RDD
REDDING REGIONAL AIRPORT

Chapter Six

Capital Improvement Program

The analyses completed in previous chapters evaluated development needs at Redding Regional Airport (RDD) over the next 20 years and beyond, based on forecast activity and operational efficiency. Next, basic economic, financial, and management rationales are applied to each development item so the feasibility of each item in the plan can be assessed.

The presentation of the capital improvement program (CIP) has been organized into two sections. First, the airport development schedule and CIP cost estimate are presented in narrative and graphic form. Second, capital improvement funding sources on the federal, state, and local levels are identified and discussed.

AIRPORT DEVELOPMENT SCHEDULES AND COST SUMMARIES

The preferred development plan has been presented and specific needs and improvements for the airport have been established. The next step is to determine a realistic schedule (implementation timeline) and associated cost estimates for the plan. The recommended improvements are grouped by each planning horizon: short-term, intermediate-term, and long-term. The short-term planning horizon is further subdivided into yearly increments.

Because a master plan is a conceptual document, implementation of the capital projects should only be undertaken after further refinement of their designs and costs has been completed through engineering analyses. Moreover, some projects may require additional infrastructure improvements (e.g., drainage improvements, extension of utilities, etc.) that may take more than one year to complete. In addition, the Airport Capital Improvement Plan (ACIP) is updated on an annual basis in coordination with the Federal Aviation Administration (FAA).

At this juncture, it is difficult to know the precise costs of individual projects; however, preparing order-of-magnitude cost estimates is an effective way to become familiar with the current costs. Many federal agencies utilize a system of five classes of estimates, as presented in **Table 6A**.

TABLE 6A | Cost Estimate Classification

Estimate Class	Name	Purpose	Project Definition Level
Class 5	Order of Magnitude	Screening or Feasibility	0% to 2%
Class 4	Intermediate	Concept Study or Feasibility	1% to 15%
Class 3	Preliminary	Budget, Authorization, or Control	10% to 40%
Class 2	Substantive	Control or Bid/Tender	30% to 70%
Class 1	Definitive	Check Estimate or Bid/Tender	50% to 100%

Source: U.S. Department of Energy

Once the list of recommended projects was identified and refined, project-specific cost estimates were developed. The cost estimates include environmental documentation, design, engineering, construction administration, and contingencies that may arise during the project. Capital costs presented here should be viewed only as estimates that are subject to further refinement during design; nevertheless, these estimates are considered sufficient for planning purposes. Cost estimates were developed based on recent airport construction costs in the region. Cost estimates for each development project in the CIP are in current (2025) dollars. **Exhibit 6A** presents the proposed CIP for Redding Regional Airport.

The FAA utilizes a priority ranking system to help objectively evaluate potential airport projects. Projects are weighed toward safety, infrastructure preservation, standards, and capacity enhancement. The FAA will participate in the highest priority projects before considering lower priority projects, even if a lower priority project is considered a more urgent need by the local sponsor; nevertheless, such a project should remain a priority for the airport and funding support should continue to be requested in subsequent years.

An important goal of the CIP is that future projects for which the airport may request FAA funding are included on the list. On an annual basis, the CIP is updated and reviewed with the FAA. Projects on the CIP will be moved up and down the list based on priority and funding availability. Periodically, new projects will arise that can then be added to the annual CIP presented to the FAA. However, it can be difficult to insert a new project for years one, two, and three, as projects slated for these years are typically considered locked in by FAA.

Hangar construction is often left to the private sector. It is typical for private hangar development to include a portion of the ramp area in front of the hangar, usually 50 feet. Taxilanes that provide access to/from hangar areas are generally eligible for FAA grant funding, unless they are exclusive use taxilanes for a single tenant.

