■■■ ■■■	000 000	THRESHOLD LIGHTS
⬛	🟦	STRUCTURE/FACILITIES (BUILDING)	●	○	REIL
——	——	AIRPORT PROPERTY LINE (APL)	■	□	VASI/PAPI
—RSA(E)—	—RSA(F)—	RUNWAY SAFETY AREA (RSA)	●	○	AIRPORT BEACON
—OFZ(E)—	—OFZ(F)—	OBSTACLE FREE ZONE (OFZ)	●	○	WIND CONE & SEGMENTED CIRCLE
—ROFA(E)—	—ROFA(F)—	RUNWAY OBJECT FREE AREA (ROFA)	●	○	AWOS
—RPZ(E)—	—RPZ(F)—	RUNWAY PROTECTION ZONE (RPZ)	●	○	LIGHTED WINDCONE
—BRL(E)—	—BRL(F)—	BUILDING RESTRICTION LINE (BRL)	✛	N/A	SECTION CORNER
—TSA(E)—	—TSA(F)—	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
—TOFA(E)—	—TOFA(F)—	TAXIWAY OBJECT FREE AREA (TOFA)	—	—	ROADS
—APRC(E)—	—APRC(F)—	APPROACH SURFACE (APRC)	⊔	⊔	MARKINGS
—TSS(E)—	—TSS(F)—	THRESHOLD SITING SURFACE (TSS)	— — —X	—XX—	FENCING
⊕	⊕	AIRPORT REFERENCE POINT (ARP)	⊕	⊕	HELICOPTER PARKING
	▨	TO BE REMOVED			

AIRPORT FACILITIES LIST

NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL-EST.)	NO.	EXIST.	FUTURE	FACILITY DESCRIPTION	TOP ELEV. (MSL-EST.)
1	○		ELECTRICAL VAULT	4467	15		☐	T-HANGARS	4477
2	○	☐	SEGMENTED CIRCLE / LIGHTED WIND CONE	4467	16		☐	T-HANGARS	4478
3	○		VASI	N/A	17		☐	BOX HANGAR	4486
4		☐	PAPI	N/A	18		☐	HELICOPTER PARKING	N/A
5		☐	REIL	N/A	19		☐	AWOS	4468
6	○		BEACON	4488					
7	○	☐	AUTO PARKING	N/A					
8		☐	TERMINAL	4483					
9		☐	SNOW REMOVAL EQUIPMENT BUILDING (SRE)	4486					
10		☐	FUEL FARM	4464					
11		☐	MAINTENANCE BUILDING	4472					
12		☐	BOX HANGAR	4483					
13		☐	BOX HANGAR	4483					
14		☐	T-HANGARS	4477					





ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

TUBA CITY AIRPORT
TUBA CITY, ARIZONA

AIP NO. 3-04-D303-01-11
NAVAJO NATION

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Apprvd.
3							
2							
1							
0	148214	05/2015	ORIGINAL ISSUE		DB/DS	CM	JZP

TERMINAL AREA DRAWING

Sheet 4 of 5

Sheet 5 of 5

AERIAL PHOTOGRAPH

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Apprvd.
3							
2							
1							
0	144214	05/2015	ORIGINAL ISSUE	05144200 -100 ALP	DBUCK	CM	JZP

TUBA CITY AIRPORT
TUBA CITY, ARIZONA

AIP NO. 3-04-D303-01-11
NAVAJO NATION

ARMSTRONG
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WINDOW ROCK AIRPORT

WINDOW ROCK, ARIZONA

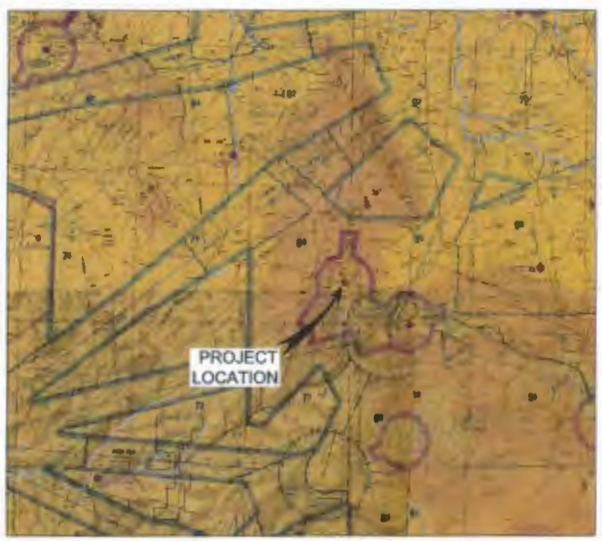
AIRPORT LAYOUT PLANS

PREPARED BY:

ARMSTRONG CONSULTANTS, INC.

A.I.P. No. 3-04-D303-01-11
A.C.I. PROJECT NO. 146214_RQE
DATE: MAY, 2015

LOCATION MAP



VICINITY MAP

INDEX TO SHEETS

(E = EXISTING, F = FUTURE)

D	HEDH	05/2015	ORIGINAL ISSUE	RQ146214 PGM	LDS	CM	JDP
No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Approvd.

ARMSTRONG
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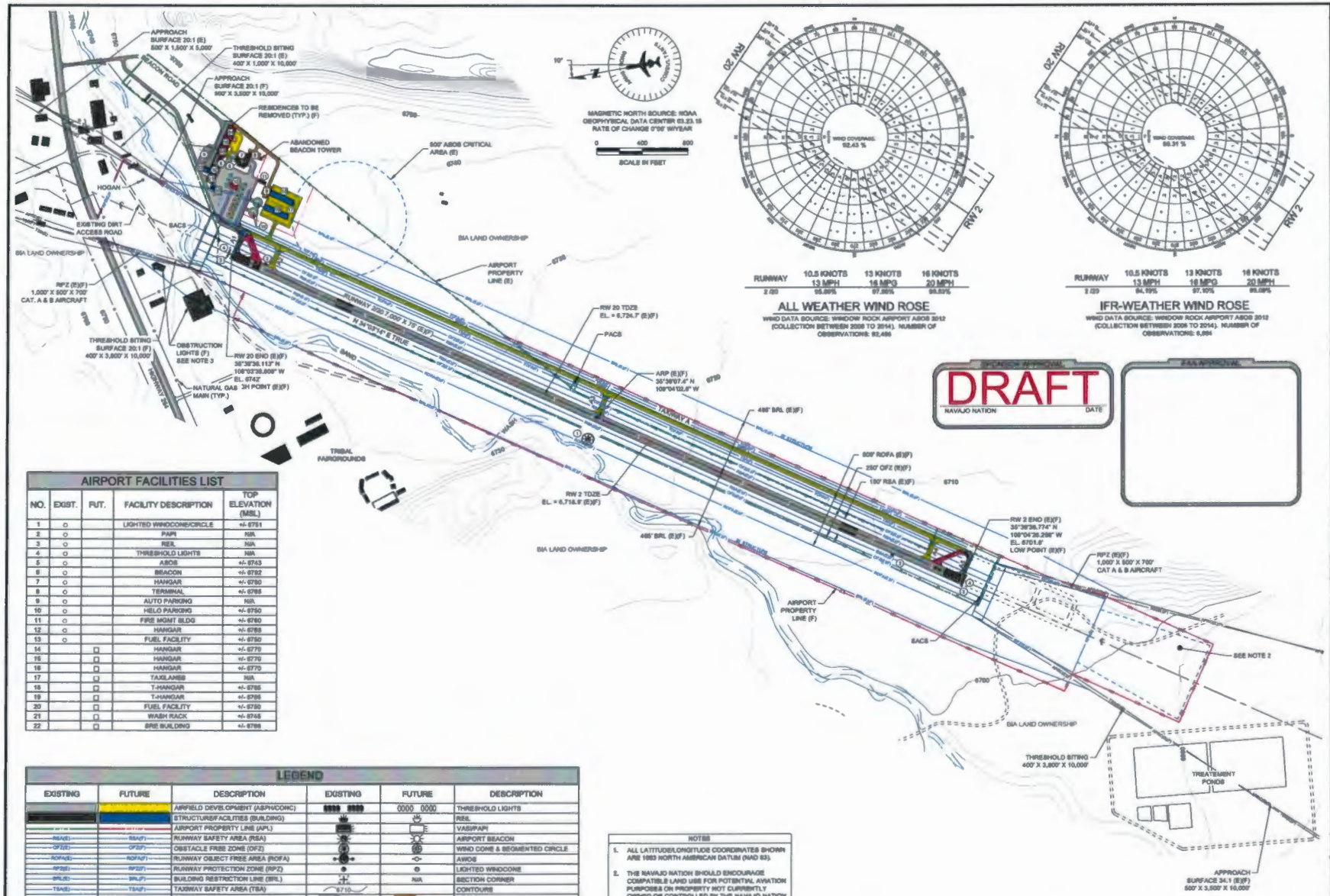

RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 16 MPG	16 KNOTS 20 MPH
2/20	95.09%	97.86%	98.52%

ALL WEATHER WIND ROSE

WIND DATA SOURCE: WINDOW ROCK AIRPORT ASOS 2012 (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 92,486

RUNWAY	10.5 KNOTS 13 MPH	13 KNOTS 16 MPG	16 KNOTS 20 MPH
2/20	94.19%	97.10%	98.08%

IFR-WEATHER WIND ROSE

WIND DATA SOURCE: WINDOW ROCK AIRPORT ASOS 2012 (COLLECTION BETWEEN 2006 TO 2014). NUMBER OF OBSERVATIONS: 6,994

DRAFT

NAVAJO NATION DATE

FAA APPROVAL

AIRPORT FACILITIES LIST

NO.	EXIST.	FUT.	FACILITY DESCRIPTION	TOP ELEVATION (MSL)
1	○		LIGHTED WINDCONE/CIRCLE	+/- 6751
2	○		PAPI	N/A
3	○		REIL	N/A
4	○		THRESHOLD LIGHTS	N/A
5	○		ASOS	+/- 6743
6	○		BEACON	+/- 6782
7	○		HANGAR	+/- 6780
8	○		TERMINAL	+/- 6785
9	○		AUTO PARKING	N/A
10	○		HELO PARKING	+/- 6750
11	○		FIRE MGMT BLDG	+/- 6760
12	○		HANGAR	+/- 6785
13	○		FUEL FACILITY	+/- 6750
14		□	HANGAR	+/- 6770
15		□	HANGAR	+/- 6770
16		□	HANGAR	+/- 6770
17		□	TAXILANES	N/A
18		□	T-HANGAR	+/- 6785
19		□	T-HANGAR	+/- 6785
20		□	FUEL FACILITY	+/- 6750
21		□	WASH RACK	+/- 6745
22		□	SRE BUILDING	+/- 6788

LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (AEP/CONC)	0000 0000	0000 0000	THRESHOLD LIGHTS
		STRUCTURES/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RSA(E)	RSA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)		N/A	NATURAL GAS MAIN
		TO BE REMOVED		N/A	PACS/SACS MONUMENTS
	N/A	DRAINAGE WASH			LAND USE LINE

NOTES

1. ALL LATITUDE/LONGITUDE COORDINATES SHOWN ARE 1983 NORTH AMERICAN DATUM (NAD 83).
2. THE NAVAJO NATION SHOULD ENCOURAGE COMPATIBLE LAND USE FOR POTENTIAL AVIATION PURPOSES ON PROPERTY NOT CURRENTLY OWNED OR CONTROLLED BY THE NAVAJO NATION.
3. CFR PART 77 SIMGINARY SURFACES OBSTRUCTIONS SHOULD BE LOWERED, MARKED AND LIGHTED OR REMOVED PER FAA FLIGHT PROCEDURE OFFICE DETERMINATION.

ARMSTRONG
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WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

A.I.P. N.o. 3-04-0303-01-11
AIRPORT LAYOUT PLAN

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd	Approvd.
0	148214	05/2015	ORIGINAL ISSUE	87-ALP-01.DWG	LJB	CM	JJP

AIRPORT LAYOUT PLAN

Sheet 2 of 5

RUNWAY DATA

ITEM		RW 2 - 20 EXISTING (E)		RW 2 - 20 FUTURE (F)	
RUNWAY IDENTIFICATION		2	20	2	20
RUNWAY DESIGN CODE (RDC) / RUNWAY VISUAL RANGE (RVR)		B-II/5000	B-II/VIS	B-II/5000	B-II/5000
DEPARTURE REFERENCE CODE (DPRC)		B-II/5000	NONE	B-II/5000	B-II/5000
SURFACE MATERIAL, PAVEMENT STRENGTH & MATERIAL TYPE	SURFACE MATERIAL	ASPHALT		ASPHALT	
	STRENGTH BY WHEEL LOADING (LBS)	30,000 SWG		30,000 SWG	
	PCN (FOR BEARING STRENGTH OF 12,500 LBS OR GREATER)	19/F/D/Y/T		N/A	
	SURFACE TREATMENT	NONE		NONE	
RUNWAY GRADIENT	EFFECTIVE (%)	0.57		0.57	
	MAXIMUM (%)	0.57		0.57	
	LINE OF SIGHT MET (Y OR N)	Y		Y	
PERCENT WIND COVERAGE	A / B-I - 10.5 KTS	95.69%		95.69%	
	A / B-II - 13 KTS	97.89%		97.89%	

RUNWAY DIMENSIONS

RUNWAY DIMENSIONS (FT)		7,000 x 75		7,000 x 75	
RUNWAY SAFETY AREA (RSA)	WIDTH (FT)	150		150	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
RUNWAY COORDINATES (NAD 83)	RUNWAY END LATITUDE	35°39'26.774" N	35°39'26.113" N	35°39'26.774" N	35°39'26.113" N
	RUNWAY END LONGITUDE	109°04'26.298" W	109°03'36.809" W	109°04'26.298" W	109°03'36.809" W
	DISPLACED THRESHOLD LAT.	N/A	N/A	N/A	N/A
	DISPLACED THRESHOLD LONG.	N/A	N/A	N/A	N/A
RUNWAY ELEVATIONS (FT) (NAVD 88)	RUNWAY END	6,701.8	6,742	6,825.90	6,580
	DISPLACED THRESHOLD	N/A	N/A	N/A	N/A
	TOUCHDOWN ZONE (TDZ)	6,716.9	N/A	6,716.9	6,734.7
	HIGH POINT	6,742		6,742	
	LOW POINT	6,701.8		6,701.8	
RUNWAY LIGHTING TYPE		MIRL		MIRL	
RUNWAY PROTECTION ZONE (RPZ) (FT)		1,000 x 800 x 700	1,000 x 800 x 700	1,000 x 800 x 700	1,000 x 800 x 700
RUNWAY MARKING TYPE		NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SURFACES	APPROACH TYPE	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
	VISIBILITY MINIMUMS (FT)	5,000	VISUAL	5,000	5,000
	APPROACH SLOPE DIMENSIONS (FT)	500 x 3,500 x 10,000	500 x 1,500 x 5,000	500 x 3,500 x 10,000	500 x 3,500 x 10,000
	APPROACH CATEGORY (SLOPE)	34:1	20:1	34:1	20:1
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH		NON-VERTICAL		NON-VERTICAL	
RUNWAY DEPARTURE SURFACE (YES OR N/A)		YES	N/A	YES	YES
RUNWAY OBJECT FREE AREA (ROFA)	WIDTH (FT)	500		500	
	LENGTH BEYOND RUNWAY END (FT)	300	300	300	300
OBSTACLE FREE ZONE (OFZ)	WIDTH (FT)	250		250	
	LENGTH BEYOND RUNWAY END (FT)	200	200	200	200
THRESHOLD SITING SURFACE (TSS)	DIMENSIONS (FT)	400 X 1,000 X 10,000	400 X 1,000 X 10,000	400 X 3,500 X 10,000	400 X 3,500 X 10,000
	SLOPE	20:1	20:1	20:1	20:1
	PENETRATIONS	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION	NO TSS PENETRATION
VISUAL AND INSTRUMENT NAVAIDS		PAPI, REIL, RNAV/GPS	PAPI, REIL	PAPI, REIL, RNAV/GPS	PAPI, REIL, RNAV/GPS

TAXIWAY AND TAXILANE DIMENSIONS

TAXIWAYS AND TAXILINES	EXISTING (ALL)	FUTURE (ALL)
TAXIWAY AND TAXILANE DESIGN GROUP (TDG)	1	2
TAXIWAY AND TAXILANE WIDTH (FT)	25	35
TAXIWAY AND TAXILANE SAFETY AREA (FT)	40	79
TAXIWAY AND TAXILANE OBJECT FREE AREA (FT)	89	131
TAXIWAY AND TAXILANE SEPARATION (FT)	48 / 40	86 / 86
TAXIWAY AND TAXILANE LIGHTING	MITL	MITL

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD 83); VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). EXISTING ELEVATIONS & RUNWAY END COORDINATES FROM FAA AIRPORT DATA CHART DATED 12/31/2014.

AIRPORT DATA

ITEM		EXISTING (E)	FUTURE (F)
AIRPORT REFERENCE CODE (ARC)		B-II	B-II
MEAN MAX. TEMP OF HOTTEST MONTH (°F) (JULY)		84*	84*
AIRPORT ELEVATION (MSL, FT) (NAVD 88) *		7,000	7,000
AIRPORT NAVIGATIONAL AIDS		MIRL, BEACON, LIGHTED WIND CONE, SEGMENTED CIRCLE, PAPI, REIL	MIRL, BEACON, LIGHTED WIND CONE, SEGMENTED CIRCLE, PAPI, REIL
AIRPORT REFERENCE POINT (ARP) COORDINATES (NAD 83)	LATITUDE	35°39'07.4" N	35°39'07.4" N
	LONGITUDE	109°04'02.5" W	109°04'02.5" W
MISCELLANEOUS FACILITIES		NONE	NONE
ARC AND CRITICAL AIRCRAFT	ARC	B-II	B-II
	AIRCRAFT	BEECHCRAFT B200	BEECHCRAFT B200
	WINGSPAN (FT)	54.50	54.50
	UNDERCARRIAGE (FT)	16.30	16.30
	APPROACH SPEED (KTS)	103	103
AIRPORT MAGNETIC VARIATION	VARIATION	10° E	TO BE DETERMINED
	DATE	2015	TO BE DETERMINED
	SOURCE	NOAA	NOAA
NPIAS SERVICE LEVEL		GA-BASIC	GA-BASIC
STATE EQUIVALENT SERVICE		GA-RURAL	GA-RURAL

* ELEVATIONS FROM FAA AIRPORT DATA CHART DATED 12/31/2014.

MODIFICATION TO STANDARDS APPROVAL

DESCRIPTION	STANDARD TO BE MODIFIED	EXISTING	PROPOSED	PROPOSED ACTION	AIRSPACE CASE NO.	APPROVAL DATE
NONE						

DECLARED DISTANCES

ITEM	EXISTING		FUTURE		FAA APPROVAL DATE
	RW 2	RW 20	RW 2	RW 20	
TAKEOFF RUN AVAILABLE (TORA) (FT)	7,000	7,000	7,000	7,000	
TAKEOFF DISTANCE AVAILABLE (TODA) (FT)	7,000	7,000	7,000	7,000	
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) (FT)	7,000	7,000	7,000	7,000	
LANDING DISTANCE AVAILABLE (LDA) (FT)	7,000	7,000	7,000	7,000	

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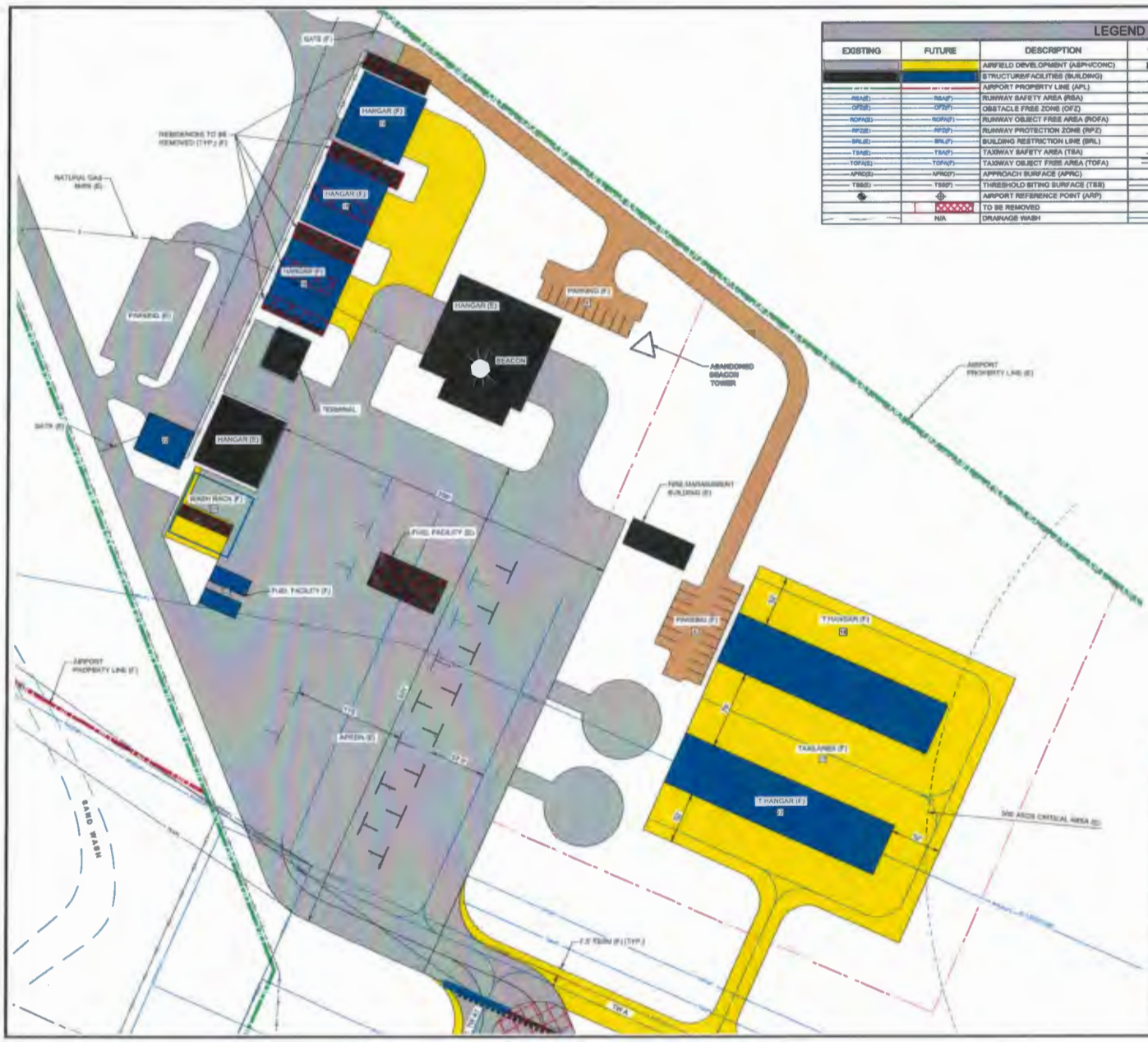
WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

A.I.P. N.o. 3-04-0303-01-11
AIRPORT LAYOUT PLAN

No.	Project No.	Date	Revision / Description	File	Dwn.	Chkd.	Approved
3							
2							
1							
0	140214	08/2015	ORIGINAL ISSUE	140214002-2DR	LDS	CM	JZP

AIRPORT DATA SHEET



LEGEND

EXISTING	FUTURE	DESCRIPTION	EXISTING	FUTURE	DESCRIPTION
		AIRFIELD DEVELOPMENT (ASPH/CONC)			THRESHOLD LIGHTS
		STRUCTURE/FACILITIES (BUILDING)			REIL
		AIRPORT PROPERTY LINE (APL)			VASI/PAPI
RBA(E)	RBA(F)	RUNWAY SAFETY AREA (RSA)			AIRPORT BEACON
OFZ(E)	OFZ(F)	OBSTACLE FREE ZONE (OFZ)			WIND CONE & SEGMENTED CIRCLE
ROFA(E)	ROFA(F)	RUNWAY OBJECT FREE AREA (ROFA)			AWOS
RPZ(E)	RPZ(F)	RUNWAY PROTECTION ZONE (RPZ)			LIGHTED WINDCONE
BRL(E)	BRL(F)	BUILDING RESTRICTION LINE (BRL)		N/A	SECTION CORNER
TSA(E)	TSA(F)	TAXIWAY SAFETY AREA (TSA)	6710		CONTOURS
TOFA(E)	TOFA(F)	TAXIWAY OBJECT FREE AREA (TOFA)			ROADS
APRC(E)	APRC(F)	APPROACH SURFACE (APRC)			MARKINGS
TSS(E)	TSS(F)	THRESHOLD SITING SURFACE (TSS)			FENCING
		AIRPORT REFERENCE POINT (ARP)			HELICOPTER PARKING
		TO BE REMOVED		N/A	PACS/SACS MONUMENTS
	N/A	DRAINAGE WASH			LAND USE LINE

MAGNETIC NORTH SOURCE: NOAA GEOPHYSICAL DATA CENTER 09.23.15
RATE OF CHANGE 0°09' W/YEAR

0 50 100
SCALE IN FEET

AIRPORT FACILITIES LIST

NO.	EXIST.	FUT.	FACILITY DESCRIPTION	TOP ELEVATION (MSL)
1	O		LIGHTED WINDCONE/CIRCLE	+/- 6751
2	O		PAPI	N/A
3	O		REIL	N/A
4	O		THRESHOLD LIGHTS	N/A
5	O		ASOS	+/- 6743
6	O		BEACON	+/- 6752
7	O		HANGAR	+/- 6780
8	O		TERMINAL	+/- 6765
9	O		AUTO PARKING	N/A
10	O		HELO PARKING	+/- 6750
11	O		FIRE MGMT BLDG	+/- 6760
12	O		HANGAR	+/- 6765
13	O		FUEL FACILITY	+/- 6750
14		□	HANGAR	+/- 6770
15		□	HANGAR	+/- 6770
16		□	HANGAR	+/- 6770
17		□	TAXILANES	N/A
18		□	T-HANGAR	+/- 6765
19		□	T-HANGAR	+/- 6765
20		□	FUEL FACILITY	+/- 6750
21		□	WASH RACK	+/- 6745
22		□	SRE BUILDING	+/- 6765

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WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

A.I.P. No. 3-04-0303-01-11
AIRPORT LAYOUT PLAN

No	Project No.	Date	Revision / Description	File	Dwn.	Chkd.	Apvd.
3							
2							
1							
0	14824-1	05/30/15	ORIGINAL ISSUE	8214000-206E	LJB	CM	JP

TERMINAL AREA DRAWING

Sheet 4 of 5

AERIAL PHOTOGRAPH

5 of 5

No.	Project No.	Date	Revision / Description	File	Drwn.	Chkd.	Apprvd.
3							
2							
1							
0	148214	05/2015	ORIGINAL ISSUE	82145025 -INDM	LDS	CM	JZP

THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER TITLE 49 U.S.C., SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT REPORTED THEREIN NOR DOES IT IMPLIED THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE OR WOULD BE ELIGIBLE FOR ACCEPTANCE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

WINDOW ROCK AIRPORT
WINDOW ROCK, ARIZONA

A.I.P. N.o. 3-04-D303-01-11
AIRPORT LAYOUT PLAN

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6.3 Development Costs

The financial feasibility for the proposed development presented in this Chapter will be discussed in more detail in Chapter 8, Financial Feasibility Analysis. Development costs discussed here are for planning purposes only, are based on 2014 dollars, and reflect level of magnitude costs. The costs in **Tables 6-1** through **6-5** are derived from the consultant's knowledge of contactors, construction material suppliers, and work performed at comparable facilities. The costs presented are not intended to be the full range of costs associated with each project. Additional costs such as operating and maintenance are not included. The objective of quantifying construction costs is to aid the Navajo Nation in the decision making process. A recommended development phasing plan, along with refined probable costs, will be presented in Chapter 7.

In addition to airport development costs, the following tables also include the anticipated costs to reconstruct and or rehabilitate the existing runways at each airport. Because the reconstruction and or rehabilitation of the runways are needed regardless if the airports are further developed, these costs have been separated out. Also, the cost breakdowns include a placeholder amount of approximately 20 percent for environmental, design, and construction administration associated with the planned construction. As planned projects get closer to fruition, the Navajo Nation will follow FAA and state guidelines for developing the actual design and construction administration costs.

TABLE 6-1 CHINLE AIRPORT PRELIMINARY COSTS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Runway Reconstruction Costs				
1	Mobilization	1	LS	$150,000.00	$150,000.00
2	Excavation	35,000	CY	$7.00	$245,000.00
3	Pavement Removal (full depth)	46,000	SY	$4.00	$184,000.00
4	Bituminous Prime Coat	23,000	Gallon	$9.00	$207,000.00
5	Crushed Aggregate Base Course (12 inches thick)	46,000	SY	$25.00	$1,150,000.00
6	Bituminous Surface Course (3 inches thick)	7,800	Ton	$153.00	$1,193,400.00
7	Pavement Markings	12,000	SF	$0.75	$9,000.00
				Total Runway Reconstruction Costs	**$3,138,400.00**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Airport Development Costs				
1	Mobilization	1	LS	$250,000.00	$250,000.00
2	Excavation	30,000	CY	$7.00	$210,000.00
3	Pavement Removal (full depth)	3,200	SY	$4.00	$12,800.00
4	Embankment in Place	5,000	CY	$7.00	$35,000.00
5	Crushed Aggregate Base Course (12 inches thick)	45,000	SY	$25.00	$1,125,000.00
6	Bituminous Surface Course (3 inches thick)	7,600	Ton	$153.00	$1,162,800.00
7	Bituminous Prime Coat	23,000	Gallon	$9.00	$207,000.00
8	Runway and Taxiway Pavement Markings	13,000	SF	$0.75	$9,750.00
9	Access Road and Vehicle Parking	5,200	SY	$50.00	$260,000.00
10	HDPE Pipe and Galvanized End Sections	750	LF	$100.00	$75,000.00
11	Terminal Building Construction (including utilities)	3,500	SF	$100.00	$350,000.00
12	Airfield Electrical Service Entrance Upgrade	1	LS	$150,000.00	$150,000.00
13	Electrical Building Modifications	1	LS	$85,000.00	$85,000.00
14	SRE Building Construction (including utilities)	1	LS	$350,000.00	$350,000.00
15	Maintenance Building Construction (including utilities)	1	LS	$150,000.00	$150,000.00
16	Fuel Facility (with card reader)	1	LS	$400,000.00	$400,000.00
17	Aircraft Wash Rack	1	LS	$100,000.00	$100,000.00
18	Seed and Mulch	70	Acre	$4,000.00	$280,000.00
19	Trenching for Counterpoise Wire	30,000	LF	$3.00	$90,000.00
20	Bare Counterpoise Wire, installed in trench, duct banks, or conduit, including ground rods and ground connectors	30,000	LF	$1.50	$45,000.00

Table 6-1 Continued

21	No. 8 AWG, 5Kv Type C Airport Lighting and Control Cable	33,000	LF	$1.25	$41,250.00
22	2-Way (4-inch) PVC Duct (Concrete Encased)	225	LF	$35.00	$7,875.00
23	2-Inch PVC Duct (Direct Earth Burial)	30,000	LF	$6.00	$180,000.00
24	Runway Edge Light	81	Each	$900.00	$72,900.00
25	Airfield Guidance Sign	12	Each	$3,500.00	$42,000.00
26	Taxiway Edge Light	170	Each	$900.00	$153,000.00
27	REIL System (per runway end)	2	LS	$40,000.00	$80,000.00
28	PAPI System (per runway end)	2	LS	$125,000.00	$250,000.00
29	Rotating Beacon and Tower	1	LS	$80,000.00	$80,000.00
30	Airfield Pilot Control System	1	LS	$12,000.00	$12,000.00
31	Wind Cone and Segmented Circle	1	LS	$50,000.00	$50,000.00
32	AWOS	1	LS	$350,000.00	$350,000.00
33	Chain Link Fence, Gates and Appurtenances	27000	LF	$18.00	$486,000.00
				Total Airport Development Costs	**$7,152,375.00**
				Environmental, Design, and Construction Administration Costs (Approx. 20%)	$2,058,155.00
				Total Preliminary Costs	**$12,348,930.00**

Notes:

1) The preliminary development costs do not include the construction of private hangars and associated utilities. Those costs would be the responsibility of a developer.

2) Design and construction administration costs are for budgetary purposes only and do not represent actual costs. The sponsor would comply with current FAA and DOT guidelines for establishing actual costs.

3) All costs are represented in 2014 dollars.

4) Pavement maintenance costs are not included.

Source: ACI, December 2014

TABLE 6-2 TUBA CITY AIRPORT PRELIMINARY COSTS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Runway Reconstruction Costs				
1	Mobilization	1	LS	$150,000.00	$150,000.00
2	Excavation	40,000	CY	$7.00	$280,000.00
3	Pavement Removal (full depth)	52,000	SY	$4.00	$208,000.00
4	Bituminous Prime Coat	26,000	Gallon	$9.00	$234,000.00
5	Crushed Aggregate Base Course (12 inches thick)	52,600	SY	$25.00	$1,315,000.00
6	Bituminous Surface Course (3 inches thick)	8,800	Ton	$153.00	$1,346,400.00
7	Pavement Markings	10,000	SF	$0.75	$7,500.00
				Total Runway Reconstruction Costs	**$3,540,900.00**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Airport Development Costs				
1	Mobilization	1	LS	$250,000.00	$250,000.00
2	Excavation	30,000	CY	$7.00	$210,000.00
3	Pavement Removal (full depth)	2,200	SY	$4.00	$8,800.00
4	Embankment in Place	8,000	CY	$7.00	$56,000.00
5	Crushed Aggregate Base Course (12 inches thick)	59,000	SY	$25.00	$1,475,000.00
6	Bituminous Surface Course (3 inches thick)	10,000	Ton	$153.00	$1,530,000.00
7	Bituminous Prime Coat	29,500	Gallon	$9.00	$265,500.00
8	Runway and Taxiway Pavement Markings	13,000	SF	$0.75	$9,750.00
9	Access Road and Vehicle Parking	5,700	SY	$50.00	$285,000.00
10	HDPE Pipe and Galvanized End Sections	750	LF	$100.00	$75,000.00
11	Terminal Building Construction (including utilities)	2,000	SF	$100.00	$200,000.00
12	Airfield Electrical Service Entrance Upgrade	1	LS	$150,000.00	$150,000.00
13	Electrical Building Modifications	1	LS	$85,000.00	$85,000.00
14	SRE Building Construction (including utilities)	1	LS	$350,000.00	$350,000.00
15	Maintenance Building Construction (including utilities)	1	LS	$150,000.00	$150,000.00
16	Fuel Facility (with card reader)	1	LS	$400,000.00	$400,000.00
17	Aircraft Wash Rack	1	LS	$100,000.00	$100,000.00
18	Seed and Mulch	65	Acre	$4,000.00	$260,000.00
19	Trenching for Counterpoise Wire	27,300	LF	$3.00	$81,900.00
20	Bare Counterpoise Wire, installed in trench, duct banks, or conduit, including ground rods and ground connectors	27,300	LF	$1.50	$40,950.00

Table 6-2 Continued

21	No. 8 AWG, 5Kv Type C Airport Lighting and Control Cable	30,000	LF	$1.25	$37,500.00
22	2-Way (4-inch) PVC Duct (Concrete Encased)	225	LF	$35.00	$7,875.00
23	2-Inch PVC Duct (Direct Earth Burial)	27,300	LF	$6.00	$163,800.00
24	Runway Edge Light	74	Each	$900.00	$66,600.00
25	Airfield Guidance Sign	12	Each	$3,500.00	$42,000.00
26	Taxiway Edge Light	190	Each	$900.00	$171,000.00
27	REIL System (per runway end)	2	LS	$40,000.00	$80,000.00
28	PAPI System (per runway end)	2	LS	$125,000.00	$250,000.00
29	Rotating Beacon and Tower	1	LS	$80,000.00	$80,000.00
30	Airfield Pilot Control System	1	LS	$12,000.00	$12,000.00
31	Wind Cone and Segmented Circle	1	LS	$50,000.00	$50,000.00
32	AWOS	1	LS	$350,000.00	$350,000.00
33	Chain Link Fence, Gates and Appurtenances	6500	LF	$18.00	$117,000.00
				Total Airport Development Costs	**$7,410,675.00**
				Environmental, Design, and Construction Administration Costs (Approx. 20%)	$2,190,315.00
				Total Preliminary Costs	**$13,141,890.00**

Notes:

1) The preliminary development costs do not include the construction of private hangars and associated utilities. Those costs would be the responsibility of a developer.

2) Design and construction administration costs are for budgetary purposes only and do not represent actual costs. The sponsor would comply with current FAA and DOT guidelines for establishing actual costs.

3) All costs are represented in 2014 dollars.

4) Pavement maintenance costs are not included.

Source: ACI, December 2014

TABLE 6-3 WINDOW ROCK AIRPORT PRELIMINARY COSTS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Runway Reconstruction Costs				
1	Mobilization (approximately 10%)	1	LS	$150,000.00	$150,000.00
2	Excavation	42,000	CY	$7.00	$294,000.00
3	Pavement Removal (full depth)	59,000	SY	$4.00	$236,000.00
4	Bituminous Prime Coat	30,000	Gallon	$9.00	$270,000.00
5	Crushed Aggregate Base Course (12 inches thick)	59,200	SY	$25.00	$1,480,000.00
6	Bituminous Surface Course (3 inches thick)	9,900	Ton	$153.00	$1,514,700.00
7	Pavement Markings	12,000	SF	$0.75	$9,000.00
				Total Runway Reconstruction Costs	**$3,953,700.00**
ITEM NO.	**DESCRIPTION**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
	Airport Development Costs				
1	Mobilization	1	LS	$250,000.00	$250,000.00
2	Excavation	25,000	CY	$7.00	$175,000.00
3	Pavement Removal (full depth)	3,500	SY	$4.00	$14,000.00
4	Embankment in Place	5,000	CY	$7.00	$35,000.00
5	Crushed Aggregate Base Course (12 inches thick)	44,000	SY	$25.00	$1,100,000.00
6	Bituminous Surface Course (3 inches thick)	7,500	Ton	$153.00	$1,147,500.00
7	Bituminous Prime Coat	22,000	Gallon	$9.00	$198,000.00
8	Runway and Taxiway Pavement Markings	13,000	SF	$0.75	$9,750.00
9	Access Road and Vehicle Parking	3,000	SY	$50.00	$150,000.00
10	HDPE Pipe and Galvanized End Sections	750	LF	$100.00	$75,000.00
11	Airfield Electrical Service Entrance Upgrade	1	LS	$50,000.00	$50,000.00
12	Electrical Building Modifications	1	LS	$50,000.00	$50,000.00
13	SRE Building Construction (including utilities)	1	LS	$350,000.00	$350,000.00
14	Maintenance Building Construction (including utilities)	1	LS	$150,000.00	$150,000.00
15	Fuel Facility (with card reader)	1	LS	$400,000.00	$400,000.00
16	Aircraft Wash Rack	1	LS	$100,000.00	$100,000.00
17	Seed and Mulch	75	Acre	$4,000.00	$300,000.00
18	Trenching for Counterpoise Wire	31,000	LF	$3.00	$93,000.00
19	Bare Counterpoise Wire, installed in trench, duct banks, or conduit, including ground rods and ground connectors	31,000	LF	$1.50	$46,500.00
20	No. 8 AWG, 5Kv Type C Airport Lighting and Control Cable	34,000	LF	$1.25	$42,500.00
21	2-Way (4-inch) PVC Duct (Concrete Encased)	225	LF	$35.00	$7,875.00

Table 6-3 Continued

22	2-Inch PVC Duct (Direct Earth Burial)	31,000	LF	$6.00	$186,000.00
23	Runway Edge Light	82	Each	$900.00	$73,800.00
24	Airfield Guidance Sign	12	Each	$3,500.00	$42,000.00
25	Taxiway Edge Light	175	Each	$900.00	$157,500.00
26	REIL System (per runway end)	2	LS	$40,000.00	$80,000.00
27	PAPI System (per runway end)	2	LS	$125,000.00	$250,000.00
28	Wind Cone and Segmented Circle	1	LS	$50,000.00	$50,000.00
29	Chain Link Fence, Gates and Appurtenances	18,500	LF	$18.00	$333,000.00
				Total Airport Development Costs	**$5,916,425.00**
				Environmental, Design, and Construction Administration Costs (Approx. 20%)	$1,974,025.00
				Total Preliminary Costs	**$11,844,150.00**

Notes:

1) The preliminary development costs do not include the construction of private hangars and associated utilities. Those costs would be the responsibility of a developer.

2) Design and construction administration costs are for budgetary purposes only and do not represent actual costs. The sponsor would comply with current FAA and DOT guidelines for establishing actual costs.

3) All costs are represented in 2014 dollars.

4) Pavement maintenance costs are not included.

Source: ACI, December 2014

TABLE 6-4 CROWNPOINT AIRPORT PRELIMINARY COSTS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Runway Reconstruction Costs				
1	Mobilization	1	LS	$150,000.00	$150,000.00
2	Excavation	30,000	CY	$7.00	$210,000.00
3	Pavement Removal (full depth)	39,000	SY	$4.00	$156,000.00
4	Bituminous Prime Coat	20,000	Gallon	$9.00	$180,000.00
5	Crushed Aggregate Base Course (12 inches thick)	39,000	SY	$25.00	$975,000.00
6	Bituminous Surface Course (3 inches thick)	6,600	Ton	$153.00	$1,009,800.00
7	Pavement Markings	9,000	SF	$0.75	$6,750.00
				Total Runway Reconstruction Costs	**$2,687,550.00**
ITEM NO.	**DESCRIPTION**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
	Airport Development Costs				
1	Mobilization	1	LS	$250,000.00	$250,000.00
2	Excavation	34,000	CY	$7.00	$238,000.00
3	Pavement Removal (full depth)	7,600	SY	$4.00	$30,400.00
4	Embankment in Place	9,000	CY	$7.00	$63,000.00
5	Crushed Aggregate Base Course (12 inches thick)	66,000	SY	$25.00	$1,650,000.00
6	Bituminous Surface Course (3 inches thick)	11,500	Ton	$153.00	$1,759,500.00
7	Bituminous Prime Coat	33,000	Gallon	$9.00	$297,000.00
8	Runway and Taxiway Pavement Markings	10,000	SF	$0.75	$7,500.00
9	Access Road and Vehicle Parking	5,700	SY	$50.00	$285,000.00
10	HDPE Pipe and Galvanized End Sections	750	LF	$100.00	$75,000.00
11	Terminal Building Construction (including utilities)	2,000	SF	$100.00	$200,000.00
12	Airfield Electrical Service Entrance Upgrade	1	LS	$150,000.00	$150,000.00
13	Electrical Building Construction	1	LS	$175,000.00	$175,000.00
14	SRE Building Construction (including utilities)	1	LS	$350,000.00	$350,000.00
15	Maintenance Building Construction (including utilities)	1	LS	$150,000.00	$150,000.00
16	Fuel Facility (with card reader)	1	LS	$400,000.00	$400,000.00
17	Aircraft Wash Rack	1	LS	$100,000.00	$100,000.00
18	Seed and Mulch	60	Acre	$4,000.00	$240,000.00
19	Trenching for Counterpoise Wire	27,500	LF	$3.00	$82,500.00
20	Bare Counterpoise Wire, installed in trench, duct banks, or conduit, including ground rods and ground connectors	27,500	LF	$1.50	$41,250.00
21	No. 8 AWG, 5Kv Type C Airport Lighting and Control Cable	30,000	LF	$1.25	$37,500.00

Table 6-4 Continued

22	2-Way (4-inch) PVC Duct (Concrete Encased)	225	LF	$35.00	$7,875.00
23	2-Inch PVC Duct (Direct Earth Burial)	27,500	LF	$6.00	$165,000.00
24	Runway Edge Light	70	Each	$900.00	$63,000.00
25	Airfield Guidance Sign	12	Each	$3,500.00	$42,000.00
26	Taxiway Edge Light	160	Each	$900.00	$144,000.00
27	REIL System (per runway end)	2	LS	$40,000.00	$80,000.00
28	PAPI System (per runway end)	2	LS	$125,000.00	$250,000.00
29	Rotating Beacon and Tower	1	LS	$80,000.00	$80,000.00
30	Airfield Pilot Control System	1	LS	$12,000.00	$12,000.00
31	Wind Cone and Segmented Circle	1	LS	$50,000.00	$50,000.00
32	AWOS	1	LS	$350,000.00	$350,000.00
33	Chain Link Fence, Gates and Appurtenances	17500	LF	$18.00	$315,000.00
				Total Airport Development Costs	**$8,140,525.00**
				Environmental, Design, and Construction Administration Costs (Approx. 20%)	$2,165,615.00
				Total Preliminary Costs	**$12,993,690.00**

Notes:

1) The preliminary development costs do not include the construction of private hangars and associated utilities. Those costs would be the responsibility of a developer.

2) Design and construction administration costs are for budgetary purposes only and do not represent actual costs. The sponsor would comply with current FAA and DOT guidelines for establishing actual costs.

3) All costs are represented in 2014 dollars.

4) Pavement maintenance costs are not included.

Source: ACI, December 2014

TABLE 6-5 SHIPROCK AIRSTRIP PRELIMINARY COSTS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Runway Reconstruction Costs				
1	Mobilization	1	LS	$150,000.00	$150,000.00
2	Excavation	30,000	CY	$7.00	$210,000.00
3	Pavement Removal (full depth)	40,500	SY	$4.00	$162,000.00
4	Bituminous Prime Coat	20,000	Gallon	$9.00	$180,000.00
5	Crushed Aggregate Base Course (12 inches thick)	41,000	SY	$25.00	$1,025,000.00
6	Bituminous Surface Course (3 inches thick)	6,800	Ton	$153.00	$1,040,400.00
7	Pavement Markings	8,000	SF	$0.75	$6,000.00
				Total Runway Reconstruction Costs	**$2,773,400.00**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	Airport Development Costs				
1	Mobilization	1	LS	$250,000.00	$250,000.00
2	Excavation	30,000	CY	$7.00	$210,000.00
3	Pavement Removal (full depth)	20,000	SY	$4.00	$80,000.00
4	Embankment in Place	8,000	CY	$7.00	$56,000.00
5	Crushed Aggregate Base Course (12 inches thick)	57,000	SY	$25.00	$1,425,000.00
6	Bituminous Surface Course (3 inches thick)	9,800	Ton	$153.00	$1,499,400.00
7	Bituminous Prime Coat	28,500	Gallon	$9.00	$256,500.00
8	Runway and Taxiway Pavement Markings	7,000	SF	$0.75	$5,250.00
9	Access Road and Vehicle Parking	6,000	SY	$50.00	$300,000.00
10	HDPE Pipe and Galvanized End Sections	750	LF	$100.00	$75,000.00
11	Terminal Building Construction (including utilities)	2,000	SF	$100.00	$200,000.00
12	Airfield Electrical Service Entrance Upgrade	1	LS	$150,000.00	$150,000.00
13	Electrical Building Construction	1	LS	$175,000.00	$175,000.00
14	SRE Building Construction (including utilities)	1	LS	$350,000.00	$350,000.00
15	Maintenance Building Construction (including utilities)	1	LS	$150,000.00	$150,000.00
16	Fuel Facility (with card reader)	1	LS	$400,000.00	$400,000.00
17	Aircraft Wash Rack	1	LS	$100,000.00	$100,000.00
18	Seed and Mulch	50	Acre	$4,000.00	$200,000.00
19	Trenching for Counterpoise Wire	23,600	LF	$3.00	$70,800.00
20	Bare Counterpoise Wire, installed in trench, duct banks, or conduit, including ground rods and ground connectors	23,600	LF	$1.50	$35,400.00

Table 6-5 Continued

21	No. 8 AWG, 5Kv Type C Airport Lighting and Control Cable	26,000	LF	$1.25	$32,500.00
22	2-Way (4-inch) PVC Duct (Concrete Encased)	225	LF	$35.00	$7,875.00
23	2-Inch PVC Duct (Direct Earth Burial)	23,600	LF	$6.00	$141,600.00
24	Runway Edge Light	62	Each	$900.00	$55,800.00
25	Airfield Guidance Sign	12	Each	$3,500.00	$42,000.00
26	Taxiway Edge Light	180	Each	$900.00	$162,000.00
27	REIL System (per runway end)	2	LS	$40,000.00	$80,000.00
28	PAPI System (per runway end)	2	LS	$125,000.00	$250,000.00
29	Rotating Beacon and Tower	1	LS	$80,000.00	$80,000.00
30	Airfield Pilot Control System	1	LS	$12,000.00	$12,000.00
31	Wind Cone and Segmented Circle	1	LS	$50,000.00	$50,000.00
32	AWOS	1	LS	$350,000.00	$350,000.00
33	Chain Link Fence, Gates and Appurtenances	23000	LF	$18.00	$414,000.00
				Total Airport Development Costs	**$7,666,125.00**
				Environmental, Design, and Construction Administration Costs (Approx. 20%)	$2,087,905.00
				Total Preliminary Costs	**$12,527,430.00**

Notes:

1) The preliminary development costs do not include the construction of private hangars and associated utilities. Those costs would be the responsibility of a developer.

