
CHAPTER 4: IMPLEMENTATION

Introduction

The implementation and compatibility plan provides guidance on how to carry out the preferred development recommendations identified in **Chapter 3: Alternatives Analysis**. Based on the preferred development plan, the improvement projects needed at the Terry Airport (8U6) over the planning period can be formulated. This chapter includes the following sections:

- Project Sequence
- Financial
- Compatibility

Background

Each project is sequenced to balance demand, schedule, other projects, environmental/agency approval, funding, and financial constraints. The project plan may change over time to react to changing conditions but is flexible so that the airport can react to change and re-prioritize projects based on actual demand.

All planning-level project costs developed are in 2023 dollars. Final project costs are subject to change based on actual construction and project formulation needs.

Many of the projects identified are demand-driven based on the Planning Activity Levels (PALs) established in the approved aviation forecasts. The timing of implementation is estimated from the FAA-approved activity forecasts.

Implementing a Project

The airport must go through an established process to receive the federal funds to complete an airport development project. FAA requires long lead times to complete all project steps and incorporate projects into federal funding plans. Additional coordination is required to prepare National Environmental Policy Act (NEPA) environmental documentation. Common steps in the project implementation process for a complex project include (steps may be shorter or longer based on complexity):

Professional Services: Select a qualified consultant for the project planning, environmental reviews, survey, engineering design, and construction administration for the project. The FAA recommends a distinct selection process for both planning and engineering services.

Five (5) Years Prior to Construction: Identify the project on the Airport Layout Plan, complete necessary airport planning studies and collect supporting documentation to demonstrate the project is justified for AIP funding, and is compatible with the Airport Layout Plan.

Four (4) Years Prior to Construction: Update the Capital Improvement Plan (CIP) to identify the project scope, eligibility, justification, and funding. Close coordination with FAA is required.

Three (3) Years Prior to Construction: Initiate any aeronautical surveys, navigational aid agreements (reimbursable agreements) or special FAA coordination for flight procedures which may be necessary prior to construction. Solidify project funding plan and final justification with FAA.

Two (2) Years Prior to Construction: Complete required NEPA environmental documentation and analysis for the proposed action. Prepare 30 percent project design, refine cost estimates, and prepare benefit/cost analysis as necessary. Acquire land for project and initiate airspace studies.

One (1) Year Prior to Construction: Obtain environmental clearance and permits for the proposed action. Prepare funding pre-application, detailed project plans and specifications including design report, airspace studies, Safety Management Systems (SMS) and construction safety/phasing plan. Finalize project schedule.

Year of Construction: Complete final design. Solicit bid proposals from companies engaged in the project construction. Prepare grant application and accept Federal grant. Issue notice to proceed and monitor construction. Maintain FAA grant compliance and payments.

After Construction: Submit final report and close out the AIP grant.

For complex projects requiring federal discretionary funding such as runway extensions, these steps may take up to five years prior to the issuance of an AIP grant for construction. Less complex projects using entitlements such as pavement rehabilitation will require less lead times, typically no less than three years prior to grant issuance.

Capital Improvement Plan (CIP)

The CIP is a key element in the implementation plan. The CIP identifies the project title, year, estimated costs, and anticipated funding for airport improvements. Larger projects are often divided into smaller elements that reflect how projects are approved, designed, and constructed. Each project is requested through the CIP project programming and grant application process. The CIP is updated and submitted to the FAA annually to program Federal and State grant funding. The proposed Terry CIP identifies over \$2 million in airport improvements over the next 10 years see **Table 4-3 Capital Improvement Plan**.