Project No.	Timeframe (Fiscal Year)	PROJECT DESCRIPTION	NPR	Federal Share	Local Share	Total
		SHORT TERM (Years 1-5)				
1	2025	Rehabilitate Runway 16-34	81	$27,899,980	$1,468,420	$29,368,400
2	2025	Master Drainage Study - Reimbursement	64	$555,940	$29,260	$585,200
3	2026	Design of Runway 16-34 RSA Improvements	90	$1,089,840	$57,360	$1,147,200
4	2027	Design Reconstruction of Twys D/Future A/Connectors	79	$1,812,021	$186,679	$1,998,700
5	2028	Construction of Runway 16-34 RSA Improvements	90	$12,375,090	$1,274,910	$13,650,000
6	2028	Wildlife Hazard Assessment & Management Plan	64	$158,655	$16,345	$175,000
7	2029	Construction of Twys D/Future A/Connectors	79	$24,931,500	$2,568,500	$27,500,000
8	2029	Acquire SRE (Plow & Broom)	73	$285,579	$29,421	$315,000
9	2030	Design of Passenger Terminal Expansion - Phase I	47	$5,439,600	$560,400	$6,000,000
10	2030	Acquire ARFF Vehicle	75	$1,427,895	$147,105	$1,575,000
		SHORT TERM TOTAL		**$75,976,100**	**$6,338,400**	**$82,314,500**
		INTERMEDIATE TERM (Years 6-20)				
11	IT	Construction of Passenger Terminal Expansion - Phase II	47	$36,264,000	$3,736,000	$40,000,000
12	IT	Security Fencing, Access Control System, Wildlife Mitigation	56	$4,283,685	$441,315	$4,725,000
13	IT	Airfield Lighting Improvements Study (Environmental/Pre-Design)	74	$309,423	$31,877	$341,300
14	IT	Expand Terminal Apron/Relocate Twy A	68	$15,956,160	$1,643,840	$17,600,000
15	IT	Construct USFS Helicopter Parking Apron	-	$0	$0	$3,200,000
16	IT	Acquire 59 Acres for Airspace Protection and Rwy Extension	66	$2,184,906	$225,094	$2,410,000
17	IT	Airfield Lighting Improvement Projects Based on Previous Study	83	$5,439,600	$560,400	$6,000,000
18	IT	Runway/Taxiway Extension (1,997 feet)	80	$38,802,480	$3,997,520	$42,800,000
19	IT	Construct Replacement Access Road to East Side	38	$1,903,860	$196,140	$2,100,000
20	IT	Pavement Rehabilitation	67	$1,813,200	$186,800	$2,000,000
		INTERMEDIATE TERM TOTAL		**$106,957,314**	**$11,018,986**	**$121,176,300**
		LONG TERM (Years 11-20)				
21	LT	Expand Terminal Apron/Add RON Positions	68	$23,662,260	$2,437,740	$26,100,000
22	LT	Reconfigure Runway 12-30	74	$12,783,060	$1,316,940	$14,100,000
23	LT	Construct East Side Parallel Taxiway/Connectors	75	$52,220,160	$5,379,840	$57,600,000
24	LT	Construct Air Cargo Complex (Apron, Building, Parking, Road)	68	$16,046,820	$1,653,180	$17,700,000
25	LT	Add Terminal Surface Parking	36	$7,887,420	$812,580	$8,700,000
26	LT	Construct Transient GA Apron Expansion	68	$6,074,220	$625,780	$6,700,000
27	LT	Construct GA Taxilanes - Phase I	65	$9,519,300	$980,700	$10,500,000
28	LT	Construct GA Apron Expansion	68	$14,958,900	$1,541,100	$16,500,000
29	LT	Construct GA Taxilanes - Phase II	65	$5,348,940	$551,060	$5,900,000
30	LT	Construct GA Taxilanes - Phase III	65	$4,442,340	$457,660	$4,900,000
31	LT	Pavement Rehabilitation	67	$3,626,400	$373,600	$4,000,000
32	LT	Eastside Apron Expansion	68	$5,167,620	$532,380	$5,700,000
33	LT	Master Plan Update	69	$1,813,200	$186,800	$2,000,000
		LONG TERM TOTAL		**$163,550,640**	**$16,849,360**	**$180,400,000**
		GRAND TOTAL		**$346,484,054**	**$34,206,746**	**$383,890,800**

KEY
NPR: National Priority Rating

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Each project listed below includes a description, the estimated National Priority Rating, a cost estimate, and funding eligibility.