2) Design and construction administration costs are for budgetary purposes only and do not represent actual costs. The sponsor would comply with current FAA and DOT guidelines for establishing actual costs.

3) All costs are represented in 2014 dollars

4) Pavement maintenance costs are not included.

Source: ACI, December 2014

6.4 Summary

This chapter presented a summary of the reasonable costs anticipated for the proposed projects at each airport. The development costs for the Navajo Nation Airport System are based on the facility requirements as presented in Chapter 5 and are summarized in **Table 6-6**. The Navajo Nation's ability to fund the recommended projects is a major consideration in preparing the Capital Improvement Plan (CIP). The next chapter will present a proposed phasing plan developed in order to better assist the Navajo Nation with developing the study airports over the course of the 20-year planning period.

Table 6-6 Summary of Estimated Airport Development Costs

Airport Name	*Preliminary Costs*
Arizona Airports	
Chinle Municipal Airport	$12,350,000
Tuba City Airport	$13,142,000
Window Rock Airport	$11,850,000
New Mexico Airports	
Crownpoint Airport	$13,000,000
Shiprock Airstrip	$12,530,000
Total Preliminary Costs	**$62,872,000**

Source: ACI, December 2014

Chapter Seven

AIRPORT CAPITAL IMPROVEMENT PLANS

CHAPTER 7 – AIRPORT CAPITAL IMPROVEMENT PLANS

7.1 INTRODUCTION

Capital Improvement Plans (CIP) resulting from the master planning process are typically constructed in a phased approach over time. An important aspect of the planning process is demonstrating how projects are phased and what the financial implications are. This chapter is intended to provide guidance on the proposed project phasing and the capital costs associated with the development at each airport. The recommended development plan for the Navajo Nation Airport System is based on the facility requirements as presented in Chapter 5 and the proposed development projects as shown on the ALP drawings in Chapter 6.

The proposed CIPs presented in this chapter assume the uninterrupted continuation of the FAA's Airport Improvement Program (AIP), ADOT and NMDOT funding programs, and the anticipated growth of the airport's aviation activity. If there are periods when funding at either the Federal or state levels are temporarily suspended or the level of funding is reduced, then the CIPs for each airport may need to be adjusted to account for the funding stream changes. Chapter 3 discussed the current funding policies in detail for Federal as well as state programs.

7.2 AIRPORT DEVELOPMENT PLAN

Future development at each airport covers a 20-year planning period. It is unlikely that all of the necessary funding will be received in one year at the federal or state level, thus the development projects for each airport are grouped into three phases:

- Phase I, Short-term (1-5 years)
- Phase II, Medium-term (6-10 years)
- Phase III, Long-term (11-20 years)

The development costs contained in this chapter are based on the proposed improvements as shown on each Airport Layout Plan. The phasing of projects will also assist the Navajo Nation in budgetary planning for future construction projects. The sequence in which the projects are completed is based, in part, on the feedback received from the various Navajo Chapters and the Planning Advisory Committee. The proposed 20-year financial development plan for each airport is outlined in **Tables 7-1 through 7-5**.

TABLE 7-1 CHINLE MUNICIPAL AIRPORT (ARIZONA) FINANCIAL DEVELOPMENT PLAN OVER 20 YEARS

Project Name and Phase	Total Estimated Costs	FAA AIP Eligible Costs	State Eligible Costs	Local/ Other Costs
Phase I Short-term Development				
Reconstruct Runway 18/36	$4,658,460	$4,241,993	$208,233	$208,234
Install MIRL/PAPI's /Guidance Signs/ REIL				
Electrical Service Upgrades/Electrical Building Modifications/Airfield Pilot Control System Installation	$305,850	$278,506	$13,672	$13,672
Install Rotating Beacon & Tower/Wind Cone & Segmented Circle	$156,000	$142,054	$6,973	$6,973
Install AWOS System	$420,000	$382,452	$18,774	$18,774
Total Short-term Development Cost	**$5,540,310**	**$5,045,005**	**$247,652**	**$247,653**
Phase II, Medium-term Development				
Fuel Facility	$480,000	-	-	$480,000
Construct Parallel Taxiway	$3,782,820	$3,444,636	$169,092	$169,092
Install MITL & Guidance Signage	$420,600	$382,998	$18,801	$18,801
Initial Aircraft Parking Area Expansion	$302,000	$275,001	$13,499	13,500
SRE Building Construction	$420,000	$382,452	$18,774	$18,774
Chain Link Fence and Gates	$583,200	$531,062	$26,069	$26,069
Total Medium-term Development Cost	**$5,988,620**	**$5,016,149**	**$246,235**	**$726,236**
Phase III, Long-term Development				
Access Road & Parking Expansion	$100,000	$91,060	$4,470	$4,470
Maintenance Building Construction	$180,000	-	-	$180,000
Terminal Building Construction	$420,000	$210,000	$110,000	$100,000
Aircraft Wash Rack	$120,000	$109,272	$5,364	$5,364
Total Long-term Development Cost	**$820,000**	**$410,332**	**$119,834**	**$289,834**
TOTAL DEVELOPMENT COST	**$12,348,930**	**$10,471,486**	**$613,721**	**$1,263,723**

Source: Armstrong Consultants, Inc. 2015

Note: All costs are calculated in 2014 dollars and are for planning purposes only. Assume 91.06 percent funding for FAA eligible development projects, and 4.47 percent for the State of Arizona with 4.47 percent match by the Sponsor (local). If state funding is not available, the Sponsor's share is 8.94 percent. Pavement maintenance costs are not included.

TABLE 7-2 TUBA CITY AIRPORT (ARIZONA) FINANCIAL DEVELOPMENT PLAN OVER 20 YEARS

Project Name and Phase	Total Estimated Costs	FAA AIP Eligible Costs	State Eligible Costs	Local/ Other Costs
Phase I Short-term Development				
Rehabilitate/Reconstruct Runway 15/33	$4,249,080	$3,869,212	$189,934	$189,934
Install AWOS	$420,000	$382,452	$18,774	$18,774
Upgrade MIRL/MITL	$224,780	$204,685	$10,047	$10,048
Upgrade/Install Airfield Signage	$115,200	$104,901	$5,149	$5,150
Electrical Service Upgrades/Electrical Building Modifications/Airfield Pilot Control System Upgrade	$305,850	$278,507	$13,671	$13,672
Install REIL & PAPI's Runway 15/33 Wind Cone & Segmented Circle	$456,000	$415,234	$20,383	$20,383
Total Short-term Development Cost	**$5,770,910**	**$5,254,991**	**$257,958**	**$257,961**
Phase II, Medium-term Development				
Fuel Facility	$480,000	-	-	$480,000
Install MITL & Guidance Signage	$555,690	$506,011	$24,839	$24,840
Rotating Beacon and Tower	$96,000	$87,418	$4,291	$4,291
Aircraft Parking Apron Expansion	$600,000	$546,360	$26,820	$26,820
Chain Link Fence and Gates	$140,400	$127,848	$6,276	$6,276
Construct SRE Building	$420,000	$382,452	$18,774	$18,774
Construct Parallel Taxiway	$4,195,770	$3,820,668	$187,551	$187,551
Total Medium-term Development Cost	**$6,487,860**	**$5,470,757**	**$268,551**	**$748,552**
Phase III, Long-term Development				
Access Road & Parking Expansion	$342,000	$311,425	$15,287	$15,287
Maintenance Building Construction	$180,000	-	-	$180,000
Terminal Building Construction	$241,120	$219,564	$10,778	$10,778
Aircraft Wash Rack	$120,000	$109,272	$5,364	$5,364
Total Long-term Development Cost	**$883,120**	**$640,262**	**$31,429**	**$211,429**
TOTAL DEVELOPMENT COST	**$13,141,890**	**$11,366,010**	**$557,938**	**$1,217,942**

Source: Armstrong Consultants, Inc. 2015

Note: All costs are calculated in 2014 dollars and are for planning purposes only. Assume 91.06 percent funding for FAA eligible development and 4.47 percent for the State of Arizona with 4.47 percent match by the Sponsor (local). If state funding is not available, the Sponsor's share is 8.94 percent. Pavement maintenance costs are not included.

TABLE 7-3 WINDOW ROCK AIRPORT (ARIZONA) FINANCIAL DEVELOPMENT PLAN OVER 20 YEARS

Project Name and Phase	Total Estimated Costs	FAA AIP Eligible Costs	State Eligible Costs	Local/ Other Costs
Phase I Short-term Development				
Rehabilitate/Reconstruct Runway 2/20	$4,744,440	$4,320,287	$212,076	$212,077
Upgrade MIRL/MITL/Airfield Signage	$283,738	$258,372	$12,683	$12,683
Install REIL & PAPI's Runway02/20/Wind Cone and Segmented Circle	$456,000	$415,234	$20,383	$20,383
Electrical Service Upgrades/Electrical Building Modifications	$120,000	$109,272	$5,364	$5,364
Total Short-term Development Cost	**$5,604,178**	**$5,103,165**	**$250,506**	**$250,507**
Phase II, Medium-term Development				
Chain Link Fence and Gates	$399,600	$363,876	$17,862	$17,862
Fuel Facility	$480,000	-	-	$480,000
Construct SRE Building	$420,000	382,452	$18,774	$18,774
Construct Parallel Taxiway	$3,974,935	$3,619,576	$177,679	$177,680
Install MITL & Guidance Signage	$365,437	$332,767	$16,335	$16,335
Initial Aircraft Parking Apron Expansion	$180,000	$163,908	$8,046	$8,046
Total Medium-term Development Cost	**$5,819,972**	**$4,862,579**	**$238,696**	**$718,697**
Phase III, Long-term Development				
Access Road & Parking Expansion	$120,000	$109,272	$5,364	$5,364
Maintenance Building Construction	$180,000	$163,908	$8,046	$8,046
Aircraft Wash Rack	$120,000	$109,272	$5,364	$5,364
Total Long-term Development Cost	**$420,000**	**$382,452**	**$18,774**	**$18,774**
TOTAL DEVELOPMENT COST	**$11,844,150**	**$10,348,196**	**$507,976**	**$987,978**

Source: Armstrong Consultants, Inc. 2015

Note: All costs are calculated in 2014 dollars and are for planning purposes only. Assume 91.06 percent funding for FAA eligible development and 4.47 percent for the State of Arizona with 4.47 percent match by the Sponsor (local). If state funding is not available, the Sponsor's share is 8.94 percent. Pavement maintenance costs are not include.

TABLE 7-4 CROWNPOINT AIRPORT (NEW MEXICO) FINANCIAL DEVELOPMENT PLAN OVER 20 YEARS

Project Name and Phase	Total Estimated Costs	FAA AIP Eligible Costs	State Eligible Costs	Local/ Other Share
Phase I Short-term Development				
Rehabilitate/Reconstruct Runway 18/36	$3,225,060	$2,902,554	$161,253	$161,253
AWOS Installation	$420,000	$378,000	$21,000	$21,000
Upgrade MIRL/MITL / Airfield Signage	$530,490	$477,441	$26,524	$26,525
Install REIL & PAPI's Runway 18/36	$396,000	$356,400	$19,800	$19,800
Electrical Service Upgrades/Electrical Building Modifications/Airfield Pilot Control System	$404,400	$363,960	$20,220	$20,220
Rotating Beacon and Tower	$96,000	$86,400	$4,800	$4,800
Wind Cone & Segmented Circle	$60,000	$54,000	$3,000	$3,000
Total Short-term Development Cost	**$5,131,950**	**$4,618,755**	**$256,597**	**$256,598**
Phase II, Medium-term Development				
Fuel Facility	$480,000	-	-	$480,000
Chain Link Fence and Gates	$399,600	$359,640	$19,980	$19,980
Aircraft Apron Expansion	$610,000	$549,000	$30,500	$30,500
SRE Facility Construction	$420,000	$378,000	$21,000	$21,000
Construct Parallel Taxiway	$4,442,616	$3,998,354	$222,131	$222,131
Install MITL & Guidance Signage	$627,524	$564,772	$31,376	$31,376
Total Medium-term Development Cost	**$6,979,740**	**$5,849,766**	**$324,987**	**$804,987**
Phase III, Long-term Development				
Terminal Building Construction	$240,000	$216,000	$12,000	$12,000
Access Road & Parking Expansion	$342,000	$307,800	$17,100	$17,100
Maintenance Building Construction	$180,000	-	-	$180,000
Aircraft Wash Rack	$120,000	$108,000	$6,000	$6,000
Total Long-term Development Cost	**$882,000**	**$631,800**	**$35,100**	**$215,100**
TOTAL DEVELOPMENT COST	**$12,993,690**	**$11,100,321**	**$616,684**	**$1,276,685**

Source: Armstrong Consultants, Inc. 2015

Note: All costs are calculated in 2014 dollars and are for planning purposes only. Assume 90 percent funding for FAA eligible development and 5 percent for the State of New Mexico with 5 percent match by the Sponsor (local). If state funding is not available, the Sponsor's share is 10 percent. Pavement maintenance costs are not included.

TABLE 7-5 SHIPROCK AIRSTRIP (NEW MEXICO) FINANCIAL DEVELOPMENT PLAN OVER 20 YEARS

Project Name and Phase	Total Estimated Costs	FAA AIP Eligible Costs	State Eligible Costs	Local/ Other Costs
Phase I Short-term Development				
Rehabilitate/Reconstruct Runway 2/20	$3,328,080	$2,995,272	$166,404	$166,404
AWOS Installation	$420,000	$378,000	$21,000	$21,000
Upgrade MIRL/MITL/Airfield Signage	$430,065	$387,059	$21,503	$21,503
Install REIL & PAPI's Runway 2/20	$396,000	$356,400	$19,800	$19,800
Electrical Service Upgrades/Electrical Building Modifications/Airfield Pilot Control System	$404,400	$363,960	$20,220	$20,220
Rotating Beacon and Tower	$96,000	$86,400	$4,800	$4,800
Wind Cone & Segmented Circle	$60,000	$54,000	$3,000	$3,000
Total Short-term Development Cost	**$5,134,545**	**$4,621,091**	**$256,727**	**$256,727**
Phase II, Medium-term Development				
Fuel Facility	$480,000	-	-	$480,000
Chain Link Fence and Gates	$496,800	$447,120	$24,840	$24,840
Aircraft Apron Expansion	$600,000	$540,000	$30,000	$30,000
SRE Facility Construction	$420,000	$378,000	$21,000	$21,000
Construct Parallel Taxiway	$3,938,580	$3,544,722	$196,929	$196,929
Install MITL & Guidance Signage	$557,505	$501,755	$27,875	$27,875
Total Medium-term Development Cost	**$6,492,885**	**$5,411,597**	**$300,644**	**$780,644**
Phase III, Long-term Development				
Terminal Building Construction	$240,000	$216,000	$12,000	$12,000
Access Road & Parking Expansion	$360,000	$324,000	$18,000	$18,000
Maintenance Building Construction	$180,000	-	-	$180,000
Aircraft Wash Rack	$120,000	$108,000	$6,000	$6,000
Total Long-term Development Cost	**$900,000**	**$648,000**	**$36,000**	**$216,000**
TOTAL DEVELOPMENT COST	**$12,527,430**	**$10,680,688**	**$593,371**	**$1,253,371**

Source: Armstrong Consultants, Inc. 2015

Note: All costs are calculated in 2014 dollars and are for planning purposes only. Assume 90 percent funding for FAA eligible development and 5 percent for the State of New Mexico with 5 percent match by the Sponsor (local). If state funding is not available, the Sponsor's share is 10 percent. Pavement maintenance costs are not included.

7.3 Pavement Maintenance Plan

Periodic maintenance is necessary to prolong the useful life of the airport pavements. The affects of weather, oxidation, and usage cause the pavement to deteriorate. The accumulation of moisture in the pavement causes heaving and cracking, and is one of the greatest causes of pavement distress. The sun's ultraviolet rays oxidize and break down the asphalt binder in the pavement mix, which in turn accelerates raveling and erosion and can reduce asphalt thickness.

The appropriate pavement maintenance will minimize the effects of weather damage and oxidation. Crack sealing is performed to keep moisture from accumulating inside and underneath the pavement and should be done at least every five years prior to fog sealing or overlaying the pavements. Fog seals, slurry seals, and coal tar emulsion (fuel resistant) seals are spread over the entire paved area to replenish the binder lost through aggregate to increase the friction coefficient of the pavement. Asphalt overlays are performed near the end of the useful life of the pavement. A layer of new asphalt is placed over the existing pavement to renew the life of the pavement and to recover lost strength due to deterioration. Unless specially designed, the overlay is not intended to increase the weight bearing capacity of the pavement. Remarking of the pavement is required following a fog seal or overlay.

The recommended pavement maintenance cycle time frames are listed below in **Table 7-6**. It should be noted that the time frames are recommendations only. Actual pavement deterioration will be affected by use of the Airport and weather exposure. Maintenance actions should be scheduled as necessary through close monitoring and inspection of the pavements.

Table 7-6 Pavement Maintenance Schedule

Pavement Maintenance Cycle	Approximate Time Frames
Crack Seal Pavement	1 - 2 years
Crack Seal, Seal Coat, and Remark Pavements	3 - 8 years
Seal Concrete Joints	6 - 8 years
Overlay Pavements	15 - 18 years

Source: ACI, 2015

7.4 Summary

This chapter presented the recommended Capital Improvement Plans for each airport and their associated costs over the 20-year planning period, as well as the recommended schedule for airfield pavement maintenance. The proposed development for each airport as shown on the Airport Layout Plans and identified in **Tables 7-1 through 7-5** is considered feasible provided adequate funding remains available for the foreseeable future from FAA, ADOT, and NMDOT. Furthermore, understanding the financial commitment needed for the recommended CIPs at the airports is an important piece of the overall puzzle for the future development of the Navajo Nation airport system. The final chapter will discuss the financial feasibility of the planned development and provide guidance on the measures required to demonstrate the Nation's ability to fund future projects found within this Master Plan.

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Chapter Eight

FINANCIAL FEASIBILITY ANALYSIS

CHAPTER 8 - FINANCIAL FEASIBILITY ANALYSIS

8.1 INTRODUCTION

This chapter will look at the historical funding and revenue sources that have been used to maintain the infrastructure and operational needs of the airports to date, evaluate the financial requirements of required airport improvements, and offer a number of funding scenarios necessary to accomplish those improvements in the future.

8.2 FINANCIAL BACKGROUND

Available historical funding records for Navajo Nation airports only cover the relatively recent past. Limited information pertaining to funding sources and historic grants are only available for the Nation's airports from Fiscal Year (FY) 2003 to the present day. However, the information is sufficient to establish a marginal baseline for maintenance and development for the system airports. A matrix indicating historic funding levels and sources is shown in **Table 8-1.** Much of the past funding for airports has come from fuel excise tax funds, Navajo Nation General Fund allotments, and in more recent years, FAA grant funding. Navajo Nation airports are also currently eligible for Arizona and New Mexico state funding opportunities under the aeronautics divisions in each state.

TABLE 8-1 HISTORICAL AIRPORT FUNDING AND REVENUE SOURCES

NN-FY	Source of Funding	Project Name	Funds Amount
2003	Fuel Excise Tax	Chinle Municipal Airport	$23,760
2003	Fuel Excise Tax	Chinle Municipal Airport Match	$3,733
2003	Fuel Excise Tax	NN Airports Maintenance	$386,831
2003	Fuel Excise Tax	Window Rock Airport Parking Lot	$395,940
2003	Fuel Excise Tax	Window Rock Airport Match	$10,140
2003	Fuel Excise Tax	Tuba City Airport Match	$16,934
2003	Fuel Excise Tax	Tuba City Airport	$1,650,615
2005	Fuel Excise Tax	Phase 3 Ext/Chinle Airport	$380,875
2006	Fuel Excise Tax	Shiprock Airstrip – Runway	$5,600
2006	Fuel Excise Tax	Chinle Municipal Airport	No Data Available
2006	Fuel Excise Tax	Tuba City Airport	No Data Available

Table 8-1 Historical Airport Funding and Revenue Sources Contd.

2006	Fuel Excise Tax	Window Rock Airport	No Data Available
2006	Fuel Excise Tax	Crownpoint Airport	No Data Available
2006	Fuel Excise Tax	Airport and Street Lighting	$9,6497
2006	Fuel Excise Tax	Window Rock Airport Matching	$1,017
2013	FAA	Window Rock Consultant	$300,000
2013/14	FHWA	Department of Airports	$716,088
2014	FAA	Window Rock Airport Rehabilitation	$841,700
2014	FAA	Window Rock Airport Rehabilitation	$600,000
2014/15	NN GF	Department of Airports Management	$328,883
2015	NN - New Budget	Department of Airports Management	$150,000

Source: Navajo DOT, 2014

8.3 Funding Sources

Historically, the Navajo Nation has drawn airport funding from a variety of internal and external sources. However, as a new age of development for the Navajo Nation's airports gets underway, it is anticipated that federal and state funding will play a much larger role in the funding of the facilities. Therefore, it is important to understand the mechanics of how those funding agencies operate and establish priorities for eligible projects. A general description of how federal and state funds are ranked and distributed to airports and related processes include the following:

8.3.1 Federal Funds

The FAA identifies airports that are significant to national air transportation through the development of the National Plan of Integrated Airport System (NPIAS). The Airport Capital Improvement Plan (ACIP) serves as the primary planning tool for systematically identifying, prioritizing, and assigning funds to critical airport development and associated capital needs for the National Airspace System (NAS). According FAA Order 5100.39A, *Airports Capital Improvement Plan,* the ACIP also serves as the basis for the distribution of grant funds under the Airport Improvement Program (AIP). The AIP provides Federal funds for planning and development at the nation's public use airports and is a major source of revenue for airport planning and development nationwide. By awarding AIP funds to airport sponsors, the FAA has always emphasized their use on the highest priority projects.

With the extensive demand for funds, the FAA must distribute funds to the different FAA regions in a way that ensures that nationally the highest priority projects are being funded. The ACIP is intended to help accomplish this objective. The FAA uses a numerical system as one tool for prioritizing airport development. The values generated by the National Priority System (NPS) equation serve only to categorize airport development in accordance with agency goals and objectives. The NPS equation generates values between zero and 100, with 100 generally being the most consistent with agency

goals. The Airport Code is used to identify the role and size of the airport and the ACIP Project Code is a 6-character alpha identifier consisting of three 2-character elements that express purpose, component, and type of project. A numerical rating alone cannot account for most qualitative factors that may affect the importance of an individual airport development project, according to FAA Order 5100.39A. The numerical priority rating is intended to be used in conjunction with qualitative factors to select airport development projects.

8.3.2 State of Arizona

According to Arizona Department of Transportation (ADOT) Airport Development Guidelines dated October, 2011, the Arizona Revised Statue (ARS) Title § 28 directs the State Transportation Board to distribute State Aviation Funds to airport facilities for planning, design, development, acquisition of interest in land, construction, and improvement of publicly owned and operated airport facilities according to the needs of those facilities, as determined by the Board.

In order to allocate the State Aviation Fund dollars in an equitable and effective manner, according to the Airport Development Guidelines, it is the policy of the Board to provide the largest amount of Airport Development Program grant dollars to those airports with the greatest amount of aviation activity while ensuring that eligible airports in all roles have an opportunity to be included in the annual allocation of State Aviation Funds.

The State Aviation Fund is made up of monies collected from a variety of sources, such as flight property tax, registration fees, airport loan payments, investment interest, aviation fuel tax, and revenue generated at the single state-owned airport. The allocation of the State Aviation Fund is generally distributed according to the following percentages:

- Commercial Service Airports 43%
- Reliever Airports 35%
- General Aviation – Community Airports 19%
- General Aviation Airports – Rural 2%
- General Aviation Airports – Basic 0.27%

ADOT also has in place a priority value system whereby the grant category and project component are described and given a priority value to help airport sponsors and ADOT Aeronautics program managers in programming and reviewing state/local airport development projects. Projects such as obstruction removal and land acquisition of safety areas rank among the highest in the State priority values, while construction of airport buildings is ranked as one of the lower priorities.

8.3.3 State of New Mexico

According to the New Mexico Airports Best Practices Guide dated September 2010, the New Mexico Aviation Division's (NMAD) role in advancing aviation in the State is governed by the provisions of Section 64-1-13, NMSA 1978 of the Aviation Act, and Sections 3-39-1 et.seq., NMSA 1978 of the Municipal Airport Law. The New Mexico Codes, Chapter 64 - Aeronautics Article 1, requires the NMAD to:

A. cooperate with all public and private agencies and organizations, state, local and federal, to encourage and advance aviation in the state;

B. assemble and distribute to the public information relating to aviation, landing fields, beacons and other matters pertaining to aviation and may accept federal money made available for the advancement of aviation;

C. authorize expenditures of money from the state aviation fund for construction, development and maintenance of public-use airport facilities, except airports serving regularly scheduled interstate airlines using aircraft with a maximum passenger capacity of more than one hundred seats or a maximum payload capacity of more than twenty-five thousand pounds, including rural landing fields and airstrips. Expenditures shall be made according to the need for airport facilities as determined by the division;

D. operate under a director, appointed by the secretary, with the approval of the governor, who shall have an aviation background and meet other qualifications prescribed by the secretary;

E. establish policies for operation of the division;

F. promulgate rules for proper enforcement of aviation laws, except for those relating to common carriers;

G. provide for a surety bond, paid from the state aviation fund, issued by a corporate surety company licensed to do business in New Mexico, in an amount set by the state board of finance, on a form approved by the attorney general, conditioned upon the faithful performance of the duties of the personnel of the division who expend or authorize the expenditure of state funds;

H. have the following powers with respect to state airports:

(1) The division may, on behalf of and in the name of the state, out of appropriations and other money made available for such purposes, plan, construct, enlarge, improve, maintain, equip and operate airports and air navigation facilities, including the construction, equipment, maintenance and operation at such airports of buildings and other facilities for the servicing of aircraft or for the comfort and accommodation of air travelers. For such purposes, the division may, in the name of the state, by purchase, gift, devise, lease or otherwise, acquire property, real or personal, or any interest in property, including easements in airport hazards or land outside the boundaries of an airport or airport site, as are necessary to permit safe and efficient operation of the airports or air navigation facilities. The division may enter into any contracts necessary to the execution of the powers granted it by this paragraph; and

(2) The division may accept, receive, receipt for, disburse and expend federal money and other money, public or private, made available to accomplish, in whole or in part, any of the purposes of this subsection. All federal money accepted under this subsection shall be accepted and expended by the division upon such terms and conditions as are prescribed by the United States. The division, on behalf of the state, may enter into contracts with the United States or with any person that may be required in connection with a grant or loan of federal money for airport or air navigation facility purposes. All money received by the division pursuant to this subsection is appropriated for the purpose for which the money was made available, to be disbursed or expended in accordance with the terms and conditions upon which the money was made available; provided that nothing contained in this section shall affect the power of a local

government to contract with the United States or any person in connection with a grant or loan of money for airports or air navigation facilities in accordance with the terms and conditions upon which the funds were made available; and

I. have the power to engage in planning for the development of a system of public airports within the state.

According to the New Mexico Airports Best Practices Guide, the NMAD gives priority for award of grants based on the Aviation Division's determination as to the need for the project. If the NMAD determines that the project meets all of the requirements of eligibility, i.e. that it meets the existing or future needs of aviation in the state and the state aid is required to accomplish the project, then it can be included in the grant agreement package.

8.3.4 Additional Navajo Nation Funding Mechanisms

In addition to the Federal, Arizona, and New Mexico governmental agency funding opportunities, the Navajo Nation airport system receives management, operational, and maintenance funding from a variety of other internal and external sources. The identified funding sources and approximate amounts as of the year 2014 are depicted in **Table 8-2**. Other potential sources of funds are possible depending on the size and duration of future development programs. Some of these include the following:

- **FAA Letters of Intent (LOI)**

The FAA may issue multi-year Letter of Intent to provide AIP grant funding to certain airports for airfield projects. Grants scheduled to be received under a LOI are not always received when project costs are incurred. For large-scale capital projects, a majority of the expenditures typically occur in the first few years, whereas the duration of an LOI is usually between 5 and 10 years. To address the resulting cash-flow shortage over the initial years, some airport sponsors have leveraged grants scheduled to be received in a LOI to obtain upfront funding. Approaches to leveraging a LOI include:

Bond Issuance

Airport sponsors have long used LOI grants to pay debt service on outstanding bonds on a double-barrel basis. The investment community has identified credit concerns related to pledging future LOI grants as security for debt, including that an LOI is not a binding obligation of the government and LOIs are dependent on appropriations by Congress. LOI entitlement payments are dependent on enplanement levels, actual expenditures, and payments may decrease resulting in a change in hub status or passenger facility charges (PFC) amount collected. However, a few airport operators have actually pledged the funds as security for the bonds. Two examples are the Airport Authority of Washoe County (Reno, Nevada) in 1993 and the City of St. Louis in 2000.

Commercial paper

The Minneapolis–St. Paul Metropolitan Airports Commission issued subordinated commercial paper notes in 2000 to be repaid by LOI grants to be received over the next 10 years. The commission considered issuing LOI-secured debt, but decided instead to pledge general airport revenues. If LOI receipts do not materialize, the commercial paper could be repaid from subordinated airport revenues.

- **Federal and State Credit Assistance for Airport Access Projects**

Credit assistance to facilitate development of surface transportation projects, and in some cases airport access projects, is available at the federal and state levels. The Transportation Infrastructure Finance and Innovation Act (TIFIA), created in 1998 as part of the Transportation Equity Act for the 21st Century (TEA-21), allows U.S. DOT to provide direct credit assistance to sponsors of major transportation projects. The TIFIA credit program offers three distinct types of financial assistance: direct loans, loan guarantees, and standby lines of credit to public and private sponsors of large surface transportation projects that meet certain eligibility criteria:

- The project must be included in a state transportation plan, and before an agreement is made for federal credit assistance, must be in an approved State Transportation Improvement Program.
- The entity undertaking the project must submit a project application.
- A credit rating or preliminary opinion letter from a rating agency indicating that the project's senior debt obligations have the potential of being investment grade is required with the application.
- Eligible project costs must equal and exceed the lesser of $100 million or 50% of the amount of federal-aid highway funds apportioned to the states for the most recently completed fiscal year.
- Project financing must be repayable in part or in whole from tolls, user fees, or other dedicated revenue sources.
- If the project is not undertaken by a state or local government or an agency or instrument of a state or local government, the project must be included in both the state transportation plan and an approved State Transportation Improvement Plan. TIFIA credit assistance backed by a regional gas tax and rental car fees helped complete the financing for a $1.3 billion Miami Intermodal Center, designed to improve access to and within Miami International Airport (*Innovative Finance Brochure—Credit Assistance* 2006). Seven credit assistance programs are state-directed programs enabled through federal-aid funding. The best point of contact is the relevant state department of transportation (DOT).

- **State Infrastructure Bank (SIB)**

The National Highway System Designation Act of 1995 (NHS Act) enabled states to capitalize transportation credit assistance banks modeled on wastewater State Revolving Loan Funds. The SIB program provides loans, credit enhancement, and other forms of assistance (such as bond banks) to eligible surface transportation projects. Thirty-nine states participated in the NHS pilot. In TEA-21, Congress allowed only four states—California, Florida, Missouri, and Rhode Island—to use new TEA-21 funding for capitalization. Because program implementation and capitalization levels vary from state to state, the best source of information about SIB assistance is the state DOT.

- **Section 129 loan**

These loans allow states to use regular federal-aid highway apportionments to fund loans to projects with dedicated revenue streams. A state may direct lend federal-aid highway funds to toll and non-toll projects that must have a pledge of a dedicated repayment source to secure the loan. Section 129 loans must be paid beginning 5 years after construction is completed and payment must be completed within

30 years of the date federal funds were authorized for the loan. States have the flexibility to negotiate interest rates and other terms of Section 129 loans.

Additional unique funding and investment sources exist as well, and the Navajo Nation may look to its own internal financial advisors to determine which may best be applied to the various elements of its future airport development programs.

TABLE 8-2 SUMMARY OF FUNDING SOURCES

Funding Source	Purpose/Eligibility	Base Amount (as of 2014)
Federal Aviation Administration	The FAA provides entitlement funds in the amount of $150,000 annually for each of the five NPIAS airports located within the Navajo Nation. Additional discretionary funding is also possible on a case by case basis for high priority projects.	$750,000
Federal Highway Administration	FHWA is currently providing limited infrastructure funding for eligible on-airport projects.	$275,000
Navajo Nation General Funding	The current appropriation levels from the Navajo Nation General Fund for Airports are utilized primarily for personnel services.	$150,000
Fuel Excise Tax	The current appropriation levels of funding from the Fuel Excise Tax are primarily utilized for administration (10%) and direct services costs (90%).	$175,000
Arizona Aeronautics Grants	State Aviation Grants are generally utilized to match a sponsor's share of a Federal Grant (approximately 5%). However direct or "state only" projects are also possible at higher participation rates.	5% of approved Federal Grant
New Mexico Aeronautics Grants	State Aviation Grants are generally utilized to match a sponsor's share of a Federal Grant (approximately 5%). However direct or "state only" projects are also possible at higher participation rates.	5% of approved Federal Grant
Fund Management Plan	The Navajo Nation Legislature may also authorize a special funding source called a Fund Management Plan to fund special programs such as the Navajo Nation Aircraft fleet and annual operations.	Variable

Sources: FAA, FHWA, ADOT, NMDOT, Navajo Nation, 2015

8.4 VALIDATION OF THE CAPITAL IMPROVEMENT PROGRAM AND FUNDING SCENARIOS

The individual Capital Improvement Programs (CIP) for the airports included in the study contain major projects such as runway and aircraft parking apron reconstruction, new NAVAID and weather systems, terminal buildings, SRE buildings, and large scale utilities and infrastructure requirements. A CIP of

approximately 12.5 million dollars for each of the five study airports over a 20-year period has been developed that addresses all of the immediately critical elements necessary to the future growth and operations of the Navajo Nation airport system.

The need and subsequent preliminary costs of each airport have been validated in previous chapters. Based on the recently developed CIP for each of the five study airports, the following funding scenarios and associated spreadsheets (see **Table 8-3**) provide an overview of suggested annual funding allocations, anticipated projects, and estimated timeframes to complete the airport development program. The purpose of presenting these scenarios are to highlight the extended timeframe resulting from reliance solely on FAA and State funds to improve the airports, and to highlight the benefits of accelerating the airport development program through Navajo Nation funding initiatives.

Scenario 1: Navajo Nation Funding Only: Full Airport Build Outs

The Navajo Nation would invest in the capital improvement for the full general aviation build out of all five of the primary airports in a single effort over two years. Under this scenario funding for engineering design (approximately $5 million) would be allocated in 2015 and funding for construction would be allocated in 2016 (approximately $57 million). This scenario would fast-track the improvements to the airports and not only provide the runway facilities needed to safely and efficiently accommodate flight for life, Tribal air transportation and tourism, and recreational and business flight activity, but it would also provide the services and support facilities (including fuel, terminal buildings, maintenance equipment, fencing, access roads and parking, and weather reporting) to enable the airports to attract users and sustain a positive economic impact to the local communities and the Nation as a whole.

Additional benefits of this scenario would include reduced overall costs with larger economies of scale, the ability to utilize traditional Navajo contracting preferences (without utilizing FAA funding, the recent waivers to Navajo law would not be necessary), and the accelerated timeframe for providing a safe and efficient Navajo airport system.

Following this initial investment, approximately $3 million in accumulated FAA non-primary entitlement funds would be available in 2017 and $750,000 ($150,000 per airport) annually thereafter for continued pavement maintenance, expansion, and upgrades. There would be no unfunded needs remaining after 2017. Periodic pavement maintenance could be accomplished with annual FAA non-primary entitlement funds.

Scenario 2: Navajo Nation Funding for Initial Runway Improvements

The Navajo Nation would invest in the initial capital improvement of the runways (i.e. pavement reconstruction, lighting, signage and visual aids) of all five primary Navajo airports in a single effort over two years. Under this scenario funding for engineering design (approximately $3 million) would be allocated in 2015 and funding for construction would be allocated in 2016 (approximately $25 million). This would provide suitable landing surfaces to accommodate flight for life, Tribal air transportation and tourism, recreational and business flight activity, but would not include improvements to surfaces or facilities beyond the runway initially.

Following this initial investment, approximately $3 million in accumulated FAA non-primary entitlement funds would be available in 2017 and $750,000 ($150,000 per airport) annually thereafter for additional projects, pavement maintenance, expansion, and upgrades.

Following the initial investment and nine years of projects with FAA funding, approximately $25 million in unfunded needs would remain. These unfunded needs would include aprons and taxiways, terminal buildings, maintenance equipment and buildings, weather reporting systems, access roads and vehicle parking, and other vital facilities.

Scenario 3: Utilize FAA and State Funding – Navajo Funding for Local Match Only

A combination of FAA non-primary entitlement funding, FAA discretionary funding, and state aeronautics grant funding would be used as the primary means of funding needed airport improvements. Navajo Nation funds would be provided to meet the local matching share of awarded grants. Under this scenario it is assumed that FAA non-primary funding of $150,000 per airport, per year ($750,000 total per year) would be accumulated for three years and that the FAA would provide discretionary funding in the amount of approximately $3 million every third year. These funds would be combined to focus on one of the primary runways at each of the five primary airports every third year.

With the use of FAA discretionary funds, these projects would be limited to runway and safety related projects including runway reconstruction, runway lighting, signage and visual aids, and fencing. It is anticipated that New Mexico and Arizona state aviation grant funding would be available to help offset the local matching share of FAA funded projects, but would not be available in significant amounts for state/local only projects.

Under this scenario, a fifteen-year development plan from 2015 to 2028 would be necessary to complete only the needed runway improvements. Following 2028, approximately $34 million in unfunded needs would remain. These unfunded needs would include aprons and taxiways, terminal buildings, maintenance equipment and buildings, weather reporting systems, access roads and vehicle parking, and other vital facilities.

8.4.1 CIP and Funding Scenarios Summary

Given the current condition of the airfield pavements and limited support facilities at these five primary Navajo airports, in addition to the vital need to accommodate flight for life and Tribal air transportation and the desire to stimulate and accommodate tourism, recreational, and business air transportation, Scenario 1 would provide the optimum solution for meeting airport development goals. This scenario would enhance the entire airport system into a safe, efficient, and modern condition in an accelerated timeframe. This scenario would also provide significant positive economic impact to the Nation in the short-term through construction programs, and in the long-term through enhanced airport activity and tenants.

As a fallback, Scenario 2 would provide a significant benefit to the Navajo Nation and the airport system by bringing the runways up to a safe, acceptable, and usable condition in the immediate timeframe. This would provide the needed landing areas for the continued use by flight of life and Tribal air transportation.

If neither Scenario 1 nor 2 are financially feasible, there may be no other choice but to continue under Scenario 3. Under this scenario, the short-term viability of continued flight for life and Tribal air transportation would be in jeopardy and the ability to attract and accommodate tourism, recreation and business activity would be severely limited. While this scenario would result in the least capital cost to

the Navajo Nation, it results in the longest development timeframe, the lowest level of facility development, and $34 million in unfunded development needs.

TABLE 8-3 FUNDING SCENARIOS AND ASSOCIATED COSTS

Scenario 1 - Navajo Nation Funding: Full GA Airport Build Outs

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description	Full Build-Out of all General Aviation Improvements
2015	$0	$0	$0	$5,000,000	$5,000,000	Design & Bidding	Runways-Reconstruct Lighting, Signage, Visual Aids
2016	$0	$0	$0	$57,000,000	$57,000,000	Construction	Taxiways
2017	$3,000,000	$0	$157,895	$157,895	$3,315,789	Airport M.E.U.	Aprons
Total	$3,000,000	$0	$157,895	$62,157,895	$65,315,789		Fuel Facilities Snow Removal Equipment & Buildings Fencing Weather Observation Systems Terminal Buildings

M.E.U. = maintenance, expansion, upgrades

***Unfunded needs after 2017 : $0.00**

Scenario 2 - Navajo Nation Funding: Initial Runway Improvements

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description	Reconstruct Runways, Lighting, Signage and Visual Aids
2015	$0	$0	$0	$2,500,000	$2,500,000	Design & Bidding	Reconstruct Runways, Install/Replace Runway Lighting, Signage, Visual Aids
2016	$0	$0	$0	$25,000,000	$25,000,000	Construction	
2017	$3,000,000	$0	$157,895	$157,895	$3,315,789	Rehab Aprons and TWs	
2018	$750,000	$0	$39,474	$39,474	$828,947	AWOS & Fuel Facilities	
2019	$750,000	$0	$39,474	$39,474	$828,947	Fuel Facilities	
2020	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX	
2021	$750,000	$0	$39,474	$39,474	$828,947	Fencing	
2022	$750,000	$0	$39,474	$39,474	$828,947	Fencing	
2023	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings	
2024	$750,000	$0	$39,474	$39,474	$828,947	SRE & Buildings	
2025	$750,000	$0	$39,474	$39,474	$828,947	Pavement MX	
Total	$9,000,000	$0	$473,684	$27,973,684	$37,447,368		***Unfunded Needs after 2025: $25 million**

Scenario 3 - FAA and State Funding: Reconstruct Runways

Year	FAA Entitlement	FAA Discretionary	State	Local	Total	Description	Runway Rehabilitation
2015							
2016	$3,000,000	$3,000,000	$157,895	$157,895	$6,315,789	Chinle - RW, Lighting, Signage, Visual Aids, Fencing	
2017					$0		
2018					$0		

Table 8-3 Funding Scenarios and Associated Costs Contd.

2019	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Tuba City - RW, Lighting, Signage, Visual Aids, Fencing
2020					$0	
2021					$0	
2022	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Shiprock - RW, Lighting, Signage, Visual Aids, Fencing
2023					$0	
2024					$0	
2025	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Crownpoint - RW, Lighting, Signage, Visual Aids, Fencing
2026					$0	
2027					$0	
2028	$2,250,000	$3,000,000	$118,421	$118,421	$5,486,842	Window Rock - RW, Lighting, Signage, Visual Aids, Fencing
Total	$12,000,000	$15,000,000	$631,579	$631,579	$28,263,158	***Unfunded needs after 2028: $34 million**

Source: ACI, 2015

8.5 Projected Annual Airport System Revenues and Expenses

The ultimate goal of any airport, or airport system, should be the capability to support its own operation and development through airport generated revenues. However, smaller airports often lack the financial infrastructure and related revenue streams necessary to support airfield operations, maintenance, and local share matching responsibilities on their own. The Navajo Nation Department of Airports should consider implementing additional airport revenue generating opportunities in order to improve its financial picture and move closer to self-sufficiency.

Based on historical and projected operating revenues and expenses, it is likely that the Navajo Nation Airports System will not operate profitably in the immediate future. This may in part be related to the gradual decline in the use of the Navajo Nation General Fund as the airports work towards self-sufficiency. Even as new development occurs, the Airport System will continue to require assistance with funding for special projects, along with State and Federal matching funds for eligible grants. Because of this, it is important for the airports to develop additional sources of revenue, either aeronautical, non-aeronautical, or both.

It is important to understand that the ability of the Navajo Nation Airport System to generate additional revenue is directly related to enhancing the airfields in order to attract additional aircraft traffic, along with leveraging un-used portions of the airport's property for either aeronautical or non-aeronautical purposes. Examples of revenue generating aeronautical development include hangar infrastructure and fuel farms; examples of non-aeronautical development include a restaurant, rental car service, or buildings for tour services. It is also important to note that all non-aeronautical development on or adjacent to the airport must be compatible with the airport and its operations.

As indicated in **Table 8-4**, the Navajo Nation Airport System can reasonably expect to see a revenue increase in the long-term, primarily from future fuel sales, hangar leases, and related property leases. Expenses will also climb as the expanding airport system generates higher maintenance costs, costs of goods sold (e.g. fuel), and additional personnel to address the increased work load.

TABLE 8-4 HISTORICAL AND PROJECTED REVENUES & EXPENSES FOR NAVAJO NATION AIRPORT SYSTEM

	Historical	Projected		
	2015	5 Yrs	10 Yrs	20 Yrs
Operating Revenues				
Navajo Nation General Fund	$150,000	$0	$0	$0
Fuel Excise Tax	$175,000	$175,000	$225,000	$275,000
Fuel Sales	-0-	*$75,000*	*$200,000*	$300,000
Hangars and other leases	-0-	$50,000	$100,000	$150,000
Total Operating Revenue	**$325,000**	**$300,000**	**$525,000**	**$725,000**
Operating Expenses				
Salaries and Benefits	$167,500	$167,500	$222,500	$277,500
Fuel and Supplies	-0-	$45,000	$120,000	$180,000
Operations, Maintenance, Utilities	$157,500	$157,500	$202,500	$247,500
Total Operating Expense	**$325,000**	**$370,000**	**$545,000**	**$705,000**
Net Operating Expense/Revenue	**$0**	**$-70,000**	**$-20,000**	**$20,000**

Note. Does not include any Capital Improvement Projects
Source: ACI, 2015

The net results of this future development will be reflected in an overall increased profitability picture for the Airport System as more air traffic is generated, more fuel is sold, and more development occurs. The financial scenarios depicted above are a reflection of the basic operating information that exists today, and projections of basic revenue expectations for the future. This is one possible financial scenario based on a conservative outlook. Additional and/or larger revenue development opportunities may exist as well, especially for those facilities that can take advantage of major tourism opportunities, or other special development circumstances.

8.6 CONTINUOUS PLANNING PROCESS

Airport planning is a continuous process that does not end with the completion of a major capital project. The fundamental issues upon which airport master plans are based are expected to remain valid for several years; however, variables such as annual aircraft operations and socioeconomic conditions, are likely to change over time. The continuous planning process necessitates that Navajo DOT monitor the progress of the airports in terms of growth in based aircraft and annual operations, as this growth is critical to the exact timing and need for new airport facilities as recommended within the Airport System Master Plan. The information obtained from this monitoring process will provide the data necessary to determine if the development schedule should be accelerated, decelerated, or maintained as scheduled.

Periodic updates of the Airport Layout Plans, Capital Improvement Plans, and Airport System Master Plan are recommended to document physical changes to the Airports, review changes in aviation activity and to update improvement plans for the Airports. The primary goal of the planning effort is to develop a safe and efficient system of airports that will meet the demands of its aviation users and stimulate economic development at each airport. The continuous planning process is a valuable tool in achieving the strategic plans and goals for an airport.

8.7 CONCLUSION

This financial analysis is based on the continuation of FAA Airport Improvement Program (AIP) funding at the current levels, as well as various other state and Navajo Nation funding sources. However, there is

competition for FAA funds, so the Nation will need to aggressively communicate its CIP needs to the FAA and other relevant agencies as opportunities arise.

Based on the assumptions and the financial analysis presented herein, the development plans for each airport presented on the ALP, along with the Capital Improvement Plans (CIP), are considered feasible and the Navajo Nation should be able to construct the necessary aviation facilities as recommended herein in order to enhance their overall system of airports.