Table 4-3 – Capital Improvement Plan

Year	Project	Scope	Estimated Cost	FAA Funds	State Funds	Local Funds	Other
2024	Land	Land Acquisition for RPZ and Wildlife Fence	325,000	292,500		32,500	
2024	Pavement	Pavement Maintenance	250,000	225,000		25,000	
2025	Irrigation Ditch	Relocate 660 LF of Irrigation Ditch	200,000	180,000		20,000	
2025	Access Road	Relocate 1300 LF of Residential Road	100,000	90,000		10,000	
2025	Wildlife Fence	Construct Wildlife Fence	500,000	450,000		50,000	
2026	Instrument Approach	Aeronautical Survey	157,500	157,500		17,500	
2026	AWOS III		300,000	270,000		30,000	
2026	Windcones	Segmented Circle and Windcones	55,000	49,500		5,500	
2028	Pavement	Pavement Maintenance	275,000	247,500		27,500	
TOTAL			\$ 2,180,000	\$ 1,962,000	\$ -	\$ 218,000	\$ -

Source: KLJ Analysis; values rounded to nearest 100.

Financial

The implementation plan considers the airport's ability to fund the projects identified in this planning study. Projects in the short-term and mid-term are discussed in more detail for realistic project sequencing based on identified needs, airport priorities and available funding. Financial feasibility is a major consideration in developing the implementation plan and Capital Improvement Plan (CIP).

Airport funding for projects is derived from many sources. Funding sources can be categorized into three main categories:

- Federal funding
- State funding
- Local or Private funding

Detailed information about these funding programs can be found in **Appendix B – General Aviation Airports 101 (Airport Funding)**. A realistic project implementation plan must consider financial resources. The financing strategy for the Terry Airport provides sufficient federal, state, and local funding for future airport improvements. Projected funding sources are based on existing legislation.

Federal Funding

Federal Airport Improvement Program (AIP) funding provides financing for most of the improvements proposed at the Terry Airport. While maximizing the projected entitlement funding available to Terry (\$150,000/year), these entitlements will only finance a portion of the proposed improvements through the 20-year period. Entitlements will be used to fund AIP-eligible projects, particularly critical maintenance, safety, and capacity enhancements.

Discretionary or State Apportionment funding is anticipated to fund about 10 percent of the cost of airport improvement projects through the next 10 years. This funding will be needed to complete these projects in 2025 for the Wildlife Fence.

COVID-19 Relief

During the Coronavirus Disease 2019 Pandemic (COVID-19), the United States government signed three laws for economic assistance to eligible U.S. airports through 2020 and 2021. These funds were to be used to prevent, prepare for, and respond to COVID-19.

The first law, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed on March 27, 2020, for \$2.3 trillion dedicated towards combatting the effects of COVID-19. Of this, \$10 billion were to keep airports in operation to serve the industry, traveling public and to support the economy, along with keeping airports credited ratings stable, and to keep airport and aviation workers employed. These funds could be used for any purpose for which airport revenues may be lawfully used.

Then on December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) was the second law signed including \$900 billion in supplemental appropriation for COVID-19 relief. The FAA established the Airport Coronavirus Response Grant Program (ACRGP) which included \$2 billion of the act.

Finally, the American Rescue Plan Act of 2021 was signed into law on March 11, 2021, which included \$1.9 trillion to address the ongoing health crisis and spur a strong economic recovery. The FAA established the Airport Rescue Grants which is how \$8 billion of those funds.

Terry Airport was granted \$20,000 under the CARES Act as a general aviation airport. \$9,000 was granted from the ACRGP as a non-primary allocation for a basic general aviation airport. Then, \$22,000 was granted from the Airport Rescue Grants as a non-primary allocation. In total \$51,000 has been awarded to combat the effects of COVID-19.

Bipartisan Infrastructure Law

On November 6, 2021, the Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act) was passed. This included \$ 1 trillion for improvements to highways, bridges, roads, passenger and freight rail, airports, water and wastewater treatment, internet access and modernizing the electric grid. The FAA awarded the \$25 billion received from the law to 3,075 airports and divided it into three grant groups:

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1. \$5 billion for airport terminals to replace aging terminals, increase energy efficiency and accessibility.
 2. \$5 billion for air traffic facilities to update and upgrade equipment to improve safety, security and environmental standards and replace necessary facilities.
 3. \$15 billion for airport infrastructure for projects as defined under the existing Airport Improvement Grant and Passenger Facility Charge criteria including runways, taxiways, safety and sustainability projects, terminal, airport-transit, and roadway.