The following sections will describe the projects identified for the airport over the next 20 years in greater detail. The short-term projects cover the first five years and are presented in yearly increments. The intermediate term covers years 6-10, and long-term projects cover years 11-20. Each project is ranked according to its priority at the time the list was developed.

NATIONAL PRIORITY RATING (NPR)

The FAA evaluates each project an airport identifies on its CIP through a combination of quantitative and qualitative methods to establish and justify AIP expenditures. The FAA utilizes a National Priority Rating (NPR) formula to generate a value based on an equation that takes the project and the airport type into consideration. The NPR formula generally categorizes airport development in accordance with FAA goals and objectives. The value returned provides insight regarding the likely eligibility for the project to receive FAA discretionary funding. The ranking system value ranges from 0-100. The threshold for eligibility fluctuates from year to year but values above 55 have generally been eligible for funding. Each project identified in the CIP has an associated NPR value, as developed by the consultant; however, only the FAA can definitively make an eligibility determination.

SHORT-TERM IMPROVEMENTS (YEARS 1-5)

The projects identified for the short-term planning period have been prioritized based on airport need and their potential to be funded. If any of these projects cannot be funded in the timeframe indicated, the airport sponsor should move the project to a more appropriate timeframe. **Exhibit 6B** presents the CIP phasing plan. References to FAA eligibility indicate the portion of the total cost that is eligible for federal funds, regardless of the specific funding program.

Project #1: Rehabilitate Runway 16-34

Description | This project is multifaceted. It includes the rehabilitation of primary Runway 16-34 (7,003'x150'), rehabilitation of threshold Taxiway H (250'x50'), and rehabilitation of both blast pads at the ends of the runway (200'x200'x2). This project includes the rehabilitation of 116,700 square yards of pavement associated with Runway 16-34 and 1,400 square yards of pavement associated with Taxiway H. The runway magnetic variance (MAGVAR) designation will be updated to Runway 17-35 with a restriping process. Enhancements will also be made to the runway lighting system and updates will be made to the airfield signage system.

Cost Estimate | $29,368,400

Funding Eligibility | FAA – 95% / Airport Sponsor – 5%

Project #2: Master Drainage Study - Reimbursement

Description | A master drainage study is currently being prepared (as of January 2025) to support improvements to airfield drainage and inform the runway safety area project for Runway 16-34 (Project #3). The airport paid up front for this study to advance the subsequent runway safety area project.

Cost Estimate | $585,200

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #3: Design of Runway 16-34 RSA Improvements

Description | This project involves the design of runway safety area improvements associated with Runway 16-34, REIL modifications, and airfield electrical improvements. Currently, the RSA is non-standard because of on-going erosion issues, which create ruts, humps, and standing water following precipitation events.

Cost Estimate | $1,147,200

Funding Eligibility | FAA – 95% / Airport Sponsor – 5%

Project #4: Design Reconstruction of Taxiway D/Future Taxiway A and Connectors

Description | This project is the design phase for improvements to Taxiway D (Future Taxiway A) as well as electrical improvements to enhance airfield efficiency. The project will rehabilitate/reconstruct parallel Taxiway D and connecting taxiways and taxiway edge lighting replacement. The existing non-standard geometry of Taxiways D1 and M are planned to be replaced with a single 90-degree connecting taxiway. The acute angle of Taxiway B (between the runway and parallel taxiway) will be replaced with a standard 90-degree connecting taxiway. In addition, the taxiways' designations will be changed to conform with current FAA guidance. Parallel Taxiway D will become Taxiway A. The Runway 16 threshold will be designated Taxiway D1, the Runway 34 threshold will become Taxiway D6, and the other connecting taxiways will be designated D2-D5.