This Airport System Master Plan has documented the existing and anticipated aviation demand based on existing conditions, as well as provided practical and implementable development plans based on input and guidance from the Planning Advisory Committee (PAC), FAA, NDOT, ADOT, and NMDOT. The ultimate goal and outcome of this Master Plan is to provide direction for the future airport system development in a financially feasible manner which meets the needs of the Navajo Nation.

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Appendices

Appendix A

ACRONYMS AND GLOSSARY OF TERMS

COMMONLY USED ACRONYMS

AC	Advisory Circular
AD	Airport Design
ADG	Airplane Design Group
AGL	Above Ground Level
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ALS	Approach Lighting System
ARC	Airport Reference Code
ARP	Airport Reference Point
ARTCC	Air Route Traffic Control Center
ASDA	Accelerate Stop Distance
ASR	Airport Surveillance Radar
ASV	Annual Service Volume
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
AWOS	Automated Weather Observation system
BRL	Building Restriction Line
CAT	Category
CFR	Code of Federal Regulations
CWY	Clearway
CY	Calendar Year
DME	Distance Measuring Equipment
EL	Elevation
EMT	Emergency Medical Technician
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBO	Fixed Base Operator
FSS	Flight Service System
FY	Fiscal Year
GA	General Aviation
GPS	Global Positioning System
HIRL	High Intensity Runway Lights
IEMT	Intermediate Emergency Medical Technician
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
LDA	Landing Distance Available
LOC	Localizer
MALS	Medium Intensity Approach Lighting System
MALSF	Medium Intensity Approach Lighting System with Sequenced Flashers
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
ME	Multi-Engine
MIRL	Medium Intensity Runway Lights
MITL	Medium Intensity Taxiway Lights
MLS	Microwave Landing System
MOA	Military Operating Area
MSL	Mean Sea Level
NAVAID	Navigational Aid
NDB	Nondirectional Beacon
NM	Nautical Mile
NPIAS	National Plan of Integrated Airport Systems
ODALS	Onmnidirectional Approach Lighting System
OFA	Object Free Area
OFZ	Obstacle Free Zone
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
RAIL	Runway Alignment Indicator Lights
RDC	Runway Design Code
REIL	Runway End Identifier Lights
ROFA	Runway Object Free Area
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RVR	Runway Visual Range
RW	Runway
SWY	Stopway
TDG	Taxiway Design Group
TH	Threshold
TL	Taxilane
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available
TSA	Taxiway Safety Area
TVOR	Very High Frequency Omni range on an Airport
TW	Taxiway
USGS	United States Geological Society
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VOR	Very High Frequency Omni range

GLOSSARY OF TERMS

Above Ground Level (AGL)	A height above ground as opposed to MSL (height above Mean Sea Level).
Advisory Circular (AC)	Publications issued by the FAA to provide a systematic means of providing non-regulator guidance and information in a variety of subject areas.
Airport Improvement Program (AIP)	The AIP of the Airport and Airways Improvement Act of 1982 as amended. Under this program, the FAA provides funding assistance for the design and development of airports and airport facilities.
Aircraft Mix	The number of aircraft movements categorized by capacity group or operational group and specified as a percentage of the total aircraft movements.
Aircraft Operation	An aircraft takeoff or landing.
Airport	An area of land or water used or intended to be used for landing and takeoff of aircraft includes buildings and facilities, if any.
Airport Elevation	The highest point of an airport's useable runways, measured in feet above mean sea level.
Airport Land Use Regulations	Are designed to preserve existing and/or establish new compatible land uses around airports, to allow land use not associated with high population concentration, to minimize exposure of residential uses to critical aircraft noise areas, to avoid danger from aircraft crashes, to discourage traffic congestion and encourage compatibility with non-motorized traffic from development around airports, to discourage expansion of demand for governmental services beyond reasonable capacity to provide services and regulate the area around the airport to minimize danger to public health, safety, or property from the operation of the airport, to prevent obstruction to air navigation and to aid in realizing the policies of a County Comprehensive Plan and Airport Master Plan.
Airport Layout Plan (ALP)	A graphic presentation, to scale, of existing and proposed airport facilities, their location on the airport and the pertinent applicable standards. To be eligible for AIP funding assistance, an airport must have an FAA-approved ALP.
Airport Master Record, Form 5010	The official FAA document, which lists basic airport data for reference and inspection purposes.
Airport Reference Code (ARC)	The ARC is a coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport.

Airport Reference Point (ARP)	The latitude and longitude of the approximate center of the airport.
Airspace	Space above the ground in which aircraft travel; divided into corridors, routes and restricted zones.
Air Traffic	Aircraft operating in the air or on an airport surface, excluding loading ramps and parking areas.
Approach Surface	A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.
Automated Weather Observing System (AWOS)	This equipment automatically gathers weather data from various locations on the airport and transmits the information directly to pilots by means of computer generated voice messages over a discrete frequency.
Based aircraft	An aircraft permanently stationed at an airport.
Building Restriction Line (BRL)	A line, which identifies suitable building area locations on airports.
Ceiling	The height above the earth's surface of the lowest layer of clouds or other phenomena which obscure vision.
CFR Part 77	A definition of the protected airspace required for the safe navigation of aircraft.
Conical Surfaces	A surface extending outward and upward form the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
Controlled Airspace	Airspace in which some or all aircraft may be subject to air traffic control to promote safe and expeditious flow of air traffic.
Critical/Design Aircraft	In airport design, the aircraft which controls one or more design items such as runway length, pavement strength, lateral separation, etc., for a particular airport. The same aircraft need not be critical for all design items.
Day Night Level (DNL)	24-hour average sound level, including a 10 decibel penalty for sound occurring between 10:00 PM and 7:00 AM.
Decibel	Measuring unit for sound based on the pressure level.
Design Type	The design type classification for an airport refers to the type of runway that the airport has based upon runway dimensions and pavement strength.
Federal Aviation Administration (FAA)	The federal agency responsible for the safety and efficiency of the national airspace and air transportation system.

Fixed Base Operator (FBO)	An individual or company located at an airport and providing commercial general aviation services.
Fuel Flowage Fees	A fee charged by the airport owner based upon the gallons of fuel either delivered to the airport or pump at the airport.
General Aviation (GA)	All aviation activity in the United States, which is neither military nor conducted by major, national or regional airlines.
Glider	A heavier-than-air aircraft that is supported in flight by the dynamic reaction of the air against its lifting surfaces and whose free flight does not depend principally on an engine (FAR Part 1).
Global Positioning System (GPS)	The global positioning system is a space based navigation system, which has the capability to provide highly accurate three-dimensional position, velocity and time to an infinite number of equipped users anywhere on or near the Earth. The typical GPS integrated system will provide: position, velocity, time, altitude, groundspeed and ground track error, heading and variation. The GPS measures distance, which it uses to fix position, by timing a radio signal that starts at the satellite and ends at the GPS receiver. The signal carries with it, data that discloses satellite position and time of transmission and synchronizes the aircraft GPS system with satellite clocks.
Hazard to Air Navigation	An object which, as a result of an aeronautical study, the FAA determines will have a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft, operation of air navigation facilities or existing or potential airport capacity.
Horizontal Surface	A horizontal plane 150 feet above the established airport elevation, the perimeter which is constructed by swinging arcs of specified radii form the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs.
Imaginary Surfaces	Surfaces established in relation to the end of each runway or designated takeoff and landing areas, as defined in paragraphs 77.25, 77.28 and 77.29 of 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. Such surfaces include the approach, horizontal, conical, transitional, primary and othersurfaces.
Itinerant Operations	All operations at an airport, which are not local operations.
Jet Noise	The noise generated externally to a jet engine in the turbulent jet exhaust.
Knots	Nautical miles per hour, equal 1.15 statute miles per hour.
Large Airplane	An airplane of more than 12,500 pounds maximum certified takeoff weight.

Local Operations	Operations by aircraft flying in the traffic pattern or within sight of the control tower, aircraft known to be arriving or departing from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.
Location Identifier	A three-letter or other code, suggesting where practicable, the location name that it represents.
Maneuvering Area	That part of an airport to be used for the takeoff and landing of aircraft and for the movement of aircraft associated with takeoff and landing, excluding aprons.
Master Plan	A planning document prepared for an airport, which outlines directions and developments in detail for 5 years and less specifically for 20 years. The primary component of which is the Airport Layout Plan.
Mean/Maximum Temperature	The average of all the maximum temperatures usually for a given period of time.
Mean Sea Level (MSL)	Height above sea level.
Medium Intensity Runway Lights (MIRL)	For use on VFR runways or runway showing a nonprecision instrument flight rule (IFR) procedure for either circling or straight-in approach.
Minimum Altitude	That designated altitude below which an IFR pilot is not allowed to fly unless arriving or departing an airport or for specific allowable flight operations.
National Airspace System	The common network of United States airspace, navigation aids, communications facilities and equipment, air traffic control equipment and facilities, aeronautical charts and information, rules, regulations, procedures, technical information and FAA manpower and material.
National Plan of Integrated Airport Systems (NPIAS)	A plan prepared annually by the FAA which identifies, for the public, the composition of a national system of airports together with the airport development necessary to anticipate and meet the present and future needs of civil aeronautics, to meet requirements in support of the national defense and to meet the special needs of the Postal Service. The plan includes both new and qualitative improvements to existing airports to increase their capacity, safety, technological capability, etc.
NAVAID	A ground based visual or electronic device used to provide course or altitude information to pilots.
Noise	Defined subjectively as unwanted sound. The measurement of noise involves understanding three characteristics of sound: intensity, frequency and duration.

Noise Contours	Lines drawn about a noise source indicating constant energy levels of noise exposure. DNL is the measure used to describe community exposure to noise.
Noise Exposure Level	The integrated value, over a given period of time of a number of different events of equal or different noise levels and durations.
Non-Precision Instrument	A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance for which a straight-in, non-precision instrument approach procedure has been approved.
Notice to Airmen (NOTAM)	A notice containing information (not known sufficiently in advance to publicize by other means concerning the establishment, condition or change in any component (facility, service, or procedure) of or hazard in the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.
Object	Includes, but is not limited to, above ground structures, NAVAIDs, people, equipment, vehicles, natural growth, terrain and parked aircraft.
Object Free Area (OFA)	A two-dimensional ground area-surrounding runways, taxiways and taxilanes which is clear of objects except for object whose location is fixed by function.
Obstacle Free Zone (OFZ)	The airspace defined by the runway OFZ and, as appropriate, the inner-approach OFZ and the inner-transitional OFZ, which is clear of object penetrations other than frangible NAVAIDs.
Obstruction	An object which penetrates an imaginary surface described in the FAA's Federal Aviation Regulations (FAR), Part 77.
Parking Apron	An apron intended to accommodate parked aircraft.
Pattern	The configuration or form of a flight path flown by an aircraft or prescribed to be flown, as in making an approach to a landing.
Precision Approach Path Indicators (PAPI)	The visual approach slope indicator system furnishes the pilot visual slope information to provide safe descent guidance. It provides vertical visual guidance to aircraft during approach and landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that they are "on path" if they see red/white, "above path" if they see white/white and "below path" if they see red/red.
Primary Surface	A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway, but when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at each end of that runway.
Rotating Beacon	A visual NAVAID operated at many airports. At civil airports, alternating white and green flashes indicate the location of the

	airport.
Runway	A defined rectangular surface on an airport prepared or suitable for the landing or takeoff of airplanes.
Runway Design Code (RDC)	A code signifying the design standards to which the runway is to be built.
Runway End Identifier Lights (REIL)	REILs are flashing strobe lights which aid the pilot in identifying the runway end at night or in bad weather conditions.
Runway Gradient	The average gradient consisting of the difference in elevation of the two ends of the runway divided by the runway length may be used provided that no intervening point on the runway profile lies more than five feet above or below a straight line joining the two ends of the runway. In excess of five feet the runway profile will be segmented and aircraft data will be applied for each segment separately.
Runway Lighting System	A system of lights running the length of a system that may be either high intensity (HIRL), medium intensity (MIRL), or low intensity (LIRL).
Runway Orientation	The magnetic bearing of the centerline of the runway.
Runway Protection Zone (RPZ)	An area off the runway end used to enhance the protection of people and property on the ground.
Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershot, overshot, or excursion form the runway.
Segmented Circle	A basic marking device used to aid pilots in locating airports and which provides a central location for such indicators and signal devices as may be required.
Small Aircraft	An airplane of 12,500 pounds or less maximum certified takeoff weight.
Taxiway	A defined path established for the taxiing of aircraft from one part of an airport to another.
Taxiway Design Group (TDG)	A classification of airplanes based on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear distance (CMG).
Terminal Area	The area used or intended to be used for such facilities as terminal and cargo buildings, gates, hangars, shops and other service buildings, automobile parking, airport motels, restaurants, garages and automobile services and a specific geographical area within which control of air traffic is exercised.
Threshold	The beginning of that portion of the runway available for landing.
Touch and Go Operations	Practice flight performed by a landing touchdown and continuous takeoff without stopping.

Traffic Pattern	The traffic flow that is prescribed for aircraft landing at, taxiing on or taking off form an airport. The usual components are the departure, crosswind, downwind, and base legs; and the final approach.
Transitional Surface	These surfaces extend outward and upward at right angles to runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces.
Universal Communications (UNICOM)	A private aeronautical advisory communications facility for purpose other than air traffic control. Only one such station is authorized in any landing area. Service available are advisory in nature primarily concerning the airport services and airport utilization. Locations and frequencies of UNICOMs are listed on aeronautical charts and publications.
Visual Flight Rules (VFR)	Rules that govern flight procedures under visual conditions.
Visual Runway	A runway intended for visual approaches only with no straight- in instrument approach procedure either existing or planned for that runway.

Appendix B

PUBLIC OUTREACH PROGRAM

Public Outreach and Community Input

Public outreach was a key component to the Navajo Nation Airport System Master Plan (NNASMP) Program. This endeavor was envisioned to provide information to Navajo Nation stakeholders who might not otherwise have access to the study information sources directly. A key component of the outreach effort was to provide community groups information at the locations where they traditionally meet to govern their local regions – the Chapter House. In addition to delivering airport master plan information, the public outreach served in an educational capacity as well by raising the awareness of what the airport planning process entailed, what the time line of activity would be, and how each community could participate in the future development of their airport.

Chapter House Meeting Outreach

Two (2) public outreach meetings at each of the associated Chapters or Agencies (Chinle, Tuba City, Window Rock, Crownpoint, and Shiprock) were held throughout the Program (for a total of 10 meetings). The meetings were held in the form of a workshop at the local Chapter Houses. Public meeting notices were widely disseminated in both English and Navajo via newspapers, mailings, a website, area signs, and electronic media.

Chapter level public meetings were scheduled to coincide with specific available information and were held at or near the respective Navajo Chapter House locations. The dates for these meetings were set well in advance so that proper notice could be given. A Navajo-speaking translator was available at all public meetings to facilitate dialogue among the sponsor, consultant team, and the public.

The Chapter House Meeting Presentations outlined the following:

- Announced the beginning of the Program;
- Provided the purpose of the Program;
- Described topics to be studied;
- Described the Public Outreach Program;
- Solicited comments on issues of concern from those present; and
- Requested a Supporting Resolution of the Program from the Chapter.

Chapter House Meetings - Schedule

Chapter House	Arizona	Date/Time
Chinle Chapter House		**Workshop July 31, 2014**
Workshop 1		10:00 am – 12:00 pm
Workshop 2		5:00 pm – 7:00 pm
Tuba City Chapter House		**Workshop - August 19, 2014**
Workshop 1		1:00 pm – 3:00 pm
Workshop 2		5:00 pm – 7:00 pm
St Michaels Chapter House		**Workshop - July 30, 2014**
Workshop 1		1:00 pm – 3:00 pm
Workshop 2		5:00 pm – 7:00 pm

Chapter House	New Mexico	Date/Time
Shiprock Chapter House		**Workshop - August 5, 2014**
Workshop 1		1:00 pm – 3:00 pm
Workshop 2		5:00 pm – 7:00 pm
Crownpoint Chapter House		**Workshop - August 6, 2014**
Workshop 1		1:00 pm – 3:00 pm
Workshop 2		6:00 pm – 8:00 pm

Chapter House Meetings - Community Comments

The following topics summarize and contain a wealth of information and commentary provided directly by the individual Chapter House community members who attended the meetings.

Economic Development

A high level of input was obtained from all the study airport communities pertaining to the direction and role each airport played in their future economic development. Major economic development topics included development of business centers, attracting fixed based operators, securing bulk mail delivery centers, tourism enhancements, development of trade zones, in-land port development, and flight school businesses. Currently air medical transportation services are the dominate users of the airport system. Some additional business categories the communities would like to see in the future include:

- Expanded Air Medical Evacuation Services
- Navajo Based Recreation and Tourism Business
- Airport Based Business Development

Two Chapter Houses are considering a regional approach to the future of their community airports. Of note, the Shiprock community is developing a community master plan that would include a regional airport concept. The capacity of the current airport location to expand to meet future growth was also heavily discussed at Tuba City, where neighboring Chapter Houses are considering a regional approach to the airport's future growth as well.

Infrastructure Improvements

Second only to economic development, infrastructure improvements were the most discussed topic at the community outreach meetings. Community participants called for improvements that might, in the long term, also benefit the community. Those types of improvements included water, sewer, and electrical systems. On-airport improvement discussions were centered on expanding the capacity of the runways to accept larger airplanes for future tourism business expansion and medevac flight operations.

The Chapter House workshops provided the community with information on the process of evaluating existing conditions and assets at the study airports. Community leadership and members voiced their concerns about current maintenance practices and what steps should be taken to maintain any newly constructed infrastructure.

Land Withdrawal

Currently there are a number of land uses and designations within the Navajo Nation. A common concern that arose at all Chapter House meetings involved the effect of airport improvements on current land status designations. It was noted that the withdrawal process for land use can be lengthy and often requires the participation of a number of Navajo Nation divisions and departments, including Navajo Nation Division of Land Resource, Bureau of Indian Affairs, Bureau of Land Management, State, County, private, and other entities. Communities also expressed the personal and emotional factor associated with the land withdrawal process. Addressing these issues in the NNASMP will include both the identification of the existing airport property and the corresponding land status at each airport, and recommendations for actions if necessary for future improvements. The Airport Layout Plan prepared

for each study airport includes the most current land use designation. Future recommendations for individual airport development will address current land use and proposed land use to comply with development recommendations, and regulations.

Time Frame of Study Recommendations

Many Chapter officials and members were concerned about the timeline for the current study and future development recommendations. In a number of Chapters, it was very clear that the expectation of the officials was that the study recommendations and future development must adhere to Navajo governance tenants, which include process representation and Chapter Acceptance Resolution.

Participation by the Community in Airport Development

Chapter government is a branch of the Navajo Nation government. As such, Chapter communities have not only statutory, but common law powers for local governance. Each Chapter is vested in full participation by their elected representatives to contribute fully in the outcomes and recommendations of the airport study.

Security

There was much discussion by local residents of night landings and suspicious behavior at many of the airports. While anecdotal in nature, security of rural airport property was a very important issue for some local communities, who see these occurrences as inappropriate and possibility illegal activities. In addition, overflights of culturally sensitive areas were a concern of both Chinle and Crownpoint Chapters. The communities expressed a strong desire that sensitive areas be protected as the plans move forward to development airport system wide improvements

Local Presence, Management, and Maintenance

Currently, except for Window Rock Airport, management and maintenance of the study airports is centralized within the Navajo Department of Transportation. This centralization currently makes the best use of resources under today's budgetary constraints and staffing limitations. Many of the Chapter House workshop attendees would like to see more local management and maintenance, especially as airports are developed.

Self-sufficiency, Education, and Training

As workshop attendees vocalized their wishes for more local management and maintenance of their local airport sites, they began to realize that having qualified aviation professionals within their communities would require engaging local colleges and encouraging curriculum that would foster the skill sets necessary to effectively produce airfield operations and maintenance workers.

Satisfaction with Airport's Name

Chapter House workshop participants were asked to voice their satisfaction with their region's airport name. From suggestions contained on the comment cards and through verbal objections gathered during the Chapter workshops held in August 2014, the consultant team was able to compile the recommended new airport names.

ARIZONA AIRPORTS:

Window Rock Airport (St Michaels Chapter)

- St. Michaels Airstrip
- Chiho'stoh Aviatio

Chinle Municipal Airport

- Tseqi Airport
- Canyon De Chelly Airport

Tuba City Airport – To'Nanees'Dizi' Airport

- Tuba City International Airport
- Echo Cliffs Airport
- Grand Canyon at Navajo Nation Airport

NEW MEXICO AIRPORTS:

Crownpoint Airport

- Eastern Navajo Airport
- Kin yaa'aah (Towering House) Airport
- Crownpoint Regional Airport

Shiprock Airstrip

- Nataani Nez Airport
- Shiprock Dine' Airport
- Trollie International Airport
- Tes'bit'ai' Municipal Airport
- Shiprock International Airport
- Northern Airport
- Tse'bit'ai' (Rock with Wings) Regional Airport
- Dine' Bi Regional Airport

As one may observe, many of the airport name changes seek to reflect the Navajo language heritage and feature more regional and/or global identities. Should the Navajo DOT, in conjunction with a local Chapter and its surrounding communities, wish to change the name of any of the study airports, there is a process which must be followed per the FAA.

According to the FAA Phoenix Airports District Office (PHX ADO), the airport name change process is relatively simple, but it can also be lengthy. The first step in officially changing an airport's name would be for the individuals or the entity requesting the change to follow the official Tribal process, i.e. first by obtaining a Resolution from the Chapter House, then by presenting the name change request at an official Tribal Council meeting. Once presented and approved by the Tribal Council, a letter must be drafted addressed to the PHX ADO on official Tribal letter head requesting the new airport name for the specific airport per the desire and wishes of the local community, and that this request has been approved by the Tribal Council. A copy of the meeting minutes from the council meeting where the name change was presented and approved and a copy of the FAA Form 5010-1 (Airport Master Record) with the existing name crossed out and the new proposed name written in must also be sent along with the letter. From here, the PHX ADO will send the request to the FAA headquarters in Washington D.C., where the request will be reviewed and a final decision rendered. Should headquarters approve the name change, the process for updating all official aeronautical charts, the airport facility directory, etc. will commence. This could take anywhere from 9 to 12 months to complete. It should be noted that this is the process for the airport name change only; the FAA three-letter identifier (RQE for Window Rock Airport, for example) would not change as a result of this process.

Appendix C

CHAPTER RESOLUTIONS

Chinle Chapter Government

THE NAVAJO NATION

Andy R. Ayze
PRESIDENT

Myron McLaughlin
VICE PRESIDENT

Cynthia Hunter
SECRETARY/TREASURER

Leonard Pete
COUNCIL DELEGATE

Eugene Tso
GRAZING COMMITTEE MEMBER

RESOLUTION OF THE CHINLE CHAPTER
NAVAJO NATION
CHIN-AUG-14-051

SUPPORTING THE PLANNING AND DEVELOPMENT OF THE CHINLE AIRPORT FOR INCLUSION IN THE NAVAJO NATION AIRPORT SYSTEM MASTER PLAN FOR SUBMITTAL TO THE FEDERAL AVIATION ADMINISTRATION NATIONAL AIRPORT CAPITAL IMPROVEMENT PROGRAM FOR FUTURE FEDERAL FUNDING.

WHEREAS:

1. Chinle Chapter, a recognized certified local government of the Navajo Nation, vested with the power and authority to advocate on behalf of its constituents for the improvement of health, education, safety, and general welfare; and
2. The Chinle Chapter community members participated in a Navajo Department of Transportation workshop on July 31st, 2014, which provided opportunity for community members to make comments and recommendations concerning the future of the local airport, and
3. The Navajo Department of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of five (5) airport development needs of the Navajo Nation, and
4. The Navajo Department of Transportation requests community representative to serve on the public Advisory Committee of the airport, Navajo Nation System Master Plan (NNSMP) to serve as point of contact and communicator for the local community.

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Chinle Chapter hereby supports the planning and development of the Chinle Airport for inclusion in the Navajo Nation Airport System Master Plan for submittal to the Federal Aviation Administration National Airport Capital Improvement Program for future Federal funding.
2. The Chinle Chapter approves Danny Wilson Halwood Jr. (Project Coordinator) to act as the Chinle Chapter representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as a point of contact and communicator for the local community.

CERTIFICATION

We, hereby certify that the foregoing chapter resolution was duly considered by the Chinle Chapter at a duly called meeting in Chinle, Navajo Nation (Arizona) at which a quorum was present and that the same was passed by a vote of 25 in favor, Ø opposed, and 3 abstained, this 17th day of August 2014.

Motioned by: ROSELYNE YAZZIE Second by: TIMOTHY BEGAY

Andy R. Ayze, President

Myron McLaughlin, Vice President

Cynthia Hunter, Secretary / Treasurer

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Ben Shelly
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RITA M. CAPITAN, PRESIDENT
CECILIA J. NEZ, VICE PRESIDENT
JERRILENE KING, SECRETARY/TREASURER
DANNY SIMPSON, COUNCIL DELEGATE
HERBERT ENRICO, LAND BOARD MEMBER

RESOLUTION CPC-15-11-002

SUBJECT: **SUPPORTING THE PLANNING AND DEVELOPMENT OF THE TSE'BIT'AI REGIONAL AIRPORT FOR INCLUSION IN THE NAVAJO NATION AIRPORT SYSTEM MASTER PLAN (NNASMP) FOR SUBMITTAL TO THE FEDERAL AVIATION ADMINISTRATION (FAA) NATIONAL AIRPORT CAPITAL IMPROVEMENT PROGRAM FOR FUTURE FEDERAL FUNDING.**

WHEREAS:

1. The Crownpoint Chapter of the Navajo Nation acts on this resolution pursuant to the authority conferred upon the chapter through Navajo Nation Code Title 26, Chapter 1, Section 1, Part B which states, "Through adoption of the Act, the Navajo Nation Council delegates to chapters governmental authority with respect to local matters consistent with Navajo Nation laws, including customs and tradition"; and
2. The Crownpoint Chapter community members participated in a Navajo Department of Transportation workshop on August 05, 2014 which provided opportunity for community members to make comments and recommendations concerning the future of the local airport; and
3. The Navajo Department of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of and the development needs of the five (5) airport located on the Navajo Nation; and
4. The Navajo Department of Transportation requests a community representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and liaison for the local community.

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Crownpoint Chapter membership recommends and supports the planning and development of the Tse'bit'ai Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal finding; and
2. The Crownpoint Chapter members appoints the Crownpoint Chapter President, Rita Capitan to act as the Crownpoint Chapter representative to serve on the Public Advisory Committee of the Navajo Airport System Master Plan (NNASMP) to serve as a point of contact and liaison for the Crownpoint community.

CERTIFICATION

WE, HEREBY CERTIFY THAT THE FOREGOING RESOLUTION was duly considered by Crownpoint (Navajo Chapter). New Mexico at a duly called Regular Chapter Meeting at which a quorum was present and that same was passed by a vote of 33 in favor, 0 opposed, 0 abstained on this 16th day of November 2014.

Motion: Lucia Craig Second: Christine Perry

Rita Capitan, President

Cecilia J. Nez, Vice President

Jerrilene King, Secretary/Treasurer

Danny Simpson, Council Delegate

Ben Shelly, President
Rex Lee Jim, Vice President

LAKE VALLEY CHAPTER
P.O. Box 190
Crownpoint, NM 87313
Phone No.: 505/786-2190/2191
Fax No.: 505/786-2192
Email: lakevalley@navajochapters.org
Website: www.lakevalley.nndes.org

Tony Padilla, Jr., President
Edison P. Tso, VP
Betty S. Dennison, S/T
Milanda Yazzie, CSC
Harriet Ploche, AMS
Danny Simpson, CD
Lucy Cayatineto, LB

LVC-NOV16-234

RESOLUTION OF LAKE VALLEY CHAPTER

SUPPORTING THE PLANNING AND DEVELOPMENT OF THE TEES SOOSII (CROWNPOINT) REGIONAL AIRPORT FOR INCLUSION IN THE NAVAJO NATION AIRPORT SYSTEM MASTER PLAN (NNASMP) FOR SUBMITTAL TO THE FEDERAL AVIATION ADMINISTRATION (FAA) NATIONAL AIRPORT CAPITAL IMPROVEMENT PROGRAM FOR FUTURE FEDERAL FUNDING.

WHEREAS:

1. Lake Valley Chapter is a certified Navajo Nation Chapter Government, pursuant to Navajo Nation Council Resolution C-J25-55, is delegated governmental authority with respect to local matters consistent with Navajo Law, including customs, traditions and fiscal matters; and

2. Lake Valley Chapter is empowered by the Navajo Nation Council to review all matters affecting the community and to make favorable decisions in the best interest for the general health, safety and welfare of chapter membership through implementation solutions for economic development, cultural preservation, recreation, solid waste management, elderly care, quality housing, public safety; road maintenance; and

3. The Navajo Nation Council pursuant to CAP-34-98 approved and adopted the Navajo Nation Local Governance Act (LGA), Title 26 of the Navajo Nation Code, which allows chapters to make decisions over local matters. This authority in the long run all improve community decision-making by allowing committees to excel and flourish, enable Navajo leaders to lead toward a prosperous future, and improve the strength and sovereignty of the Navajo Nation; through adoption of this Act, chapters are compelled to govern with responsibility and accountability to the local citizens; and

4. The Navajo Department of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of and the development needs of the five (5) airport located on the Navajo Nation; and

5. The Navajo Department of Transportation requests a community representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and liaison for the local community

6. Lake Valley Chapter adopted Resolution No. **LVC-NOV16-234** on November 16, 2014, to support the Planning and Development of the Tees Soosii (Crownpoint) Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal Funding.

NOW THEREFORE BE IT RESOLVED THAT:

1. Lake Valley Chapter of the Navajo Nation hereby approves and supports the planning and development of the Tse'bit'ai Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal Funding.

CERTIFICATION

WE HEREBY CERTIFY that the foregoing resolution was duly considered by the Lake Valley Chapter at a duly called chapter meeting at Lake Valley (New Mexico) Navajo Nation, at which a quorum was present and that same was passed by a vote of 36 in favor, 0 opposed and 3 abstained on this 16th day of November 2014. Motion Bernice Henry and seconded by Stella Baldy

Tony Padilla, Jr., President

Edison P. Tso, Vice President

Betty S. Dennison, Secretary/Treasurer

Not in Attendance
Danny Simpson, Council Delegate

LITTLEWATER CHAPTER

Post Office Box 1898
Crownpoint, New Mexico 87313
PHONE: (505) 786-2120
FAX: (505) 786-2125

WEBSITE: www.littlewaterchapter.navajo.org

CHAPTER ADMINISTRATION
Genevieve Castillo
Chapter Manager
AnnJanette Bebo
Administrative Assistant
Email: littlewater@navajochapters.org

RESOLUTION **LITT-11-15-2632**
OF
THE LITTLEWATER CHAPTER OF EASTERN NAVAJO AGENCY

SUPPORTING RESOLUTION FOR THE PLANNING AND DEVELOPMENT OF THE CROWNPOINT REGIONAL AIRPORT FOR INCLUSION IN THE NAVAJO NATION AIRPORT SYSTEM MASTER PLAN (NNASMP) FOR SUBMITTAL TO THE FEDERAL AVIATION ADMINISTRATION (FAA) NATIONAL AIRPORT CAPITAL IMPROVEMENT PROGRAM FOR FUTURE FEDERAL FUNDING.

WHEREAS:

1. The Littlewater Chapter of the Navajo Nation acts on this resolution pursuant to the authority conferred upon the chapter through Navajo Nation Code Title 26, Chapter 1, Section 1, Part B which states, "Through adoption of the Act, the Navajo Nation Council delegates to chapters governmental authority with respect to local matters consistent with Navajo Nation laws, including customs and tradition"; and
2. The Littlewater Chapter community members participated in a Navajo Department of Transportation workshop on August 05, 2014 which provided opportunity for community members to make comments and recommendations concerning the future of the local airport; and
3. The Navajo Department of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of and the development needs of the five (5) airport located on the Navajo Nation; and
4. The Navajo Department of Transportation requests a community representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and liaison for the local community.

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Littlewater Chapter membership recommends and supports the planning and development of the Tse'bit'ai Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal finding; and

CERTIFICATION

WE HEREBY CERTIFY THAT THE FOREGOING RESOLUTION was duly considered by and moved for adoption by Thomas Barbone, seconded by Jennie Yazzie, thoroughly discussed and adopted by a vote of 41 in favor, 1 opposed and 1 abstained at a duly called meeting at Littlewater Chapter, Navajo Nation (New Mexico) on this 13th day of November 2014.

George Jim, Chapter President

Paul D. Pablo, Chapter Vice-President

June Barbone, Secretary/Treasurer

08-11-14-065-SHIP

Resolution of the Shiprock Chapter

SHIPROCK, NAVAJO NATION

SUPPORTING THE PLANNING AND DEVELOPMENT OF THE TSE'BIT'AI REGIONAL AIRPORT FOR INCLUSION IN THE NAVAJO NATION AIRPORT SYSTEM MASTER PLAN (NNASMP) FOR SUBMITTAL TO THE FEDERAL AVIATION ADMINISTRATION (FAA) NATIONAL AIRPORT CAPITAL IMPROVEMENT PROGRAM FOR FUTURE FEDERAL FUNDING

WHEREAS:

1. The Shiprock Chapter of the Navajo Nation acts on this resolution pursuant to the authority conferred upon the chapter through Navajo Nation Code title 26, Chapter 1, Section 1, Part B which states, "Through adoption of this Act, the Navajo Nation Council delegates to chapters governmental authority with respect to local matters consistent with Navajo Nation laws, including customs and tradition"; and

2. Shiprock Chapter community members participated in a Navajo Department of Transportation workshop on August 05, 2014 which provided opportunity for community members to make comments and recommendations concerning the future of the local airport; and

3. The Navajo Department of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of and the development needs of the five (5) airport located on the Navajo Nation; and

4. The Navajo Department of Transportation requests a community representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and liaison for the local community.

NOW THEREFORE BE IT RESOLVED THAT:

1. The Shiprock Chapter membership recommends and supports the planning and development of the Tse'bit'ai Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal finding; and

2. The Shiprock Chapter members appoints the Shiprock Planning Commission Chairperson, Viviene Tallbull to act as the Shiprock Chapter representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as a point of contact and liaison for the Shiprock community.

Motioned by: Charley P. Joe

Seconded by: William Lee

CERTIFICATION

We hereby certify that the foregoing resolution was presented and considered at a duly called Chapter meeting at which a quorum was present and that the same was approved by a vote of 32 in favor, -0- opposed and -0- abstentions on this 11th day of August, 2014.

Duane H. Yazzie, President

Dr. J. Kaibah Begay, Secretary/Treasurer

Tommie Yazzie, Vice-President

Russell Begaye, Council Delegate

ST. MICHAELS CHAPTER - P.O. BOX 829 ST. MICHAELS, ARIZONA 86511

PHONE: 928-871-7842 - FAX: 871-3023

Curran Hannon, President
Alfred Mike, Sr., Vice-President
Gloria Smiley, Secretary/Treasurer
Jonathan Hale, Council Delegate
Joseph Peshlakai, Grazing Official
Russell Gould, CSC
Teresa Tabaha, AMS

Ben Shelly, Navajo Nation President

Rex Lee Jim, Navajo Nation Vice President

RESOLUTION OF THE St. Michaels CHAPTER

The StMichael Chapter supports the planning and development of the WindowRock Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) national Airport Capital Improvement Program for future Federal funding.

WHERE AS:

1. The St. Michaels Chapter is a recognized chapter of the Navajo Nation, and is the delegated government authority with respect to local matters consistent with Navajo Laws, including customs, traditions and local conditions, and

2. Pursuant to Resolution No. CAP-34-98, the Navajo Nation Council adopted the Navajo Nation Local Governance Act (LGA), Title 26 of the Navajo Nation Code, which directs local chapters to promote all matters that affect the local community members and to make appropriate decisions, recommendations advocate on their behalf; and

3. The St Michaels Chapter community members participated in a Navajo Department of Transportation workshop on _date_ which provided opportunity for community members to make comments and recommendations concerning the future of the local airport, and

4. The Navajo Department Of Transportation is authorized by the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of five (5) airport development needs of the Navajo Nation; and

5. The Navajo Department of Transportation requests a community representative to serve on the Public Advisory Committee of the airport Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and communicator for the local community.

NOW THEREFORE BE IT RESOLVED:

1. The St Michaels Chapter supports the planning and development of the up grade Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) national Airport Capital Improvement Program for future Federal funding; and

2. The St Michaels Chapter approves up grade ___ to act as the St Michaels Chapter representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as a point of contact and communicator for the local community.

CERTIFICATION

We hereby certify that the foregoing resolution was duly considered by the St Michaels Chapter at a duly called meeting at the _____ at which a quorum was present and that the same was passed by a vote of 44 in Favor, and 0 Opposed, 4 Abstained on the 10th day of Aug., 2014.

MOTIONED: Brian Upshaw SECONDED: Joe Lee Yazzie

Chapter President

THE NAVAJO NATION
TSE'II'AHI' (Standing Rock) CHAPTER
P.O. BOX 247
CROWNPOINT, NEW MEXICO 87313
Telephone: (505) 786-2247/2248
FAX: (505) 786-2249
Email: standingrock@navajochapters.org

RESOLUTION OF THE TSE'II'AHI' CHAPTER
RESOLUTION NO.: TSEIL1114.1101

Supporting the Planning and Development of the Crownpoint Regional Airport for Inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for Future Federal Funding

WHEREAS:

1. Pursuant to NNC Title 26, the Tse'ii'ahi' Chapter is recognized local government entity of the Navajo Nation, established and a duly certified chapter of the Navajo Nation to exercise local governing powers to review and support activities benefiting the chapter community; and
2. Pursuant to 26 NNC, Section 1 (b) Tse'ii'ahi' Chapter is vested with the authority to review all matters affecting the community and to make appropriate correction when necessary and make recommendation to the Navajo Nation and other local agencies for appropriate action; and
3. The Tse'ii'ahi' Chapter and its' membership fully supports the Crownpoint Chapter requesting the Navajo Department of Transportation is authorize the Navajo Nation Council and Federal Aviation Administration to conduct community outreach and airport evaluation concerning the future of and the development needs of the five (5) airport located on the Navajo Nation; and
4. The Tse'ii'ahi' Chapter and its' membership fully supports the Crownpoint Chapter requesting to the Navajo Department of Transportation a community representative to serve on the Public Advisory Committee of the Navajo Nation Airport System Master Plan (NNASMP) to serve as point of contact and liaison for the local community.

NOW, THEREFORE BE IT RESOLVED THAT:

1. The Tse'ii'ahi' Chapter membership recommends and supports the planning and development of the Crownpoint Regional Airport for inclusion in the Navajo Nation Airport System Master Plan (NNASMP) for submittal to the Federal Aviation Administration (FAA) National Airport Capital Improvement Program for future Federal funding.

2. The Tse'ii'ahi' Chapter supports the Crownpoint Chapter resolution in the appointment of Mrs. Rita Capitan to act as the representative to serve on the Public Advisory Committee of the Navajo Airport System Master Plan (NNASMP) to serve as a point of contact and liaison for the community.

CERTIFICATION

I, hereby certify that the foregoing resolution was duly considered by the Tse'ii'ahi' Chapter at a duly called meeting at which a quorum was present and that the same was passed by a vote of 25 in favor, 00 opposed and 01 abstained this 10th day of November 2014.

Motion by: Michael Coan Second by: Edison Leslie

Johnny Johnson, Chapter President
TSE'II'AHI' CHAPTER

Appendix D

GRANT PROGRAM GUIDE

Airport Grant Guide Outline of Contents

AIRPORT GRANT GUIDE INTRODUCTION

In an effort to improve airport grant project performance and increase the flow of outside funds to Navajo Nation airports, this Airport Grant Guide has been developed. The Guide includes a brief description of the available federal and state airport grant programs and outlines the sequential steps required to secure these funds. These key tasks were identified through a collaborative review and understanding of the fundamental processes and procedures pertinent to the FAA, Arizona, New Mexico, and Navajo Nation.

Intent and Purpose of the Grant Guide

The intent of the Grant Guide is to provide the Navajo Nation Government Divisions with a template of procedures that will assist them in coordinating their internal processes with those of the funding agencies involved in airport development improvements. While not all inclusive, the Grant Program Guide will serve as a checklist of activities and references to ensure project success from initiation to completion.

Airport Funding Agencies Included in the Grant Guide

- Federal Aviation Administration
- State of Arizona
- State of New Mexico
- Navajo Nation

Airport Project Checklists

In order to easily identify an airport grant project, checklists have been created with pertinent data fields including the facility location, description of work, business unit number, contract number, FAA grant number, state grant number, and others as requested. These checklists allow for customization to meet the needs of any potential project type including planning, design, construction, land acquisition, and equipment purchases while guiding the user from project formulation to grant closeout. It is a tool for information and tracking of the Navajo Nation and funding agencies processes.

Supporting Documentation

In addition to the Airport Grant Guide checklists, supporting documentation is included to aid in the understanding of what some of the more relevant forms and guidance documents look like. In many cases, websites have been referenced to allow the user to find the most recent information online.

Summary

The Airport Grant Guide is included within the Navajo Nation Airport System Master Plan as an appendix, and will also be made available as a stand-alone document for interested government Divisions of the Navajo Nation to use as needed.