\$110,000 was allocated in 2022 and \$113,000 was allocated in 2023 from the Bipartisan Infrastructure Law to Terry Airport along for future improvements. The remaining three years of allocations are expected to be similar but will fluctuate some as the number of airports in each category change.

State Funding

State funding will primarily be used to provide a match for Federal AIP funding. This is expected to be as much as 10% in the planning period. Terry should stay apprised of the State's funding programs and funding levels to determine the impact of that funding on the projects planned for the Terry Airport. The state of Montana offers various project funding for an airport that is publicly owned and is public-use.

- Grants: Up to 100% of the airport's share of federal NPIAS project costs.
- Loans: Up to 100% of the airport's shares of any airport project. These loans are low-interest and can be repaid in equal annual installments with a division loan over a ten-year period or paid in full at any time without incurring additional interest or penalty charges.
- Non-Federal Aid Projects: NPIAS and Non-NPIAS airports are eligible for grants or loans up to 100% of the project cost for non-FAA eligible projects.

Local Funding

A local match will be needed for the AIP funded projects. This requirement will be as much as 10% of the project cost but could vary depending on project eligibility and the structure of the State and Federal funding programs. The Terry Airport has a slate of projects planned and should assure that it has adequate funding sources for operating expenses as well as project funding. See **Appendix B – General Aviation Airports 101 (Airport Funding)** for further details on airport funding options.

Compatibility

Overview

Airports are community assets providing significant benefits. They facilitate the movement of people, goods, and services, promote tourism and trade, stimulate business development, and support a variety of jobs.

The objective of land use planning is to guide on-airport and off-airport land use development to be compatible with airport operations. The airport directly controls on-airport compatible land uses to primarily serve aeronautical activities. The airport does not directly control off-airport land uses. Surrounding land uses compatible with airports typically include those uses that can co-exist with a

nearby airport without either constraining the safe and efficient operation of the airport or exposing people working or living nearby to unacceptable levels of noise or safety hazards. Compatible land use also considers minimizing potential hazards to aircraft and the flying public. The impact of airport planning decisions extending well beyond the airport property line must be considered.

Land use planning around airports is important to airports and communities for several reasons:

- **Safety** - Compatibility is needed to maintain safety of the general and flying public. Risk should be reduced to an acceptable level. The airport must also maintain operational utility within identified safety and risk criteria.
- **Airport Utility** - Land uses around airport should provide the airport so that there are not undue restrictions placed on the airport's existing or planned future arrival and departure procedures. Opportunities for future development identified in the Airport Master Plan and shown on the Federally (FAA) approved Airport Layout Plan should be considered.
- **Human Environment** - Balancing the human environment with airport operations is important to maintain an acceptable level of airport impacts (i.e. noise and visual exposure) with the surrounding community.
- **Economic Development** – Operational restrictions placed on the airport because of land use compatibilities have the potential to have a trickle-down effect on the community. This reduces the community's ability to accommodate the aviation needs of the public and local businesses, thus limiting economic development opportunities.

Incompatible land uses are one of the largest issues facing airports today, often resulting in conflicts between airports and their communities. They also may result in airport operational and grant project funding implications in certain situations. Building consistency between the recommendations in this study with airport land use compatibility standards and area-wide planning is vital for maintaining compatible land use.

The objective of this section is to assist the Terry Airport in identifying land use standards compatible with the development plan and provide recommendations so that the airport can continue to meet safety and compatibility criteria. This chapter should become the framework to future land use planning efforts between Airport and Prairie County.