Cost Estimate | $1,998,700

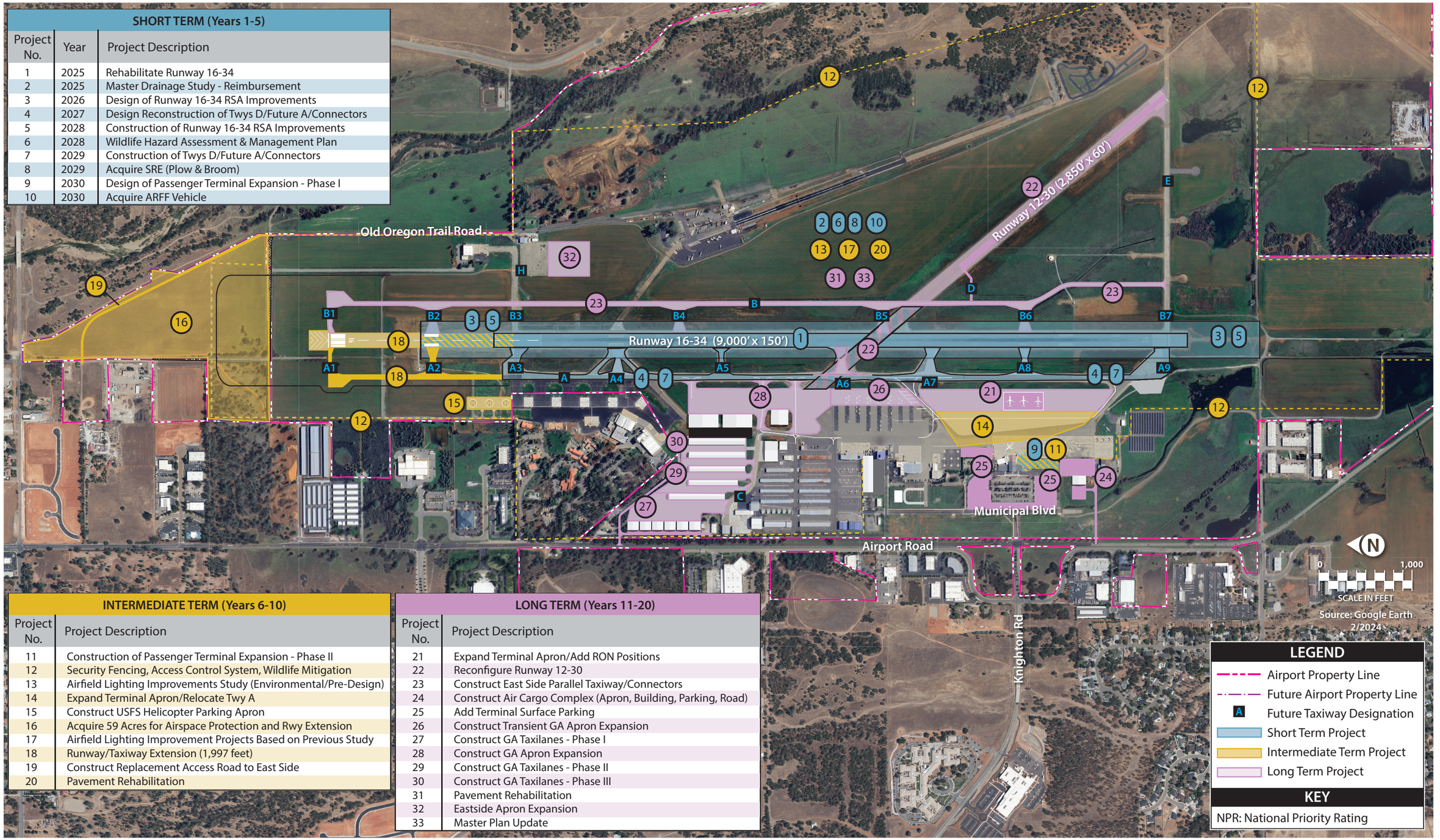
Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #5: Construction of Runway 16-34 RSA Improvements