AIRPORT GRANT MASTER PROCESS CHECKLIST

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K101111
ADOT E14F25		Contract No C12345
NMDOT xxxxx		CFDA No

Complete? Y/N or N/A	Date	Task	Grant Program Master Guideline	See sub-checklist if box is checked	Sub-checklist Number and/or Reference Information
		1.0	**Project Formulation (3 years before construction)**		
		1.1	Identify project based on approved NN DOT Dept. of Airports Strategic Management Plan		See 1.1 SMP
		1.2	Identify potential funding sources: federal, state, and local		See 1.2 Funding Narrative
		1.3	Determine if any equipment, navaids, or instrument approaches will be affected		
		1.4	Navajo DOT, OMB, and OOC review FAA's and states' grant assurances for compliance http://www.faa.gov/airports/airport_compliance/overview/		See websites for FAA See 1.3 (FAA) 1.4 (ADOT) & 1.5 (NMDOT)
		1.5	Confirm the project is depicted on an approved Airport Layout Plan and Property Map See current and approved ALP		See Navajo Nation GIS
		1.6	Determine if land withdrawal and/or other land jurisdiction issues are addressed		See Navajo Nation GIS
		1.7	Participate in annual ACIP meeting(s) with funding agencies		
		2.0	**Project Programming (2 years before construction)**		
		2.1	Consultant Selection (FAA AC 150/5100-14E) or latest version http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5100-14E.pdf		See AC and website for reference
			(A) See Consultant Selection 2.1A - Multi-Project Professional Services Agreement (PSA)	x	2.1A sub-checklist
			(B) See Consultatn Selection 2.1B - Projects Performed Under Existing PSA	x	2.1B sub-checklist
			(C) See Consultant Selection 2.1C - Single Project Consultant Selection	x	2.1C sub-checklist
		2.2	Participate in annual ACIP meeting(s) with funding agencies		
		2.3	Refine total costs in conjunction with annual ACIP submission		
		2.4	Identify environmental requirements of federal, state, Navajo Nation, BIA, FHWA		
		2.5	Submit ACIP to appropriate funding agencies (FAA Order 5100.39A) or latest version http://www.faa.gov/documentLibrary/media/Order/order-5100-39A-acip.pdf	x	2.5 Airport Capital Improvement Plan sub-checklist. Also see website
		2.6	Receive notification of potential grant(s) from funding agencies		
		2.7	Prepare environmental assessment, if applicable		
		2.8	Submit FAA grant application - SF 424, 5100-100 http://www.faa.gov/airports/resources/forms/media/faa-form-5100-100-application-for-federal-assistance-2014.pdf	x	2.8 Grant Application sub-checklist and see website
		2.9	Navajo Nation Executive Review Process		
		2.1	Asses if DBE program is current and on file for projects (over $250,000)		
		2.11	Determine Pavement Maintenance Management Program (PMMP) compliance		

AIRPORT GRANT MASTER PROCESS CHECKLIST

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K101111
ADOT E14F25		Contract No C12345
NMDOT xxxxx		CFDA No

Complete? Y/N or N/A	Date	Task	Grant Program Master Guideline	See sub-checklist if box is checked	Sub-checklist Number and/or Reference Information
		3.0	**Design Phase (1 year before construction)**		
		3.1	Submit annual ACIP to funding agencies	x	2.5 Airport Capital Improvement sub-checklist
		3.2	Receive state grant offer and complete Navajo Nation Administrative Review		See 2.02 reference form
		3.3	Consultant selection, if applicable (FAA AC 150/5100-14E) http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5100-14E.pdf	x	2.1 A,B,C sub-checklists. Also see website
		3.4	Hold pre-design/scoping meeting (FAA AC 150/5300-9) See Standard Handout for Pre-Design Conference http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_9b.pdf		See 3.01 reference info also see website
		3.5	Letter Stating Environmental Findings for Record		
		3.6	For design project - Submit FAA grant application - SF424, 5100-100 http://www.faa.gov/airports/resources/forms/media/faa-form-5100-100-application-for-federal-assistance-2014.pdf		See website
		3.7	Receive federal grant offer and complete Navajo Nation Administrative Review		
		3.8	Review 30% complete design plans and specifications including engineer's report		
		3.90	Conduct design review meeting(s) with appropriate funding agencies		
		3.10	Navajo Nation OOC prepares grant reimbursement requests to federal and state agencies	x	3.11 Grant Reimbursement sub-checklist
		3.11	Receive approval to proceed to final design from FAA/State DOT's		
		3.12	Review final design plans and specifications including final construction cost estimates		
		3.13	Submit final design plans and specifications to funding agencies for approval		
		3.14	Receive approval to advertise from funding agencies		
		4.0	**Project Implementation (Construction)**		
		4.1	Advertise project for bids for 30 days (FAA AC 150/5300-9)		See AC for reference
		4.2	Conduct pre-bid conference (FAA AC 150/5300-9) http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_9b.pdf		See AC and website for reference
		4.3	Conduct bid opening		
		4.4	Submit bid tabulation with award recommendation to funding agencies		
		4.5	Conduct Navajo Nation Administrative Review & receive concurrence to award		
		4.6	Submit FAA grant application - SF 424, 5100-100, (construction project) http://www.faa.gov/airports/resources/forms/media/faa-form-5100-100-application-for-federal-assistance-2014.pdf	x	2.8 Grant Application sub-checklist and see website

AIRPORT GRANT MASTER PROCESS CHECKLIST

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K101111
ADOT E14F25		Contract No C12345
NMDOT xxxxx		CFDA No

Complete? Y/N or N/A	Date	Task	Grant Program Master Guideline	See sub-checklist if box is checked	Sub-checklist Number and/or Reference Information
		4.7	Receive federal grant offer and complete Navajo Nation Administrative Review	x	2.8 Grant Application sub-checklist
		4.8	Request state matching grant, if applicable	x	2.8 Grant Application sub-checklist
		4.9	Receive state grant offer and complete Navajo Nation Administrative Review	x	2.8 Grant Application sub-checklist
		4.10	Execute construction contract through 164 Administrative Review		
		4.11	Conduct pre-construction conference		
		4.12	Issue construction notice-to- proceed		
		4.13	Prepare grant reimbursement requests to federal and state agencies	x	3.11 Grant Reimbursement sub-checklist
		4.14	Navajo DOT receives & reviews construction progress & inspection reports		
		4.15	Receive, review, and approve contractor payment applications		
		4.16	Review, approve, and submit change order(s) to funding agencies		
		4.17	Receive approval of change order(s) from funding agencies		
		4.18	Attend final inspection of construction project		
		4.19	Consultant to provide final Engineers Report		See 4.01 Closout Guidance
		4.20	AIP Project Closeout Checklist		See 4.01 Closeout Guidance
		4.21	Submit Sponsor Certification for "Construction Project Final Acceptance"		
		5.0	**Project Close-Out**		
		5.1	Receive and submit record drawings and final construction report to funding agencies		
		5.2	Prepare and submit final reimbursement request to FAA and request grant closure	x	3.11 Grant Reimbursement sub-checklist
		5.3	Complete Contracts & Grants /NN OMB and OCC contract Closeout procedures		See 4.01 Closeout Guidance
		5.4	GIS - Update in-house and submit revised ALP to FAA reflecting project improvements		See Navajo Nation GIS Standards

AIRPORT GRANT PROJECT CHECKLIST - CONSULTANT SELECTION

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description:	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K110111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	2.1 A. B. C. Consultant Selection	Reference Information
			A. Multi-Project Professional Services Agreement (PSA) Contract	
		2.1A	Navajo DOT prepares Request for Qualifications (RFQ)	
		2.2A	In RFQ, list all projects anticipated for the next five years	
		2.3A	Submit draft RFQ to FAA and state DOTs for review and approval	
		2.4A	Receive comments and/or approval from FAA and State DOTs and submit to Navajo DOJ	
		2.5A	Publish RFQ for 30 days	
		2.6A	Convene selection panel to review and rank proposals	
		2.7A	Conduct interviews, if warranted	
		2.8A	Select firm and begin contract negotiations	
		2.9A	Department of Airports prepares draft Professional Services Agreement (PSA)	
		2.10A	Submit draft PSA to FAA and State DOTs for review and approval	
		2.11A	Navajo Nation Administrative Review	See 2.02 sample
		2.12A	Prepare Final Professional Services Agreement (PSA)	
		2.13A	Execute PSA Contract	
			B. Professional Service under an existing Agreement (PSA)	
		2.1B	Confirm project was listed on original Professional Service Agreement	
		2.2B	Conduct scoping meeting with consultant	
		2.3B	Engineer/Project Manager (PM) prepares draft draft scope of work for Dept of Airports Review & Concurrence	
		2.4B	Submit SOW to FAA and State DOTs for review and approval	
		2.5B	Receive comments and/or approval from FAA and State DOTs and submit to Navajo DOJ	
		2.6B	Negotiate project fees	
		2.7B	Send SOW (without fees) for an Independent Fee Estimate (IFE) if over $100,000, or fee review for all other	
		2.8B	Review IFE and acceptance by FAA, State DOT & Depart. Of Aviation http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5100-14E.pdf	See website
		2.9B	Navajo Nation Administrative Review	See 2.02 sample
		2.10B	Execute task for SOW	
		2.11B	Navajo DOT maintains records of solicitation and negotiations	
			C. Single Project - Professional Service Consultant Selection	
		2.1C	Navajo DOT Prepares Request for Qualifications (RFQ)	
		2.2C	Submit draft RFQ to FAA and state DOTs for review and approval	
		2.3C	Receive comments and/or approval from FAA and State DOTs and submit to Navajo DOJ	
		2.4C	Publish RFQ for a minimum of 2 weeks	
		2.5C	Convene selection panel to review and rank proposals	
		2.6C	Conduct Interviews, if warranted	

AIRPORT GRANT PROJECT CHECKLIST - CONSULTANT SELECTION

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description:	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K110111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	2.1 A. B. C. Consultant Selection	Reference Information
		2.7C	Select firm and begin contract negotiations	
		2.8C	Department of Airports prepares draft contract	
		2.9C	Send SOW (without fees) for Independent Fee Estimate (IFE) if over $100,000, or fee review for all other	
		2.10C	Review IFE (should be within 10% of proposed fee)	
		2.11C	Navajo Nation Administrative Review	See 2.02 sample
		2.12C	Execute contract	
		2.13C	Navajo DOT maintains records of solicitation and negotiations	

AIRPORT GRANT PROJECT CHECKLIST

Airport	AIRPORT NAME	Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	**PROJECT DESCRIPTION**	**Navajo DOT**
FAA 3-04-000-13-2014	**(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)**	**Business Unit** K101111
ADOT E14F25		**Contract No.** C1234
NMDOT xxxxx		**CFDA No.**

Complete? Y/N or N/A	Date	Task	2.5 Airport Capital Improvement Program	Reference Information
			Navajo Nation Airport Capital Improvement Program	
		2.5.1	Navajo DOT prepares project recommendations based on approved Strategic Management Plan	See 1.1 SMP
		2.5.2	Identify potential funding sources: federal, state, and local	
		2.5.3	Complete Navajo Nation Budget Process for External Grant Funds	
			FAA Airport Capital Improvement Program	
		2.5.1	Complete five-year ACIP form and exhibits	
		2.5.2	Obtain signatures from authorized Navajo Nation representatives	
		2.5.3	Submit completed and signed ACIP to FAA (PHX ADO and SW Regional Office, Fort Worth TX)	
			ADOT Airport Capital Improvement Program	
		2.5.1	Identify five-year ACIP projects	
		2.5.2	Submit projects and exhibits through ADOT's website - serves as your grant application	
		2.5.3	Respond to comments and requests for additional information or revisions	
		2.5.4	Resubmit revised ACIP through ADOT's website	
		2.5.5	Receive project approval from ADOT	
		2.5.6	Submit signed ACIP to FAA PHX ADO	
			NMDOT Airport Capital Improvement Program	
		2.5.1	Complete five-year ACIP and Overall Development Objective	
		2.5.2	State of New Mexico - Aviation Division completes grant application	
		2.5.3	Obtain signatures from authorized Navajo Nation representatives	
		2.5.4	Submit to New Mexico DOT - Aviation Division	

AIRPORT GRANT PROJECT CHECKLIST

Airport	AIRPORT NAME	The Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K101111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	2.8 Grant Application and Acceptance	Reference Information
			Navajo Nation Grant Application and Acceptance	
			For: FAA Airport Improvement Program	
		2.8.1	Navajo DOT - Dept. of Airports Management completes project specific information for grant	
		2.8.2	Navajo DOT prepares FAA grant app & required report including NNFB 1-6 for Document Review SF 434-5100 http://www.faa.gov/airports/resources/forms/media/faa-form-5100-100-application-for-federal-assistance-2014.pdf	See website
		2.8.3	Navajo DOT Budget Review for External Grant Funds process is initiated	See 1.2 Funding Narrative
		2.8.4	Navajo DOT Contracts and Grants Section prepares 164 Review Packet	See 2.01 sample
		2.8.5	Following Section 164 Review packet returned to Department of Airports	
		2.8.6	Submit completed and signed application to FAA (PHX ADO & SW Reg, Fort Worth TX)	
			For: ADOT Airport Development Grant	
			Arizona State/Local grant (SL)	
		2.8.1	ACIP submittal is the project grant application for state & local	See website
		2.8.2	Receive Airport Development Reimbursable Grant Agreement offer	
		2.8.3	Navajo DOT - Dept. of Airports Management completes project specific information for grant	
		2.8.4	Navajo DOT Contracts and Grants Section prepares 164 Review Packet	See 2.01 sample
		2.8.5	Following Section 164 Review packet returned to Department of Airports	
		2.8.6	Submit completed grant agreement to ADOT (2 originals)	
		2.8.7	Receive executed grant agreement from ADOT	
			ADOT with Federal/State/Local grant (FSL)	
		2.8.1	Receive Federal Airport Development Reimbursable Grant Agreement offer	
		2.8.2	Submit executed FAA grant agreement requesting state matching grant	
		2.8.3	Navajo DOT - Dept. of Airports Management completes project specific information for grant	
		2.8.4	Navajo DOT Contracts and Grants Section prepares 164 Review Packet	See 2.01 sample
		2.8.5	Following Section 164 Review packet returned to Department of Airports	
		2.8.6	Submit completed grant agreement to ADOT (2 originals)	
		2.8.7	Receive executed grant agreement from ADOT	
			For: NMDOT Aviation Division Grant	
			New Mexico State Grant	
		2.8.1	NM DOT Prepares State Application	
		2.8.2	NN Department of Airports receives the grant offer	
		2.8.3	Navajo DOT/Dept. of Airports Management completes project specific information for grants	
		2.8.4	Navajo DOT Contracts and Grants Section prepares 164 Review Packet	See 2.01 sample
		2.8.5	Following Section 164 Review packet returned to Department of Airports	
		2.8.6	Submit completed grant agreement to NMDOT	

AIRPORT GRANT PROJECT CHECKLIST

Airport	AIRPORT NAME	The Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K101111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	2.8 Grant Application and Acceptance	Reference Information
			FAA Matching Grant	
		2.8.1	Submit executed FAA grant agreement requesting state matching grant	
		2.8.2	Receive Federal Airport Grant offer	
		2.8.3	Navajo DOT - Dept. of Airports Management completes project specific information for grant	
		2.8.4	Navajo DOT Contracts and Grants Section prepares 164 Review Packet	See 2.01 sample
		2.8.5	Following Section 164 Review packet returned to Department of Airports	
		2.8.6	Submit completed grant agreement to NMDOT	

AIRPORT GRANT PROJECT CHECKLIST

Airport	AIRPORT NAME	The Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K10111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	3.11 Grant Reimbursements	Reference Information
			Navajo Nation Grant Reimbursement	
		3.11.1	Navajo DOT receives/reviews/approves invoices and sends to Contracts and Grants Section	
		3.11.2	Navajo DOT Contracts and Grants Section prepares and distributes pay request approval form	
		3.11.3	NN Office of the Controller (OOC) Contracts and Grants confirm availability of funds	
		3.11.4	NN OOC Accounts Payable prepares reimbursement request for appropriate funding agency	
			FAA Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits reimbursement request via Delphi E-Invoicing http://www.dot.gov/cfo/delphi-einvoicing-system	See website
		3.11.6	NN OOC receives/confirms reimbursement payment (electronically)	
			ADOT Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits request on ADOT approved Grant Reimbursement Request form electronically or via mail	
		3.11.6	NN OOC receives/confirms reimbursement payment (electronically or hard copy)	
			NMDOT Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits reimbursement request on Form A-1159	
		3.11.6	NN OOC receives/confirms reimbursement payment	

AIRPORT GRANT PROJECT CHECKLIST

Airport	AIRPORT NAME	The Navajo Nation
Project Type	Planning / Design / Construction / Environmental / Land / Equipment	*Project Numbers*
	Project Description	
Grant Numbers	PROJECT DESCRIPTION	Navajo DOT
FAA 3-04-000-13-2014	(MUST BE CONSISTENT ACROSS ALL LINES OF BUSINESS)	Business Unit K10111
ADOT E14F25		Contract No. C1234
NMDOT xxxxx		CFDA No.

Complete? Y/N or N/A	Date	Task	3.11 Grant Reimbursements	Reference Information
			Navajo Nation Grant Reimbursement	
		3.11.1	Navajo DOT receives/reviews/approves invoices and sends to Contracts and Grants Section	
		3.11.2	Navajo DOT Contracts and Grants Section prepares and distributes pay request approval form	
		3.11.3	NN Office of the Controller (OOC) Contracts and Grants confirm availability of funds	
		3.11.4	NN OOC Accounts Payable prepares reimbursement request for appropriate funding agency	
			FAA Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits reimbursement request via Delphi E-Invoicing http://www.dot.gov/cfo/delphi-einvoicing-system	See website
		3.11.6	NN OOC receives/confirms reimbursement payment (electronically)	
			ADOT Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits request on ADOT approved Grant Reimbursement Request form electronically or via mail	
		3.11.6	NN OOC receives/confirms reimbursement payment (electronically or hard copy)	
			NMDOT Grant Reimbursement	
		3.11.5	NN OOC Accounts Payable submits reimbursement request on Form A-1159	
		3.11.6	NN OOC receives/confirms reimbursement payment	

Airport Grant Master Process Checklist

Reference Content List

1.0 Project Formulation (3 Years Before Construction)

1.1 Navajo Division of Transportation, Department of Airports Management Strategic Management Plan Fiscal Year 2014-2017 (SMP) (Hard Copy)

1.2 Summary of all Resources to be Utilized & Assumption Regarding the Resources (Project Specific) (Hard Copy)

Navajo DOT, OMB, and OOC review FAA's and states' grant assurances for compliance
http://www.faa.gov/airports/airport_compliance/overview

1.3 Federal Aviation Administration (FAA) Airports – Assurances

1.4 Arizona Department of Transportation, Multimodal Planning Division, Aeronautics Group Airport Development Reimbursable Grant Agreement, Base Agreement, Exhibit "A" Grant Assurances (Hard Copy)

1.5 New Mexico Department of Transportation, Aviation Division, State Grant Agreement for Airport Projects, excerpt – New Mexico Grant Assurances

2.0 Project Programming (2 Years Before Construction)

Consultant Selection (FAA AC 150/5100-14E) or latest version
http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5100-14E

Submit ACIP to appropriate funding agencies (FAA Order 5100.39A) or latest version
http://www.faa.gov/documentLibrary/media/Order/order-5100-39A-acip.pdf

Submit FAA grant application - SF 424, 5100-100
http://www.faa.gov/airports/resources/forms/media/faa-form-5100-100-application-for-federal-assistance-2014.pdf

2.0 Navajo Nation Executive/Administrative 164 Review Process/Packet Executive Order 07-2013 (Hard Copies):

2.01 Form 164 Example

2.02 Executive Official Review Sample

2.03 External Funding – 164 Form Use

3.0 Design Phase (1 Year Before Construction)

Hold pre-design/scoping meeting (FAA AC 150/5300-9)
http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_9b.pdf

3.01 Standard Handout for Pre-Design Conference (Directive and Packet)

4.0 Project Implementation (Construction)

4.01 Engineering Guidance 2010-06

2013

Department of Airports Management

Strategic Management Plan
Fiscal Year 2014 - 2017

Arlando Teller
Department of Airports Management
5/23/2013

CONTENTS

Included in this report are the Department of Airports Management's Strategic Direction, Goals & Objectives and Prioritized Strategies with systematic assessment to keep track of the progress. The strategic plan has initiatives aligned with the overall direction of the Navajo Division of Transportation.

Organizational Statement – An Executive Summary of the department's primary functions and why it is crucial for its being

Mission Statement - A statement describing the department's core purpose and reason for being

Vision Statement – A statement describing where the department would like to be

Goals, Objectives, Priorities and Performance Measures
A broad statement of intent where the department will direct its effort to implement and achieve its strategic plan by taking key approaches, prioritization and systematic assessments of the department's performance

Prioritized Strategies and/or Plan of Action – Key approaches are prioritized or ranked based on certain criteria

- Urgency – The urgency of the strategy
- Potential Impact – How will it impact the public
- Feasibility – How feasible is it to implement
- Strategic Fit – How well does it fit the overall strategy
- Resources – Is funding available and do we have the staff
- Risk – Is there a risk such as budget shortfalls or timeline

Summary of All Resources to be utilized and Assumptions Regarding the Resources – A statement identifying funding sources, budgetary information, staffing and assume changes or trends that may impact the strategic plan

EXECUTIVE SUMMARY

The Department of Airports Management (Department) functioned as a program under the Navajo Division of Transportation (Navajo DOT) until the Department's Plan of Operation was approved and recognized by the 22nd Navajo Nation Council (Resolution: GSCAU-26-09) on April 16, 2013.

The departmental functions are guided by:

- 25 CFR 170: Department of Interior, Bureau of Indian Affairs: Indian Reservation Roads Program for eligible airfield maintenance functions
- USDOT-Code of Federal Regulations – Title 14: Federal Aviation Administration (FAA) regulations to airport users and owners
- Federal Aviation Regulations (FARs): Rules prescribed by the FAA governing all aviation activities in the United States. The FARs are part of Title 14 of the Code of Federal Regulations (CFR). The rules are designed to promote safe aviation, protecting pilots, flight attendants, passengers and the general public from unnecessary risk.
- Advisory Circulars (ACs): External publications issued by the FAA consisting of non-regulatory material providing for recommendations relative to a policy, guidance and information relative to specific aviation subject

The Navajo Nation Airport System is comprised of six airports included in the FAA's National Plan of Integrated Airport Systems (NPIAS). These six are: 1) Tuba City Airport; 2) Kayenta Airport (managed by Township); 3) Chinle Airport; 4) Window Rock Airport (managed by Division of General Services); 5) Shiprock Airport and 6) Crownpoint Airport. In addition to these six primary airports there are 20 dirt airstrips distributed throughout the Nation, bifurcating the boundaries of three FAA regions and three states.

These airports provide vital services to the four-corner region, which include air medical evacuations, business transportation, government transportation, search and rescue, tourism and general aviation activity.

The Navajo Nation airports currently offer varying levels of facilities and services and are in varying physical conditions. In order to provide safe and efficient airport facilities and services, and to identify and prioritize the capital, operational and maintenance investments needed the Navajo Nation desires to improve in

the current infrastructures by working closely with our Stakeholders and address deficiencies, as well as plan for future developments.

The purpose and function of the Department are:

1. Provide continued airfield maintenance to each primary airport through the following activities: airfield mowing; airport electrical maintenance; pavement preservation and repairing; perimeter fence maintenance and continued livestock/wildlife control; and addressing snow removal on airport runways/taxiways
2. Continue Stakeholders Collaboration (FAA, State, Local, Navajo Nation, etc.) to update each primary Airport's Capital Improvement Plan; Airport's Layout Plan; Airport's Maintenance Plan; and various required documentation and/or process requested by Stakeholder(s). Such updates are required to the FAA/State/Navajo Nation on a semi-annual basis.
    a. The Airport Capital Improvement Plan (ACIP) that the Department updates and submits serves as the primary planning tool for identifying and prioritizing critical airport development and associated capital needs. It also serves as the basis for the distribution of grant funds under the Airport Improvement Program (AIP). ACIP guidance is available in the Airports Capital Improvement Plan Order (FAA Order 5100.39A).
    b. The Airport Improvement Program (AIP) provides grants to public agencies (i.e., Navajo Nation) for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS).
        i. The Federal AIP funding of 95 percent can be received from the FAA for eligible projects.
            1. Local Share for Navajo Nation and each State is:
                a. Arizona – 0 percent
                b. New Mexico – five percent
                c. Navajo Nation – 10 percent (AZ) / 5 percent (NM)
        ii. Navajo Airports' eligible projects include improvements related to enhancing airport safety, capacity, security, and environmental concerns. In general, Navajo could use AIP funds on most airfield capital improvements or repairs and in some specific situations, for hangars, and non-aviation development. Any professional services that are necessary for

eligible projects — such as planning, surveying, and design — are eligible. Aviation demand at the airports must justify the projects, which must also meet Federal environmental requirements.

3. Provide Public Participation and Involvement by conducting technical services and guidance to the chapters, counties, regions and communities, especially those who request (through Chapter Supporting Resolution) their community dirt airstrip to be maintained by the Department. Additionally, address supplemental guidance to communities interested in establishing heliports.

ORGANIZATIONAL STATEMENT:

TO ADVOCATE FOR NAVAJO NATION AIRPORTS, TO MAINTAIN AIRPORTS WITH COORDINATION AND ACCOUNTABILITY FROM THE STAFF AND FINANCE FOR FUND AVAILABILITY.

MISSION STATEMENT:

TO BE SELF-DETERMINE PROGRAM BY PLANNING FUTURE AIRPORT DEVELOPMENT, AND TO MAINTAIN NAVAJO NATION AIRPORTS IN A SECURE AND SAFE STANDARD TO ATTAIN QUALITY CUSTOMER SERVICE.

VISION STATEMENT:

WE ENVISION A WELL-MAINTAINED AND EQUIPPED AIRPORT THAT ENCOURAGES ECONOMIC OPPORTUNITIES, STRIVING TOWARDS SELF-SUSTAINMENT THAT ENHANCES SAFE AND SECURE AIRPORT OPERATIONS.

GOALS, OBJECTIVES, PRIORITIES AND PERFORMANCE MEASURES

Short Range Goal
FINANCE

Priority	Action Items	Person Responsible	Start Date	End Date	Progress
1.	Obtain funding to pay out allottees for Crownpoint airport	Edith/ Arlando	07/01/13	09/30/13	Have funds available in 2014 budget
2.	Complete ROW process for Crownpoint Airport	Arlando	07/01/13	06/30/14	Lease is already developed; review of OST,
3.	Generate Revenue for Airports	Arlando	06/22/13	12/30/13	Final Draft Form for Executive Review
4.	Better measurable statements with Form 2	Edith/ Arlando	06/22/13	09/30/13	Strategic Planning next week 06/22-23/13 develop statements
5.	New Vehicle	Geri/Edith	06/22/13	08/30/13	MVRB, in bid process

Short Range Goal
ADMINISTRATIVE

Priority	Action Items	Person Responsible	Start Date	End Date	Progress
1.	Training for FMIS/Budgets/Support Services	Geri	06/23/13	10/30/13	Professional Development
2.	Update Forms – Federal Highway, DOT (NM & AZ) on call Engineer	Geri	06/23/13	01/20/14	Records Management for all forms
3.	Collect Data/Reports	Geri	06/23/13	12/20/14	Accountability of funding, grant money, CFR Requirement

Short Range Goal
MANAGEMENT

Priority	Action Items	Person Responsible	Start Date	End Date	Progress
1.	Create and maintain a work sheet form for federal highway	Arlando/ Edith/Geri	06/22/13	08/30/13	Record keeping Federal highway
2.	NMDOT/ADOT state grant agreement thru NDOJ and SAS	Arlando/Geri	07/01/13	06/30/14	NMDOT agreement at DOJ; ADOT agreement is on AZ Governor's Desk; both a NDOJ
3.	Fund Management Plan	Arlando/Geri	07/01/13	06/30/14	Final draft at Executive
4.	Airport Maintenance Plan	Arlando/Geri Dave/Engine er	08/01/13	06/30/14	Plan will be tasked with on call (Engineer to complete the task)
5.	Update ACIP and submit to FAA and DOT's	Arlando/Geri	09/01/13	12/20/13	Annual updates needs to be submitted to DOT's for funding requirements
6.	Airport Rules SOP, Regulations and Standards	Arlando/Geri Engineer	08/01/13	06/30/14	Tasked to on called Engineer
7.	Employee Staff Development	Arlando/Geri	12/01/13	03/30/14	Staff IDP's, evaluation
8.	Ganado Airport Improvements	Arlando/Dav e/ Road Maintenance	08/01/13	12/30/13	Propose determination of re-opening airport per FAA
9.	Crownpoint Airport Lease	Arlando/Edith NDOJ	07/01/13	02/28/14	Finalize the airport lease agreement update

Short Term Goal
MAINTENANCE COORINDATOR/LABORER:

Priority	Action Items	Person Responsible	Start Date	End Date	Progress
1.	Finish project on crack sealing on Chinle Airport	Dave/Delvec chio	06/22/13	01/01/14	Safety of the runway

2.	Chinle Airport re-do striping	Dave/Delvecchio	06/30/13	12/30/13	Safety of the runway
3.	Ganado Airport earthwork, re-do entire runway, fencing	Dave/Delvecchio	08/01/13	12/30/13	Upgrade and re-opening of airport
4.	Crownpoint Airport, striping	Dave/Delvecchio	06/30/13	01/30/14	Safety of the runway
5.	All Airports Re-painting, semi-circle	Dave/Delvecchio	07/01/13	08/30/13	Visual observation
6.	Tuba City Airport, striping	Dave/Delvecchio	07/01/13	08/30/13	Safety of runway

Priority1: AIRPORT LAND WITHDRAWAL
Goal: To withdraw land for the current airports under NDOT

Action Item	Target Date	Responsible Person	Action Status
Project Management	2018	Arlando	
Arch Clearances			
Bio			
Surveys			
Chapter Resolutions			
Identify funding sources			

Priority 2: SECURING FAA/STATE DOT'S FUNDING
Goal: To obtain and rehabilitate airports on Navajo Nation

Action Items	Target Date	Responsible Person	Action Status
Legislate waivers to accept FAA Grants	2016	Arlando	
Legislate to amend state statute to include tribal governments as sponsors			
Process FAA/DOT's State Grant Agreement through the SAS			
Fully expend Airport Improvement Plan Funds			

Priority 3: AIRPORT STAFF DEVELOPMENT
Goal: To enhance and invest in professional development

Action Item	Target Date	Responsible Person	Action Status
Develop and implement Individual Employment Plan	2014	Arlando	
Salary Wage Adjustment through performance evaluations			
Increase staffing level to six			

Priority 4: Implement Navajo Airport Policy, Codes and Ordinance
Goal: To establish a uniform Airport Policy, Codes and Ordinance

Action Item	Target Date	Responsible Person	Action Status
Develop and complete airport policy, codes and ordinances	2015	Arlando/Engineer	
Provide training to public, stakeholders			

Priority 5: IDENTIFY NEW AIRPORT SITES
Goal: To identify new airport sites within Navajo Nation

Action Item	Target Date	Responsible Person	Action Status
Feasibility study on airports sites	2017	Arlando/Engineer	
Secure funding for new airport sites			

PRIORITY PROJECT SUMMARY

Project Title	Rank/ Priority	Category	Funding Sources	2014	2015	2016	2017	2018
AP Land withdrawal	1	Capital Outlay	NN, State, Federal					$
Secure FAA/State DOT Funding	2		State, Federal				$	
Staff Development	3	Training	NN	$				
AP Policy, Codes, Ordinances	4		NN		$			
Identify new AP Sites	5		NN				$	

Multi-year Short/Long Term Goals & Objectives w/ Performance Measures:

1. Utilize an On-Call Engineering Service to provide Airport/Airfield Project Management, utilizing Federal Highway Administration and Fuel Excise Tax Funds
    - Develop an Airport/Airfield Maintenance Plan, in accordance to 25 CFR 170 within 15 months
    - Complete the Airport Snow/Ice Removal Preparedness Plan for each airport within 15 months
    - Complete the Airport Stormwater Pollution Prevention Plan for each airport within 15 months
2. Perform Land Withdrawals for Shiprock Airport; Tuba City Airport; and Ganado Airport
    - Complete Archeological Report within 12 months
    - Complete Biological Report within 12 months
    - Conduct/Complete Airport Property Survey within 15 months
    - Conduct Public Participation throughout the process
3. Reconcile conflicting Navajo Nation Provisions and FAA Grant Assurances to fully receive and expend FAA grant funds
    - Provide Testimonies to Navajo Nation Council and oversight committees
    - Carryout the Navajo Nation Airport System Mater Plan within 24 months
        - Conduct Airport Asset Inventory

- Conduct Public Participation
- Conduct Airport Demand Forecasts
- Conduct Airport Facility Requirements
- Conduct Airport Development Alternatives
- Update Airport Layout Plan
- Update Airport Capital Improvement Plans
- Conduct Airport Environmental Evaluations

- Carry out the Window Rock Airport Rehabilitation Project within 24 months

4. Apply for airport entitlement funds (apply for airport discretionary funds) to address deteriorated infrastructure, i.e., runways/taxiways
5. Develop an Airport Rules and Regulations, with Standard Operating Procedures Manual
6. Initiate State Grant Agreements for eligible airport safety/maintenance activities
7. Complete the Department's Fund Management Plan
   - Conduct Airport Fee Research within 15 months
   - Conduct an Airport Leasing Program Management Guide within 15 months
   - Collect Airport User's fees within 24 months

Priorities:

1. Reconcile conflicting Navajo Nation Provisions and FAA Grant Assurances to fully receive and expend FAA grant funds
2. Complete the Navajo Nation Airport System Master Plan
3. Complete the Department's Fund Management Plan
4. Initiate and address the each ACIP for Navajo Nation's airports
   1. Airport Rehabilitation Projects

PRIORITIZED STRATEGIES AND/OR PLAN OF ACTION

- Urgency – Reconcile the Navajo Nation Provision conflict with FAA's Grant Assurances to address the deteriorating airport infrastructure. Navajo's FAA-NPIAS airports are entitled $150,000 per year but since there is a conflict we cannot address any improvements with Federal funds.
- Potential Impact – If no resolution to the conflict, there is a high-probability the Navajo Nation will have to consider severe options from funding 100% of a capital improvement project or closing the airport, due to safety.
- Resources – The Fuel Excise Tax may be a potential source, which would complete with Road Maintenance activities. An approved and recognized Department Fund Management Plan can also address minor maintenance concerns.

SUMMARY OF ALL RESOURCES TO BE UTILIZED AND ASSUMPTIONS REGARDING THE RESOURCES

Branch/Division/Office Resource Distribution Summary
Current Year (FY 13) and Future Years (FY 14 - FY 17)

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
General Fund		$	$	$	$	$
	sub total					
	Full Time Equivalent (FTE)					
IDC Fund		$	$	$	$	$
	0	0.00	0.00	0.00	0.00	1.00
Proprietary Fund		$	$	$	$	$
Roads	**506006**	386,100.00	386,100.00	386,100.00	386,100.00	386,100.00
	sub total	**386,100.00**	**386,100.00**	**386,100.00**	**386,100.00**	**386,100.00**
	Full Time Equivalent (FTE)	**123,041.00**	**123,041.00**	**123,041.00**	**123,041.00**	**123,041.00**
Fiduciary Fund		$	$	$	$	$
	Full Time Equivalent (FTE)	0.00	0.00	0.00	0.00	1.00
Special Revenue/Internal Fund		$	$	$	$	$
FHWA DEPT OF APS	**K131005**	248,132.00	253,095.00	258,157.00	263,320.00	268,586.00
	sub total	**248,132.00**	**253,095.00**	**258,157.00**	**263,320.00**	**268,586.00**
	Full Time Equivalent (FTE)	**57,493.00**	**60,368.00**	**73,276.00**	**78,542.00**	**78,542.00**
Capital Outlay Fund						
	Total - All Funds	**634,232.00**	**639,195.00**	**644,257.00**	**649,420.00**	**654,687.00**
	Full Time Equivalent (FTE)	**180,534.00**	**183,409.00**	**196,317.00**	**201,583.00**	**201,583.00**

Assumptions/Explanation of Changes:

There is an incremental of 2% increase on the FHWA funding beginning FY 2014, and thereafter a 5% increment.

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SUMMARY OF ALL RESOURCES TO BE UTILIZED AND ASSUMPTIONS REGARDING THE RESOURCES

Branch/Division/Office Resource Distribution Summary
Current Year (FY 13) and Future Years (FY 14 - FY 17)

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
General Fund		$	$	$	$	$
	sub total					
	Full Time Equivalent (FTE)					
IDC Fund		$	$	$	$	$
	0	0.00	0.00	0.00	0.00	1.00
Proprietary Fund		$	$	$	$	$
Roads	**506006**	386,100.00	386,100.00	386,100.00	386,100.00	386,100.00
	sub total	**386,100.00**	**386,100.00**	**386,100.00**	**386,100.00**	**386,100.00**
	Full Time Equivalent (FTE)	**123,041.00**	**123,041.00**	**123,041.00**	**123,041.00**	**123,041.00**
Fiduciary Fund		$	$	$	$	$
	Full Time Equivalent (FTE)	0.00	0.00	0.00	0.00	1.00
Special Revenue/Internal Fund		$	$	$	$	$
FHWA DEPT OF APS	**K131005**	248,132.00	253,095.00	258,157.00	263,320.00	268,586.00
	sub total	**248,132.00**	**253,095.00**	**258,157.00**	**263,320.00**	**268,586.00**
	Full Time Equivalent (FTE)	**57,493.00**	**60,368.00**	**73,276.00**	**78,542.00**	**78,542.00**
Capital Outlay Fund						
	Total - All Funds	**634,232.00**	**639,195.00**	**644,257.00**	**649,420.00**	**654,687.00**
	Full Time Equivalent (FTE)	**180,534.00**	**183,409.00**	**196,317.00**	**201,583.00**	**201,583.00**

Assumptions/Explanation of Changes:

There is an incremental of 2% increase on the FHWA funding beginning FY 2014, and thereafter a 5% increment.

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FAA
Airports

ASSURANCES

Airport Sponsors

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of this grant offer by the sponsor, these assurances are incorporated in and become part of this grant agreement.

B. Duration and Applicability.

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.**

   The terms, conditions and assurances of this grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.**

   The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.**

Unless otherwise specified in this grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 25, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of this grant agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Airport Revenue so long as the airport is used as an airport.

C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

1. **General Federal Requirements.**

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

Federal Legislation

a. Title 49, U.S.C., subtitle VII, as amended.
b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.[1]
c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
d. Hatch Act – 5 U.S.C. 1501, et seq.[2]
e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1 2]
f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]
g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]
h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended.
j. Coastal Zone Management Act, P.L. 93-205, as amended.
k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]
l. Title 49, U.S.C., Section 303, (formerly known as Section 4(f))
m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
n. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
o. Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.), prohibits discrimination on the basis of disability).
p. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
q. American Indian Religious Freedom Act, P.L. 95-341, as amended.
r. Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]
s. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]
t. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]
u. Copeland Anti-kickback Act - 18 U.S.C. 874.1
v. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]
w. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
x. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]
y. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

z. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. 109-282, as amended by section 6202 of Pub. L. 110-252).

Executive Orders

a. Executive Order 11246 - Equal Employment Opportunity[1]
b. Executive Order 11990 - Protection of Wetlands
c. Executive Order 11998 – Flood Plain Management
d. Executive Order 12372 - Intergovernmental Review of Federal Programs
e. Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]
f. Executive Order 12898 - Environmental Justice

Federal Regulations

a. 2 CFR Part 180 - OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement).
b. 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [OMB Circular A-87 Cost Principles Applicable to Grants and Contracts with State and Local Governments, and OMB Circular A-133 - Audits of States, Local Governments, and Non-Profit Organizations].[4, 5, 6]
c. 2 CFR Part 1200 – Nonprocurement Suspension and Debarment
d. 14 CFR Part 13 - Investigative and Enforcement Procedures14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
e. 14 CFR Part 150 - Airport noise compatibility planning.
f. 28 CFR Part 35- Discrimination on the Basis of Disability in State and Local Government Services.
g. 28 CFR § 50.3 - U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964.
h. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]
i. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]
j. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]
k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]
l. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]
m. 49 CFR Part 20 - New restrictions on lobbying.
n. 49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
o. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.

p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.[1 2]
q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Programs.
r. 49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.[1]
s. 49 CFR Part 28 – Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation.
t. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
u. 49 CFR Part 32 – Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)
v. 49 CFR Part 37 – Transportation Services for Individuals with Disabilities (ADA).
w. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.

Specific Assurances

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this grant agreement.

Footnotes to Assurance C.1.

[1] These laws do not apply to airport planning sponsors.

[2] These laws do not apply to private sponsors.

[3] 49 CFR Part 18 and 2 CFR Part 200 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

[4] On December 26, 2013 at 78 FR 78590, the Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR Part 200. 2 CFR Part 200 replaces and combines the former Uniform Administrative Requirements for Grants (OMB Circular A-102 and Circular A-110 or 2 CFR Part 215 or Circular) as well as the Cost Principles (Circulars A-21 or 2 CFR part 220; Circular A-87 or 2 CFR part 225; and A-122, 2 CFR part 230). Additionally it replaces Circular A-133 guidance on the Single Annual Audit. In accordance with 2 CFR section 200.110, the standards set forth in Part 200 which affect administration of Federal awards issued by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this Part becomes final. Federal agencies, including the Department of Transportation, must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB.

[5] Cost principles established in 2 CFR part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.

[6] Audit requirements established in 2 CFR part 200 subpart F are the guidelines for audits.

2. **Responsibility and Authority of the Sponsor.**

   a. Public Agency Sponsor:

   It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

   b. Private Sponsor:

   It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. **Sponsor Fund Availability.**

   It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this grant agreement which it will own or control.

4. **Good Title.**

   a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

   b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. **Preserving Rights and Powers.**

   a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in this grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in this grant agreement and shall insure that such arrangement also requires compliance therewith.

g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

6. **Consistency with Local Plans.**

   The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.**

   It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.**

   In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.**

   In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Metropolitan Planning Organization.**

    In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

11. **Pavement Preventive Maintenance.**

    With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.**

    For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and

has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. **Accounting System, Audit, and Record Keeping Requirements.**

    a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

    b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. **Minimum Wage Rates.**

    It shall include, in all contracts in excess of $2,000 for work on any projects funded under this grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. **Veteran's Preference.**

    It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. **Conformity to Plans and Specifications.**

    It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans,

specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this grant agreement.

17. **Construction Inspection and Approval.**

    It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. **Planning Projects.**

    In carrying out planning projects:

    a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

    b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

    c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

    d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

    e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

    f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

    g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

    h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. **Operation and Maintenance.**

    a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal,

state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for-

1) Operating the airport's aeronautical facilities whenever required;

2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

3) Promptly notifying airmen of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. **Hazard Removal and Mitigation.**

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. **Compatible Land Use.**

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. **Economic Nondiscrimination.**

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or

to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. **Exclusive Rights.**

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. **Fee and Rental Structure.**

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. **Airport Revenues.**

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:

1) If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or

operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

2) If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor's acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.

3) Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at Section 47102 of title 49 United States Code), if the FAA determines the airport sponsor meets the requirements set forth in Sec. 813 of Public Law 112-95.

b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. **Reports and Inspections.**

It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:

1) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and

2) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. **Use by Government Aircraft.**

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that –

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. **Land for Federal Facilities.**

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. **Airport Layout Plan.**

a. It will keep up to date at all times an airport layout plan of the airport showing

1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;

2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and

roads), including all proposed extensions and reductions of existing airport facilities;

3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon; and

4) all proposed and existing access points used to taxi aircraft across the airport's property boundary. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

30. **Civil Rights.**

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this grant.

a. Using the definitions of activity, facility and program as found and defined in §§ 21.23 (b) and 21.23 (e) of 49 CFR § 21, the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to these assurances.

b. Applicability

1) Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the sponsor's programs and activities.

2) Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.

3) Real Property. Where the sponsor receives a grant or other Federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

1) So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or

2) So long as the sponsor retains ownership or possession of the property.

d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this grant agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

"The **(Name of Sponsor)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

e. Required Contract Provisions.

1) It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in Federally-assisted programs of the DOT, and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in Federally-assisted programs of the DOT acts and regulations.

2) It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.

3) It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.

4) It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin, creed, sex, age, or handicap as a

covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:

a) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and

b) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.

g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

31. **Disposal of Land.**

a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order, (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund. If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested or transferred to another

eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order: (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. **Engineering and Design Services.**

It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

33. **Foreign Market Restrictions.**

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. **Policies, Standards, and Specifications.**

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated _____ (the latest approved version as of this grant offer) and included in this grant, and in accordance

with applicable state policies, standards, and specifications approved by the Secretary.

35. **Relocation and Real Property Acquisition.**

    a. It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.
    b. It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.
    c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. **Access By Intercity Buses.**

    The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. **Disadvantaged Business Enterprises.**

    The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its DBE and ACDBE programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Parts 26 and 23 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1936 (31 U.S.C. 3801).

38. **Hangar Construction.**

    If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. **Competitive Access.**

a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

   1) Describes the requests;

   2) Provides an explanation as to why the requests could not be accommodated; and

   3) Provides a time frame within which, if any, the airport will be able to accommodate the requests.

b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.

Grant Number E#x##
Sponsor Name
Airport Name

Arizona Department of Transportation
Multimodal Planning Division
Aeronautics Group

Airport Development Reimbursable Grant Agreement

Part I

THIS AGREEMENT is entered into _____, between the STATE OF ARIZONA, acting by and through its DEPARTMENT OF TRANSPORTATION, through its Multimodal Planning Division (the "State") and the [enter sponsor name], a sovereign tribal nation in the State of Arizona (the "Sponsor"), for a grant of State funds for the purpose of aiding in financing a Project of ***[enter project. Must match FAA and/ or state description and description on page 17]*** (the "Project"), for the improvement of the [enter airport name] (the "Airport").

WITNESSETH

Recitals:

1) The Sponsor desires, in accordance with the authority granted by Arizona Revised Statutes (A.R.S.) Section 28-8413, funds from the State for the purpose of airport planning and/or development.

2) The Arizona State Transportation Board, as approved on [enter STB approval date] and the Director of the Arizona Department of Transportation, in accordance with the authority granted by A.R.S. Sections 28-304, 28-363, and 28-401 and Title 28, Chapter 25, A.R.S., have authorized reimbursement to the Sponsor of funds expended for airport planning and/or development.

Now, therefore, in consideration of the foregoing recitals and of the covenants and agreements made by the parties herein to be kept and performed, the parties agree as follows:

Sponsor's Responsibility

1) The Sponsor shall accept this Agreement within 4 months of the date of the grant offer cover letter: **Enter Cover letter date**. This Grant offer, if not accepted by the Sponsor, shall expire at the end of the 4-month period.

2) The Sponsor shall commence the Project within 6 months of the date the grant was executed by the State. This Project will consist of the airport improvements as described in Exhibit C. The Sponsor shall proceed with due diligence and complete the Project in accordance with the provisions of this Agreement. The Sponsor shall provide and maintain competent supervision to complete the Project in conformance with the plans, specifications and work completion schedule incorporated as part of this Agreement.

3) The Sponsor shall submit completed Project Reimbursement and Milestone schedules, which shall be attached hereto, as Exhibit C, Schedules Two and Three respectively and shall complete the Project within that schedule. Any change to the schedule shall be submitted in writing and be approved by the State. A time extension beyond the State's obligation to provide funds herein must be reflected by formal Amendment to this Agreement.

4) The Sponsor shall comply with the Sponsor Assurances and abide by and enforce the General Provisions and Specific Provisions incorporated herein as Exhibits A, B and C respectively.

Obligations

1) The minimum funding participation from the Sponsor shall be [enter percentage in words and numbers (X.X%)] as determined by the State.

2) The maximum reimbursement available from the State to the Sponsor for this Agreement shall be **[enter dollars in words and numbers ($x,xxx)]**

3) Except as otherwise provided herein, the State's obligation to provide funds hereunder expires upon completion of the efforts required herein or **[enter date],** whichever is earlier.

4) The State may, after agreeing to provide said funds to the Sponsor, withdraw/terminate the grant if the Project has not been initiated as evidenced by a Notice to Proceed within 6 months of the date the grant was executed by the State or has not progressed as scheduled over a period of 12 months. If it becomes necessary to terminate a grant at any time, the State will reimburse expenses of the Sponsor, approved by the State, up to the time of notification of cancellation.

5) Sponsor acknowledges that in the event of a late payment or reimbursement by the State, the State shall have no obligation to pay a late payment fee or interest and shall not otherwise be penalized.

6) In the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination at its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Preliminary Work Provision

Any preliminary work, for which costs for this Project were incurred after [Enter Date] shall be considered eligible for reimbursement provided that said costs are directly related to the Project on which this Agreement is written. The State shall review related records and determine eligibility at its sole discretion.

Part II

The Sponsor shall approve and attach to this agreement a resolution by its governing body that certifies as follows:

1) The Sponsor has the legal power and authority:

   a) to do all things necessary, in order to undertake and carry out the Project;

   b) to accept, receive and disburse grant funds from the State in aid of the Project.

2) The Sponsor now has on deposit, or is in a position to secure _____ dollars ($_____), or an equivalent amount represented by Sponsor's proposed labor and equipment costs, for use in defraying Sponsor's share of the costs of the Project. The present status of these funds is as follows:

   _____
   (Enter local funding type and location)

3) The Sponsor hereby designates _____, _____
   Name Title

   to receive payments representing the State's share of project costs.

   _____ _____
   Signature of Sponsor's Representative Title of Representative

4) The Sponsor has on file with ADOT the following vendor identification and address for project payments:

   Sponsor Vendor Id #: **Enter current vendor id**

   Sponsor Vendor Address: **Sponsor Name**
   Address on file
   City, AZ Zip Code

Exhibits

The following Exhibits are incorporated herewith and form a part of this Agreement.

Exhibit A - Sponsor Assurances

Exhibit B - General Provisions

Exhibit C - Specific Provisions and Project Schedules

STATE:

State of Arizona
Department of Transportation
Multimodal Planning Division

By: _____

Title: Joseph S. Omer, Director

Date: _____

SPONSOR:

Name of Sponsor
Name of Airport

By: _____

Title: _____

Date: _____

WITNESSED BY:

Signature: _____

Print Name: _____

Date: _____

WITNESSED BY:

Signature: _____

Print Name: _____

Date: _____

EXHIBIT A

Sponsor Assurances

Upon acceptance of the grant offer by the Sponsor, these assurances will become a part of this Agreement. The Sponsor hereby covenants and agrees with the State as follows:

General

1) That the Project is consistent with plans (existing at the time of approval of the Project) of political jurisdictions authorized by the State to plan for the development of the area surrounding the Airport and has given fair consideration to the interest of communities in or near where the Project is to be located. In making a decision to undertake any airport development Project under this Agreement the Sponsor insures that it has undertaken reasonable consultation with affected parties using the Airport at which the Project is proposed. All appropriate development standards of Federal Aviation Administration (FAA) Advisory Circulars, Orders, or Federal Regulations shall be complied with. All related state and federal laws shall be complied with.

2) That these covenants shall become effective upon execution of this Agreement for the Project or any portion thereof, made by the State and shall remain in full force and effect throughout the useful life of the facilities or the planning project's duration developed under the grant, but in any event, not less than twenty (20) years from the date of acceptance of the grant offer by the Sponsor.

3) The Sponsor certifies in this Agreement that it is a political subdivision of the State and is the public agency with control over a public-use Airport and/or on behalf of the possible future development of an Airport and is eligible to receive grant funds for the development or possible development of an Airport under its jurisdiction.

4) The Sponsor further agrees it holds good title, satisfactory to the State, to the landing area of the Airport or site thereof, or will give assurance satisfactory to the State that good title will be acquired.

5) That the Sponsor is the owner or lessee of the property or properties on which the Airport is located and that the lease guarantees that the Sponsor has full control of the use of the property for a period of not less than twenty (20) years from the date of this Agreement. All changes in airport ownership or to an airport lease shall be approved by the State.

6) The Sponsor agrees that it has sufficient funds available for that portion of the project costs which are not to be paid by the State (or the United States).

7) The Sponsor agrees to provide and maintain competent supervision to complete the Project in conformance with this Agreement.

8) Preserving Rights and Powers: The Sponsor agrees it shall not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions and assurances in this Agreement without written permission from the State, and shall act promptly to acquire, extinguish or modify any outstanding rights or claims of right by others which would interfere with such performance by the Sponsor. This will be done in a manner acceptable to the State. The Sponsor shall not sell, lease, encumber or otherwise transfer or dispose of any part of its title or other interests in the property shown on the airport property map included in the most recent FAA-approved Airport Layout Plan, or to that portion of the property upon which State funds have been expended, for the duration of the terms, conditions and assurances in this Agreement without approval by the State. If the transferee is found by the State to be eligible under Title 49, United States Code, to assume the obligations of this Agreement and to have the power, authority and financial resources to carry out such obligations, the Sponsor shall

insert in the contract or document transferring or disposing of Sponsor's interest and make binding upon the transferee all the terms, conditions and assurances contained in this Agreement.

9) Public Hearings: In Projects involving the location of an Airport, an airport runway or a major runway extension, the Sponsor has afforded the opportunity for public hearings for the purpose of considering the economic, social and environmental impacts of the Airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the State, submit a copy of such hearings to the State.

Financial

Pursuant to A.R.S. 35-326, the Sponsor may elect to utilize the Local Government Investment Pool ("LGIP") maintained by the state treasurer. The Sponsor shall request written approval from the State to use the LGIP. Thereafter, the State may deposit the funds authorized by the grant into the Sponsor's account. After approval of the reimbursements by the state, the funds shall be disbursed through the LGIP account to the Sponsor. The disbursements shall be made pursuant to the applicable laws and regulations.

The Sponsor shall establish and maintain for each Project governed by this Agreement, an adequate accounting record to allow State personnel to determine all funds received (including funds of the Sponsor and funds received from the United States or other sources) and to determine the eligibility of all incurred costs of the Project. The Sponsor shall segregate and group project costs into cost classifications as listed in the Specific Provisions of Exhibit C.

Record Keeping

The Sponsor shall maintain accurate records of all labor, equipment and materials used in this Project and that upon reasonable notice, shall make available to the State, or any of their authorized representatives, for the purpose of audit and examination all records, books, papers or documents of the recipient relating to work performed under this Agreement. For airport development Projects, make the Airport and all airport records and documents affecting the Airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the State upon reasonable request.

Airport Based Aircraft Reporting

The Sponsor shall furnish to the State on a quarterly basis, a current detailed listing (including: Registration/N Number, Name, Address and Phone Number of Owner) of all based aircraft on the Airport in a form approved by the State.