Roles and Responsibilities

AIRPORT SPONSOR

As the airport sponsor, the Prairie County Airport Authority, applies and receives federal grants. These federal grants require the city to develop and maintain the airport compatible with FAA rules and regulations through FAA Grant Assurances (obligations). There are currently 39 grant assurances which an airport sponsor assumes as a contractual obligation with the Federal Government when the sponsor accepts federal funds for airport development. FAA has published Order 5190.6B *Airport Compliance Manual* to assist FAA personnel and airport sponsors to maintain compliance with grant and land obligations. These grant assurances describe how the sponsor must operate the airport and serve the needs of the flying public. Grant assurances 20 and 21 pertain to compatible land use around airports.

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.

FAA grant assurances require airports take appropriate action to protect airspace and restrict land uses in the immediate vicinity to those compatible with airport operations. Compatible land use control for the Terry Airport is the responsibility of the airport sponsor.

FEDERAL AVIATION ADMINISTRATION

The FAA can provide guidance and funding to promote compatible land development around airports; however, it has no regulatory authority for controlling land uses. State and local governments are responsible for land use planning, zoning, and regulations. The FAA develops grant assurances to protect federal investments in airports but are the responsibility of the airport sponsor to maintain.

The FAA monitors all obligated airports to ensure they comply with the requirements of the grant assurances through its Compliance Program. If the sponsor fails to take the necessary corrective action, the FAA can legally impose penalties on the sponsor, including the loss of federal funding.

As defined by law, the FAA's authority to enforce most regulations and grant assurances is limited to within the airport boundaries. The FAA's only authority on compatible land use planning is through the grant assurances airport sponsors must adhere to in order to obtain federal funding for airport improvements. In most cases, the most practical and cost-effective method for a sponsor to affect compatible land use outside of the airport's property is through zoning or easements rather than through land acquisition.

STATE OF MONTANA

Montana Code Annotated Title 67, Chapter 7, allows counties and cities of the state to designate Airport Affected Areas to control height and land use around airports.

South Dakota Codified Laws allow counties and cities of the state to enter into joint planning and zoning agreements. Municipalities may also exercise zoning powers within three miles of their corporate limits subject to county approval. There are no minimum land use development and airspace standards around airports. Additional State regulations and laws in place under Chapter 50-9 concern structures affecting aviation in South Dakota. Under Chapter 50-9-1, South Dakota Aeronautics Commission approval is required for any new or altered structure greater than 200 feet above the terrain, and for any new or altered structure within a 100:1 slope from the runway at a public airport with a runway length of 3,200 feet or greater.

SURROUNDING JURISDICTIONS

Local jurisdictions are responsible for developing and enforcing land use planning, zoning, and regulations. Development proposals are reviewed and approved at this local level through an established process. The local authority enforces multi-jurisdictional airport zoning regulations for proposed development. For the Terry Airport, surrounding jurisdictions affected by the airport includes the Town of Terry and Prairie County.

Land Use Compatibility Elements

Four key elements should be considered to achieve land use compatibility at any airport.

- Airspace
- Safety
- Compliance

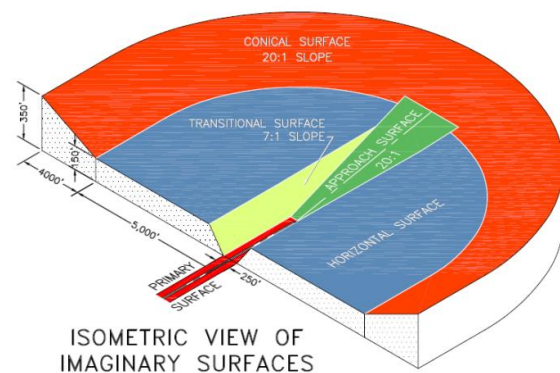
A general description of each element is provided based on criteria developed by the FAA and the State of Montana, if applicable.