Description | This project involves the construction of the runway safety area surrounding Runway 16-34 to remove ruts, humps, and other non-standard conditions brought about by erosion. Also included with this project are modifications to the REIL at the threshold of Runway 16 and other airfield electrical improvements. The project includes adding approximately 432,000 square yards of fill material.

Cost Estimate | $13,650,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%



SHORT TERM (Years 1-5)		
Project No.	Year	Project Description
1	2025	Rehabilitate Runway 16-34
2	2025	Master Drainage Study - Reimbursement
3	2026	Design of Runway 16-34 RSA Improvements
4	2027	Design Reconstruction of Twys D/Future A/Connectors
5	2028	Construction of Runway 16-34 RSA Improvements
6	2028	Wildlife Hazard Assessment & Management Plan
7	2029	Construction of Twys D/Future A/Connectors
8	2029	Acquire SRE (Plow & Broom)
9	2030	Design of Passenger Terminal Expansion - Phase I
10	2030	Acquire ARFF Vehicle

INTERMEDIATE TERM (Years 6-10)	
Project No.	Project Description
11	Construction of Passenger Terminal Expansion - Phase II
12	Security Fencing, Access Control System, Wildlife Mitigation
13	Airfield Lighting Improvements Study (Environmental/Pre-Design)
14	Expand Terminal Apron/Relocate Twy A
15	Construct USFS Helicopter Parking Apron
16	Acquire 59 Acres for Airspace Protection and Rwy Extension
17	Airfield Lighting Improvement Projects Based on Previous Study
18	Runway/Taxiway Extension (1,997 feet)
19	Construct Replacement Access Road to East Side
20	Pavement Rehabilitation

LONG TERM (Years 11-20)	
Project No.	Project Description
21	Expand Terminal Apron/Add RON Positions
22	Reconfigure Runway 12-30
23	Construct East Side Parallel Taxiway/Connectors
24	Construct Air Cargo Complex (Apron, Building, Parking, Road)
25	Add Terminal Surface Parking
26	Construct Transient GA Apron Expansion
27	Construct GA Taxilanes - Phase I
28	Construct GA Apron Expansion
29	Construct GA Taxilanes - Phase II
30	Construct GA Taxilanes - Phase III
31	Pavement Rehabilitation
32	Eastside Apron Expansion
33	Master Plan Update

LEGEND

- Airport Property Line
- Future Airport Property Line
- A — Future Taxiway Designation
- Short Term Project
- Intermediate Term Project
- Long Term Project

KEY

NPR: National Priority Rating

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Project #6: Wildlife Hazard Assessment & Management Plan

Description | This project will evaluate wildlife hazards on and adjacent to the airport through a 12-month Wildlife Hazard Assessment. Information gathered from the assessment will be used to update the airport's Wildlife Hazard Management Plan, in which strategies and techniques will be developed for wildlife mitigation.

Cost Estimate | $175,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #7: Construction of Taxiway D/Future Taxiway A and Connectors

Description | This is the construction phase of the improvements for Taxiway D (Future Taxiway A) and its connecting taxiways. This project involves rehabilitating the asphalt pavement on Taxiway D, from the threshold with Runway 16 to the intersection with Runway 12-30. Taxiway D, from the intersection with Runway 12-30 to the Runway 34 threshold, is to be reconstructed with asphalt. Also included is a replacement aircraft hold apron on the west side of Taxiway D (Future Taxiway A) at the Runway 34 threshold. This hold apron will replace the non-standard existing hold apron located between Taxiway D and the runway.