Airport Layout Plan

1) The Sponsor shall maintain a current signed/approved Airport Layout Plan (ALP) of the Airport, which shows building areas and landing areas, indicating present and planned development and to furnish the State an updated ALP of the Airport as changes are made.

2) The Sponsor shall be required to prepare an ALP for update or revalidation in accordance with current FAA and State standard guidelines. The ALP will indicate any deviations from FAA design standards as outlined in current FAA Advisory Circulars, orders or regulations. A copy of the signed/approved ALP in electronic format shall be forwarded to the State after authentication by FAA or the State.

3) The Sponsor shall assure that there are no changes to the airport property boundaries, together with any off-site areas owned or controlled by the Sponsor which support the Airport or its operations as a part of this project.

4) If a change or alteration is made at the Airport which the State determines adversely affects the safety, utility or efficiency of the Airport, or any State funded property on or off Airport which is not in conformity with the ALP as approved by the State, the Sponsor will, if requested by the State, eliminate such adverse effect in a manner approved by the State.

Immediate Vicinity Land Use Restriction

The Sponsor shall restrict the use of land, adjacent to or in the immediate vicinity of the Airport, to activities and purposes compatible with normal airport operations and to take appropriate action including the adoption of appropriate zoning laws. In addition, if the Project is for noise compatibility or to protect the 14 CFR Part 77 imaginary surfaces of the Airport, the Sponsor will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the Airport, of the noise compatibility program measures or the imaginary surfaces of the Airport upon which State funds have been expended.

Airport Operation

1) The Sponsor shall promote safe airport operations by clearing and protecting the approaches to the Airport by removing, lowering, relocating, marking and/or lighting existing airport hazards and to prevent, to the extent possible, establishment or creation of future airport hazards. The Sponsor shall take appropriate action to assure such terminal airspace as is required to protect instrument and visual operations to the Airport (including established minimum flight altitudes) will be adequately cleared and protected by preventing the establishment or creation of future airport hazards. The Sponsor shall promptly notify airmen of any condition affecting aeronautical use of the Airport.

2) The Sponsor further agrees to operate the Airport for the use and benefit of the public and to keep the Airport open to all types, kinds and classes of aeronautical use without discrimination between such types, kinds and classes; provided that the Sponsor shall establish such fair, equal and nondiscriminatory conditions to be met by all users of the Airport as may be necessary for the safe and efficient operation of the Airport; and provided further, that the Sponsor may prohibit any given type, kind or class of aeronautical use of the Airport if such use would create unsafe conditions, interfere with normal operation of aircraft, or cause damage or lead to the deterioration of the runway or other airport facilities.

3) In any agreement, contract, lease or other arrangement under which a right or privilege at the Airport is granted to any person, firm or corporation to conduct or engage in any aeronautical activity for furnishing services to the public at the Airport, the Sponsor shall insert and enforce provisions requiring said person, firm or corporation:

   a) to furnish services on a reasonable and not unjustly discriminatory basis to all users thereof and charge reasonable and not unjustly discriminatory prices for each unit or service;

   b) and be allowed to make reasonable and nondiscriminatory discounts, rebates or similar types of price reductions to volume purchasers;

   c) each Fixed Based Operator (FBO) and Air Carrier at the Airport shall be subject to the same rates, fees, rentals and other charges as are uniformly applicable to all other FBOs and Air Carriers making the same or similar uses of the Airport and utilizing the same or similar facilities;

   d) each Air Carrier using such Airport shall have the right to service itself or to use any FBO that is authorized or permitted by the Airport to serve any Air Carrier at the Airport.

4) The Sponsor shall not exercise or grant any right or privilege which operates to prevent any person, firm or corporation operating aircraft on the Airport from performing any services on its own aircraft with its own employees (including but not limited to maintenance, repair and fueling) that it may choose to perform. In the event the Sponsor

itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by a commercial aeronautical operator authorized by the Sponsor under these provisions.

5) The Sponsor shall suitably operate and maintain the Airport and all facilities thereon or connected therewith which are necessary for airport purposes and to prohibit any activity thereon which would interfere with its use for aeronautical purposes and to operate essential facilities, including night lighting systems, when installed, in such manner as to assure their availability to all users of the Airport; provided that nothing contained herein shall be construed to require that the Airport be operated and maintained for aeronautical uses during temporary periods when snow, flood or other climatic conditions interfere substantially with such operation and maintenance.

6) The Sponsor shall not permit an exclusive right for the use of the Airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, providing services at an Airport by a single FBO shall not be construed as an "exclusive right" if:

   a) it would be unreasonably costly, burdensome or impractical for more than one FBO; and

   b) if allowing more than one FBO to provide such services would require a reduction of space leased pursuant to an existing agreement between a single FBO and the Airport.

Note: Aeronautical activities that are covered by this paragraph include, but are not limited to: charter flights, pilot training, aircraft rental, sightseeing, air carrier operations, aircraft sales and services, aerial photography, agricultural spraying, aerial advertising and surveying, sale of aviation petroleum products whether or not conducted in conjunction with any other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity.

7) The Sponsor shall terminate any exclusive right to conduct an aeronautical activity now existing at the Airport before any grant of assistance from the State. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the Airport is used as an Airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with State funds.

8) Airport Pavement Preservation Program: The Sponsor certifies that they have implemented an effective pavement preservation management program at the Airport in accordance with Public Law 103-305 and with the most current associated FAA policies and guidance for the replacement, reconstruction or maintenance of pavement at the Airport. The Sponsor assures that it shall use and follow this program for the useful life of the pavement constructed, reconstructed or repaired with financial assistance from the State and that it will provide such reports on pavement condition and pavement management programs as may be required by the State.

Sponsor Transactions

The Sponsor shall refrain from entering into any transaction which would deprive the Sponsor of any of the rights and powers necessary to perform any or all of the covenants made herein, unless by such transaction the obligation to perform all such covenants is assumed by another public agency eligible to assume such obligations and having the power, authority and financial resources to carry out such obligations; and, if an arrangement is made for management or operation of the Airport by an agency or person other than the Sponsor, the Sponsor shall reserve sufficient powers and authority to insure that the Airport will be operated and maintained in accordance with these covenants or insure that such an arrangement also requires compliance therewith.

Airport Revenues

The Sponsor shall maintain a fee and rental structure for the facilities and services at the Airport which will make the Airport as self-sustaining as possible under the circumstances existing at the particular Airport, taking into account such factors as the volume of traffic and economy of collection. All revenues generated by the Airport (and any local taxes established after Dec 30, 1987), will be expended by it for the capital or operating costs of the Airport; the local airport system; or the local facilities which are owned or operated by the owner or operator of the Airport and which are directly or substantially related to the actual air transportation of passengers or property, on or off the Airport.

Disposal of Land

1) For land purchased under a grant for airport development purposes (it is needed for aeronautical purposes, including runway protection zones, or serve as noise buffer land; and revenue from the interim use of the land contributed to the financial self-sufficiency of the Airport), the Sponsor shall apply to the State and FAA for permission to dispose of such land. If agreed to by the State and/or FAA, the Sponsor shall dispose of such land at fair market value and make available to the State and FAA an amount that is proportionate to the State and FAA's share of the cost of the land acquisition. That portion of the proceeds of such disposition, which is proportionate to the share of the cost of acquisition of such land, shall be (a) reinvested in another eligible airport development Project or Projects approved by the State and FAA or (b) be deposited to the Aviation Trust Fund if no eligible Project exists.

2) Disposition of such land shall be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the Airport.

EXHIBIT B

General Provisions

Employment of Consultants

The term consultant, as used herein, includes planners, architects and/or engineers. If a consultant is to be used for this Project, the Sponsor agrees to consider at least three (3) consultant firms. If the Sponsor has contracted with or will contract with a consultant on a retainer basis, the Sponsor assures to the State that prior to entering such a contract, at least three (3) consultants were or will be considered. The Sponsor shall submit to the State, for review and approval, a copy of the request for proposals and/or request for qualifications, and the proposed consultant contract prior to its execution and upon award of the contract, a fully executed copy. All requests for qualifications and requests for proposals shall be in accordance with A.R.S. 34, Chapters 1, 2 and 6, and shall include a list of projects and project locations to be awarded project contracts.

Contracts

1) The Sponsor as an independent entity and not as an agent of the State may obtain the services required in order to fulfill the work outlined in the Project Description as approved by the State for funding in the Airport Capital Improvement Program. All contracts awarded to accomplish the project work described in this Agreement shall state:

   a) The name of the consultant authorized to perform the work and to communicate on behalf of the Sponsor;

   b) The terms for termination of the contract either for failure to perform or in the best interest of the Sponsor;

   c) The duly authorized representatives of the State shall have access to any books, documents, papers and records of the consultant and/or contractor which are in any way pertinent to the contract for a period of five years, in accordance with A.R.S. 35-214, for the purpose of making inspections, audits, examinations, excerpts and transcriptions.

2) All contracts shall stipulate and make clear:

   a) The responsibilities of the consultant to gain authorization for changes on the Project which may have an effect on the contract price, scope, or schedule;

   b) That all construction contractors and sub-contractors hired to perform services, shall be in compliance with A.R.S. 32, Chapter 10.

   c) That any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. That these items shall be made available to the public. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else.

   d) That any travel shall be reimbursable by the State only within the rules and costs in accordance with the State of Arizona Travel Policy.

Conflict of Interest

Each consultant submitting a proposal shall certify that it shall comply with, in all respects, the rules of professional conduct set forth in Arizona Administrative Code R4-30-301. In addition, a conflict of interest shall be cause for disqualifying a consultant from consideration; or terminating a contract if the conflict should occur after the contract is made. A potential conflict of interest includes, but is not limited to:

1) Accepting an assignment where duty to the client would conflict with the consultant's personal interest, or interest of another client.

2) Performing work for a client or having an interest which conflicts with this contract.

Reports

The Sponsor shall submit monthly status reports during planning, shall submit monthly status reports during design, and shall submit weekly reports during construction. All reports shall reflect, at a minimum, the progress accomplished in relation to the Grant and Project schedules and milestones, the reasons for any changes, and the recommended corrections of problems encountered. Upon completion of the Project, the Sponsor shall submit a letter to the State specifying that the Project has been completed to their satisfaction and that the consultant and the contractor have completed their contractual responsibilities.

Changes

Any changes to the consultant contract, authorized by the Sponsor, that include additional funds, time and/or scope, shall be by amendment and shall be approved by the State prior to being made in order to be eligible for reimbursement. Approval of a change by the State shall not obligate the State to provide reimbursement beyond the maximum funds obligated by this Agreement. Any increase to the amount of funds authorized hereunder, to the expiration date of this agreement, or to the scope of work included in this agreement must be by formal amendment, and signed by all parties.

Any changes to the contract documents, authorized by the Sponsor, must be approved by the State prior to any changes being made in order to be eligible for reimbursement.

Audit

Upon completion of the Project, the Sponsor agrees to have an audit performed. The audit examination may be a separate project audit or in accordance with the Single Audit Act of 1984 (Single Audit). If the Sponsor is required under law to have a Single Audit, this Project shall be considered for inclusion in the scope of examination.

The Sponsor shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the Project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the Project supplied by other sources, and such other financial records pertinent to the Project. The accounts and records will be kept in accordance with A.R.S. 35-214.

In any case in which an independent audit is made of the accounts of a Sponsor relating to the disposition of the proceeds of a grant relating to the Project in connection with which the grant was given or used, it shall file a certified copied of such audit with the State not later than six (6) months following the close of the fiscal year in which the audit was made.

The Sponsor shall make available to the State or any of their other duly authorized representatives, for the purpose of audit and examination, any books, documents, papers and records of the recipient that are pertinent to the grant. The Sponsor further agrees to provide the State a certified copy of the audit report. The State is to determine the acceptability of this audit.

Suspension

If the Sponsor fails to comply with any conditions of this Agreement, the State, by written notice to the Sponsor, may suspend participation and withhold payments until appropriate corrective action has been taken by the Sponsor. Costs incurred during a period of suspension may not be eligible for reimbursement by the State.

Failure to Perform

If the Sponsor fails to comply with the conditions of this Agreement the State, may by written notice to the Sponsor, terminate this Agreement in whole or in part. The notice of termination will contain the reasons for termination, the effective date, and the eligibility of costs incurred prior to termination. The State shall not reimburse any costs incurred after the date of termination.

Termination for Convenience

When the continuation of the Project will not produce beneficial results commensurate with the further expenditure of funds or when funds are not appropriated or are withdrawn for use hereunder, the State may terminate this Agreement. In the case where continuation of the Project will not produce beneficial results, the State and the Sponsor shall mutually agree upon the termination either in whole or in part. In the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination as its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Waiver by State

No waiver of any condition, requirement or right expressed in this Agreement shall be implied by any forbearance of the State to declare a default, failure to perform or to take any other action on account of any violation that continues or repeats.

Dispute Resolution / Arbitration

1. Limited Waiver of Sovereign Immunity. For purposes of this Agreement, and subject to the terms of this section, the Nation consents and agrees to a limited waiver of its sovereign immunity from suit and consents to be sued on an arbitration award. The Nation represents that this limited waiver of sovereign immunity has been duly approved by the Nation's Tribal Council, as authorized by the Arbitration and Sovereign Immunity Acts of the Navajo Nation. The Nation is not waiving its right to assert the defense of sovereign immunity except as expressly set forth, referred to, and provided for, in this Agreement This limited waiver is enforceable solely by the State as limited hereunder and does not create any additional third party beneficiary rights to suits or private causes of action in favor of third Parties. The Parties agree that this section provides a limited waiver of sovereign immunity solely for the purpose of enforcing the provisions of this Agreement and enforcing any arbitration award hereunder and for no other purpose.

2. Dispute Resolution. In the event of a dispute, claim or controversy ("Dispute") arising out of or related to this Agreement, the Parties agree that it is in their mutual best interest to meet as promptly as possible for the purpose of informally resolving said Dispute. In the event the Parties cannot resolve their Dispute informally alter attempting to work in good faith, the Parties hereto agree to abide by arbitration as set forth below and that an order compelling arbitration or a judgment enforcing the arbitration award shall be the only relief of any kind provided by the State or Tribal court.

3. Arbitration. If a party in good faith concludes that a Dispute arising out of or related to this Agreement is not likely to be resolved by informal dispute resolution then, upon notice by that Party to the other, said Dispute shall be finally and exclusively settled by submission of such Dispute to the American Arbitration Association ("AAA") under its then

prevailing procedural rules contained in the AAA's Commercial Arbitration Rules to the extent that such rules shall not be interpreted to diminish, limit, or void the limited waiver of sovereign immunity set forth in Section 1above or to increase the enforcement rights of the Parties. Within ten (10) days after the notice of intent to arbitrate, each party shall select one person to act as arbitrator and the two selected shall select a third arbitrator within ten (10) days of their appointment. The third arbitrator shall be a practicing attorney, actively engaged in the practice of law for at least ten (10) years and a member in good standing of the bar of the State of Arizona. Alternatively, the third arbitrator may be a retired judge of the federal court or the trial court of the State of Arizona. At least one of the arbitrators shall be knowledgeable with federal Indian law and one arbitrator shall have AAA-acknowledged expertise in the appropriate subject matter. By agreement of the parties, when the amount in controversy renders the cost of three arbitrators unreasonable, the parties may agree to select a single arbitrator to resolve a dispute. All arbitration proceedings shall be held in Maricopa County or at such other place as shall be agreed by the Parties.

4. Award. The award shall be made within sixty (60) days of the filing of the notice of intent to arbitrate, and the arbitrator's shall agree to comply with the schedule before accepting appointment. However, this time limit maybe extended by agreement of the Parties or by the majority of the Parties or by the majority of the arbitrators, if necessary. Any award rendered in any such arbitration proceeding shall be final and binding upon all Parties to the proceeding. Any action to enforce the arbitration award must be filed within one hundred and eighty (180) days from the issuance of the award.

5. Governing Law. This Agreement, including any claim or dispute arising hereunder submitted to binding arbitration shall be governed by the laws of the State of Arizona.

6. Enforcement. Judgment upon any award rendered by the arbitrators against the Nation may be entered in the Nation's tribal court system ('Tribal Court") or against the State of Arizona in the Arizona State Court System ("Court System") and interpreted and/or enforced pursuant to the terms of this Agreement, and/or pursuant to the terms of the AAA's Commercial Arbitration Rules, and/or pursuant to the terms and provisions of the statutes, rules and regulations governing or providing for interpretation or enforcement of judgments applicable in any State of Arizona or Navajo Nation court.

Discrimination

This Agreement is subject to all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 USC. 12101-12213) and all applicable Federal regulations under the ACT. This Agreement is also subject to all applicable provisions of Federal Executive Order 11246, Arizona State Executive Order 2009-09, or A.R.S. 41−1461 through 1465. It shall be permissible for SUBRECIPIENT and its CONTRACTORS to engage in tribal or Indian preference in employment as allowed by applicable federal law.

Exception: Under Title VII – Employment Practices: Nothing contained in this subchapter shall apply to any business or enterprise on or near an Indian reservation with respect to any publicly announced employment practice of such business or enterprise under which a preferential treatment is given to any individual because he is an Indian living on or near a reservation." 42 U.S.C. § 2000e-2(i).

Compliance with Laws

The Sponsor shall comply with all Federal, State and Local laws, rules, regulations, ordinances, policies, advisory circulars, and decrees that are applicable to the performance hereunder.

Excess of Payments

If it is found that the total payments to the Sponsor exceed the State's share of allowable project costs, the Sponsor shall promptly return the excess to the State. Final determination of the State's share of allowable costs shall rest solely with

the State. Any reimbursement to the Sponsor by the State not in accordance with this Agreement or unsubstantiated by project records will be considered ineligible for reimbursement and shall be returned promptly to the State.

State Inspectors

At any time and/or prior to final payment of funds for work performed under this Agreement, the State may perform an inspection of the work performed to assure compliance with the terms herein and to review the workmanship of the Sponsor's contractors and/or consultants. No inspector is authorized to change any provisions of this Agreement or any provisions of Agreements between the Sponsor and the Sponsor's contractor and/or consultant.

Indemnification

Each party to this Agreement is responsible for its own negligent acts and omissions of its employees and agents.

Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall forthwith be physically amended to make such insertion or correction.

Property of the Sponsor and State

Any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else. The Sponsor shall give the State unrestricted authority to publish, disclose, distribute and otherwise use at no cost to the State any of the material prepared in connection with this grant. At the completion of the project, the Sponsor shall provide the State with an electronic copy, in a format useable by the State, and one hard copy in a format useable by the State, of final plans, specifications, reports, planning documents, and/or other published materials as produced as a result of this project.

EXHIBIT C

Specific Provisions and Project Schedules

Provisions for Design/Construction

Financial Cost Categories

The Sponsor shall segregate and group project costs in categories as follows:

1) "Design/Engineering Services" (as applicable), including topographic surveys/mapping, geometric design, plans preparation, geotechnical and pavement design, specifications, contract documents.

2) "Construction" (must be accounted for in accordance with approved work items as presented in the bid tabulation).

3) "Construction Engineering" (as applicable), including contract administration, inspection/field engineering, materials testing, construction staking/as-built plans and other.

4) "Sponsor Administration" directly associated with this Project (not to exceed 5% of project costs).

5) "Sponsor Force Account" contribution (if applicable).

6) "Contingencies" (not to exceed 5% of construction costs).

7) "Other" with prior approval of the State.

Design Review – Plans, Specifications and Estimates

Plans, specifications and estimates shall be accomplished by, or under the direct supervision of a qualified engineer registered by the State of Arizona. The Sponsor shall conduct a Concept Design Review meeting with the State and Sponsor's consultant at approximately the thirty percent (30%) completion point in the design of the Project, and a Final Design Review at one hundred percent (100%) plan completion.

These mandatory reviews shall be completed before the Sponsor will be permitted to proceed with the Project. The State shall issue an approval to proceed with final design upon satisfactory completion of the 30% review. The State shall issue an approval of the 100% plans, specifications and estimates upon satisfactory completion of the 100% review. Upon State approval, the Sponsor may proceed to advertising if construction is included in the scope of the Project, or must close the Project and submit a final grant reimbursement request if the grant is for design only.

Any modification to the approved plans, specifications and estimates authorized by the Sponsor shall also be subject to approval of the State. **Changes made to approved plans, specifications, and estimates at any time must be authorized by the State prior to executing the changes in order to be eligible for reimbursement by the State.**

The National Environmental Policy Act (NEPA) documentation must be complete and approved by the State and/or FAA prior to construction. The Sponsor shall submit a copy of the documentation to the State.

FAA Notice of Proposed Construction

The Sponsor agrees to submit an FAA Form 7460-1, Notice of Proposed Construction or Alteration before construction, installation or alteration of any Project under this Agreement that falls under the requirements of Subpart B to Part 77, Objects Affecting Navigable Airspace.

Bidding - Alternate Bidding Methods

Design, Bid, Build is the standard and preferred method for project delivery for State airport development grant projects. Alternative contracting methods (Design Build, Construction Manager at Risk, Task Order Contract) may be used in accordance with A.R.S. Title 34, Chapters 1, 2 and 6. **Use of an alternative contracting method shall be reviewed and approved by the State prior to the Sponsor executing a contract for the work.** If a project is approved for an alternative contracting method, the Sponsor must comply with all Federal, State, and Local policies, regulations, rules, and laws, as well as all requirements of this grant agreement within that method.

Based on Bids

If a Sponsor has requested a match to a Federal construction grant that was based on bids (the project was already advertised by the Sponsor with no existing State airport development grant for the design work), then all design coordination with the State required by this agreement must have been met during the design process for any prior design work to be considered eligible for reimbursement by the State. The State shall review any documentation and work done prior to bidding and, at its sole discretion, determine the eligibility of the work. Only work items necessary to complete the Project as stated in Exhibit C, Schedule One, Project Description, may be considered eligible.

Contractor Allowance

This item may only be used to cover costs of unknown, unforeseen circumstances within the scope of the grant that are necessary for Project completion. (For example: if unknown underground utilities must be removed or relocated to accomplish the Project) **This item must have prior approval of the State for each use of the item during construction in order to be eligible for reimbursement by the State.** The bid item shall be clearly defined in the contract documents with concise language describing when it may be utilized. It shall also be specified that the item may not be used at all. The allowance may only be used for unforeseen items directly related to the Project.

Contingencies

Contingencies are to be used as an estimating tool during the preliminary phases of Project development. They are intended to allow room in the grant funding level for reasonable price increases or approved added items during design. Contingencies are not eligible for reimbursement by the State as bid items in a construction contract.

Itemized Allowance

Use of an itemized allowance items may only be included in a contract with prior approval of the State. Any use of an itemized allowance bid item as part of a grant must be for a clearly defined portion of the project. (For example: cabinet allowance – cabinets in terminal storage room as shown on plans to be selected by Sponsor, or carpet allowance – industrial Berber carpet for 200 SF lobby to be selected by Sponsor) Each contract allowance item must be approved by the State in order to be included in the bid package. The State will not approve use of an item to cover expenses not directly related to the item. (For example: Left over funds from cabinet allowance cannot be used to purchase light fixtures)

Construction Inspection

Airport planning, design, project estimates, bidding, and construction inspection are the direct responsibility of the Sponsor and may be accomplished by the Sponsor's staff or by a qualified consultant. The Sponsor shall provide and maintain competent technical supervision throughout the Project to assure that the work conforms to the plans, specifications and schedules approved by the State and the Sponsor.

Construction inspection shall be accomplished by, or under the direct supervision of a qualified engineer registered by the State of Arizona.

The Sponsor shall subject the construction work and any related documentation on any Project contained in an approved Project application to inspection and approval by the State and the FAA. The State shall, if in accordance with regulations and procedures, prescribe such work as needed for the Project.

Change Orders

The Sponsor shall notify the State in advance of the need for a change. Such notification shall clearly define the changed or added bid items, the locations of changed work, the quantities and costs of changed work, and the time required for the change. Justification for the change must be provided to the State by the Sponsor. Change orders may be approved by the State only if they are clearly necessary to accomplish the original grant scope. If approval is granted by the State, the Sponsor shall follow up with the written change order for the State's review and approval in a timely manner. The Sponsor may not request reimbursement for the work done under a change order until the change order is approved by the State.

Construction Contract Documents

Any changes to the construction contract documents (including scope, time and amount), authorized by the Sponsor, must be approved by the State prior to being implemented by the Sponsor in order to be eligible for reimbursement under the grant. All changes, as well as any notifications and approvals related to the changes, shall be documented in the final contract documents, change orders, and as built plans provided to the State at the end of the contract. Verbal requests and approvals are not sufficient as documentation for reimbursement. Final reimbursements will not be made until all documentation is received by the State.

Design/Construction Project Schedules

The Schedule Forms are intended to identify and monitor project scope, costs, and basic milestones that will be encountered during various phases of the Project. The Sponsor shall complete these three schedules showing the project description and total costs, project reimbursements (cash flow) schedule and project milestones.

Schedule One shows the total Project estimated costs associated with each share - State and Federal and Local. Schedule Two shows a projected cash flow for State funds only. The Sponsor is to estimate requests to the State for Project reimbursement. Schedule Three shows anticipated dates of Project milestones. These schedules will be used to keep track of the Project's progress. Be sure to develop realistic schedules.

As the project progresses, and the original reimbursement schedule and or milestone dates change, the Sponsor must submit a revised Schedule to the State for approval.

Schedule One
Design/Construction Project Description and Funding Allocation

Detailed Project Description:

Enter Project Description Here

(FAA AIP # if FSL)

Project Cost Category	Total Estimated Project Cost	Estimated Local Share	Estimated Federal Share	Estimated State Share*
Design/Engineering Services	$	$	$	$
Construction	$	$	$	$
Construction Engineering	$	$	$	$
Sponsor Administration**	$	$	$	$
Sponsor Force Account Work***	$	$	$	$
Contingencies	$	$	$	$
Total Project Costs	$	$	$	$

*Total of this column to be used in Schedule Two.
** Sponsor Administration is not eligible for reimbursement above 5% of the project costs.
*** All force account work is to be approved by the State prior to the grant agreement being signed.

NOTE: The Sponsor must attach a project plan based upon the ALP that clearly shows the scope and the limits of the work.

Schedule Two
Design/Construction Project Reimbursement Schedule

The Sponsor must complete this Project Reimbursement Schedule showing the projected cash flow of State grant funds only for this Project. Projections must include all consultant and contractor services. The reimbursement schedule should be a realistic schedule and will be used to keep track of a project's progress. Reimbursement requests must be submitted regularly by the Sponsor while the grant is active. The cash flow should reflect when a request is submitted to the State, not when invoices are paid by the Sponsor.

Instructions:

1) For "Total State Funds" below, enter the Total Project Costs/Estimated State Share from Schedule One.

2) For each month/year, indicate the projected reimbursement request amount for **State Funds Only** (use whole dollars only, e.g. $540 or $1,300).

3) Continue the process by entering a Zero (Ø) in the month/year for which no reimbursement is anticipated and/or a dollar amount of the reimbursement, until the total State funds are accounted for in the cash flow.

Total State Funds: **$ Enter State Dollars**

Projected Reimbursement Requests / State Cash Flow

Calendar Year	Jan	Feb	Mar	Apr	May	Jun
2013	$	$	$	$	$	$
2014	$	$	$	$	$	$
2015	$	$	$	$	$	$
2016	$	$	$	$	$	$
2017	$	$	$	$	$	$
Calendar Year	Jul	Aug	Sep	Oct	Nov	Dec
2013	$	$	$	$	$	$
2014	$	$	$	$	$	$
2015	$	$	$	$	$	$
2016	$	$	$	$	$	$
2017	$	$	$	$	$	$

Grants expire 4 years from the date of the grant offer. The Sponsor shall schedule the work to be completed within the 4 years.

Schedule Three
Design/Construction Project Milestones

Milestone Duration Guidelines

The below duration periods are intended to provide guidelines for you to consider. These are average time periods (in calendar days), but it is understood these periods may vary by Sponsor and Project, and are subject to modification. If an entry on the form is not applicable, write N/A.

1) The Consultant Selection Phase for all Projects, regardless of type, is approximately ninety (90) days but should not exceed one hundred eighty (180) days.
2) The Design/Engineering Phase is subject to the type and complexity of the Project, however, most designs can be accomplished within one hundred eighty (180) days to two hundred and seventy (270) days.
3) The Bidding Phase typically should be sixty (60) days or less.
4) The Construction Phase is dependent upon the type of Project, the airport traffic, and the available construction season, generally ninety (90) days to three hundred sixty (360) days.
5) The State review periods should be fifteen (15) days.

Design/Construction Milestone Schedule

Milestones	Duration # of Days	Start Date		Completion Date	
		Proposed	Actual	Proposed	Actual
Consultant Selection Phase					
Submit Scope for State Review/Approval*					
Submit Contract for State Review/Approval					
Award Consultant Contract					
Design & Engineering Phase					
Sponsor Issue Notice to Proceed/Start Design					
Conduct 30% Design Review/Approval					
Conduct Final Design Review/Bid Set Submitted (100%) for Review/Approval					
Bidding Phase					
Bid Set Submitted (100%) for Review/Approval					
Issue Invitation for Bids					
Submit Bid Tab for State Review/Approval					
Award Construction Contract/Submit to the State					
Construction Phase					
Pre-Construction Meeting					
Issue NTP – Begin Construction					
Final Inspection					
Submit As-Builts & Final Documentation					
Submit Final Reimbursement Request and Sponsor Closeout Letter					

* The solicitation for qualifications and the service agreements must contain a list of projects, including this grant project, per A.R.S. 34-Chapter 6.

STATE GRANT AGREEMENT FOR AIRPORT PROJECTS AVIATION DIVISION

NMDOT - AVIATION DIVISION
GRANT ASSURANCES EXCERPT FROM LEGAL DOCUMENT
REVISION DATE - 06-2014

SECTION EIGHT - ASSURANCES

The Sponsor hereby covenants and agrees with the Division the following by signing this Agreement:

1. The Sponsor agrees that it will operate the airport receiving aid under this application for the use and benefit of the public on fair and reasonable terms, and without unjust discrimination.

2. The Sponsor specifically agrees that it will keep said airport open to all types, kinds and classes of Aeronautical use without discrimination between such types, kinds, and classes: **provided**, that the Sponsor establish such fair, equal and not unjustly discriminatory conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

3. The Sponsor agrees that in its operation of the airport and all facilities. Neither it nor any person or organization occupying space on facilities thereon will discriminate against any person or class of persons by reason of race, color, creed, or national origin in the use of the facility provided for the public on the airport; and further that any person, firm or corporation rendering service to the public on the airport will do so on a fair, equal and not unjustly discriminatory basis to all users thereof.

4. The Sponsor will operate and maintain in a safe and serviceable condition the airport and all facilities connected therewith which are necessary to serve the aeronautical users and will not permit any activity which would interfere with its use for airport purposes.

5. The Sponsor will, by acquisition of land interest, acquisition of easements, airspace zoning, or other accepted means, protect the runway approaches and the airspace in the immediate vicinity of the airport from the construction, alteration, erection or growth of any structure which would interfere with the use or operation of the airport.

6. The Sponsor agrees that no landing fee shall be charged any owner or operator of aircraft using said airport; which would be in violation of Section 64-1-16, NMSA 1978, as amended.

7. If said airport is on private land, the Sponsor shall attach a duly executed agreement permitting public
use of this land for airport purposes without limit as to time, titled "Exhibit C".

8. The Sponsor agrees to comply with the New Mexico Aviation Act and the rules and regulations promulgated there under.

9. The Sponsor hereby specifically agrees that it shall not award the contract for which this grant is given, nor shall bidding documents be given to any contractor which or who is subject to suspension or debarment by the U.S. Department of Transportation or any of its agencies, or the New Mexico Department of Transportation at the time of the bidding or award of the contract. Violation of this provision shall void this grant.

THE 164 REVIEW AND SIGNATURE PROCESS

NAVAJO NATION
EXECUTIVE ORDER NO. 07-2013

April 18, 2013

WHEREAS:

1. The President of the Navajo Nation serves as the Chief Executive Officer for the Executive Branch of the Navajo Nation government with *full* authority to conduct, supervise, and coordinate personnel and programs of the Navajo Nation; and

2. The President of the Navajo Nation holds the fiduciary responsibility for the proper and efficient operation of all Executive Branch offices and functions; and

3. The Office of the Attorney General of the Navajo Nation is charged with protecting the legal needs of the Navajo Nation; representing both Executive and Legislative Branch interests, and, providing legal advice to the Executive and Legislative Branch, including the Navajo Nation Council; and

4. The Navajo Nation Council by Resolution CO-45-12, adopted amendments to Title 2 of the Navajo Nation Code; and

5. To fully protect the interests of the Navajo Nation government, the process for legislative and non-legislative review under the Section 164 review process using the SAS Review Sheet requires the Executive Branch to conform to the Title 2 Amendments; and

6. The term "SAS" currently is used for the process by which Executive Branch agencies review documents and sign an "SAS" sheet. There are three classes of documents that currently are reviewed by Executive Branch agencies through the SAS process:

   a. Documents requiring review and approval by the Navajo Nation Council or Committee under 2 N.N.C. § 164(A).
   b. Documents requiring review and signature under 2 N.N.C. § 164(B) before approval by the President.
   c. Documents that do not require review and approval under either Section 164(A) or (B), but which through some other statutory requirement or through administrative practice require review and signature before approval or execution by an Executive Branch official or employee.

THEREFORE:

1. In accordance with the 2012 Title II amendments, three categories of review will be used:

   a. ***Section 164(A) Review***: covers documents that require Legislative approval under Section 164(A) of Title II.

   b. ***Section 164(B) Review***: covers documents that require review and signature of Executive Branch officials or employees prior to execution by the President under Section 164(B) of Title II.

   c. ***Executive Review***: covers documents that require review and signature of Executive Branch officials or employees pursuant to Navajo Nation laws other than Section 164(A) or (B).

2. The term "SAS" will no longer be used. Instead, the three classes of review will be utilized, and forms will be generated to clearly distinguish the different classes of documents.

3. An electronic means of tracking and viewing the status of these review packets shall be developed and implemented through a web browser to provide transparency and convenience to the Navajo Nation. Once the electronic tracking system is operational, program sponsors, reviewers, and appropriate IT leadership in each division shall be responsible for taking any necessary training to learn how to use the electronic tracking system.

4. **Documents to be Reviewed under Section 164(A)**
   Section 164(A) lists five documents that require legislative approval: (1) statements of policy, (2) enactment of positive law, (3) intergovernmental agreements, (4) budget allocations, and (5) budget reallocations. Each document is defined in Title II, Section 110. Under Executive Order 01-2004, issued by President Joe Shirley, Jr. on July 1, 2004, Section 164(A) documents require legal review by the Department of Justice before an Executive Branch official or employee can seek a Council Delegate sponsor for that legislation. Further, in practice, the Navajo Nation Council and Committees generally expect an SAS sheet to be included as part of the materials included in a legislation packet.

   Through this Executive Order, the Office of the President and Vice President reaffirms that review and signature of the Department of Justice will be required for documents listed in Section 164(A) before Executive Branch officials or employees may seek a Council Delegate sponsor. The Department of Justice (DOJ) will be required to review the document within seven (7) working days of the date and time the document is first submitted to DOJ. OMB and the Office of the Controller will also be required to review all 164(A) documents having a financial impact on the Nation. For such documents requiring their review, OMB and Office of the Controller will be required to review and sign such documents within seven (7) working days.

   Prior to the effective date of this Executive Order, the Department of Justice shall develop and issue a Section 164(A) review sheet, which will be used by all Executive Branch officials and employees.

5. **Documents to be Reviewed Under Section 164(B)**
   There are eight documents listed in Section 164(B) requiring review and signature before execution by the President: (1) subcontracts, (2) grants, (3) contracts expending Council-appropriated funds, (4) letters of assurance, (5) memoranda of understanding, (6) memoranda of agreement, (7) other agreements that do not involve spending of money, and (8) amendments to any of these documents.

   Under Section 164(B), only four individuals are listed as required to review and sign a document: (1) the Division Director, (2) the Director of the Office of Management and Budget for documents having a financial impact on the Navajo Nation; (3) the Controller for documents having a financial impact on the Navajo Nation.

and (4) the Attorney General. Further, the Business Regulatory Department has separate authority to review contracts for compliance with the Navajo Business Opportunity Act. *See* 5 N.N.C. § 207(C)(5).

The Office of the President and Vice President mandates that those five reviewers are the only ones required for Section 164(B) review. Depending on the document, only three or four of those reviewers will be required. However, no other individual or program's review and signature will be required. Other agencies, such as Risk Management or other insurance programs, may be consulted for advice on their area of expertise, but their signatures will not be included on the Section 164(B) review sheet.

Neither Section 164 nor Executive Order currently sets a timeline for programs to review a Section 164(B) document. For the review process to work, a timeline is necessary. Therefore, the Office of the President and Vice President hereby requires each of the four (4) reviewers under Section 164(B) to conduct the review within seven (7) working days from the date and time it is received. However, for the Business Regulatory Department, review shall be completed in two (2) working days as that office's review is limited to NBOA compliance. The Office of the President and Vice President encourages programs to send any complex documents or documents never before reviewed by Section 164(B) reviewers as a "pre-review" before submitting them through the process. If programs work with Section 164(B) reviewers in advance of formally submitting the document, seven working days is sufficient for review and signature.

Prior to the effective date of this Executive Order, the Department of Justice shall develop and issue a Section 164(B) review sheet, which will be used by all Executive Branch officials and employees.

6. **Document Requiring Executive Official Review Outside Sections 164(A) and (B)**
This category of review includes different types of documents that require some sort of Executive Branch review, such as relinquishments of Navajo membership or Credit Services loan approvals, but which are not listed in Section 164(A) or (B). There is no one form that can cover these different types of review, and programs currently use modified forms of an SAS sheet. Before this Executive Order becomes effective, each Executive Branch program shall develop a list of all those documents it currently sends through SAS review. For all those documents that do not fall under Section 164(A) or (B), specific forms shall be developed listing the Executive Branch offices or officials that will review and sign. Further, the programs shall develop clear timelines for review of such documents. Programs are encouraged to work with the Department of Justice in the development of such forms.

7. **Role of Programs**
It is important to emphasize that programs sponsoring documents for review are ultimately responsible for preparing complete and accurate document packages prior to submitting them to reviewers. Programs sponsoring documents are also responsible for ensuring that document packages are uploaded into and tracked using the electronic tracking system. Incomplete or inaccurate packages unnecessarily result in time and work for reviewers to attempt to fix the problems before moving a document forward. Further, programs must anticipate deadlines under their funding agreements or from their vendors and not attempt to push through documents at the last minute, including hotel contracts for trainings and conferences. Programs are on notice that the timelines set by this Executive Order do not mean that programs may expect immediate action on document review. Programs therefore shall not attempt to push documents through the system in a few days or hours when adequate preparation would have allowed the documents to be reviewed within the reasonable time limits set out in this Order.

8. **Role of Reviewers**
Consistent with the process stated in Section 164(B), the officials reviewing any of the three classes of documents are to "review and sign." They are not "approving" the document. They are making comments and recommendations to the officials or employees authorized to approve or execute the document. Reviewers may make suggestions on how to improve the document, and may work with the sponsoring program to incorporate

those changes within the required review time limit. However, they do not have the authority to reject a document and return it the program unsigned, hold a document past the required time period to force programs to make changes, or otherwise refuse to sign or act to move the document forward. Reviewers will also be responsible for making sure that document packets needing their review are processed using the electronic tracking system.

Based on these principles, the Office of the President and Vice President mandate the following guidelines to all reviewers. There are only three actions a reviewer can take: (1) sign with the comment that the document is sufficient as is, (2) sign with comments that the document is not sufficient based upon specific concerns within the authority of that official to state, or (3) not sign it within the required time period. If an official does not sign the Review sheet within the required time period, it will move forward automatically, and the lack of signature will mean that there are no comments or objections. The sponsoring program may choose to revise the document after review and resubmit the document to the reviewer before moving the document forward to the next reviewer. Further, once the review process is complete, the Office of the President and Vice-President may require the program to work with the reviewer to address any comments and fix the document.

FURTHERMORE:

1. This Executive Order will become effective on July 1, 2013, to give all Executive Branch officials and employees time to generate forms and train staff on the new review procedures. After that date, SAS review within the Executive Branch will not exist, and all Executive Branch officials and employees will refer to the review process under one of the three classes of review: (1) Section 164(A) Review, (2) Section 164(B) Review, or (3) Executive Review. Training sessions will be coordinated by the Department of Justice.

2. Pursuant to 2 N.N.C. §1085 (C)(14), I, Ben Shelly, President of the Navajo Nation, hereby direct that this Executive Order No. 07-2013 shall be binding on all Navajo Nation Executive Branch employees and subject to enforcement under the Navajo Nation Personnel Policies Manual.

Executed at the Office of the President and Vice President of the Navajo Nation this 18th day of April 2013.

Ben Shelly, President
THE NAVAJO NATION

ATTEST:

Harrison Tsosie, Attorney General
THE NAVAJO NATION DEPARTMENT OF JUSTICE

Navajo Nation

Title II Reform Act of 2012

D. Salary advances made to a Council Delegate during any bi-weekly pay period shall be deducted in amounts not less than fifty dollars ($50.00) from his or her bi-weekly pay, unless larger deductions are authorized in writing by the individual Council Delegate.

E. The Navajo Nation shall have the right to deduct from any and all moneys or other credits which the Navajo Nation owes to any Council Delegate receiving an advance under this Section, an amount equal to the total funds advanced at any time within 30 days prior to the expiration of the Council Delegate's term of office, or at any other time after the Council Delegate leaves his or her office for any reason whatsoever, whether voluntary or involuntary.

F. The balance of any travel or salary advance not cleared within 30 days from the date of issue shall, at the Council Delegate's election, either be deducted from the Council Delegate's next bi-weekly pay or be assessed interest at a rate of 1.2% per annum. The balance of any travel or salary advance outstanding at year end shall be deducted from any and all moneys which the Navajo Nation owes to the Council Delegate. These deductions shall not be made from Deferred Compensation balances or payments.

§ 108. Group Insurance

A. Navajo Nation group insurance shall be provided for Navajo Nation Council Delegates and their dependents.

B. The Navajo Nation shall pay a percent of the insurance premium as its contribution.

§ 109. Tax Declarations and Returns; Deductions

A. Each delegate to the Navajo Nation Council is a common law employee of the Navajo Nation for federal employment tax purposes.

B. The Controller of the Navajo Nation shall make deductions in the proper amounts from the salaries of the delegates to the Navajo Nation Council for federal income tax and social security income withholding.

C. Excluded from participating in the Navajo Nation Personnel Policy are the elected officials, public boards, volunteer, and any other contractual services agreements to provide services to the Navajo Nation Government.

§ 110. Definitions

The following definitions apply in this Chapter:

A. **Agency** generally means a division or unit of a government or other organization. When used to refer to the geographic divisions of the Navajo Nation it means the collection of Chapters in each of the five geographic divisions: Chinle Agency, Eastern Agency, Fort Defiance Agency Northern Agency, Western Agency.

B. **Associated Amendments** means to alter, change, add or modify an existing agreement, subcontract, or Letter of Assurance Agreement listed in 2 N.N.C. §164(B)(1).

C. **Budget resolution** is a resolution passed by the Navajo Nation Council appropriating funds pursuant to 12 N.N.C. §800, et seq.

D. **Chapter**, as stated in 26 N.N.C. §2(6), means units of local government which are political subdivisions of the Navajo Nation.

E. **Comment period** means calendar days in which proposed resolutions are posted on the Navajo Nation Council's website and available for submission of written comments by Chapter

governments and departments or divisions of the Navajo Nation government. The comment period shall begin to run at midnight of the day a resolution is introduced into the legislative process.

F. **Confidential matter** means a matter which violates the Navajo Nation Privacy and Access to Information Act or whose unauthorized disclosure could be prejudicial or detrimental to the legal or financial interests of the Navajo Nation government or its entities. The Navajo Nation Department of Justice shall determine what matters qualify as confidential. Matters determined to be confidential shall not be released without the written approval of the Attorney General or his designee.

G. **Coordinate** means to combine efforts on a common action to produce harmonious actions and results.

H. **Financial impact** means any agreement that obligates the Navajo Nation to expend funds no matter what the sources of the funds, or provides funds to the Navajo Nation.

I. **Iłná** is the part of the process of Nitsáhákees-Nahat'á-liná-Siihasin to collaboratively make and implement a decision, which must be dynamic and vibrant to accomplish effective and efficient outcomes, for sustaining life, in a constant cycle of examining and analyzing issues for growth and development.

J. **Intergovernmental agreements** are agreements between the Navajo Nation and another government that involve the sharing of governmental powers, and includes Indian Self-Determination and Education Assistance Act (P. L. 638) contracts. Intergovernmental agreements do not include agreements between the Navajo Nation and another government where the Nation or the other government acts in a landowner or commercial capacity.

K. **Legislation** generally means the action of legislating or the enactments of a legislative body. As used in 2 N.N.C. §164, it means the enactment of laws or amendments to laws by the Navajo Nation Council.

L. **Letter of Assurance** means a letter sent to another party in lieu of a bond or other surety assuring the receiver that the sender will perform its contract obligations.

M. **Local Government Unit** means political subdivisions of the Navajo Nation including, Chapters, Townships, or other municipal forms of government for the purpose of 2 N.N.C §500 to §503.

N. **Memorandum of Agreement** (MOA) means a binding written agreement between two or more parties to cooperatively work together to resolve an issue of mutual concern, or to accomplish one or more agreed upon projects or one or more mutual purposes. An MOA lays out the ground rules for a positive cooperative effort. It may be used between the tribal government and a private individual or entity, or between the central government and local governance certified chapter of Navajo Nation Township, and is legally enforceable.

O. **Memorandum of Understanding** (MOU) means a non-binding written agreement between two or more parties indicating an intended line of action where the parties agree to act in good faith to comply with the terms. It may be used between the tribal government and a private individual or entity, or between the central government and a local governance certified chapter or Navajo Nation Township, and is not legally enforceable. Agreements between tribal divisions, agencies, programs and non-certified chapters are not MOUs for purposes of 2 N.N.C. §164(B) and may be executed by the appropriate division.

P. **Nahat'á** is a part of the process of Nitsáhákees-Nahat'á-Iiná-Siihasin to strategically plan while utilizing Diné bibeehaz'áanii Bitsé Siléí (foundation of Diné law), statutory laws, informed research and public input (through use of the Naabik'íyáti' process) in a constant cycle of examining and analyzing issues for growth and development.

Q. **Nitsáhákees** is the part of the process of Nitsáhákees-Nahat'á-Iiná-Siihasin which involves critical thinking, and more broadly, to give direction and guidance to the issue at hand, in a constant cycle of examining and analyzing issues for growth and development.

R. **Oversight** means to monitor and review a programs' or entities' execution of legislation, regulations, and policies related to the program or entity or affected subject area. In comparison, legislative oversight is more limited and means to assist programs or entities to efficiently carry out their duties by ensuring adequate funding and ensuring that their governing authority is effective.

S. **Reallocations** are redesignations of appropriated or budgeted funds from one account to another account or to a newly-created account for a different use or purpose.

T. **Resolution**, which is a form of legislation, means a formal action of the Navajo Nation Council or its Committees adopting its approval of or stating its opinion on a matter.

U. **Positive law** means legislation by the Navajo Nation Council that creates or amends a section or sections of the Navajo Nation Code.

V. **Siihasin** is the part of the process of Nitsáhákees-Nahat'á-Iiná-Siihasin to ensure resilience through evaluation of decision-making and outcomes in a constant cycle of examining and analyzing issues for growth and development.

W. **Statements of Policy** are written statements submitted to federal, state or local governments, by a Navajo Nation official stating the official position of the Navajo Nation on proposed legislation or other action by that government.

X. **Subcontract** means a contract that delegates some or all of the responsibilities of an existing contract to another party to perform. The original contractor retains ultimate responsibility for performance of the underlying contract including any responsibilities delegated to a subcontractor.