AIRSPACE

Guidelines & Evaluation

Airspace compatibility includes avoiding vertical development that reduces the level of safety, increases risks of aircraft accidents, or measurably reduces the operational utility of airports. 14 CFR Part 77, *Objects Affecting Navigable Airspace* defines obstructions to air navigation. Other airspace requirements are defined in FAA Advisory Circulars and Orders. All Part 77 obstructions are a hazard to air navigation unless an aeronautical study concludes otherwise.

It is important to acknowledge that the FAA's role is limited to evaluating the aeronautical effects of proposed structures; the FAA has no legal authority to stop the construction of any proposed structure.



However, FAA grant assurance obligations require sponsors to take reasonable action to prevent and remove hazards to air navigation. Montana state law requiring airport zoning and other regulations be consistent with the Airport Layout Plan.

Recommendations

It is recommended that the airport consider provisions in building codes to require FAA Form 7460-1 *Notice of Proposed Construction or Alterations* to be submitted and reviewed by the Airport as part of the local building permit approval process.



SAFETY

FAA design standards and regulations prescribe several zones and imaginary surfaces intended to protect aircraft and their occupants while landing or taking off. However, the safety element primarily associated with compatible land use is focused on minimizing risks to persons and property on the ground.

FAA Runway Protection Zones

To reduce the public safety risk associated with aircraft operations, communities typically use FAA airport design standards and safety compatibility guidelines developed by state aeronautical agencies to formulate safety policies. The safety element primarily associated with compatible land use is focused on minimizing risks to the flying public, as well as persons and property on the ground. FAA has defined minimum land use standards in the form of a Runway Protection Zone (RPZ) in FAA AC 150/5300-13A *Airport Design*. See **Chapter 4: Facility Requirements** for definitions. Existing RPZs are either owned in fee or by avigation easement. There are no incompatible land uses inside the existing RPZs at Ekalaka. For future RPZs it is recommended that the City acquire necessary property interest to insure no incompatible land uses.



Wildlife Hazards

FAA is also focused on minimizing safety risks associated with wildlife near an airport. Hazardous wildlife use natural or artificial habitats on or near an airport for food, water, or cover. Wildlife near airport operations may result in an aircraft-wildlife strike. The FAA recommends that airport sponsors implement the standards and practices contained in FAA AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports* to mitigate wildlife risks. The airport has an existing deer-proof perimeter fence and it is recommended to maintain that fence and extend it to encompass any new airfield improvements.



Recommendations

It is recommended that the airport install the wildlife fence as recommended in the Wildlife Hazard Management Plan.

COMPLIANCE

As noted before, airports that do not abide by grant assurances are subject to withholding of FAA grant funding. Common airport compliance issues include non-aeronautical use of airport property, land releases, and through-the-fence operations.

Non-Aeronautical Use of Airport Property

Airport property is to be used for aeronautical purposes. For an airport to develop land for non-aeronautical use, the FAA must first approve of the change in airport property use from aeronautical to non-aeronautical. All airport property is identified in the Exhibit "A"/Airport Property Map.

Land Releases

When requested, the FAA will consider a release, modification, reform, or amendment of any airport agreement to the extent that such action has the potential to protect, advance, or benefit the public interest in civil aviation. Such action may involve only relief from specific limitations or covenants of an agreement, or it may involve a complete and total release that authorizes subsequent disposal of federally obligated airport property. Common types of release requests include concurrent use, request for change in use or the sale/disposal of airport property. No land has been released from federal obligations or sold at 8U6.

Through-the-fence Operations

Agreements that permit access to the airfield by aircraft based on land adjacent to, but not a part of, the airport property are commonly referred to as a "through-the-fence" operation (even though a perimeter fence may not be visible). "Through-the-fence" arrangements can encumber the airport property and reduce an airport's ability to meet its federal obligations. There are no documented through-the-fence operations at 8U6.

Action Plan & Recommendations

It is recommended that the airport continue to control development and leasing that occurs on airport and consult with FAA as needed to verify compliance with FAA rules and regulations.