§ 161. Place

A. All regularly scheduled or special sessions of the Navajo Nation Council shall be held at the Navajo Nation Council Chambers located at Window Rock, Navajo Nation (Arizona) with the following exceptions.

1. If the Chambers in Window Rock are unsuitable for meeting, because of fire, physical damage, remodeling or other cause the Speaker may designate an alternate meeting place in Window Rock, and give reasonable notice to all Council Delegates.

2. A majority of all Council Delegates may agree to hold a meeting in some location in Window Rock other than the Chambers. Such agreement may be by written petition or by motion at any regular or special session of the Navajo Nation Council.

§ 162. Number; Time; Duration

A. There shall be four regular sessions of the Navajo Nation Council each year. Such sessions shall commence at 10 a.m. on the fourth Monday of January, and the third Monday of April, July and October of each year.

B. Special meetings of the Navajo Nation Council may be called upon reasonable and timely notice to all Council Delegates, by the Speaker of the Navajo Nation Council acting on written petition of a majority of all Council Delegates or request by written message from the President.

C. The duration of each session shall be no more than five working days. Each meeting day of the Navajo Nation Council shall be for a minimum of six hours each day of the session or upon completion of the agenda items.

§ 163. Agenda

A. The Navajo Nation Council shall adopt an agenda in accordance with written rules and procedures established by the Navajo Nation Council. In the absence of the adoption of new rules and procedures by an elected Council, the rules and procedures of the last Council shall be used until amended or rescinded.

B. The agenda shall allow for inclusion of a consent schedule which is a listing of resolutions which will likely be approved by unanimous consent of the Delegates in attendance. The consent schedule shall be developed by the Speaker. Upon request by any Delegate, and item on the consent schedule shall be moved to the regular schedule on the agenda. The Speaker shall move any item on the consent schedule which receives more than five (5) minutes of debate or questioning to the regular schedule on the agenda.

C. Once an agenda is adopted, it shall be amended only by two thirds (2/3) vote of the Council.

§ 164. Navajo Nation Council and Committee Legislative Process

A. Statements of policy, enactment of positive law, intergovernmental agreements, budget resolutions, and reallocations, must be reviewed and approved by resolution by the appropriate standing committee (s) and the Navajo Nation Council except as otherwise provided herein.

1. Except for statutorily enumerated situations as set out in 2 N.N.C. §164(A)(16), only Council Delegates or Standing Committees may introduce a proposed resolution to the Standing Committee(s) and the Navajo Nation Council, except where Navajo government employees are authorized by statute or regulation to introduce a proposed resolution. The last day for consideration of resolutions shall be December 31st of the year immediately preceding the swearing in of the new Council. Council delegates, standing committees, and other Navajo government employees who are statutorily authorized to introduce proposed resolutions, may seek the assistance of either the Office of Legislative Counsel or other legal counsel employed by the Navajo Nation to draft proposed resolutions. The Office of Legislative Counsel shall ensure that the proposed resolution is drafted in a proper codified format before it is assigned a number and introduced into the legislative process. The Office of Legislative Counsel shall notify the Council by memorandum of the legal sufficiency of each proposed resolution.

2. Expressions of condolence, congratulations, appreciation, recognition of achievement and other similar expressions of sentiment shall be processed as memorials of the Navajo Nation Council or its standing committees but shall be issued by certificates from the Speaker of the Navajo Nation Council at the written request of any Council Delegate and in the manner set forth at 2 N.N.C. §285(B)(7).

3. After the proposed resolution is deemed properly drafted by the Office of Legislative Counsel, the council delegate(s), standing committee(s) or authorized employee(s) shall

the Council. Memorials are not subject to veto but become effective upon certification by the Speaker pursuant to 2 N.N.C. §221(C). All acts of the vetoing the resolution shall occur within the territorial jurisdiction of the Navajo Nation as described in 7 N.N.C. §254.

B. Agreements not requiring Committee or Council approval.

1. Subcontracts implementing agreements approved under §164(A) above, grants providing funds to the Navajo Nation, contracts expending funds appropriated by the Navajo Nation Council, Letter of Assurance agreements, memoranda of understanding, memoranda of agreement and other agreements that do not expend funds, associated amendments shall not require approval by the Navajo Nation Council or its committees.

2. Prior to final execution as provided in 2 N.N.C. §222, documents not requiring approval by resolution of the Navajo Nation Council or its committees shall be reviewed and signed by the following:

a. The appropriate Division Director for departments and activities under his or her supervision;

b. The Controller (or designee) for all documents having a financial impact on the Navajo Nation;

c. The Director of the Office of Management and Budget (or designee) for all documents having a financial impact on the Navajo Nation; and

d. The Attorney General of the Navajo Nation (or designee).

§ 166. Record of proceedings; interpreters; access to records

A. Proper records of the proceedings of the Navajo Nation Council and all standing committees, boards and commissions shall be kept and the necessary interpreting services shall be provided by the Office of Legislative Services.

B. Access to records of the proceedings of the Navajo Nation Council, standing committees, boards and commissions shall be provided to the public through the Office of Legislative Services and the Central Records Department.

§ 167. Failure to attend

All delegates to the Navajo Nation Council shall attend all regular and special meetings of the Navajo Nation Council or Committees. If any delegate is absent from sixty percent (60%) of the meeting days within a one year period, the Navajo Nation Council may consider a motion to censure said delegate. If his/her absence continues, the Navajo Nation Council shall have the authority to declare the delegate's seat forfeited and vacant.

§ 168. Sergeant at Arms; appointment; duties

A. The Director of the Division of Public Safety shall designate a member of the Navajo Nation police force to fill the post of Sergeant at Arms.

B. The Sergeant at Arms shall maintain order under the direction of the Speaker or Presiding Chairperson of the Navajo Nation Council or Committees and shall make appropriate arrangements for maintenance of law and order during Council and Committee sessions.

§ 169. Quorum

Document No. 000076 Date Issued: 07/17/2013

SECTION 164 REVIEW FORM

Title of Document: Rescinding CAP-34-80; Approving Navajo N Contact Name: HENRY, MICHELLE A

Program/Division: DIVISION OF NATURAL RESOURCES

Email: michellehenry@navajo-nsn.gov Phone Number: 928-871-7947

Division Director Approval for 164A:

Check document category; only submit to category reviewers. Each reviewer has a maximum 7 working days, except Business Regulatory Department which has 2 days, to review and determine whether the document(s) are sufficient or insufficient. If deemed insufficient, a memorandum explaining the insufficiency of the document(s) is required.

Section 164(A) Final approval rests with Legislative Standing Committee(s) or Council

			Sufficient	Insufficient
☒ **Statement of Policy or Positive Law:**				
1. OAG:		Date: 7/30/13	☑	☐
☐ **IGA, Budget Resolutions, Budget Reallocations or amendments: (OMB and Controller sign ONLY if document expends or receives funds)**				
1. OMB:		Date:	☐	☐
2. OOC:		Date:	☐	☐
3. OAG:		Date:	☐	☐

Section 164(B) Final approval rests with the President of the Navajo Nation

☐ **Grant/Funding Agreement or amendment:**				
1. Division:		Date:	☐	☐
2. OMB:		Date:	☐	☐
3. OOC:		Date:	☐	☐
4. OAG:		Date:	☐	☐
☐ **Subcontract/Contract expending or receiving funds or amendment:**				
1. Division:		Date:	☐	☐
2. BRD:		Date:	☐	☐
3. OMB:		Date:	☐	☐
4. OOC:		Date:	☐	☐
5. OAG:		Date:	☐	☐
☐ **Letter of Assurance/M.O.A./M.O.U./Other agreement not expending funds or amendment:**				
1. Division:		Date:	☐	☐
2. OAG:		Date:	☐	☐
☐ **M.O.A. or Letter of Assurance expending or receiving funds or amendment:**				
1. Division:		Date:	☐	☐
2. OMB:		Date:	☐	☐
3. OOC:		Date:	☐	☐
4. OAG:		Date:	☐	☐

DOJ
DATE/TIME 7/19/13 @ 4:09p
DOC: 000076
UNIT: NM

NAVAJO NATION DEPARTMENT OF JUSTICE

REQUEST FOR SERVICES

RECEIVED JUL 19 2013 DEPARTMENT OF JUSTICE RECEPTIONIST DESK

-CLIENT TO COMPLETE-

DATE OF REQUEST: July 19, 2013 DIVISION: NATURAL RESOURCES
REQUESTING PARTY: Michelle Henry DEPARTMENT: Administration
PHONE NUMBER: (928) 871-7947 PROGRAM: Administration

COMPLETE DESCRIPTION OF LEGAL NEED AND SERVICES REQUESTED (attach documents):

SAS#000076 - Rescinding CAP-34-80; Approving the Navajo Nation Energy Policy of 2013.

DEADLINE: REASON:

RECEIVED JUL 19 2013 DEPARTMENT OF JUSTICE NATURAL RESOURCES UNIT

-DOJ SECRETARY TO COMPLETE-

DATE/TIME IN UNIT: RESPONSIBLE STAFF PERSON: Biddah
REVIEWED AND ASSIGNED: TIME/HRS/MIN: 4:00pm COMPLETION DATE: 7/30/13

[✓] REVIEW FOR LEGAL SUFFICIENCY
[ ] REQUEST FOR LEGAL OPINION
[ ] RESOLUTION:
[✓] SURNAME
[ ] APPOINTMENT/CONFERENCE/MEETING
[ ] REVIEW & ADVISE

-DOJ ATTORNEY/ADVOCATE TO COMPLETE-

legally sufficient.

REVIEWED BY: DATE: TIME: Hrs. Min.
SURNAMED BY: DATE: 7/30/13 TIME: 2 Hrs. — Min.

DATE SENT TO DOJ RECEPTIONIST: Called for document pickup. Date: Time: By:

PICKED UP BY: Michelle Henry DATE/TIME: 7/30/pm 4:45pm

PLEASE PRINT *PLEASE PRINT* PLEASE PRINT* PLEASE PRINT

LEGISLATIVE BRANCH
NAVAJO NATION

HONORABLE JOHNNY NAIZE
Speaker, 22nd Navajo Nation Council

September 11, 2013

MEMORANDUM

TO : *Honorable* Members
Resources and Development Committee
Naa'bik'iyati' Committee
Navajo Nation Council

FROM : Hon. Johnny Naize, *Speaker*
22nd Navajo Nation Council

SUBJECT : **ASSIGNMENT OF LEGISLATION**

Pursuant to 2 N.N.C § 164 (A)(4), this memorandum serves to inform and advise you that I assign the following legislation to the Resources And Development Committee, Naa'bik'iyati' Committee and the Navajo Nation Council;

Legislation No. 0276-13

RELATING TO RESOURCES AND DEVELOPMENT AND NAA'BIK'IYATI'; RESCINDING CAP-34-80; APPROVING THE NAVAJO NATION ENERGY POLICY OF 2013.

As the Committee assigned to consider the legislation, Legislation No. 0276-13 must be placed on the Resources And Development Committee, Naa'bik'iyati' Committee and the Navajo Nation Council's agenda at the next regular meeting for final consideration.

ATTACHMENT: Legislation No. 0276-13

xc: Hon. Ben Shelly, *President*
The Navajo Nation
Harrison Tsosie, *Attorney General*
Mark Grant, *Controller*
Dominic Beyal, *Executive Director, OMB*
Honorable Roscoe Smith, Council Delegate (*Prime Sponsor*)

OFFICE OF THE SPEAKER / NAVAJO NATION LEGISLATIVE BRANCH / POST OFFICE BOX 3390 / WINDOW ROCK, ARIZONA 86515
TELEPHONE (928) 871-7160 FAX (928) 871-7255

Office of Legislative Counsel
Telephone: (928) 871-7166
Fax: (928) 871-7576

Johnny Naize
Speaker of the Navajo Nation Council

MEMORANDUM

TO: Honorable Roscoe Smith
Crystal, Fort Defiance, Red Lake, Sawmill Chapters

FROM: Mariana Kahn
Mariana Kahn, Attorney
Office of Legislative Counsel

DATE: August 10, 2013

SUBJECT: PROPOSED NAVAJO NATION COUNCIL RESOLUTION; AN ACTION RELATING TO RESOURCES AND DEVELOPMENT AND NAABIK'ÍYÁTI'; RESCINDING CAP-34-80; APPROVING THE NAVAJO NATION ENERGY POLICY OF 2013

As requested, I have prepared the above-referenced proposed resolution and associated legislative summary sheet pursuant to your request for legislative drafting. Based on existing law and review of documents submitted, the resolution drafted is legally sufficient. However, as with all legislation, it is subject to review by the courts in the event of challenge. You are encouraged to review the proposed resolution to ensure that it is drafted to your satisfaction.

If you are satisfied with the proposed resolution, please sign it as "sponsor" and submit it to the Office of Legislative Services where it will be given a tracking number and sent to the Office of the Speaker for assignment.

If the proposed resolution is unacceptable to you, please contact me at the Office of Legislative Counsel and advise me of the changes you would like made to the proposed resolution.

Thank you for your service to the Navajo Nation.

13-520-1

THE NAVAJO NATION
LEGISLATIVE BRANCH
INTERNET PUBLIC REVIEW PUBLICATION

LEGISLATION NO: _0276-13____ SPONSOR: Roscoe Smith

TITLE: An Action Relating To Resources And Development And Naabik'iyati': Rescinding CAP-34-80 Approving The Navajo Nation Energy Policy of 2013

***Date posted*: September 11, 2013 at 4:15 pm**

Digital comments may be e-mailed to comments@navajo-nsn.gov

Written comments may be mailed to:

Executive Director
Office of Legislative Services
P.O. Box 3390
Window Rock, AZ 86515
(928) 871-7590

Comments may be made in the form of chapter resolutions, letters, position papers, etc. Please include your name, position title, address for written comments; a valid e-mail address is required. Anonymous comments will not be included in the Legislation packet.

THE NAVAJO NATION
LEGISLATIVE BRANCH
INTERNET PUBLIC REVIEW SUMMARY

LEGISLATION NO.: **0276-13**

SPONSOR: **Honorable Roscoe Smith**

TITLE: **An Action Relating To Resources And Development And Naabik'iyati'; Rescinding CAP-34-80 Approving The Navajo Nation Energy Policy Of 2013.**

Posted: **September 11, 2013 at 4:15 pm**

5 DAY Comment Period Ended: **September 16, 2013**

Digital Comments received: ***none***

Executive Director
Office of Legislative Services

9.17.2013. 9:00 AM

Date

COMMITTEE REPORT
OF THE
RESOURCES AND DEVELOPMENT COMMITTEE

22nd Navajo Nation Council Third Year – 2013	LEGISLATION **0276-13** Presenting Sponsor: Honorable Roscoe D. Smith, Council Delegate
An action relating to Resources and Development and Naabik'iyati'; Rescinding CAP-34-80; approving the Navajo Nation Energy Policy of 2013	

Mr. Speaker:
The Resources and Development Committee, to whom has been referred Legislation 0276-13, has had it under consideration and reports a **DO PASS** recommendation and thence **REFERRED TO THE NAABIK'IYATI' COMMITTEE** *on this 8th day* of October, 2013.

Katherine Benally, Chairperson
RESOURCES AND DEVELOPMENT COMMITTEE

COMMITTEE ACTION:

Motion to Support:	Leonard H. Pete
Second:	George Apachito
Vote:	4-0-0

22nd NAVAJO NATION COUNCIL

Third Year 2013

The **NAA'BIK'IYATI' COMMITTEE** to whom has been assigned:

LEGISLATION No. 0276-13

An Action Relating To Resources And Development And Naa'bik'iyati'; Rescinding CAP-34-80; Approving The Navajo Nation Energy Policy Of 2013. *(Sponsored by Honorable Roscoe Smith, Honorable Johnny Naize, Honorable Charles Damon II)*

Has had it under consideration and reports the same with the recommendation that it **DO PASS** with two amendments:

Amendment No. 1 (Motion by Honorable Walter Phelps and Second by Honorable Charles Damon II; VOTE 11-1)

On Page 3 of 5, lines 22 to 27 strike section (l) in its entirety:

> ~~l. The Nation's coal resources make a significant contribution to the support of many Navajo families and to the financial stability of the Navajo Nation government and its communities. The current policies of the federal government of the Unites States do not favor the use of coal. These policies negatively impact the Navajo Nation and the lives of its residents, and are contrary to the interest of the Navajo Nation; and~~

Amendment No. 2 (Motion by Honorable Dwight Witherspoon and Second by Honorable Walter Phelps; VOTE 11-1)

On attached 'Exhibit A', page 9 of 12, Section 9: Coal, Section 901: after 'legislation' delete "~~and adapt to the new federal regulatory environment~~"

And therefore, referred to the NAVAJO NATION COUNCIL

Respectfully submitted,

Johnny Naize, Chairman

Adopted: _____ Not Adopted: _____

Legislative Advisor Legislative Advisor

Date: October 10, 2013
The vote was **8** in favor and **4** opposed
Motion: Honorable Danny Simpson
Second: Honorable Jonathan L. Hale

CO-50-13

RESOLUTION OF THE
NAVAJO NATION COUNCIL

RELATING TO RESOURCES AND DEVELOPMENT AND NAABIKI'ÍYÁTI; RESCINDING CAP-34-80; APPROVING THE NAVAJO NATION ENERGY POLICY OF 2013

BE IT ENACTED:

1. The Navajo Nation makes the following findings with respect to this resolution.

a. The Navajo Nation Council adopted the Navajo Nation Energy Policy, CAP-34-80 on April 29, 1980 ("1980 Energy Policy"); and

b. The Nation acknowledges the enduring principles and motivations set forth in the 1980 Energy Policy; and

C. The Nation desires to update and amend the energy policies of the Nation by rescinding the 1980 Energy Policy (CAP-34-1980) by approving this 2013 Energy Policy; and

d. The energy resources of the Nation are owned by the Nation and are to be administered and managed by the Nation for the benefit of all Diné; and

e. The Nation will seek to maximize its level of autonomy in managing its energy resources and energy use on the Nation; and

f. The Nation will take a leadership role in exploring and developing its energy resources to exercise its political sovereignty, to build true economic sovereignty, and to promote greater self-determination for future generations of Diné; and

g. The Nation has established wholly owned businesses that explore for, develop and manage certain of its energy resources. To optimize the Nation's use, management and conservation of its energy resources, the Nation may choose to utilize a combination of its wholly owned entities and outside energy companies to take advantage of the best technologies and capabilities to achieve the optimal balance of cost and results; and

h. The 1980 Energy Policy helped build capacity of the Nation to realize many successes in the form of more favorable contracts and greater ownership of certain energy resources. It is acknowledged that the Nation can make improvements in the areas of governance, ownership, management, community involvement, health impacts, conservation and environmental protection of the Nation's energy resources; and

i. The Navajo government should ensure that the local impacted communities are educated on relevant energy development and related issues. Prior energy development and related projects occurred with little or no consultation or results; and

j. Energy forms a cornerstone of the Navajo economy by providing jobs for our people, electricity for our homes and business, and revenues for our local and central government. Developing energy resources will expand government revenues, create new industries and promote sustainable jobs for the Diné. This economic base provides opportunities for Navajos to pursue technical and managerial careers in many energy-related products, service and supporting industries. The ability for Navajos to build stable careers while remaining close to their families will build the strength of our families and communities that have been fragmented by the need of our people to find work in metropolitan centers. A growing Navajo economy draws

educated and experienced tribal members back to the Nation, and provide the economic growth to support Navajo entrepreneurs and business owners; and

k. The Navajo People have made invaluable contributions to the strength of the United States and its economy by permitting and assisting in the extraction of uranium over several decades. Numerous uranium mines across the Nation were not properly reclaimed leading to widespread contamination and illness of our people and livestock; and

l. The United States is the trustee of the resources of the Navajo Nation. In this role the United States government has a duty to protect the Nation's energy resources and to assist the Nation to manage such resources for the benefit of the Diné. The United States government is to engage in government-to-government dialogue and understanding and to respect Navajo Nation's decision in the users of its resources. Historically, the United States government has sought to control the Nation's resources to benefit external interests in the uses of its natural resources or refrained from assisting the Nation in the protection of its interests; and

m. The Nation's depletable fossil fuels are abundant; however, some fossil fuels are currently out of favor with federal and state regulatory and environmental policies. A balanced portfolio of fossil fuel and cleaner renewable energy resources will provide the Nation with greater economic and financial stability; and

n. The Nation has the great potential of solar and wind energy resources. The development of these cleaner renewable resources can provide our communities with cleaner energy and generate substantial economic value if sold to surrounding communities and metropolitan regions; and

o. Many of the Nation's residents, businesses and institutions are located in growth centers while many others are dispersed in remote regions and lack access to electric

power. Greater access to electric power will provide a greater opportunity and access to modern conveniences for the Navajo residences; and

p. The Nation is situated to provide pipeline and electrical transmission service provides access to more direct routes between energy sources and energy customers. The Nation's non-renewable energy resources require transportation and transmission to energy markets. Pipeline and transmission infrastructure can have a substantial impact on the environment communities and the viewscape. Establishing energy corridors are encouraged to enable the Nation to increase its revenues while minimizing the impact on the Nation; and

q. Future development of cleaner renewable energy for export to metropolitan regions can generate substantial rents and business profits. These profits may be utilized to subsidize the cost of utilities for the Nation's residents, institutions and businesses; and

r. By developing and executing a comprehensive energy strategy, the Nation can establish energy independence and build its economy for future generations. Diverse revenue streams from a balanced portfolio of energy extraction, generation and transmission will provide the Diné with economic stability, career opportunities and business opportunities.

s. Approval and implementation of energy policies and agreements affect all parts of the Navajo Nation and it is important that the Executive Branch and Legislative Branch both be involved in the negotiation and approval of energy agreements.

2. The Navajo Nation hereby rescinds CAP-34-80, the 1980 Energy Policy.

3. The Navajo Nation hereby approves the Navajo Nation Energy Policy of 2013, attached hereto as Exhibit A.

CERTIFICATION

I hereby certify that the foregoing resolution was duly considered by the Navajo Nation Council at a duly called meeting in Window Rock, Navajo Nation (Arizona) at which a quorum was present and that the same was passed by a vote of 13 in favor and 6 opposed, this 22nd day of October 2013.

Johnny Naize, Speaker
Navajo Nation Council

10-24-13
Date

Motion: Honorable Walter Phelps
Second: Honorable Katherine Benally

ACTION BY THE NAVAJO NATION PRESIDENT:

1. I hereby sign into law the foregoing legislation, pursuant to 2 N.N.C. § 1005 (C)(10), on this _____ day of OCT 24 2013 2013.

Ben Shelly, President
Navajo Nation

2. I hereby veto the foregoing legislation, pursuant to 2 N.N.C. §1005 (C) (11), this _____ day of _____ 2013, for the reason(s) expressed in the attached letter to the Speaker.

Ben Shelly, President
Navajo Nation

Navajo Nation Energy Policy of 2013

PREAMBLE:

The Navajo Nation (hereinafter the "Nation"); to protect the energy natural resources and assets of the Nation; to ensure such resources and assets are used for the benefit of the Dine'; to create a self-sustaining economic future for the Dine' on their lands; to ensure sovereign control by the Nation over the extraction and flow of resources from the Nation's lands; to supply Navajo communities with the benefits afforded by energy development through total resource sovereignty, hereby establishes the Navajo Nation Energy Policy of 2013 (hereinafter the "2013 Energy Policy").

This 2013 Energy Policy provides guidance in common language for elected officials, community leaders, managers in the Nation's government, board members and managers of the Nation's enterprises, federal and state regulatory authorities and Navajo and non-Navajo business interests dealing with energy issues on the Nation. The 2013 Energy Policy serves to guide in consideration of specific legislation, rules and regulations, energy strategies, board resolutions, management policies, programs and decisions related to energy in and around the Nation.

WHEREAS:

1. The Navajo Nation Council adopted the Navajo Nation Energy Policy (CAP-34-80) on April 29, 1980 ("1980 Energy Policy"); and

2. The Nation acknowledges the enduring principles and motivations set forth in the 1980 Energy Policy; and

3. The Nation desires to update and amend the energy policies of the Nation by rescinding the 1980 Energy Policy (CAP-34-80) and, hereby adopting this 2013 Energy Policy; and

4. The energy resources of the Nation are owned by the Nation and are to be administered and managed by the Nation for the benefit of all Dine; and

5. The Nation will seek to maximize its level of autonomy in managing its energy resources and energy use on the Nation; and

6. The Nation will take a leadership role in exploring and developing its energy resources to exercise its political sovereignty, to build true economic sovereignty, and to promote greater self-determination for future generations of Dine'; and

7. The Nation has established wholly owned businesses that explore develop and manage certain of its energy resources. To optimize the Nation's use, management and conservation of its energy resources, the Nation may choose to utilize a combination of its wholly owned entities and outside energy companies to take advantage of the best technologies and capabilities to achieve the optimal balance of cost and results; and

8. The 1980 Energy Policy helped build capacity of the Nation to realize many successes in the form of more favorable contracts and greater ownership of certain energy resources. It is acknowledged that the Nation can make improvements in the areas of governance, ownership, management, community involvement, health impacts, conservation and environmental protection of the Nation's energy resources; and

9. The Navajo government should ensure that the local impacted communities are educated on relevant energy development and related issues. Prior energy development and related projects occurred with little or no consultation or results; and

10. Energy forms a cornerstone of the Navajo economy by providing jobs for our people, electricity for our homes and businesses, and revenues for our local and central government. Developing energy resources will expand government revenues, create new industries and promote sustainable jobs for the Dine. This economic base provides opportunities for Navajos to pursue technical and managerial careers in many energy-related product, service and supporting industries. The ability for Navajos to build stable careers while remaining close to their families will build the strength of our families and communities that have been fragmented by the need of our people to find work in metropolitan centers. A growing Navajo economy draws educated and experienced tribal members back to the Nation, and provides the economic growth to support Navajo entrepreneurs and business owners; and

11. The Navajo People have made invaluable contributions to the strength of the United States and its economy by permitting and assisting in the extraction of uranium over several decades. Numerous uranium mines across the Nation were not properly reclaimed leading to widespread contamination and illness of our people and livestock; and

12. The Nation's coal resources make a significant contribution to the support of many Navajo families and to the financial stability of the Navajo Nation government and its communities. The current policies of the federal government of the United States do not favor the use of coal. These policies negatively impact the Navajo Nation and the lives of its residents, and are contrary to the interests of the Navajo Nation; and

13. The United States is the trustee of the resources of the Navajo Nation. In this role the United States government has a duty to protect the Nation's energy resources and to assist the Nation to manage such resources for the benefit of the Dine. The United States government is to engage in government-to-government dialogue and understanding and to respect Navajo Nation's decision in the uses of its resources.. Historically, the United States government has sought to control the Nation's resources to benefit external interests in the uses of its natural resources or refrained from assisting the Nation in the protection of its interests; and

14. The Nation's depletable fossil fuels are abundant, however, some fossil fuels are currently out of favor with federal and state regulatory and environmental policies. A balanced portfolio of fossil fuel and cleaner renewable energy resources will provide the Nation with greater economic and financial stability; and

15. The Nation has the great potential of solar and wind energy resources. The development of these cleaner renewable resources can provide our communities with cleaner energy and generate substantial economic value when sold to surrounding communities and metropolitan regions; and

16. Many of the Nation's residents, businesses and institutions are located in growth centers while many others are dispersed in remote regions and lack access to electric power. Greater access to electric power will provide a greater number of opportunity and access to modern conveniences for the Navajo residences; and

17. The Nation is situated to provide pipeline and electrical transmission service providers with access to more direct routes between energy sources and energy customers. The Nation's non-renewable and renewable energy resources require transportation and transmission to energy markets. Pipeline and transmission infrastructure can have a substantial impact on the environment, communities and the viewscape. Establishing energy corridors are encouraged to enable the Nation to increase its revenues while minimizing the impact on the Nation.

18. Future development of cleaner renewable energy for export to metropolitan regions can generate substantial rents and business profits. These profits may be utilized to subsidize the cost of utilities for the Nation's residents, institutions and businesses; and

19. By developing and executing a comprehensive energy strategy, the Nation can establish energy independence and build its economy for future generations. Diverse revenue streams from a balanced portfolio of energy extraction,

generation and transmission, will provide the Dine with economic stability, career opportunities and business opportunities.

NOW, THEREFORE, BE IT RESOLVED THAT THE NAVAJO NATION COUNCIL HEREBY RESCINDS THE 1980 ENERGY POLICY (CAP-34-80) AND ADOPTS THE NAVAJO NATION ENERGY POLICY OF 2013, ATTACHED HERETO AS EXHIBIT A:

EXHIBIT A

NAVAJO NATION ENERGY POLICY OF 2013

Section 1: Short Title

The Navajo Nation Energy Policy of 2013 hereinafter is referred to as the "2013 Energy Policy". The Navajo Nation hereinafter is referred to as the "Nation"

Section 2: Scope and Review

This 2013 Energy Policy sets forth principles relating to the exploration, development, sustainable management and use of energy resources on the Navajo Nation. The energy resources and assets of the Nation addressed by the 2013 Energy Policy include fuel resources, mines, generation facilities, transmission and distribution infrastructure and pipelines. The energy uses addressed by the 2013 Energy Policy include, but are not limited to, residential, commercial, industrial and governmental uses, including heating, cooling, mechanical, industrial process and transportation uses.

The 2013 Energy Policy addresses the Nation's natural resource endowment in the areas of resource assessment, exploration, severance, development, production, preservation, management, protection, and distribution in order to maximize revenue and job creation for the benefit of the citizens of the Nation.

This 2013 Energy Policy may be amended by the Nation if, and when, circumstances require. The Navajo Energy Office, referenced herein, will recommend proposed amendments to the 2013 Energy Policy as needed.

Section 3: Definitions

Section 301: The following terms are defined for the purposes of this document as follows.

Electricity generating facilities. Includes facilities that burn fossil and biomass fuels to generate electricity; facilities that convert renewable resources to electricity (such as wind, solar, geothermal and hydroelectric); and, facilities generating electricity through nuclear fusion or fission for use on the Nation and for export for use off the Nation.

Electricity transmission infrastructure. Includes high voltage and distribution transmission lines, substations and related infrastructure.

Fuel minerals. Includes petroleum (*e.g.* oil, natural gas and associated liquids and gasses), coal, coal bed methane, uranium and any derivatives or associated minerals.

Large-scale energy developments. Includes (a) electricity generating facilities with capacity of one (1.0) megawatt or greater, (b) energy-related facilities utilizing five (5) acres of land or more, and (c) transmission lines or pipelines extending more than five hundred (500) feet.

High Voltage. Includes 69KV and higher.

Pipelines. Includes oil and gas pipelines, coal slurry lines and related compression and pumping infrastructure.

Section 4: Navajo Fundamental Law

Section 401: Before commencement of any Large-Scale Energy Development or other projects utilizing the Nation's energy resources, the Navajo Medicine Men's Association may be consulted to ensure the proper ceremonies, prayers and other rituals are conducted to maintain the Navajo people's Great Covenant with the deities. By doing so, the Nation shall strive to maintain a proper balance with the natural world.

Section 5: Sustainable Energy Economy

Section 501: Chapter 2 of the Navajo Nation Code entitled "The Foundation of the Dine', Dine' Law, and Dine' Government" describes the four sacred elements of life as "air, light/fire, water, and earth/pollen" and provides that "in all their forms [they] must be respected, honored, and protected for they sustain life". Recognizing the sacredness of these elements, the Nation desires to establish a sustainable energy economy based on the Nation's human capital, natural resources, capital resources and the exercise of its inherent sovereign authorities. A sustainable Energy Economy ensures an acceptable quality of life for Navajo people; proper planning and management by governmental officials; energy security; environmental stewardship; adequate rents, royalties, bonuses and taxes to ensure benefits for a sustainable Nation.

Section 6: General Provisions

Section 601: Applicability of the Nation's Laws and Regulations. The Nation's laws and regulations will apply to energy projects located within the Nation's jurisdiction.

Section 602: Long-Term Sustainability of Energy Developments. Energy developments on the Nation will be designed to be sustainable over the long-term based on economic considerations and environmental and community impacts.

Section 603: Lease Rent and Royalty Rates. Lease rental and royalty rates and charges for easements and rights-of-way will be equal to or greater than fair market value including energy projects where the Nation or an affiliate is an owner, taking into consideration the direct and indirect economic benefits of the energy project to the Nation.

Section 604: Renewal of Leases for Existing Energy Infrastructure. When negotiating renewals of rights-of-ways, leases for existing power generating facilities, transmission infrastructure and pipeline infrastructure and related water allocations, the Nation will maximize the total value of consideration to be received by the Nation.

Section 605: Selecting External Development Partners. External development partners of the Nation and its enterprises must possess relevant experience in the industry and those specific technologies required for the proposed energy development, as well as sufficient financial resources to adequately fund their portion of development expenses and contemplated investment in the project.

Section 606: End of Project Life. Leases and rights-of-way for energy projects will require the lessees to return the land to its original condition, or better, at the end of the projects, except where the Nation desires to retain improvements and related infrastructure after lease or right-of-way termination.

Section 607: Consistency in Energy-Related Decision Making. The development and management framework for the Nation's energy resources will encourage consistency in decisions involving the use of Navajo resources. The process for making energy development decisions shall be clearly communicated to the Nation and its stakeholders.

Section 608: Impact on Other Resources. New energy projects shall minimize negative impacts on other scarce and valuable resources of the Nation and manage such impacts in accordance with the Nation's laws, policies and plans for its resources, and will mitigate adverse impacts where necessary.

Section 609: Negotiation of Energy Agreements. The Executive and Legislative Branches of the Navajo Nation shall be involved in the negotiation and approval of energy agreements.

Section 7: Large-Scale Energy Developments

Section 701: Maximize Ownership, Control and Revenues. The Nation promotes majority ownership by the Nation or its entities of large-scale energy projects that utilize

the Nation's resources in order to optimize the Nation's participation in profits, in balance with the risks; maximize control and revenues; and, to ensure the interests of the Navajo people are protected. The Nation will have the option to purchase a majority of the equity of new large-scale energy projects on the Nation, including expansions of existing facilities and developments.

Section 702: Maximizing Navajo Return on Investment. When the Nation invests in energy projects, the primary goal will be to maximize profits and return on investment, in light of the attendant risks, for the benefit of the Nation.

Section 703: Navajo Ownership and Development Representatives. The Nation may acquire or designate an entity as its representative in any energy project in which the Nation desires to take ownership of a portion of such project.

Section 704: Operating Capabilities. The Nation will ensure that energy developments, including where the Nation or its enterprises possess a degree of ownership, will be operated and managed by entities that possess appropriate industry experience and capabilities.

Section 8: Community and Economy

Section 801: Expanding Rural Electrification. The Nation will continue to seek ways to expand electrical services to the residents of the Nation in balance with the cost to serve remote regions.

Section 802: Local Community Input, Support for, and Benefits from Energy Developments. Communities impacted by energy development will have the opportunity to provide input on and to indicate their support for such projects, and where substantially and adversely impacted by the development to share in a portion of the financial benefits of such projects.

Section 803: Managing the Cost of Energy for Residents of the Nation. The Nation will continue to seek ways to manage the cost of electricity and fuel for its residents to minimize the financial burden on Navajo communities.

Section 804: Navajo-Owned Small Businesses. The Nation will encourage the development of Navajo-owned small businesses that will support the Nation's energy industries.

Section 805: Fostering Economic Development, Developing Capabilities and Creating Career Opportunities. Energy projects will be developed to foster industrial and commercial growth, create career opportunities, and build the management skills and capabilities of the Navajo workforce in order to build the Nation's institutional capacity to manage its own energy resources.

Section 806: Distributed Electricity Generation. The Nation supports the development of distributed electricity generation and community scale electricity generation for use on the Nation.

Section 807: Science, Technology, Engineering, and Mathematics Education (STEM). The Nation shall support the pursuit of educational studies in STEM by its youth in order to create an interest in careers in the energy industry and to build a workforce that is prepared for technical and managerial careers in the energy industry.

Section 808: Health and Safety. The Nation will strive to protect the safety and health of Navajo communities when considering new energy developments and regulating existing energy developments.

Section 809: Energy Efficiency and Conservation. The Nation will continue to seek ways to enhance and promote energy efficiency and conservation on the Nation in order to manage future energy demand, reduce environmental impacts, reduce the financial energy costs for the residents of the Nation and build energy efficient industries.

Section 9: Coal

Section 901: The Future of Coal and Coal-Fired Power Plants. Coal and coal-fired plants are a significant component of the Navajo economy and the Nation's revenues. The Nation will encourage a future coal as a key component of the Nation's energy mixas a coal producer that derives a significant amount of royalties, rent, fees, jobs and tax revenue from coal mining and production of electricity. The Nation will pursue federal coal fuel legislation.

Section 10: Renewable Energy

Section 1001: Renewable Energy Development. The Nation will continue to develop a renewable portfolio of power generating facilities that balances coal, gas or oil-fired generation with economically viable renewable energy generation from such sources as wind, solar, hydro, geothermal and biomass.

Section 1002: Renewable Energy Portfolio Standard (RPS). The Nation will evaluate the appropriateness of implementing a Renewable Energy Portfolio Standard (RPS) for electricity used on the Nation. If an RPS is established, the Nation will strive to mitigate the impacts of increased costs of electricity for residential customers within the Nation caused by the implementation of an RPS.

Section 11: Nuclear Matters

Section 1101: Uranium Mining and Nuclear Power Generation. The Nation currently supports the moratorium on uranium mining on tribal trust, allotted trust and fee lands on the Navajo Nation. The Nation will continue to monitor uranium technologies and secondary mineral extraction techniques as well as market conditions to assess the safety, viability and potential of these activities for the future.

Section 12: Electrical and Energy Distribution Systems

Section 1201: New Electricity Transmission and Pipeline Infrastructure. The Nation supports the development of new electricity transmission infrastructure that provides the Nation with an opportunity to unlock the value of its vast renewable and conventional energy resources by providing transmission corridors to metropolitan centers.

Section 1202: Energy Corridors. The Nation will establish energy corridors to manage and minimize the impact on Navajo communities resulting from future electrical transmission, pipeline and railroad infrastructure.

Section 13: Navajo Energy Office

Section 1301: Establishment of the Navajo Energy Office. The Navajo Energy Office shall be established under the Executive Branch of the Navajo Nation government, and with appropriate staffing and budget.

Section 1302: Responsibilities. The Navajo Energy Office shall act as a clearinghouse for energy related projects, to facilitate energy development on the Nation and to increase institutional capacity on energy issues within Navajo Nation governmental agencies and enterprises. The Navajo Energy Office will act under the established Plan of Operation.

Section 1303: Strategic, Integrated Approach to Energy Planning. The Navajo Energy Office will develop a long-term Strategic Energy Plan. The Strategic Energy Plan will be designed to stimulate increased revenues from energy projects, spur energy infrastructure development, and diversify the Navajo energy economy. The Strategic Energy Plan will address opportunities to foster a competitive business environment to attract private investors to energy projects on the Nation, address how the Nation will strategically engage the key governmental and community representatives on Navajo energy projects, investigate the potential of all the Nation's available energy resources in all regions and serve as a resource to assist the Nation's leadership to prioritize energy projects

Section 14: Research and Development

Section 1401: Support for Technologies that Enhance the Use of Navajo Coal. The Nation will support clean coal technologies being developed through research and development which lessen the environmental impact of coal based electricity generation and maximize the efficient use of the Nation's coal resources.

Section 1402: Support for Technologies that Enable and Enhance the Use of All of the Nation's Resources. The Nation shall support the research and development of technologies that will allow the Nation to use its resources to maximize their benefit to the Nation and also lessen the environmental impact of their use.

Section 15: Taxation

Section 1501: Navajo Nation Taxation. The Nation shall seek to exert primacy in the taxation of energy development on the Nation to contribute to the funding of essential governmental services on the Nation.

Section 1502: Tax Incentive. The Nation may provide tax incentives to encourage the development of the Nation's energy resources, while balancing the need to provide supporting infrastructure, services and the Nation's finances.

Section 16: Limitations

Section 1601: Limitations. Nothing in the 2013 Energy Policy is intended to, nor shall it be construed to:

a) Alter, amend or diminish in any way the sovereign immunity of the Navajo Nation or constitute a waiver of the sovereign immunity of the Navajo Nation, as defined in 1 N.N.C. § 551 .;

b) Abrogate any authority conferred by the Navajo Nation Council upon any agency, enterprise or other instrumentality of the Navajo Nation;

c) Repeal in whole or in part any law or regulation duly promulgated by the Navajo Nation or any of its agencies;

d) Authorize or sanction the breach of any contractual duty or diminish any vested property rights; or

e) Provide the basis for a private cause of action by or against any person or entity, or confer jurisdiction upon any court for any cause of action predicated on the 2013 Energy Policy.

Section 164 No. Click here to enter text. Date Issued: Click here to enter a date.

EXECUTIVE OFFICIAL REVIEW

Title of Document: _____ Contact Name: Click here to enter text.

Program/Division: Click here to enter text. Email/Phone Number: Click here to enter text.

			Sufficient	Insufficient
Business Site Lease				
☐ 1. Division:	_____	Date: _____	☐	☐
☐ 2. Office of the Controller:	_____	Date: _____	☐	☐
(only if Procurement Clearance is not issued within 30 days of the initiation of the E.O. review)				
☐ 3. Office of the Attorney General:	_____	Date: _____	☐	☐
Business and Industrial Development Financing, Veteran Loans, Credit Services Loans (i.e. Loan, Loan Guarantee and Investment) or Delegation of Approving and/or Management Authority of Leasing transactions				
☐ 1. Division:	_____	Date: _____	☐	☐
☐ 2. Office of the Attorney General:	_____	Date: _____	☐	☐
Fund Management Plan, Expenditure Plans, Carry Over Requests, Budget Modifications				
☐ 1. Office of Management and Budget:	_____	Date: _____	☐	☐
☐ 1. Office of the Controller:	_____	Date: _____	☐	☐
☐ 2. Office of the Attorney General:	_____	Date: _____	☐	☐
Navajo Housing Authority Request for Release of Funds				
☐ 1. NNEPA:	_____	Date: _____	☐	☐
☐ 2. Office of the Attorney General:	_____	Date: _____	☐	☐
Lease Purchase Agreements				
☐ 1. Office of the Controller: (recommendation only)	_____	Date: _____	☐	☐
☐ 2. Office of the Attorney General:	_____	Date: _____	☐	☐
Grant Applications				
☐ 1. Office of Management and Budget:	_____	Date: _____	☐	☐
☐ 2. Office of the Controller:	_____	Date: _____	☐	☐
☐ 3. Office of the Attorney General:	_____	Date: _____	☐	☐
Five Management Plan of the Local Governance Act, Delegation of an Approving Authority from a Standing Committee, Legislation Initiated by Executive Branch Entity, Local Ordinances (Local Government Units), or Plans of Operation/Division Policies Requiring Committee Approval				
☐ 1. Division:	_____	Date: _____	☐	☐

☐ 2. Office of the Attorney General: _____ Date: _____ ☐ ☐

Relinquishment of Navajo Membership

☐ 1. Land Department: _____ Date: _____ ☐ ☐

☐ 2. Elections: _____ Date: _____ ☐ ☐

☐ 3. Office of the Attorney General: _____ Date: _____ ☐ ☐

Land Withdrawal or Relinquishment for Commercial Purposes:

Sufficient Insufficient

☐ 1. Division: _____ Date: _____ ☐ ☐

☐ 2. Office of the Attorney General: _____ Date: _____ ☐ ☐

Land Withdrawals for Non-Commercial Purposes, General Land Leases and Resource Leases:

☐ 1. NLD _____ Date: _____ ☐ ☐

☐ 2. F&W _____ Date: _____ ☐ ☐

☐ 3. HPD _____ Date: _____ ☐ ☐

☐ 4. Minerals _____ Date: _____ ☐ ☐

☐ 5. NNEPA _____ Date: _____ ☐ ☐

☐ 6. DNR _____ Date: _____ ☐ ☐

☐ 7. DOJ _____ Date: _____ ☐ ☐

Rights of Way

☐ 1. NLD _____ Date: _____ ☐ ☐

☐ 2. F&W _____ Date: _____ ☐ ☐

☐ 3. HPD _____ Date: _____ ☐ ☐

☐ 4. Minerals _____ Date: _____ ☐ ☐

☐ 5. NNEPA _____ Date: _____ ☐ ☐

☐ 6. Office of the Attorney General: _____ Date: _____ ☐ ☐

☐ 7. OPVP _____ Date: _____ ☐ ☐

Oil and Gas Prospecting Permits, Drilling and Exploration Permits, Mining Permit, Mining Lease

☐ 1. Minerals _____ Date: _____ ☐ ☐

☐ 2. OPVP _____ Date: _____ ☐ ☐

☐ 3. NLD _____ Date: _____ ☐ ☐

Assignment of Mineral Lease

☐ 1. Minerals _____ Date: _____ ☐ ☐

☐ 2. DNR _____ Date: _____ ☐ ☐

☐ 3. DOJ _____ Date: _____ ☐ ☐

ROW (where there has been no delegation of authority to the Navajo Land Dept. to grant the Nation's consent to a ROW)

☐ 1. NLD _____ Date: _____ ☐ ☐

☐ 2. F&W _____ Date: _____ ☐ ☐

☐ 3. HPD _____ Date: _____ ☐ ☐

☐ 4. Minerals _____ Date: _____ ☐ ☐

☐ 5. NNEPA _____ Date: _____ ☐ ☐

☐ 6. DNR _____ Date: _____ ☐ ☐

☐ 7. DOJ _____ Date: _____ ☐ ☐

☐ 8. OPVP _____ Date: _____ ☐ ☐

OTHER Click here to enter text.

☐ 1.Click here to enter text. _____ Date: _____ ☐ ☐

☐ 2.Click here to enter text. _____ Date: _____ ☐ ☐

☐ 3.Click here to enter text. _____ Date: _____ ☐ ☐

☐ 4.Click here to enter text. _____ Date: _____ ☐ ☐

☐ 5.Click here to enter text. _____ Date: _____ ☐ ☐

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External Funds

Projects are often funded by External Funds. These funds can include Arizona, New Mexico, and Utah State funds, Bureau of Indian Affairs funds, Indian Health Service funds, and other Federal funds. When projects are funded by external sources the Navajo Nation MUST accepts the funds via the **164 Review Process**. The process is as follows:

- The Project Sponsor Receives a Copy of the Funding Award Letter.
- The Project Sponsor Submits a Scope of Work to the Funding Source.
- The Funding Source Prepares the Grant Agreement and Gives it to the Navajo Nation.
- The Capital Improvement Office (CIO) prepares the 164 Review Package, which includes:
    - Award Letter
    - Grant Agreement
    - Scope of Work (SOW) for the amount of the awarded
    - Budget (for the amount awarded)
- Review and Surname of 164 package.
    - Division of Community
    - Navajo Nation Office of Management & Budget (OMB)
    - Navajo Nation Office of the Controller (OOC)
    - Navajo Nation Department of Justice (DOJ)
    - Navajo Nation Office of President & Vice President Review & Approval
- The Capital Improvement Office (CIO) sends package to Funding Source.
- The Funding Source Approves the Agreement and Sends it Back to the Navajo Nation.
- The Office of Management & Budget (OMB) Issues Business Unit Number.
- The Capital Improvement Office (CIO) sends Letter to Project Sponsor informing the funding is ready for use.
- The Capital Improvement Office (CIO) authorizes Lead Agency for Project Implementation.

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ENGINEERING GUIDANCE 2013-04

SUBJECT: Standard Handout for Predesign Conference and Design Report.

PURPOSE: Provide guidance for predesign conferences and design reports.

CANCELLATION: This Guidance replaces Engineering Guidance 2012-05 dated May 8, 2012.

DISCUSSION: The Predesign conference offers the opportunity for discussion of project issues related to acceptable design parameters, airport safety considerations, construction phasing, and environmental considerations.

The Design Report serves to document the design considerations, engineering analysis and design selections that occur early in the design phase. The report must be an explanation of the engineer's design based on scope of the project, critical aircraft dimensions and weight, and analysis of materials and site conditions.

GUIDANCE: The attached handout should be used for AIP projects in the Northwest Mountain Region. Any suggested changes or comments should be forwarded to Safety and Standards Branch, Paul Johnson, at (425) 227-2622.

REFERENCES: None.

APPROVAL: W. L. Watson

Bill Watson, Manager, ANM-620
Northwest Mountain Region
Safety & Standards Branch, Airports Division

DATE: 12/26/12, 2012

Project Design:

Sponsor Responsibility

Under the Airport Improvement Program (AIP), the sponsor is responsible for accomplishing project engineering and design. The sponsor shall use qualified technical resources to accomplished project design and to prepare a bid package that complies with Federal, State and local regulations and standards. The project design shall incorporate sound engineering principals along with accepted design considerations and methods.

FAA Standards

By accepting an AIP grant, the sponsor agrees to adhere to FAA standards that are presented in various applicable Advisory Circulars (AC's). A listing of applicable AC's is attached to each grant agreement.

Unless specifically approved in writing by the FAA, the sponsor must apply all applicable FAA standards to the project design without modification. Non-standard design elements that are deemed not acceptable to the FAA are ineligible for AIP participation.

FAA Review

Sponsors, along with their consultant, are strongly encouraged to consult with the FAA prior to commencement of the project design phase. This coordination will establish the limits of AIP eligibility and thus hopefully limit any misdirected work that may be declared ineligible after the fact.

The primary purpose of the FAA's review is to assure that applicable FAA standards are being applied as well as to make determinations regarding the limits of AIP eligibility. The review is generally limited to eligibility determinations and a review of critical project elements such as the safety plan, pavement details, airfield marking details and airfield signage details. The FAA will not typically review detailed engineering and quantity calculations; however such documentation shall be made available if so requested by the FAA.

FAA acceptance of the plans and specifications is based on a combination of a FAA cursory review and the submittal of a satisfactory executed sponsor certification. Sponsors and their consultant must not construe the FAA review as a quality control review. The responsibility for complying with FAA standards rests with the sponsor. Any review and approval by the FAA does not relieve the sponsor or the engineer of the responsibility for the accuracy, completeness, and technical content of the plans and specifications.

The sponsor and their consultant shall allow sufficient time for the FAA to conduct an appropriate review. This may vary per size and type of project. Generally, a review time frame of 2-3 weeks is requested. Sponsors should not proceed with the invitation for bids until FAA concurs with the design and bid package.

Predesign Conference:

The predesign conference offers the opportunity for discussion of project issues related to acceptable design parameters, airport safety considerations, construction phasing and environmental considerations. This meeting also re-affirms the limits of AIP participation thus hopefully limiting misdirected design work. The predesign conference should be held prior to formally establishing the scope of services for the consultant contract. The sponsor and consultant should contact the FAA project manager about the level and extent of predesign conference required for the project.

A predesign conference is generally held for all, but the most basic projects. This meeting is essential when a project is of sufficient magnitude and complexity. For smaller scale projects, the predesign conference may be conducted via a telephone conference call. In either case, it is recommended that a prepared agenda be distributed to all participants. More information on predesign conferences can be found in Advisory Circular (AC) 150/5300-9 – *Predesign, Prebid & Preconstruction Conferences*.

Attendees

The magnitude and complexity of the project will be a factor in who needs to attend the predesign conference. In general, the airport sponsor, their design consultant and the FAA project engineer should attend the predesign conference. Other attendees that may be invited, depending on the scope of the project, include: FAA Air Traffic Organization, FAA Airport Certification personnel (for Part 139 certificated airports), airport maintenance supervisors, FBOs, airlines, affected utility companies, and airport tenants.

Listed below are some items to be discussed at a predesign conference. This list should not be construed as being inclusive of all such project issues. Minutes of the Predesign Conference should be prepared by the consultant and distributed to all participants.

Predesign Conference Checklist

Airport: _____ **Location:** _____

AIP Project No. _____ **Fiscal Year:** _____

Sponsor: _____ **Date:** _____

Consultant: _____ **Date:** _____

FAA: _____ **Date:** _____

Project Description: _____

_____

_____

1. **Scope of Work**:
   a. Discuss scope of project including federally and non-Federally-funded work.
   b. AIP participation limits including identification of non-participating work.
   c. Discuss environmental mitigation requirements and environmental checklist requirements.
   d. Discuss Status of Airport Layout Plan and requirement for FAA Standards.
   e. Coordination of project with airport users and FBO's.

Notes:

2. **Funding:**
   a. Identity proposed project funding sources as applicable:
      1) State Apportionment.
      2) Entitlement (Primary and Nonprimary).
      3) Discretionary.
      4) Multi-year.
      5) Passenger Facility Charge Funds.
      6) Transfer of entitlement funds (timing of transfer documents).

Notes:

3. **Engineering Fees:**
   a. Amount of engineering fee eligible for Federal participation must be approved by ADO. ADO will make a "reasonableness of cost" determination.
   b. Design work performed prior to FAA approval is at consultant's/sponsor's own risk. Refer to Advisory Circular (AC) 150/5100-14 (Current addition) for consultant negotiation process.
   c. Sponsor should provide to the ADO:
      1) Detailed scope of work.
      2) Consultant estimate.
      3) Independent estimate.
      4) Cost analysis comparing estimate.
      5) Record of negotiations.
      6) Letter requesting approval of design and/or construction management fees
      7) Sponsor Certification for Selection of Consultants.

Notes:

4. **Project Schedule:**
   a. Develop a project schedule that identifies elements listed in the "AIP Development Schedule" form. (Appendix 1). The Sponsor, Consultant, and ADO Project Manager must all sign this schedule.
   b. Advise Sponsor that funding may be lost if project schedule is delayed and bids are not opened per the signed schedule.

Notes:

5. **Reimbursable Agreements:**
   a. Determine if any FAA owned navigation aids need to be installed, moved, or altered as part of construction.
   b. Sponsor must initiate a reimbursable agreement with ATO-Planning and Requirements.
   c. Reimbursable agreements can take up to 24 months to develop and require advance payment to the FAA prior to starting work.
   d. New installations for Non-federal owned VGSI or REIL's for airports that have instrument approaches including an airport circling approach must be flight checked. A reimbursable agreement is established by the airport sponsor directly with the Flight Inspection group in Oklahoma. Contact Georgia Hines at (405) 854-8545 to establish a reimbursable. Typically, reimbursable agreements for flight checks of non-federally owned VGSI or REIL installations take much less time. (2 to 3 months)

Notes:

6. **Project Impacts on existing NAVAID's and Instrument Approach Procedures (IAP):**
   a. Discuss design and construction Impacts on Navigational aids. Work in critical areas or changes to grading near equipment such as VOR, ILS Glide Slope and Localizer, RVR's or any other equipment need to be airspaced.
   b. For projects changing runway grade, runway location, or runway length, discuss impact to existing NAVAIDS and IAPs, including the possible need for surveying, submittal, and approval through Airports GIS, reimbursable agreements, and flight checks.
   c. Discuss Airspace submittal schedule.
   d. Discuss Impacts on project schedule if flight check is required after construction. Technical Operations reviews the project airspace case and makes the determination if flight checks required after construction.

Notes:

7. **Flight Check Requirements:**
   A flight check is required for installation of a new REIL (REIL replacement is exempted) or PAPI at airports have an instrument approach including circling approach. The Project Manger must notify the Non Federal Project Implementation Manager (PIM), Matt Gammon, (425) 203-4763, during the design phase. The airport must set up a reimbursable agreement directly with Flight Inspection, Georgia Hines, (405) 854-8545. Typical costs run $5,000-$12,000 and should be included in the grant request. The airport must submit a "Data Information for VGSI Facilities Form" for PAPI or VASI installations to the PIM when equipment is ready for flight check. The airport must have a representative available during flight check that can communicate with the Flight Inspection crew using VHF radio frequency 135.85 MHz, and make any adjustments to the equipment. Reference Engineering Guidance 2013-03 for additional information.

Notes:

8. **Airspace Requirements:**
   a. Identify items to be airspaced. The airspace process may take 60 days for each airspace case. Potential items include:
      1) Initial Project Airspace (see Engineering Guidance 2012-03)
      2) Cranes, concrete pumps, drill equipment, or other equipment taller than typical construction equipment (reference AC 150/5370-2F, paragraph 104b.(14).
      3) Batch Plants.
      4) Construction Safety Phasing Plan.

Notes:

9. **Modification to Standards:**
   a. Use current edition of applicable FAA Advisory Circulars and Northwest Mountain Region current Specification Notice. Any modification to standards must be approved by FAA.
   b. FAA Order 5300.1 requires all design modification to standards be submitted to FAA Headquarters office for approval. Processing time for HQ is 30 days and coordination with other FAA offices takes 60-90 days. (Appendix 2).
   c. Construction specification modifications can be approved by the ADO provided changes do not need HQ approval. These are listed in paragraph 11 of Order 5300-1.(Appendix 3).
   d. Modifications to General Provisions of AC 150/5370-10 may be made only to make them consistent with local law or regulation.

Notes:

10. **Disadvantage Business Enterprise (DBE):**
   a. For grants that exceed $250,000, insure sponsor's Disadvantaged Business Enterprise (DBE) plan is approved by Civil Rights and the project DBE goals are in conformance with the annual DBE.
   b. States in the Ninth Circuit Court of Appeals (Washington, Oregon, Idaho, Montana), no DBE goal should be included in the contract documents, however an approved plan is still required. Delete contract goals paragraph from FAA Standard Construction Contract Provisions.
   c. States in the Tenth Circuit Court of Appeals (Utah, Colorado, and Wyoming) must have a DBE goal, or be race neutral.
   d. ANM Civil Rights Office, Ricky Watson, Telephone: (310) 725-3940.

Notes:

11. Federal Wage Rates:
Obtain latest Federal Wage Rates on internet

Notes:

12. Contract Provisions:

a. Obtain latest copy of FAA Contract Provisions at: http://www.faa.gov/airports/

Notes:

13. Buy American Provisions:

a. Discuss Buy American Provisions and requirements for waivers.

Notes:

14. Airport Construction Safety & Phasing Plan (CSSP):

a. Provide a Construction Safety Phasing Plan. The plan may be incorporated into the plans and specifications; however an electronic copy must be submitted to the Airport District Office for coordination with other FAA lines of business using the airspace process. Plan should include:
    1) Plan sheets showing contractor construction routes, Issuance of Notices to Airmen (NOTAM) and Procedure NOTAMS, temporary marking and lighting, safety areas, OFZ, temporary threshold displacements, runway shutdowns, construction phasing, etc.
    2) Routing of aircraft.
    3) Address each applicable item identified in AC 150/5370-2. Include estimated dates that navigational aids will be shut down during construction.
    4) Discuss need for review of draft CSPP and timing of submittal of final CSPP for airspace coordination.

Notes:

15. Design Report:

a. Review and discuss Design Report requirements.

Notes:

16. Construction Management Plan:

a. Construction management plans are required for all paving projects over $250,000 as a grant special condition. Review plan requirements.

Notes:

17. Plans and Specification Review:

a. Prior to advertising and in accordance with the project schedule, submit following as a package for FAA review and acceptance: (Allow 3 weeks for FAA review for items 1-3 and 8 weeks for item 4)
    1) Engineer's project cost estimate.
    2) Project Plans and Specifications.
    3) Design Report.
    4) Revised sign or marking plan on a Part 139 airport for approval by inspector.

Notes:

18. Coordination with ATCT Manager:

a. ADO Project Manager must contact Tower Manager and inform them of any projects that impact the National Airspace System. This should be done by phone call followed by e-mail and should include the approximate dates of construction. The ATO may initiate a Safety Risk Management evaluation of proposed change.

Notes:

19. Sponsor Coordination with other users and agencies:

a. Advise airport users of construction activities and scheduled.
b. Coordinate with State aeronautics.
c. Coordinate with other agencies for construction permits, zoning, legal, or political issues.
d. Issue NOTAM during construction activities.

Notes:

20. Survey requirements for runway environment:

Discuss survey requirements to assure flight procedure is available when facility is operational. Flight procedure development takes two years from the time the new design runway coordinates are entered into the AGIS system and verified by NGS. Any proposed procedure development or amendment must be coordinated with the Regional Airspace Procedures Team (RAPT) 2 years in advance. (Don Larson is our RAPT representative)

a. As a general rule (reference Order 8260.19E, paragraph 8-58e), runway geometry changes equal to or greater than 50 feet along the longitudinal axis, 10 feet about the centerline axis, or threshold change of 3 feet vertically, require existing approach and/or departure procedures be amended and a survey is required in accordance with AC 150/5300-16/17&18, including imagery of the approach and departure surfaces. This is a general rule and revisions or amendments may be needed for threshold changes that are less than this. (Discuss runway geometry changes with the RAPT representative to verify when new procedure development or amendments would be required)

b. FAA Memorandum, Airports Geographic Information System (Airports GIS) Transition Policy, dated August 23, 2012 provides guidance for phased implementation of Airports GIS, As-built surveys are required in accordance with AC 150/5300-16/17&18 for the following items listed below (items taken from the AGIS Transition Policy Table 1. Safety Critical Projects).

- Relocate/move runway end more than 1 foot longitudinal, 1 foot transverse, or 6 inches vertical
- Displaced thresholds
- Extend/shorten/shift runway
- Widen or extend runway
- Add/modify stopway, clearway, or EMAS
- Modify declared distances
- New/revised instrument procedures
- Install/relocate NAVAID (electronic or visual)
- Changes to airport elevation or airport reference point
- Airports currently listed as needing SMGCS charts

For non-safety critical projects, listed in Table 2, airports must incorporate Airports GIS requirements for all small, medium, and large hub airports now, non-hub airports by FY 2014, and non-primary airports certified under Part 139 or with an ATCT by FY 2015.

Table 2. Non Safety Critical Projects include:

- Construct/reconstruct taxiway or apron
- Reconstruct/rehab runway (Not required unless moving runway end by more than 1 foot by 1 foot by 6 inches vertical.
- Acquire land
- Acquire aviation or noise easement
- AIP-funded wetlands, wildlife habitat, or other environmental mapping or delineation
- Release land
- Master Plan / ALP update (If aerial photography or obstruction surveys are included, they must be in conformance with the latest version of AC 150/5300-17 and -18.
- Approved noise contours from a Part 150 study
- Rehab / install lighting
- Construct structure / building
- Close any runway
- Install fencing
- Install / replace jet bridge

c. As-built surveys for construction to meet grade requirements in AC 150/5370-10, Standards for Specifying Construction at Airports, do not get submitted through AGIS. These are the as-built surveys for meeting final pavement surface grade that are done by the contractor as part of the acceptance testing required by the contract specifications.

Notes:

21. Application for Federal Assistance requirements:

a. Discuss the requirements for the Application for Federal Assistance.

Notes:

22. Sponsor Certifications:

a. Discuss required sponsor certifications:
   1) Selection of Consultants.
   2) Plans and Specifications.
   3) Equipment/Construction Contracts.
   4) Drug Free Workplace.
   5) Real Property Acquisition.
   6) Certificate of Title.

Notes:

23. Revised Sign and Surface Painted Hold Sign (SPHS) Plan:

a. Submit a revised sign and SPHS marking plan to the Airports District Office.

Notes:

24. Airport Diagram Changes:

a. Airport Diagrams must be changed for any project that changes airports geometry. The Airport Sponsor is responsible updating diagrams and coordinating changes with the Air Traffic Control Tower (for towered airports). Requirements for airport diagram changes are outlined in Order 7910.4C. Changes must be coordinated at least three months in advance to assure diagram changes are published within the 56 day publication schedule. The Sponsor or consultant should contact Chris Criswell, Federal Aviation

Administration at: **https://nfdc.faa.gov/xwiki/bin/view/NFDC/ACC** to determine charting requirements in the Airport Facility Directory.

Notes:

25. Events conflicting with construction:

a. Identify any events at the airport that may conflict with project construction.

Notes:

26. Security:

a. Discuss how airport will maintain adequate level of security at all contractor access gates and any TSA requirements.

Notes:

27. Project Closeout:

a. Review project closeout requirements per Regional Guidance (for land, development, and equipment), including:
   1) Summary of Change Orders.
   2) Record Drawings.
   3) Summary of Testing (projects greater than $300K)
   4) Before and After project photos.
   5) Updated Airport Master Record (FAA Form 5010)
   6) Revised or Updated ALP/Exhibit A Property Map/Sign Plan
   7) Non-expendable personal property form (equipment).

Notes:

28. Strategic Interruptions Service Level Agreement:

Discuss sponsor requirement to notify Planning and Requirements preferably 45 days in advance for any runway closures at all airports, significant taxiway closure at OEP airports (SEA,DEN,SLC,PDX) , or temporary shutdown of navaids at any airport. A shutdown of NAS equipment must be reported for consecutive days in excess of 4 hours daily or for time periods greater than 24 hours, or for runway/taxiway closures greater than 24 hours. Reference NAS Strategic Event Interruptions Agreement. Assistance regarding the electronic form (Appendix 5), may be requested from Andrea Chay. Planning and Requirements, (425) 203 4788.

Notes:

29. Other:

Notes:

Design Report:

The design report serves to document the design considerations, engineering analysis and design selections that occur early in the design phase. A design report must be prepared and submitted for all projects greater than $300,000. As each individual project will present unique design considerations, the degree to which topics will be addressed within the design report will vary with each specific project.

For small projects less than $300,000 the extent of design report required should be discussed with the FAA project manager.

The report must be an explanation of the engineer's design based on scope of the project, critical aircraft dimensions and weight, and analysis of materials and site conditions. Since the report provides the rationale for the total design, the plans and specifications cannot be property reviewed without it. The design report must be available before or at the same time as the plans and specifications are submitted.

The design report outline must be submitted using the following format.

Design Report

1. **Scope of Work**:
   a. A brief narrative on the scope of work including AIP eligible and ineligible work items.
   b. Unique and unusual site conditions.
   c. Age of the existing pavement
   d. Current PCI value.
   e. History of work performed in project area.

2. **Photographs:**
   a. Include a representative number of photographs that depict the existing condition of the project site.

3. **Life Cycle Cost Analysis:**
   a. Compute a life cycle cost analysis comparing asphalt design sections to concrete sections and explain reasons for selecting final design. Final selection of pavement options may consider impacts to airport capacity during construction and project budget.

4. **Design Standards:**
   a. List applicable standards in AC 150/5300-13, *Airport Design,* related to project and address:
      1) Design aircraft.
      2) Dimensional standards for project pavements.
      3) Longitudinal and transverse grades for runways, taxiways, shoulders, aprons, safety areas.
      4) Object free areas.
      5) Runway line of sight.
      6) Threshold siting for displaced or relocated thresholds.
      7) Runway and Taxiway lighting layout color.
      8) Siting and aiming criteria for sponsor installed PAPI.
      9) Siting criteria for REILS or sponsor installed approach light systems.

5. **Environmental Protection**
   a. Address requirements specific to project and any monitoring required by other governmental agencies.

6. **Soils and Grading -**
   a. The geotechnical report should follow requirements outlined in AC 150/ 5320-6, *Airport Pavement Design and Evaluation*. A summary of the geotechnical report should be referenced in the report and include:
      1) Site conditions.
      2) Soil classification.
      3) Internal drainage.
      4) Frost depth.
      5) Water table.
      6) Soils characteristics and classification.
      7) Estimated CBR or K values and how derived.
      8) For pavement sections subjected to frost that use the reduced subgrade design option, specify the Frost Group (FG-1 thru FG-4) and corresponding CBR value.
      9) Identify any special compaction requirements of the existing subgrade materials.
      10) Identify potential for removal and replacement of unsuitable or wet material.

7. **Drainage:**
   a. Address rainfall, runoff, storm drains, and detention ponds design.
   b. Describe pond design and special features taken to mitigate wildlife hazards.
   c. In flood plain areas, discuss any potential changes from the increase in pavement areas.

8. **Pavement Design:**
   a. Use AC 150/5320-6 and current pavement design program to develop pavement sections, layout, and standard details. When Portland Cement Concrete pavement is selected, use the Northwest Design Guide Supplement for Portland Cement Concrete, dated October 2002, as a supplement to AC 150/5320-6. The pavement report must include:
      1) Design assumptions.
      2) Fleet mix (aircraft, load, and frequency of operations).
      3) Number of departures for each aircraft.
      4) Computer program pavement design output.
      5) Final design summary on FAA Form 5100-1. (Appendix 4)
      6) Report pavement PCN number and gross weights in accordance with AC 150/5335-5B, Standard Method of Reporting Pavement Strength-PCN and COMFAA 3.0 (ACN/PCN Software Calculations).

9. **Recycling:**
   a. Identify materials that can be recycled and used on or off the project.

10. **Material Availability:**
    a. For remote locations, the engineer should investigate the local availability of construction materials. This includes contacting potential material suppliers to determine if sufficient material will be available for the project.

11. **Pavement Marking:**
    a. Address marking requirements for compliance with AC 150/5340-1. Application of temporary marking should also be addressed. Surface painted hold sign markings must be approved by the FAA Part 139 Certification Inspector prior to bid.

12. **Signage:**
    a. Address standard layout and design criteria for airport signage in accordance with AC 150/5340-1. For Part 139 airports, a revised sign plan must be submitted for approval prior to project bids.

13. **Lighting:**
    a. Define the scope of the lighting project and identify:
       1) Design criteria, design selection, and lighting layout.
       2) Existing power sources and circuit loading that was considered for new lighting installations.
       3) Existing cable and equipment conditions, including age, circuit loads, and reliability or grounding problems.
       4) Provide summary of electric design calculations that support the design selections.
       5) Location of rotating Beacon (installations must be coordinated using the 7460 airspace process.)

6) If LED lights are being proposed, a satisfactory life-cycle analysis must be prepared.

14. FAA Owned Facilities:

a. Identify Impacts to FAA owned facilities and equipment. Address:
   1) Construction impacts on FAA equipment when working in critical areas.
   2) Grading impacts in FAA equipment critical areas.
   3) Temporary outages required during construction on FAA equipment (VOR, Glide Slope, Localizer, RVR, PAPI, VASI, REILS, etc).
   4) Schedule of NAVAID shutdowns.

15. Non-AIP work

a. Separately identify all work items, including quantities that are not eligible for AIP participation. These items must be listed on a separate bid schedule.

16. Engineers Estimate:

a. Provide an engineer's estimate of probable construction costs.
b. Provide a project budget that identifies all anticipated project costs (administrative, engineering design, construction inspection, construction, etc.).

17. Precision Approach Path Indicators:

a. Provide location, threshold crossing height, aiming angle. Address schedule requirements for FAA flight check when an airport has an instrument approach (circling or straight-in).

18. Modifications to Standards:

a. Provide listing, description and justification for all sponsor initiated modifications to FAA standards.
b. Proposed Modifications to Construction Standards must be listed by specification and paragraph and include a justification. (Appendix 3)
c. Modifications to design standards or construction standards referenced in Order 5300.1 must be documented on a separate form. (Appendix 2) These modifications require coordination with Headquarters and other FAA organizations. Review times can take 60-90 days.

19. DBE participation:

a. Identify potential work items that are suitable for participation by available DBE's firms.

20. Buildings:

a. The size and design features of Snow Removal Equipment (SRE) and Aircraft Rescue Fire Fighting (ARFF) buildings must be justified and approved by the FAA. The design report must address the size and features using AC 150/5220-18 for SRE and AC 150/5210-15 for ARFF buildings.

21. Equipment:

a. Justify equipment requirement and need for the airport.
b. Describe existing equipment and age of equipment to be replaced.
c. For Snow Removal Equipment (SRE) justify size and capacity using requirements in AC 150/5200-30 and AC 150/5220-20.

d. For Aircraft Rescue Fire Fighting Vehicles (ARFF) state the current Part 139 index and index of the replacement vehicle. Vehicle specifications must meet AC 150/5220-10 requirements.

22. Airport Operational Safety:

a. Provide a Construction Safety Plan as a separate section in the specifications.
b. Show contractor staging area, construction access and routes, sequence and phasing of construction, pavement closures, temporary marking and lighting, barricade requirements, safety areas, protection of OFZ, temporary threshold displacements, etc.
c. Address each applicable item identified in AC 150/5370-2. (Appendix 5). Submit safety phasing checklist, checking items applicable to project that have been incorporated into the plan.
d. The FAA requires that a copy of the final safety plan (preferably in a .pdf format) be submitted to the FAA project manager early in the project phase for the purpose of coordinating construction impacts with other FAA organizations. The Air Traffic Organization will use this plan to perform a risk analysis using the Safety Management System (SMS) process for towered airports.

23. Miscellaneous Work Items:

a. Address other project related work items such as seeding, fencing, site access, etc.
b. Fencing should be installed along the airport property line. The report must show property line limits and fence location. Any proposal to not install a fence along the property boundary must be discussed with the FAA project manager.

24. Predesign Meeting Minutes:

a. Include a copy of the Predesign Meeting Minutes in the Design Report.

Reference Documents:

AC 150/5200- 30	*Winter Safety Operations*
AC 150/5210-15	*Aircraft Rescue Fire Fighting Building Design*
AC 150/5220-10	*Guide Specification for ARFF Vehicles*
AC 150/5220-18	*Buildings for Storage and Maintenance of Airport Snow and Ice Control Equipment and Materials*
AC 150/5220-20	*Airport Snow and Ice Control Equipment*
AC 150/5300-13	*Airport Design*
AC 150/5320-6	*Airport Pavement Design and Evaluation*
AC 150/5370-2	*Operational Safety on Airports During Construction*
FAA Form 5100-1	*Airport Pavement Design* (ANM Modified Form)

Design Guide Supplement Portland Cement Concrete, FAA, Northwest Mountain Region, October 2003.

AIP DEVELOPMENT PROJECT SCHEDULE

AIRPORT: _____ AIP NO: _____
SPONSOR: _____ DATE: _____
CONSULTANT: _____ DATE: _____
FAA : _____ DATE: _____
PROJECT DESCRIPTION: _____

ITEM	DATE		COMMENTS
	ESTIMATED	ACTUAL	
1. Environmental Approved			
2. CIP Data Sheet Submitted			
3. Work Scope and Record of Negotiations Submitted			
4. Signed Engineering Contact Approved by FAA			
5. DBE Plan and Goal Submitted to Civil Rights			
6. Construction Safety Plan Submitted for Airspace			
7. Modification to Standards Submitted			
8. Plans and Design Report Submitted			
9. Plans Reviewed by FAA and Returned with Comments			
10. Final Plans Accepted by FAA			
11. Advertising Date			
12. Bid Opening Date			
13. Recommendation of Award and Bid Tab Submitted			
14. Grant Application Submitted by Sponsor			
15. Grant Issued			
16. Construction Management Plan Submitted			
17. Mix Design Submitted (if applicable)			
18. Construction Complete			
19. Acceptance Testing Submitted to FAA			
20. Final Inspection			
21. ALP Revised and Submitted to FAA			
22. Exhibit "A" Revised and Submitted to FAA			
23. PAPI Flight Checked (if instrument approach)			
24. Navaid Commissioned			
25. Airport Facility Diagram Updated			
26. Project Closeout Submitted to FAA			

Appendix 2

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NORTHWEST MOUNTAIN REGION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

BACKGROUND

1. AIRPORT:	2. LOCATION(CITY,STATE):	3. LOC ID:
4. EFFECTED RUNWAY/TAXIWAY:	5. APPROACH (EACH RUNWAY): ☐ PIR ☐ NPI ☐ VISUAL	6. AIRPORT REF. CODE (ARC):

7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY):

MODIFICATION OF STANDARDS

8. TITLE OF STANDARD BEING MODIFIED (CITE REFERENCE DOCUMENT):

9. STANDARD/REQUIREMENT:

10. PROPOSED:

11. EXPLAIN WHY STANDARD CANNOT BE MET (FAA ORDER 5300.1E):

12. DISCUSS VIABLE ALTERNATIVES (FAA ORDER 5300.1E):

13. STATE WHY MODIFICATION WOULD PROVIDE ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP (FAA ORDER 5300.1E):

ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN

Appendix 2

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NORTHWEST MOUNTAIN REGION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

MODIFICATION:	LOCATION:	PAGE 2 OF 2
14. SIGNATURE OF ORIGINATOR:	15. ORIGINATOR'S ORGANIZATION:	16. TELEPHONE:
17. DATE OF LATEST FAA SIGNED ALP:		
18. ADO RECOMMENDATION:	19. SIGNATURE:	20. DATE:
21. FAA DIVISIONAL REVIEW (AT, AF, FS):		

ROUTING SYMBOL	SIGNATURE	DATE	CONCUR	NON-CONCUR

COMMENTS:

22. AIRPORTS' DIVISION FINAL ACTION:

☐ UNCONDITIONAL APPROVAL	☐ CONDITIONAL APPROVAL	☐ DISAPPROVAL

DATE:	SIGNATURE:	TITLE:

CONDITIONS OF APPROVAL:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
NORTHWEST MOUNTAIN REGION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT DESIGN STANDARDS

ITEMS 1-17 ARE TO BE COMPLETED BY THE AIRPORT SPONSOR(ORIGINATOR). ALL OTHER ITEMS WILL BE COMPLETED BY THE FAA.

THE COMPLETED FORM WILL BE TRANSMITTED BY THE ORIGINATOR TO THE APPLICABLE ADO/AFO. THE ADO/AFO WILL TRANSMIT THE FINAL FAA DETERMINATION TO THE ORIGINATOR.

MODIFICATION TO AIRPORT DESIGN STANDARDS REQUESTS SHOULD INCLUDE SKETCHES OR DRAWINGS WHICH CLEARLY ILLUSTRATE THE NONSTANDARD CONDITION.

ITEMS

1. LEGAL NAME OF AIRPORT.

2. ASSOCIATED CITY.

3. AIRPORT LOCATION IDENTIFIER (SEE APPROACH PLATES/AIRPORT FACILITY DIRECTORY).

4. IDENTIFY THE RUNWAY(S), TAXIWAY(S) OR OTHER FACILITIES EFFECTED BY THE PROPOSED MODIFICATION TO STANDARDS REQUEST.

5. IDENTIFY THE MOST CRITICAL APPROACH FOR EACH RUNWAY IDENTIFIED IN #4.

6. AIRPORT REFERENCE CODE - SEE PARAGRAPH 2, PAGE 1 AC 150/5300-13(CHANGE 4) - I.E. C-II, B-II, A-I (SMALL).

7. NOTE THE DESIGN AIRCRAFT (ARC OR SPECIFIC AIRCRAFT) FOR EACH FACILITY IDENTIFIED IN #4. A DESIGN AIRCRAFT MUST MAKE REGULAR USE OF THE FACILITY. NORMALLY, FAA CONSIDERS REGULAR USE TO BE 500 OR MORE ANNUAL INTINERANT OPERATIONS.

IF THE AIRPORT SERVES A WHOLE FAMILY OF AIRCRAFT IN A PARTICULAR GROUP, THE ARC (I.E. B-II) SHOULD BE SPECIFIED. IF,HOWEVER, THE AIRPORT IS USED BY ONLY 1 OR 2 OF A FAMILY OF AIRCRAFT (IX- BEECH KING AIR C90), THE MOST DEMANDING (APPROACH SPEED, WINGSPAN) AIRCRAFT SHOULD BE SPECIFIED.

8. IDENTIFY THE SPECIFIC NAME OF THE STANDARD THAT IS PROPOSED TO BE MODIFIED FOR THE SUBJECT LOCAL CONDITION.
9. DESCRIBE (WORDS AND NUMBERS) THE DIMENSIONS AND REQUIREMENTS OF THE STANDARD AS PROVIDED IN AC 150/5300-13.

10. STATE THE PROPOSED MODIFICATION TO THE STANDARD.

11. DISCUSS THE LOCAL CONDITIONS THAT MAKE IT IMPRACTICAL OR IMPOSSIBLE TO MEET THE STANDARD.

12. IDENTIFY ALTERNATIVES TO THE SUBJECT PROPOSED MODIFICATION, AND SHOW WHY THESE ALTERNATIVES ARE NOT VIABLE.

13. DISCUSS HOW THE PROPOSED MODIFICATION WOULD IMPACT AIRPORT SAFETY AND EXPLAIN WHY AN ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP WOULD STILL EXIST.

14. TYPED NAME AND SIGINATURE OF AIRPORT AUTHORITY REPRESELNTATIVE.

15. SELF-EXPLANATORY.

16. SELF-EXPLANATORY.

17. SELF-EXPLANATORY.

18. TO BE COMPLETED BY FAA.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AIRPORT IMPROVEMENT PROGRAM

MODIFICATION OF AIRPORT CONSTRUCTION STANDARDS

SPECIFICATION & PARA. REQUESTED MODIFICATION & JUSTIFICATION

DATE **SPONSOR**

DATE **APPROVED BY (FAA)**

Attachment A

AIRPORT PAVEMENT DESIGN

STATE	CITY	AIRPORT
PROJECT NUMBER	SPONSOR	DESIGN ENGINEER

PROJECT DESCRIPTION

GROSS ALLOWABLE AIRCRAFT WEIGHT (KIPS)

(Gear configuration or aircraft type)

SINGLE WHEEL	DUAL WHEEL	DUAL TANDEM	DDT		

DESIGN CRITERIA

DESIGN A/C	PCN #	CBR	K			FLEX STRENGTH		

TYPICAL SECTIONS

(Show and number each course)

NONCRITICAL AREAS	CRITICAL AREAS

DESIGN DETAILS

NO.	COURSE	THICKNESS OF PAVEMENT						SPECIFICATION
		RUNWAY	NONCRITICAL RUNWAY	TAXIWAY	NONCRITICAL TAXIWAY	APRON		

FAA FORM 5100-1 (7-80) Supersedes Previous Edition (ANM Modified) Form dated March 27, 2012)

SOIL ANALYSIS

		GRADATION (% PASSING)														
TEST HOLE	DEPTH OF SAMPLE	3"	2"	1"	3/4"	1/2"	3/8"	4	10	40	100	200	% FINER[1] THAN .02 MM	L.L.	P.I.	USC

SUBGRADE CHARACTERISTICS

AVERAGE FROST PENETRATION	SUBSURFACE DRAINAGE	FROST DESIGN METHOD[2]				
		CP ☐	LSP ☐	RSP ☐	RSS ☐	NONE ☐

COMMENTS[3]

NOTES:
1. Applies only when material is used above frost line.
2. Select one.
3. Attach sketch showing location of borings.

SUBMITTED BY	TITLE	DATE
APPROVED BY	FAA REGIONAL PAVING ENGINEER	DATE
APPROVED BY	FAA STATE AIRPORT ENGINEER	DATE

Appendix 5

National NAS Strategic Interruptions Service Level Agreement

AIRPORT SPONSOR STRATEGIC EVENT SUBMISSION FORM

Submit this form preferably 45 days prior to the event to the Federal Aviation Administration, Air Traffic Organization, Planning and Requirements, Western Service Area
Please email form to 9-AJV-SEC-WSA@faa.gov

AIRPORT NAME _____ **LOCATION ID** _____
CITY, STATE _____
Referenced **NRA NUMBER** _____
PROJECT SCOPE (Example: Reconstruct Runway 18/36)
PROJECT PHASE (Example: Phase 1 of 3) _____

EVENT (Example: Runway 18/36 closure) _____
Duration: Start Date _____ End Date _____
Hours: 24 hrs a day ☐ or from: _____ to: _____ daily.
Other hours of Operation Specify: _____

FACILITIES IMPACTED:

Are any facilities impacted? Yes ☐ No ☐ If yes, list impacted facilities below along with the duration of the impacts if different than duration of the event (these facilities may be found on the NRA determination letter).

Facility: _____ (Example: RWY 18 localizer) Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____
Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____
Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____	Facility: _____ Start Date _____ End Date _____ Hours: Start/End Time _____

Submitted by Sponsor Representative:

Print Name _____
Title _____
Signature _____ Date _____

ENGINEERING GUIDANCE 2010-06

SUBJECT: Standard Handout for Final Reports

PURPOSE: This guidance is established to standardize the final reports for projects within the region.

CANCELLATION: This engineering guidance replaces Engineering Guidance 01-03, dated June 2003.

DISCUSSION: An updated regional standard handout for final reports and close-out documents is attached. The final report and close-out documents are for planning, environmental, construction, land, and equipment projects. A final report is required for every grant project. Projects that are phased over several grants must each have a closeout package that identifies project costs allocated to each grant. A grant covering an earlier phase of a project may be financially closed provided that documentation appropriate to the project phase is included in the closeout and the full documentation will be done when the last grant covering the project completion is closed.

For paving projects, a summary of the acceptance tests are to be included in the report and will be reviewed by the FAA. Quality control tests and inspection results are not required to be included in the final report; however the sponsor is to maintain testing information with their project files for three years after construction project has been financially closed.

GUIDANCE: The attached handout must be used for Airport Improvement Program (AIP) projects in the Northwest Mountain Region. Any suggested changes or comments should be forwarded to, Safety and Standards Branch, Paul Johnson at (425) 227-2622.

REFERENCES: None.

APPROVAL: W L Watson

Bill Watson, Manager, ANM-620
Northwest Mountain Region
Safety and Standards Branch, Airports Division

DATE: 12/7/10

ENGINEERING GUIDANCE 2010-06

Project Closeout Requirements

1. Project Closeout Requirements (for all types of grants)

The following is a summary of general requirements for all Airport Improvement Program (AIP) project closeout packages. Specific requirements for each type of grant are defined below. An AIP checklist is also included and must be completed by the Sponsor or Consultant as part of the project closeout.

a) One signed copy of Final Pay Request on SF 271 for all projects, including Federal Financial Report, SF-425 for letter of credit projects. Do not bind in the final report.

b) Final Payment Summary Worksheet for all projects. Summarize administration, planning, environmental, engineering, Sponsor force account design, construction, Sponsor force account construction, land, and equipment costs, as applicable. (Appendix 1) (Word or Excel forms maybe used) (not required for planning or environmental grants)

c) Summary of DBE utilization including names of DBE firms used, contract amounts, and percent attained as shown on DBE Participation Summary, if applicable. (Appendix 2)

d) Confirm that all Grant Special Conditions were met.

e) Amendment request justifying a grant increase if allowable costs exceed the grant amount and the grant has not yet been amended to increase the maximum federal share, (planning and environmental grants may not be amended).

f) Final project report for planning, environmental, construction, land, or equipment (as outlined in items 2 through 7 below).

g) Submit required Sponsor Certifications (as outlined in items 2 through 8 below).

2. Final Planning Closeout Report

The following documentation, in addition to the applicable items in paragraph 1 above, must be submitted to closeout an AIP planning grant.

a) Statement that all work identified in the Grant and Scope of Services were completed.

b) Date when Forecasts were approved by FAA.

c) Date when the Master Plan was accepted by FAA.

d) Date when Airport Layout Plan was approved by the FAA.

e) One copy of ALP drawings in pdf format.

f) Sponsor Certification for Selection of Consultants (Appendix 3)

3. Final Environmental Closeout Report

The following documentation, in addition to the applicable items in paragraph 1 above, must be submitted to closeout an AIP environmental grant.

a) Statement that all work identified in the Grant and Scope of Services were completed.

b) Date when environmental document was approved by FAA.

c) Sponsor Certification for Selection of Consultants (Appendix 3)

4. Final Construction Report (Grants more than $300,000 all phases combined)

The following documentation, in addition to the applicable items in paragraph 1, must be submitted to closeout an AIP construction grant over $300,000. (The $300,000 threshold shall include the total of all phases of the work for the same overall project – design, construction, etc.)

a) Project History, including:

1) Project Location.

2) Work items constructed.

3) Work bid but not constructed with reasons for deletion.

4) Show the following dates: contract award, notice to proceed, scheduled and actual completion for each contract, final inspection and final acceptance. Approved time extensions should also be listed and explained if applicable.

5) Brief narrative on methods and sequencing of construction, problem areas, unusual conditions, unique features, and actions taken to address any environmental mitigation measures.

6) List of prime and all subcontractors and work performed.

7) Explanation of any liquidated damages assessed.

b) Administrative

Include a list or narrative describing the costs of all administrative work (advertisement, independent fee estimate, outside legal fees, mailing costs, etc.), with an explanation of what was done, if not obvious. See AC 150/5100-10B for definition of administrative items. Note that construction equipment acquisition costs are not to be included under administrative costs.

c) Engineering Design and Construction Management

1) Contract date, amount, and FAA approval date for the consultant design and construction management contracts and any amendments.

2) Approved amount and FAA approval date for the use of Sponsor force account design and construction management services, if applicable. Show actual costs broken down for each person and state what work was accomplished.

d) Construction, Sponsor Force Account Construction and Sponsor Procurement of Materials and Services

1) Summary of all change orders and supplemental agreements. Include cost, change order dates, and FAA approval dates, if applicable.

2) Summary of final quantities. Include design quantities and justification if final quantities significantly vary (+/-10%) from design.

3) Final inspection report. Include a list of any punch list items and schedules of corrective actions giving method, responsible party, and date of correction.

4) One copy of the as-built drawings in PDF format.

5) Summary of test results. Asphalt (P-401) & Concrete (P-501) PWL calculation tables shall be included in report using the output from the pay adjustment calculations, using the FAA paving payment software. Acceptance testing for P-403 (Appendix 17). Acceptance testing summary for P-152, 154, 155, 208, 209, and 304. (Appendix 10 &11).

6) Revised Construction Management Plan testing frequencies for paving work that exceed $250,000 to show actual testing frequencies. (Appendix 12)

7) Summary of the Sponsor force account construction work performed (if applicable). Include type of work, hours and costs for labor and equipment.

8) Summary of any items acquired by Sponsor directly (materials or services)

e) Submit as-built ALP for FAA review and approval resulting from the project, if applicable.

f) Submit marked up Airport Master Record (Form 5010) and note any changes, if applicable.

g) Pavement Strength Survey (Form 5320-1) updated, if applicable.

h) Sponsor Certification for Selection of Consultants (Appendix 3)

i) Sponsor Certification for Project Plans and Specifications (Appendix 4)

j) Sponsor Certification for Equipment / Construction Contracts (Appendix 5)

k) Sponsor Certification for Construction Project Final Acceptance (Appendix 6)

l) Consultant Certification for Project Testing (paving over $250,000) (Appendix 8)

m) Sponsor Certification of Testing Laboratories (paving over $250,000) (Appendix 9)

5. Final Construction Report (Grants $300,000 and less)

The following abbreviated documentation, in addition to the applicable items in paragraph 1, must be submitted to closeout an AIP construction grants $300,000 and less.

a) Project History, including:

1) Project Location.

2) Pre and post construction photographs, if no FAA inspection was done.

3) Work items constructed.

4) List of prime and all subcontractors and work performed..

b) Administrative

Include a list or narrative describing the costs of all administrative work (advertisement, independent fee estimate, outside legal fees, mailing costs, etc.), with an explanation of what was done, if not obvious. See AC 150/5100-10B for definition of administrative items. Note that construction equipment acquisition costs are not to be included under administrative costs.

c) Engineering Design and Construction Management.

1) Contract date and amount for the consultant design and construction management contracts and any amendments.

2) Approved amount and FAA approval date for the use of Sponsor force account design and construction management services, if applicable. Show actual costs broken down for each person and state what work was accomplished.

d) Construction

1) Summary of all change orders and supplemental agreements. Include cost, change order dates, and FAA approval dates, if applicable.

2) Summary of final quantities. Include design quantities and justification if final quantities significantly vary (+/-10%) from design.

3) Final inspection report or post construction photographs.

4) One copy of the as-built drawings in PDF format.

5) Summary of the Sponsor force account construction work performed (if applicable). Include type of work, hours and costs for labor, materials and equipment.

e) Submit as-built ALP for FAA review and approval resulting from the project, if applicable.

f) Submit marked up Airport Master Record (Form 5010) and note any changes, if applicable.

g) Sponsor Certification for Selection of Consultants (Appendix 3)

h) Sponsor Certification for Project Plans and Specifications (Appendix 4)

i) Sponsor Certification for Equipment / Construction Contracts (Appendix 5)

j) Sponsor Certification for Construction Project Final Acceptance (Appendix 6)

6. Final Land Closeout Report

The following documentation, in addition to the applicable items in paragraph 1, above, must be submitted to closeout an AIP land grant:

a) Two signed copies of the revised Exhibit "A" Property Map.

b) "Land Acquisition Cost Breakdown" worksheet. (Appendix 13)

c) A summary of the major project details, negotiations, and unusual conditions (e.g., if purchase price was not equal to the offered amount, explain). Also include a statement on the findings of the Phase 1 Environmental Due Diligence Audit. See sample Final Land Acquisition Report. (Appendix 16)

d) Summary of the amounts for service contracts (land acquisition services, appraisals, review appraisals, negotiations, legal, etc.) and FAA approval date for all contracts over $10,000.

e) Sponsor Certification of Title. (Appendix 15) (see also AC 150/5100-17, Appendix 4, entitled "Guidelines for Sponsor Certification of Title")

f) Sponsor Certification for Selection of Consultants (Appendix 3)

g) Sponsor Certification for Real Property Acquisition (Appendix 7)

7. Final Equipment Closeout Report

The following documentation, in addition to the applicable items in paragraph 1, above, must be submitted to closeout an AIP equipment grant:

a) A summary of amounts and FAA approval dates for all contracts and change orders.

b) Show the following dates: contract award, notice to proceed, scheduled and actual delivery, final inspection and final acceptance.

c) A copy of the final equipment costs.

d) "Inventory of Non-Expendable Personal Property." (Appendix 14).

e) Photographs of equipment purchased (2 copies – one for project file and one for site file).

f) Sponsor Certification for Selection of Consultants (Appendix 3)

g) Sponsor Certification for Project Plans and Specifications (Appendix 4)

h) Sponsor Certification for Equipment / Construction Contracts (Appendix 5)

8. Financial Closeout of Phased Project

The following are the requirements for financially closing an earlier phase of an Airport Improvement Program (AIP) project, where the project is included in more than one grant. An earlier phase of a project may be financially closed at the discretion of the FAA Project Manager provided that documentation appropriate to the project phase is included in the closeout and that full documentation will later be done when the last grant covering the project completion is closed. Phased grants may require a Grant Amendment, as requested by the Sponsor, to change the project description to reflect the actual work completed for the phase. A financially closed grant may not be amended in the future and the grant amount should be fully reimbursed.

a) One signed copy of Final Pay Request on SF 271 for all projects, including Federal Financial Report, SF-425 for letter of credit projects.

b) Complete a Final Payment Summary Worksheet for all projects. Summarize administration, planning, environmental, engineering, Sponsor force account design, construction, Sponsor force account construction, land, and equipment costs, as applicable. (Appendix 1) (Word or Excel forms maybe used) (form not required for planning or environmental grants, but costs must be documented)

c) Submit required Sponsor Certifications, which apply to the project phase. For most this would include the Sponsor Certification for Selection of Consultants (Appendix 3) and if the design has been completed, also include the Sponsor Certification for Project Plans and Specifications (Appendix 4)

d) Project book has all required documents referenced in Index, which apply to the project phase.

AIP Project Closeout Checklist
(for Sponsor or Consultant to complete)

Airport _____ AIP # _____

Project_____

(Indicate Yes if item is included in documentation or N/A if not applicable.)

Sponsor or Consultant Checklist Items	Yes	N/A
1. Project Closeout Requirements (for all types of grants)		
a) Final Pay Request SF-271, for all reports, plus SF-425 for letter of credit projects.		
b) Final Payment Summary Worksheet, if applicable		
c) Summary of DBE Utilization, if applicable		
d) Grant Special Conditions were met		
e) Amendment request, if applicable		
f) Final Project Report as applicable (planning, environmental, construction, land, or equipment)		
g) Required Sponsor Certifications, as applicable		
2. Final Planning Closeout Report		
a) Statement that all work in the Grant and Scope of Services were completed		
b) Date when aviation Forecasts were approved by the FAA		
c) Date when Master Plan was accepted by the FAA		
d) Date when Airport Layout Plan was approved by the FAA		
e) One copy of ALP drawings in pdf format		
f) Sponsor Certification for Selection of Consultants		
3. **Final Environmental Closeout Report**		
a) Statement that all work in the Grant and Scope of Services were completed		
b) Date when environmental document was approved by FAA.		
c) Sponsor Certification for Selection of Consultants		
4. Final Construction Report (Grants more than $300,000)		
a) Project History		
1) Project Location		
2) Work items constructed		
3) Work deleted and reasons for deleting		
4) Table of contract dates		
5) Narrative on methods and sequencing of construction		
6) List of prime and subcontractors and work performed		
7) Explanation of liquidated damages		
b) Administrative Costs		
c) Engineering Design and Construction Management		
1) Consultant Services summary		
2) Sponsor Force Account Services summary		
d) Construction		
1) Summary of Change Orders		
2) Summary of final quantities		
3) Final Inspection Report, with punch list status		
4) One copy of the as-built drawings in PDF format.		
5) Summary of test results		
6) Revised construction management plan showing actual testing frequency		
7) Summary of Sponsor force account construction work, if applicable		
8) Summary of any items acquired by Sponsors directly (materials, etc.)		

	Yes	N/A
e) Submit as-built ALP resulting from the project, if applicable		
f) Submit marked up Airport Master Record and note any changes, if applicable.		
g) Pavement Strength Survey (Form 5320-1) updated, if applicable		
h) Sponsor Certification for Selection of Consultants		
i) Sponsor Certification for Project Plans and Specifications		
j) Sponsor Certification for Equipment/Construction Contracts		
k) Sponsor Certification for Construction Project Final Acceptance		
l) Consultant Certification for Project Testing (paving over $250,000)		
m) Sponsor Certification of Testing Laboratories (paving over $250,000)		
5. Final Construction Report (Grants $300,000 and less)		
a) Project History		
1) Project Location		
2) Pre and post construction photographs, if no FAA inspection was done		
3) Work items constructed		
4) List of Prime and Subcontractors and work performed		
b) Administrative Costs		
c) Engineering Design and Construction Management		
1) Consultant Services summary		
2) Sponsor Force Account Services summary		
d) Construction		
1) Summary of Change Orders		
2) Summary of final quantities		
3) Final Inspection Report or post construction photographs		
4) One copy of the as-built drawings in PDF format		
5) Summary of Sponsor force account construction work, if applicable		
e) Submit as-built ALP resulting from the project, if applicable		
f) Submit marked up Airport Master Record and note any changes, if applicable.		
g) Sponsor Certification for Selection of Consultants		
h) Sponsor Certification for Project Plans and Specifications		
i) Sponsor Certification for Equipment/Construction Contracts		
j) Sponsor Certification for Construction Project Final Acceptance		
6. Final Land Closeout Report		
a) Revised Exhibit "A" Property Map (2 signed copies)		
b) Land Acquisition Cost Breakdown worksheet		
c) Summary of major project details, negotiations, and unusual conditions		
d) Summary of amounts for service contracts (appraisals, acquisition, etc.)		
e) Sponsor Certification of Title		
f) Sponsor Certification for Selection of Consultants		
g) Sponsor Certification for Real Property Acquisition		
7. Final Equipment Closeout Report		
a) Summary of contract approvals		
b) Show the following dates: (contract award, NTP, delivery, acceptance, etc.)		
c) Copy of final equipment costs		
d) Inventory of Non-Expendable Personal Property		
e) Photographs of equipment purchased (two copies)		
f) Sponsor Certification for Selection of Consultants		
g) Sponsor Certification for Project Plans and Specifications		
h) Sponsor Certification for Equipment/Construction Contracts		

(Indicate Yes if item is included in documentation or N/A if not applicable.)

FAA Project Manager Action Items Checklist	Yes	N/A
a) Final Closeout Report meets requirements and checklist items addressed		
b) As-built ALP sets signed and sent to sponsor with letter, Safety & Standards for Part 139 airports, and to ADO files		
c) Airport Master Record (5010) revisions sent to AAS-330.		
d) Inventory of Non-Expendable Equipment form and photo put in project and airport site files, if applicable		
e) DBE summary sent to Civil Rights office, if applicable		
f) Project book has all required documents referenced in Index		
g) Pavement Strength Survey (5320-1) put in office pavement file, if applicable		
h) Grant Special Conditions were met		
i) Final project financial report submitted for approval		

Forms and Certifications

Appendix

1. Final Payment Summary Worksheet
2. DBE Participation Summary
3. Sponsor Certification for Selection of Consultants
4. Sponsor Certification for Project Plans and Specifications
5. Sponsor Certification for Equipment/Construction Contract
6. Sponsor Certification for Construction Project Final Acceptance
7. Sponsor Certification for Real Property Acquisition
8. Consultant Certification for Project Testing
9. Sponsor Certification of Testing Laboratories
10. Acceptance Testing Summary for P-152, 154, 155, 208 & 209
11. Acceptance Testing Summary for P-304
12. Construction Management Plan Revision for actual testing
13. Land Acquisition Cost Breakdown
14. Inventory of Non-Expendable Personal Property
15. Sponsor Certification of Title
16. Sample Final Land Acquisition Report
17. Acceptance Testing for P-403

Appendix E

SENATE BILL 1317 — AUTHORIZING FUNDING BILL

HOUSE OF REPRESENTATIVES
SB 1317 tribal airports; state aviation fund

OVERVIEW
SB 1317 adds Indian Reservations as eligible entities for the State Aviation Fund (Fund) for projects related to publicly owned and operated airport facilities.

HISTORY
Arizona Revised Statutes (A.R.S.) § 28-8202 establishes the Fund. The Fund consists of aviation fuel taxes or motor vehicle fuel taxes deposited by the Arizona Department of Transportation (ADOT), monies deposited from the sale of abandoned aircraft, flight property taxes, registration fees, license taxes and penalties, and monies received from the operation of airports. ADOT is required to distribute the monies that are appropriated by the Legislature. Currently, statute requires monies to be appropriated from the Fund for planning, designing, developing, acquiring of interests in land, construction, and improvement of publicly owned and operated airport facilities in counties and incorporated cities and towns. In this context, publicly owned and operated airport facility means an airport and appurtenant facilities in which one or more agencies, departments or instrumentalities of this state, or a city, town, or county of this state holds an interest in the land on which the airport is located that is clear of any encumbrance that might preclude or interfere with possession, use, or control of the land for public airport purposes for a minimum period of twenty years.

State of Arizona Senate
Fifty-first Legislature
First Regular Session 2013

Introduced by:
Prime Sponsor Senators Jackson Jr., Farley, Lopez
Prime Sponsor Representatives Gonzales, Peshlakai, Steele
Co-Sponsor Senators Bradley, Cajero, Bedford
Co-Sponsor Representative Dalessandro

Chapter 239, Senate Bill 1317

Be it enacted by the Legislature of the State of Arizona:
Section1. Section 28-8202, Arizona Revised Statutes, is amended to read:
START STATUTE28-8202. State aviation fund

A. A state aviation fund is established consisting of the following:

1. Aviation fuel taxes or motor vehicle fuel taxes deposited by the department.
2. Monies deposited by the department as a result of the sale of an abandoned aircraft as defined in section 28-8243 or seized aircraft.
3. The amount of flight property tax that the department of revenue has deposited pursuant to section 42-14255.
4. Registration fees, license taxes and penalties collected pursuant to article 4 of this chapter.
5. Monies received by the department from the operation of airports under this article and articles 2 through 5 of this chapter.

B. On notice from the department, the state treasurer shall invest and divest monies in the state aviation fund as provided by section 35-313, and monies earned from investment shall be credited to the fund.

C. The department shall administer monies that are appropriated by the legislature from the state aviation fund.

D. The board shall distribute monies appropriated to the department from the state aviation fund for planning, design, development, acquisition of interests in land, construction and improvement of publicly owned and operated airport facilities in counties, incorporated cities and towns and indian reservations. The board shall distribute these monies according to the needs for these facilities as determined by the board. No more than ten per cent of the average annual revenue that the fund received for the past three years may be awarded to any one airport in grants in any fiscal year. For the purposes of this subsection, "publicly owned and operated airport facility" means an airport and appurtenant facilities in which one or more agencies, departments or instrumentalities of this state, a city, town or county of this state or an indian tribe or tribal government holds an interest in the land on which the airport is located that is clear of any reversionary interest, lien, easement, lease or other encumbrance that might preclude or interfere with the possession, use or control of the land for public airport purposes for a minimum period of twenty years.

Appendix F

AIRFIELD INVENTORY REPORTS AND PHOTOGRAPHS

Chinle Airport – Approach to Runway 18

Approach end of Runway 18 looking north; No obstructions within the Part 77 imaginary surfaces; Markings are weathered and faded; Pavement is in fair condition; there is surface cracking over 60% of the runway.

Approach end of Runway 18 looking south; Departure end fairly clear with low hills in the distance; No close in obstructions off the side of the runway.

A closer look at Runway 18 end looking north. Here is an example of longitudinal pavement cracking prevalent down the runway short of 1500 feet from south end.

Chinle Airport - Approach to Runway 36

Approach end of Runway 36 looking north; No obstructions within the Part 77 imaginary surfaces;
Markings are weathered and faded and the pavement is in fair condition.

Runway 36 looking south;
Pavement cracking and vegetation within cracks are evident;
Pavement is in fair condition.

Evidence of pavement failure on north end of the runway;
Possible sub-grade issues.

Chinle Airport - Areas of Concern - Runway 18/36

Extensive cracking throughout the runway surfaces, most with vegetation established inside of the cracks.

Lateral cracking with vegetation beginning to work its way into most of the cracks.

Longitudinal cracking full length of the runway

Chinle Airport - Taxiway Markings

Taxiway hold bars;
Markings are in poor condition.

Lead-in lines show recent painting, but hold bars are badly faded.

Close up of marking and asphalt cracking and vegetation on north end of the runway.

Chinle Airport - NAVAID's and Lighting

Windsock and segmented circle;
Facilities are in good condition.

Two box VASI system;
Facilities are in fair condition.

Runway lighting appears to be in fair condition.
Lighting system appears to be in cans as opposed to stake mounted.

Chinle Airport - Facilities

Generator building and rotating beacon.

Fuel farm and containment structure.
Privately owned by Air Med operator.

Close up of 12,000 Gallon Jet-A fuel tank.

Crownpoint Airport – Approach to Runway 18/36

Approach end of Runway 18 looking south;
Example of longitudinal cracking in foreground;
A large dip in the runway occurs at mid-field.

Runway 36 end looking North.

Runway 36 - A major crack has occurred transverse across the runway. Vegetation in cracks is becoming an issue.

Crownpoint Airport - Areas of Concern

Pavement conditions are fair throughout the runway length.

Shoulder areas rise slightly to the west of the runway. Possible intrusion into the 7 to 1 transitional surface.

Example of cracking and potential asphalt failure near mid-field.

Crownpoint Airport - Areas of Concern

Pavement markings are badly faded.

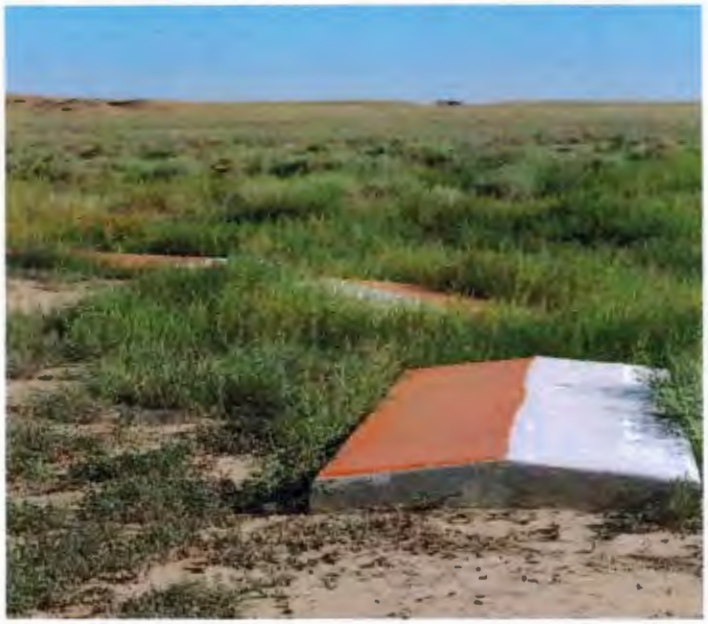
Crownpoint Airport - NAVAIDs and Lights

Electrical control panel; good condition.

Airport beacon; non-standard.

Crownpoint Airport - NAVAIDs and Lights

PLASI Approach System; fair condition.



Segmented Circle; fair condition; overgrown with brush.

Lighted Wind Sock; fair condition.

Crownpoint Airport - NAVAIDs and Lights

Stake-mounted runway end light; fair condition.

Entry Gate; poor condition.

Shiprock Airstrip – Approach to Runway 02

Approach end of Runway 02 looking north.
No obstructions visible within the Part 77 imaginary surfaces. Markings are weathered and faded. Pavement is in fair to poor condition, and there is surface cracking over majority of the runway.

Approach end of Runway 2 looking south.
Departure end is fairly clear. No close in obstructions off the side of the runway were observed.

A closer look at Runway 2 end shows an example of longitudinal pavement cracking prevalent down the runway.

Shiprock Airstrip - Areas of Concern - Runway 02/20

Looking towards mid-field, many lateral cracks are visible in the runway.

Example of a lateral crack in the runway filled with dirt and some vegetation.

Runway cracks have been crack-sealed in past years, but continue to widen requiring additional crack-seal or repair.

Shiprock Airstrip - Areas of Concern - Runway 02/20

Example of both longitudinal and lateral cracking present throughout the runway.

Centerline markings are faded and in poor condition.

Runway 20 approach looking down the runway; pavement cracking is evident and is in need of crack-sealing.

Shiprock Airstrip - Areas of Concern – Runway 02/20

View from the approach end of runway 20; No apparent obstructions are visible.

Partial-parallel taxiway with widespread cracking; pavement is fair condition, with previous crack seal applications evident.

Additional view of partial-parallel taxiway looking to the south.

Shiprock Airstrip - Facilities

Entry gate off of highway

Unlighted wind sock

Segmented circle

Shiprock Airstrip - Facilities

Airport beacon; appears to be non-operational.

Airport entry sign

Tuba City Airport – Approach to Runway 15

Approach end of Runway 15 looking north;
No obstructions within the Part 77 imaginary surfaces;
Markings are weathered and faded;
Pavement is in fair condition; there is surface cracking over 60% of the runway.

Approach end of Runway 15 looking south;
Departure end fairly clear with low hills in the distance;
No close in obstructions off the side of the runway.

A closer look at Runway 15 end looking south. Here is an example of longitudinal pavement cracking prevalent down the runway short of 1500 feet from south end.

Tuba City Airport - Areas of Concern - Runway 15

Approximately 1,500 feet south of the approach end of Runway 15, a large section of cracked, rough, and heaved pavement is present; it is possibly the result of expansive soils in the pavement sub-grade.

Major cracking and associated heaving is occurring transversely across the runway.

A couple of rounded "humps" have also developed that extend two or three inches above the pavement grade.

NOTAM for this area: "Rough Pavement"

Wide block cracking with old crack seal; vegetation is growing through the cracks.

Looking north from mid-field;
Vegetation has begun to work its way into the open cracks.

West side of the runway at mid-field;
A section of the shoulder has begun to crack and fail.

Considerable vegetation has invaded the cracking pavement in several areas.

Tuba City Airport - Approach to Runway 33

Looking south from the last 1000 feet of Runway 33; this pavements appears to be newer than the rest of the runway.
There is an apparent extension south of the taxiway into the parking area.

From the threshold of Runway 33 looking south; Markings are faded, however pavement appears to be in better condition than the north end.

Looking north from the threshold of Runway 33.

Tuba City Airport - Taxiway and Aircraft Parking Area

Taxiway lead-in line and hold bars located on the south end of the runway.

Aircraft Parking and Tie-down area. There are approximately a dozen tie down spaces.

Aircraft parking area and generator building.

Tuba City Airport - NAVAIDs

The wind sock is located on the west side of the airfield and appears to be in good condition.

The airport is equipped with VASI on both ends of the runway. They are operational and in good condition.

The airport has an operational rotating beacon that appears to be reasonably new and in good condition.

Window Rock Airport – Approach to Runway 20

Approach end of Runway 20 looking to the North;
Markings are very poor and faded.

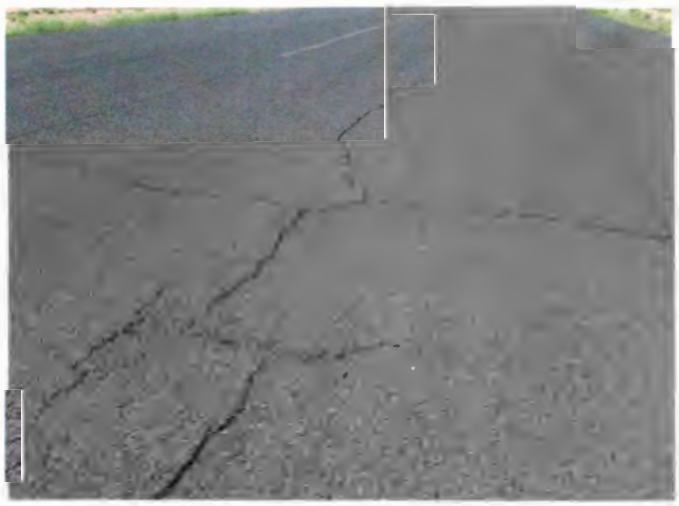
Taxiway tie-in to Runway 20;
Pavement is in fair condition; markings are very poor and faded.

Threshold of Runway 20 looking to the South; Pavement cracking is prevalent throughout the length of the runway.

Window Rock Airport - Areas of Concern

Typical cracking patterns throughout the length of the runway are apparent.

Vegetation issues on runway shoulder areas exist.



Cracking and possible pavement failure issues at mid-field on Runway 02/20.

Window Rock Airport - Areas of Concern

Taxiway to Runway 20 exhibits cracking with vegetation growing into the cracks.

Runway lights are stake-mounted and vulnerable to rodent damage.

Taxiway lights are also stake-mounted and vulnerable to rodent damage.

Window Rock Airport - Areas of Concern

Taxiway to Runway 20 exhibits cracking with vegetation growing into the cracks.

Runway lights are stake-mounted and vulnerable to rodent damage.

Taxiway lights are also stake-mounted and vulnerable to rodent damage.

Window Rock Airport - Facilities

Fuel Farm - Property of the Navajo Nation

Large maintenance hangar and terminal building

Terminal Building

Window Rock Airport - Facilities

Terminal Signage

Interior of the Navajo Nation Hangar

Exterior of Navajo Nation Hangar

Window Rock Airport - NAVAIDs, Lighting, and Weather Systems

VASI System;
poor condition.

REIL System; fair to good condition.

AWOS (Automatic Weather Observing System); excellent condition.

EXHIBIT
C

ST. MICHAELS CHAPTER – P.O. BOX 829 – ST. MICHAELS, ARIZONA 86511

PHONE: 928-871-7842 - FAX: 871-3023

RESOLUTION OF THE ST. MICHAELS CHAPTER No. 7-19-15-161

Supporting and Recommending for Navajo Nation Department of Transportation, Resources and Development Committee of the Navajo Nation Council, and Navajo Nation Land Administration to place a moratorium on the Window Rock Airport facility upgrade construction and land expansion.

WHEREAS:

1. Pursuant to Resolution of the Navajo Nation Council, Title 26, Section 3(A), the St Michaels Chapter is a duly certified Chapter of the Navajo Nation Government, and
2. Pursuant to Resolution of the Navajo Nation Council, Title 26, Section 1(B), the St. Michaels Chapter is vested with the authority to review all matters affecting the community and to make appropriate correction when necessary and make recommendation to the Navajo Nation and other local agencies for appropriate actions, and
3. St. Michaels Chapter supports Donnaleigh Dedman's request for an immediate moratorium until solutions are integrated to keep family members safe, community members' transportation needs are met and the family members living in the vicinity of the strip are contacted and collective agreement is made.
4. Mrs. Donnaleigh Dedman is a registered voter at St. Michael's Chapter and currently lives in St. Michaels Chapter Community.

NOW, THEREFORE, BE IT RESOLVE THAT:

1. The St. Michaels Chapter hereby supports and recommends to the Navajo Nation Department of Transportation, Resources and Development Committee of the Navajo Nation Council, and Navajo Nation Land Administration to place a moratorium on the Window Rock Airport facility upgrade construction and land expansion.

CERTIFICATION

We hereby certify that the foregoing resolution was considered at a duly regular called meeting at St. Michaels Chapter, Navajo Nation (Arizona), at which a quorum was present and that same passed by 38 in Favor, 00 opposed, 04 abstained, this July 19, 2015.

Motion By: Roy Keeto

Second By: Alex Yazzie

Curran Hannon, Chapter President
St. Michaels Chapter

JUL 10 '15 AM11:35

Requesting an Immediate Moratorium of the Expansion/Development Plans of the Window Rock Airport

We the undersigned, homeowners and/or residents sign this petition in support of creating a moratorium and demand that our St Michael's Chapter House officials act upon our demands. We demand an immediate moratorium of all development, any alterations and most importantly the implementation of the proposed Navajo Nation Airport System Master Plan of the Window Rock Airport, in order to launch a full investigation of the historical development of the Navajo Nation Window Rock Airport and allowing the undersigned parties to gather the legal documentation to support their legal claims to the land.

Signature:	Print you name:	Mailing Address:	Enrolled Chapter Member Y/N
Wilbert Dawes	Wilbert Dawes	Box 2177 Window Rock, AZ 86515	Y
Mary Dawes	MARY DAWES	Box 2177 Window Rock AZ 86515	Y
Patricia Dawes	PATRICIA DAWES	Box 2177 Window Rock, AZ 86515	Y
Elsie D Bowman	Elsie D Bowman	Box 294 Window Rock,	Y
[illegible]	Victor Bowman	Box 2151 Window Rock	Y
Holly Bowman	Standing Pawing	Box 2357 W/R AZ	N
Delphine Lee	Delphine Lee	Box 1164 W/R AZ	Y
Freva Bowman	Freva Bowman	Box 1164 W/R AZ	Y
Julia Ann Watson	Julia Ann Watson	Box 4531 Yahtahey Gallup NM 86375	
Seth Arviso	SETH ARVISO	BOX 4721 WINDOW ROCK AZ	N
Marie D Arviso	Marie D. Arviso	Box 4721, Window Rock, AZ	Y
[illegible]	Donna leigh Dedman	Box 2823 Window Rock, AZ	Y
[illegible]	Tarrence Dedman	P.O. Box 2823 Window Rock Az	Y
Lorenzo Peshlakai	Lorenzo Peshlakai	P.O. Box 4801 Window Rock, Az	Y
Sarah Peshlakai	Sarah Peshlakai	P.O. Box 4804 Window Rock, AZ	N
Wendy Peshlakai	Wendy Peshlakai	PO Box 4804 Window Rock AZ	N
Elizabeth Endischee	Elizabeth Endischee	P.O Box 3227, Window Rock AZ	Y
Florida Endischee	Florida Endischee	P.O.B 3227, W/R, AZ 86515	Y
Aaron Endischee	Aaron Endischee	P.O. Box 3227 Window Rock Az 86515	Y
Melvin Harvey	Melvin Harvey	P.O. Box 902 St. Michael Az 86511	Y
Flint Tsosie	Flint Tsosie	Box 1174, W/R, AZ 86515	N
Myron Tsosie	Myron Tsosie	Box 1174, WR, AZ 86515	N

LaTonya Tommy	LaTonya Tommy	P.O Box 1174 Window Rock, AZ 86515	N
Bowman	Rosalinda Bowman	P.O. BOX 294 Window Rock, AZ	Y
Marietta Allison	Marietta Allison	PO Box 92 St. Michaels AZ	Y
Marilyn Allison	Marilyn Allison	BOX 546 St. Michaels, AZ	Y
Janice Taliwood	Janice Taliwood	Box 1185 Window Rock AZ	Y
Lillian Whitegoat	Lillian Whitegoat	Bx 595 St Michaels, AZ 86511	Y
George Whitegoat	George W. Whitegoat	Bx 595 St Michaels, AZ	Y
[illegible]	[illegible]	Box 1291, Window Rock	Y
[illegible]	[illegible]	Box 1165 [illegible]	Y

July 25, 2015

JUL 10 '15 AM11:35

Minutes of the St. Michaels Chapter
Regular Meeting
Sunday, July 19, 2015

I. Call the Meeting to Order: Mr. Curran Hannon, President, called the regular chapter meeting to order at 12:28 p.m. with more than twenty-five community members present constituting a quorum.

II. Invocation: Janis Damon provided the invocation.

III. Review and Adopt Agenda: Whereupon, Mr. Hannon, President, read the agenda for the record and approval. Jasper Walker moved to accept and adopt the agenda, seconded by Janis Damon. The motion passed with a vote of 30 in favor, 00 opposed, 02 abstentions.

IV. Announcement:

A. 07/20-24/15, 10:00am, Monday through Friday, Navajo Nation Council Special Session
B. 07/21/15, Tuesday, 2015 Special Election Re: 2015 Referendum, Language Fluency
C. 08/04/2015, 9:00am, Tuesday, District #18 Grazing Committee Meeting, Red Lake Chapter
D. 08/14/2015, Thursday, Navajo Nation Code Talker's Day, Navajo Nation Offices Closed

V. Presenters/Special Guests:

A. Christy Dennison – No show

VI. Reading and Approval of Minutes from June 14, 2015: The minutes of the last regular meeting on June 14, 2015, was read into record for community member's approval. Joan Peshlakai moved to accept and approve the minutes of June 14, 2015 and seconded by Janis Damon. Motion unanimously passed with a vote of 37 in favor 00 opposed, 05 abstentions.

VII. Old/Unfinished Business: None

VIII. New Business:

A. Financial Report for June 2015: Secretary/Treasurer read and reviewed the financial report for June 2015. Janis Damon motioned to accept and approve June 2015 financial report and seconded by Jasper Walker. Motion carried with a vote of 37 in favor, 00 opposed, 05 abstained.

B. Resolutions:

1. Supporting Resolution #07-19-15-157: The St. Michaels Chapter supported and requested the Resources and Development Committee of the Navajo Nation Council, Division of Economic Development and Navajo Nation Land Administration to place moratorium on side road along State Highway 264 that is exclusively for businesses. Mr. Hannon stated that there are multiple requests for land withdrawal along 264-State Highway over the past years, which has prompted this moratorium. He went on saying that the Chapter community and officials had created a special zone for

the industrial and commercial businesses structures to occupy and operate along 264-State Highway. Businesses such as Navajo Nation Government does not fit the profile are prohibited from new office complex development. The Community members requested to impose moratorium on Navajo Nation government offices that are requesting land withdrawal for office building construction. Currently, there are no land use plans developed for 750 feet parameters of 264-State Highway business zone. Motion to the Resolution was made by Mary Beth Sage and seconded by Willie Keeto, Sr. Motion carried with a vote of 50 in favor, 00 opposed, 02 abstentions.

2. Supporting Resolution #07-19-15-158: St. Michael's Chapter hereby rescinded the Resolution No. 06-14-15-148 that was previously approved for Navajo Nation Head Start to withdraw land within St. Michaels Chapter property at the former Division of Economic Development located on State Highway Road #264 and Mercedes in St. Michaels. The primary purpose of the community members' requests to rescind the resolution is to promote economic development to help enhance the economy and job growth that is in the best interest of the community members. Several community members raised their concerns and issues regarding the land withdrawal for Head Start Program; most of all, the Chapter has minimal land space, but the Navajo Nation government keeps taking the community land without through going the proper channel. Motion made by Janis Damon, seconded by Willie Keeto, Jr., to accept the Resolution. Motion was passed with a vote of 46 in favor, 02 opposed, 06 abstentions.

3. Supporting Resolution #07-19-15-159: Approving Sales Tax Account Funds to be used for a Shell Home Construction for Mr. Jasper Walker of St. Michaels Chapter, He is a Registered Voter, Armed Force Military and he has been Assessed as Qualified. Ms. Sage stated that Mr. Jasper Walker has not submitted the required documents to the Housing committee for assessment and processing. Therefore, Mary Beth Sage made a motion to defer to the resolution for Mr. Jasper Walker to the next meeting, seconded by Janis Damon. The motion was passed with a vote of 38 in favor, 00 opposed, and 02 abstentions.

4. Supporting Resolution #07-19-15-160: The St. Michaels Chapter in-house policy for chapter administration staff was deferred until Administrative Services Center staff reviews it to assure that appropriate steps are taken to protect the employee's rights and the policy will serve as important role of the immediate supervisor for disciplinary action and chapter meeting attendances. Motion by Janis Damon seconded by Joann Peshlakai. Motion carried with a vote of 46 in favor, 00 oppose, 02 abstentions.

5. Supporting Resolution #07-19-15-161: Supporting Resolution for Navajo Nation Department of Transportation, Resources and Development Committee of the Navajo Nation Council, and Navajo Nation Land Administration to place moratorium on Window Rock Airport facility upgrade construction and land expansion. Ms. Donna Dedman stated that Window Rock Airport staff did not notify her family concerning the upgrades and expansion. Several community members expressed concerns that landing strip expansion will cut off the residents and she provided a demographic of the family living in the landing strip zone; moreover, the airplanes are health hazard to the community. Roy Keeto made a motion to approve the

moratorium on the Window Rock airport upgrades and expansion, seconded by Alex Yazzie. Motion carried with a vote of 38 in favor, 00 opposed, 04 abstentions.

Mr. Hannon requested to Add Two Additional Agenda Item: Janis Damon motion and seconded by Larry Skeet to Add Grader purchase and water/sewer line installs at the banana curve in St Michaels Motion passed with a vote of 42 in favor, 00 opposed and 01 abstention.

6. Supporting Resolution #07-19-15-162: The St. Michaels Chapter supports and requests to use Capital Improvement Project Account funds #6801; 24, 25 & 27 in the amount of $100,000.00 to purchase a new Caterpillar Motor Grader equipment for community road improvements within the St. Michaels Chapter Community Area that is in accordance with the procurement policy and procedures of the Navajo Nation. Janis Damon motioned and seconded by Larry Skeet to approve motor grader equipment purchase using CIP funds. Motion passed with a vote of 47 in favor, 00 opposed, 01 abstention.

7. Supporting Resolution #07-19-15-163: the St. Michaels Chapter requests the Indian Health Services – Office of Environmental Health Services (Phase II for 6 clients) to install 6x8 bathroom structures for 15 residential of St. Michaels Chapter community, Indian Health Services – Office of Environmental Health Services is providing sink, bathtub, toilet and plumbing that includes foundation, walls, roofing and flooring. Billy and Irene Yazzie are one of the recipients for bathroom addition. Janis Damon motioned to approve the resolution for HIS-OEHS to perform 6 bathroom additions for St. Michael's chapter recipients and seconded by Betty Begay. Motion carried with a vote of 43 in favor, 00 opposed, 01 abstention.

C. Homesite Lease: None

IX. Reports:

A. Jonathan Hale, Navajo Nation Council reported:

- Navajo Nation Council Summer Session starts July 20-24, 2015
- State of the address from President of the Navajo Nation, Honorable Russell Begaye
- Receive report from the Navajo Nation Council Speaker, Honorable Lorenzo Bates
- Oral Reports from BIA, HIS, Navajo Controller, NN Attorney General, NN Chief Justice and Sihasin Fund Subcommittee
- Written Reports from Standing committee, boards and commissions, BIA and HIS
- Legislation – An Act relating to Law and Order: Naabik'iyati' and the Navajo Nation Council; Approving the Judicial elections Referendum Act of 2015 Referring to Voters of the Navajo Nation a referendum Measure on Whether title 2, 7 and 11 of the Navajo Nation code to provide for the election of the Navajo Nation District court Judges and Supreme Court Justices.
- An Act relating to Law and Order, Naabik'iyati' and the Navajo Nation Council; Approving the change of composition of the supreme Court Referendum Act of 2015 referring to votes of the Navajo Nation referendum measure on whether Title 7 of the Navajo Nation Code should be amended to provide a change of composition of the Supreme Court from (2) Associate Justices for (4) Associate Justices from each of the five Navajo Agencies.
- An act relating to Budget and Finance, Naabik'iyati', and the Navajo Nation Council; referring a Referendum Measure on Expenditure of fund Principal Pursuant to 12

NNC Sub-Section 904. Permanent trust fund to support the transportation stimulus plan.

- An Act relating to Law and Order Committee, Naa'bik'iyati' committee and the Navajo Nation Council; Amending Title 2 NNC Sub-Section 1002 and the Navajo Nation election Code Title 11 NNC Sub-Section 6 for purposes of permitting a president whose term has ended to continue his or her functions as President pending an election, certification and the administering of oaths for the new elected President and Vice-President.
- An Act relating to Law and Order, Naa'bik'iyati' and Navajo Nation Council; amending Navajo Nation Code title 7 by requiring NN Supreme Court Justices to hold a Juris Doctor Degree.
- An Act relating to Law and Order, Budget and Finance, Education and Human Services and Naa'bik'iyati' committees and the Navajo Nation Council; amending 2 NNC Sub-Section 57, General provisions concerning the Nation Property that the out-going NN President requested to purchase at a low market value price.
- An Act relating to Health, Education and Human Services and Naa'bik'iyati' committee and the Navajo Nation Council; amending Title 2 by moving the Department of Personnel Management from under the Division of Human Resources to the Office of the President and Vice-President and amending the Department of Personnel Management Plan of Operations.
- An Action relating to Law and Order, Naa'bik'iyati' committee and Navajo Nation; amending the Navajo Nation Council and Committee legislative process 2 NNC Sub-Section 164 creating a new Sub-Section 165, and amending corresponding definitions at 2 NNC Sub-Section 110
- An Act relating to Health, Education, and Human Services, Resources and Development, Budget and Finance, Law and Order, Naa'bik'iyati' and Navajo Nation Council; amending Navajo Nation Code Title 24 by Enacting the Alcohol Tax
- An Act relating to Budget and Finance Committee and Naa'bik'iyati' Committee and Navajo Nation Council; amending Navajo Nation FY 2015 comprehensive budget, CS-46-14, and approving the appropriation of $374,264 to the Office of the Legislative Services and the Office of Legislative Services-Legislative District Assistants from Unappropriated recurring revenues
- An Act relating to Naa'bik'iyati' committee and the Navajo Nation Council; Confirming the NN President's Appointment of Jackson Brossy, as NN Washington Office Director
- An Action relating to Law and Order, Naa'bik'iyati' committee and Navajo Nation Council, appointing Ethel Billie Branch as NN Attorney General
- An Action relating to Law and Order, Naa'bik'iyati' committee and Navajo Nation Council; consenting to Jesse Delmar as NN Division of Public Safety Executive Director.
- Naa'bik'iyati' committee meeting is scheduled, Monday at 7:00 a.m. to discuss an Act relating to Resources and Development, Health, Education and Human, Budget & Finance, Navajo Nation Council; approving supplemental funds from unreserved, undesignated fund balance in the amount of $3.0 million for the 110 chapter houses for summer youth employment and scholarship funds.
- The previous Navajo Nation Council Special Session an action requesting allocations for powerline/waterline extension, summer youth employment and scholarship failed. There was only 15 votes and only one more vote was required to meet the 2/3 majority votes; 16 votes equates to 2/3 votes, therefore the legislation was nullified and voided.

- 2015 Navajo Nation Referendum Election July 21, 2015 at 6:00 a.m. to 7:00 p.m.; explained the referendum languages of qualifications for President and Vice-President: Must be able to speak and understand the Navajo and English language; and this ability shall be determined by the Navajo voter when he/she casts a ballot. Wherein, the voters can either mark FOR or AGAINST.

B. Alfred Mike, Chapter Vice-President reported:
Attached hereto is a written report made by Mr. Mike during the meeting

C. Joseph Peshlakai, Grazing Official reported:
- United State Department of Agriculture (USDA) are providing reimbursements for water, hay, grain and feed purchase to sustain livestock; clients must produce your permits and tally counts.
- USDA office is located next door to St. Michaels Post Office.
- White Cone Chapter has a newly elected Grazing Official
- Navajo Nation Agriculture is proposing to cut 20% of Grazing Official stipends
- District #18 grazing records has 40,040 sheep units and 45,222 permit holder that over the limit by 5,182
- St. Michaels Chapter community has 150 permit holders, 308 permits for horses, 508 permits for sheep and 1,174 lacked tally counts, etc.

D. Willie Keeto, Jr., Chairperson of the St. Michaels Chapter Housing Committee reported:
Attached hereto is a written report made by Mr. Keeto during the meeting

E. Janis Damon, School Board and CLUP committee member written report is attached.

X. Next Chapter Meetings:
1. Planning Meeting @ 12:00 p.m., Sunday, August 2, 2015
2. Regular Meeting @ 12:00 p.m., Sunday, August 9, 2015

XI. Adjournment: President Hannon adjourned the regular chapter meeting at 4:08 p.m.

Respectfully Submitted by,

G Smiley

Gloria Smiley, Secretary/Treasurer
St. Michaels Chapter

Office of Legislative Counsel
Telephone: (928) 871-7166
Fax # (928) 871-7576

Honorable LoRenzo Bates
Speaker
23rd Navajo Nation Council

MEMORANDUM

TO: Honorable Jonathan Hale
Navajo Nation Council Delegate

FROM: Marvin Beauvais, Attorney

DATE: November 9, 2015

SUBJECT: AN ACTION RELATING TO RESOURCES AND DEVELOPMENT; APPROVING A MORATORIUM ON THE WINDOW ROCK AIRPORT FACILITY UPGRADE AS OUTLINED IN NDOT'S NAVAJO NATION AIRPORT SYSTEM MASTER PLAN

Pursuant to your request, attached is the above-referenced proposed resolution and associated legislative summary sheet. Based on existing law and review of the documents submitted, the resolution as drafted is legally sufficient. However, as with all legislation, it is subject to review by the courts in the event of a challenge.

The Office of Legislative Council confirms the appropriate standing committee(s) reviews based on the standing committees powers outlined in 2 N.N.C. §§ 301, 401, 501, 601 and 701. Nevertheless, "the Speaker of the Navajo Nation Council shall introduce [the proposed resolution] into the legislative process by assigning it to the respective oversight committee(s) of the Navajo Nation Council having authority over the matters for proper consideration." 2 N.N.C. § 164(A)(5).

Please review the proposed resolution to ensure it is drafted to your satisfaction. If this proposed resolution is acceptable to you, please sign it where it indicates "Sponsor", and submit it to the office of Legislative Services for the assignment of a tracking number and referral to the Speaker.

If the proposed resolution is unacceptable to you, or if you have further questions, please contact me at the Office of Legislative Counsel and advise me of the changes you would like to make to the proposed resolution. You may contact me at (928) 871-7166. Thank you.

THE NAVAJO NATION
LEGISLATIVE BRANCH
INTERNET PUBLIC REVIEW PUBLICATION

LEGISLATION NO: _0391-15__ **SPONSOR: Jonathan L. Hale**

TITLE: An Action Relating To Resources And Development Approving A Moratorium On he Window Rock Airport Facility Upgrade As outlined In NDOT'S Navajo Nation Airport System Master Plan

***Date posted*: November 17, 2015 at 4:46PM**

Digital comments may be e-mailed to comments@navajo-nsn.gov

Written comments may be mailed to:

Executive Director
Office of Legislative Services
P.O. Box 3390
Window Rock, AZ 86515
(928) 871-7586

Comments may be made in the form of chapter resolutions, letters, position papers, etc. Please include your name, position title, address for written comments; a valid e-mail address is required. Anonymous comments will not be included in the Legislation packet.

THE NAVAJO NATION
LEGISLATIVE BRANCH
INTERNET PUBLIC REVIEW SUMMARY

LEGISLATION NO.: 0391-15

SPONSOR: Honorable Jonathan L. Hale

TITLE An Action Relating To Resources And Development Approving A Moratorium On he Window Rock Airport Facility Upgrade As outlined In NDOT'S Navajo Nation Airport System Master Plan.

Posted: November 17, 2015 at 4:46PM

5 DAY Comment Period Ended: November 22, 2015

Digital Comments received: ***No comments received.***

Lotanya Bulock
Policy Analyst
Office of Legislative Services

11/23/15 9:53am
Date/Time

THE NAVAJO NATION
LEGISLATIVE BRANCH
INTERNET PUBLIC REVIEW SUMMARY

LEGISLATION NO.: 0391-15

SPONSOR: Honorable Jonathan L. Hale

TITLE An Action Relating To Resources And Development Approving A Moratorium On he Window Rock Airport Facility Upgrade As outlined In NDOT'S Navajo Nation Airport System Master Plan.

Posted: November 17, 2015 at 4:46PM

5 DAY Comment Period Ended: November 22, 2015

Digital Comments received:

Comments Supporting	*None*
Comments Opposing	*None*
Inclusive Comments (1)	**1. Geraldine (Arviso) BinettneeKirk; Window Rock Arizona.**

Executive Director
Office of Legislative Services

12/28/2015 - 4:00 pm

Date/Time

December 28, 2015

Honorable Council Delegate Jonathan Hale
The Navajo Nation
Window Rock, AZ 86515

RE: Window Rock Airport

Dear Honorable Council Delegate Jonathan Hale,

With regards to the above, I am hereby submitting this letter to you regarding homesite situated south of old Credit Union, Window Rock, Arizona.

In 2009, I started to build a Hogan utilizing my 401K funds, and in 2012, I purchased a mobile home through the Navajo Nation Credit Services in hopes for a brighter future for my daughters and I. My homesite was approved approximately 7 years ago. I have lived adjacent to the homesite over 55 years.

Currently, I do not have any services such as utility lines, water/sewer, because I was told the cost of a powerline to my home would be over 12,000.00 (180 feet from existing powerline pole). This cost is an extravagant cost to me and my family, as I am a single parent. Since the cost was high, I requested for another survey and other options to curtail cost to me. With this request, I paid a fee and made a followup with NTUA, last year; thus: I was asked by Laura Sloan, whether my dispute with the airport is resolved?

Upon applying for my homesite, I met with Wayne Hunter, Director of Air Transportation at the time regarding any issues of my request for proposed homesite. Mr. Hunter indicated that there were no issues of building a home and that there were no plan to improve.

Upon building my Hogan, I was visited by Mr. Arlando Teller, staff of Navajo Department of Transportation. He indicated that my Hogan is in the way of the improvements of the airport and that they cannot obtain the necessary federal funding for improvements due to my Hogan. He further indicated that he would write a letter to the above, and to date, I have not received any letters in written format of a quest to improve the airport or any issues or disputes of my homesite and existing homes.

I further met with Land Administration-Mr. Halona, Director and expressed by concerns and he indicated that there were several issues regarding my homesite and that he indicated that I should not have to wait but rather enjoy my homesite with necessary improvements.

With this letter, please note that I have no immediate plans to moving my current place of residence, but rather look to improvements of my homesite. I am further asking a resolve and your office to intervene and schedule a date to meet with me for further discussion. I have worked with the Navajo Nation over 25 years, yet I cannot quietly enjoy my home and plans due to a **unresolved matter.**

Should you have any questions, please call me. I can be reached at at my work or my cellular at

Sincerely,

Geraldine (Arviso) BinettneeKirk
Post Office Box
Window Rock, AZ 86515

RESOURCES AND DEVELOPMENT COMMITTEE
23rd NAVAJO NATION COUNCIL

FOURTH YEAR 2018

COMMITTEE REPORT

Mr. Speaker,

The **RESOURCES AND DEVELOPMENT COMMITTEE** to whom has been assigned:

Legislation # 0391-15: An Action Relating to Resources and Development; Approving a Moratorium on the Window Rock Airport Facility Upgrade as outline in NDOT's NN Airport Master Plan. *Sponsor: Honorable Jonathan L. Hale.*

Has had it under consideration and reports the same **EXPIRED.**

Pursuant to NN Standing Committee Rules of Order, Rule 18.H, "Any Legislations not taken up from the table in the manner provided herein directed by the Committee shall be deemed to be expired and shall be eliminated from the agenda of the committee."

The above referenced legislation was not acted on in the manner directed by the Committee on December 1, 2015 and is therefore "expired and shall be eliminated from the agenda of the Committee." As such, Legislation # 0391-15 will be closed out.

Respectfully submitted,

Alton Joe Shepherd, Chairperson
Resource and Development Committee of
the 23rd Navajo Nation Council

March 8, 2018

ATTACHED: RDC Agenda of December 1, 2015.

RESOURCES AND DEVELOPMENT COMMITTEE OF THE
23rd NAVAJO NATION COUNCIL

Regular Meeting
December 1, 2015
10:00 A.M.

PRESIDING: Honorable Alton Joe Shepherd, Chairperson
Honorable Benjamin Bennett, Vice-Chairperson

LOCATION: Twin Arrows Resort/Casino
Flagstaff, Arizona

(✓) Alton Joe Shepherd
(✓) Leonard Tsosie
(✓) Leonard Pete
(✓) Walter Phelps
( ) Benjamin Bennett
(✓) Davis Filfred

10:08 a.m. (4) WPhelps.

1. Call Meeting to Order; Roll Call; Invocation; and Announcements;

2. Recognizing Guests and Visiting Officials:

3. Reviewing and Approving the Agenda:

M: DFilfred S: Leonard Pete V: 4-0-0

4. Reviewing and Approving Journal(s): **November 3, 2015; November 23, 2015 and November 24, 2015**

M: DFilfred S: LPete V: 4-0-0

5. Receiving Report:

A. Report – Wells Fargo Chapter HR and Payroll Services *Presenter: Elizabeth Begay, Office of the Auditor General*

M: ____ S: ____ V: 4-0-0

IRS-policy in place? $ from Personnel Lapse Fund to pay for monitoring. Request for cost for monitoring personnel.

6. Old Business: None

7. New Business:

A. **Legislation # 0378-15:** An Action Relating to Resources and Development And Naabik'Iyati Committees; Committing to the Little Colorado River Watershed Chapter Association Submission of a Phase-Two Grant Application to the United States Department of Agriculture. *Sponsor: Walter Phelps*

M: S: V:

Table — 90 days

2604

alternative sites, Cost, process

B. **Legislation # 0391-15:** An Action Relating to Resources and Development; Approving a Moratorium on the Window Rock Airport Facility Upgrade as outline in NDOT's Navajo Nation Airport System Master Plan. *Sponsor: Honorable Jonathan Hale*

BIA Land — Chapters, NDOT, St. Michael's, BIA, Hospital, General Services. Land users — Grazing Permit

M: L Pete S: W Phelps V:

C. **Legislation # 0392-15:** An Action Relating to Resources and Development; Approving the Grant of Right-of-Way to Jemez Mountain Electric Cooperative, Inc., to Construct, Operate and Maintain Electrical Distribution Line Orlando Gordon Project Located in the Torreon Chapter Vicinity, Navajo Nation (McKinley County, New Mexico); and Approving the Waiver of consider of $2,102.24 for the Right-of-Way. *Sponsor: Honorable Leonard Pete*

DF | BB | 4-0-0

M: S: V:

D. **Legislation # 0393-15:** An Action Relating to Resources and Development; Approving the Grant of Right-of-Way to Jemez Mountain Electric Cooperative, Inc., to Construct, Operate and Maintain the "NGSWP Reach 26.2 (A.K.A. Cutter Lateral)" Single Phase Power Line "A" and Temporary Construction Easement Located in the Pueblo Pintado Chapter Vicinity, Navajo Nation (McKinley County, New Mexico); and Waiving Consideration as the Right-of-Way and temporary Construction Easement will Benefit Navajo Families.. *Sponsor: Honorable Leonard Pete*

Deferred — ED

LP | WP | 5-0-0

M: S: V:

E. Approving ~~Leadership Meeting~~ W/S with BIA, Department of Agriculture, Eastern Navajo Land Board Relative to their Roles and Responsibilities with the Eastern Navajo Grazing Regulations on December 28, 2015 at Route 66, Albuquerque, NM

M: DFitzpatrick S: BBennett V: 4-0-0

8. Conclusion of Committee Meeting; Other Announcements; Adjournment:

M: LT S: LP V: 4-0-0

NOTE: The public is advised that the Resources and Development Committee Agenda is not final until adopted by a majority vote of the Committee at a duly called Committee meeting pursuant to 2 N.N.C. § 183. Navajo Nation Standing Committee Rule No. 8.

12:50 pm