This project also includes improvements to connecting taxiways. Taxiways D1 and M (between Taxiway D and the runway) are to be removed and then replaced with a single 90-degree connecting taxiway designed to meet current FAA design standards. Taxiway D2 will be rehabilitated in its current location. Taxiway B (between Taxiway D and the runway) is to be reconstructed and reoriented to meet the 90-degree FAA standard. A new connecting taxiway is to be constructed between Taxiway B and the Runway 34 threshold taxiway. Current FAA taxiway fillet design standards are to be applied.

Cost Estimate | $27,500,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #8: Acquire Snow Removal Equipment (Plow and Broom)

Description | Periodically, airports need to acquire or replace aging equipment that is required to meet FAR Part 139 standards for commercial service airports. One such requirement is that the airport has serviceable equipment to remove snow accumulation in a timely manner to maintain the safety and efficiency of the airfield. This project entails the purchase of plow and broom attachments.

Cost Estimate | $315,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #9: Design of Passenger Terminal Building Expansion – Phase I

Description | Due to significant increases in passenger levels at the airport, additional terminal space is needed. This master plan provides estimates of deficiencies by functional area within the terminal building. It shows that the terminal building is undersized, with several functional areas showing significant capacity constraints, such as the passenger hold room, lobby area, and bag processing areas.

The analysis indicates that an additional 16,192 square feet of space will be needed within five years, increasing to 44,648 square feet in the long term to accommodate projected passenger levels (reference Exhibit 3F). This project should be viewed as a placeholder, as additional analysis of the terminal building will be needed to inform if a replacement building is necessary or if an expansion of the current building is adequate. Consideration should be given to a focused terminal planning study in the years prior to this design project.

Cost Estimate | $6,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #10: Acquire Aircraft Rescue and Firefighting (ARFF) Vehicle

Description | Periodically, airports need to acquire or replace aging equipment that is required to meet FAR Part 139 standards for commercial service airports. One such requirement is that the airport maintains firefighting equipment based on the applicable Aircraft Rescue and Firefighting (ARFF) Index. The airport meets its current ARFF Index B requirements, however, one of its required vehicles is 26 years old. This project entails the purchase of a new ARFF Crash Truck to replace the 1999 Oshkosh AR-72 truck. The replacement ARFF truck should have similar capacities, such as 1,500 gallons of water, 210 gallons of aqueous film-forming foam, 500 pounds of dry chemical, and 20 pounds of CO_2.

Cost Estimate | $1,575,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Short Term Summary

The short-term CIP addresses the highest priority projects for the airport. These projects primarily relate to safety and include rehabilitation of primary Runway 16-34, changing the runway designation of Runway 17-35 because of the change in magnetic variation, reconstruction, and redesignation of the parallel taxiway and connectors. In addition, the RSA surrounding Runway 16-34 is scheduled for significant safety improvements. In addition, planning for a new terminal building or expansion of the existing building starts in the short term.

The short-term projects total approximately $82.31 million. The share eligible for FAA funding is estimated at $75.97 million. The total local share is $6.33 million.

INTERMEDIATE-TERM PROJECTS (YEARS 6-10)

The intermediate-term projects are those anticipated to be needed within years six through 10 of the 20-year study timeframe. Many of these projects are priorities for the airport and could reasonably fall within the short-term timeframe; however, the current short-term projects are higher priorities at this time. Positioning the intermediate-term projects in this timeframe indicates recognition that grant funds are not limitless, and it is necessary to spread capital projects over a reasonable period of time.

Project #11: Construction of Passenger Terminal Expansion – Phase II

Description | This project is a placeholder to alert the FAA and other potential funding sources of the need for either a new terminal building or an expansion of the existing terminal building. A terminal building of 82,198 square feet is needed to satisfy the projected long-term passenger levels. Additional analysis is necessary prior to implementation of a terminal building project.

Cost Estimate | $40,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #12: Security Fencing, Access Control System, Wildlife Mitigation

Description | This project is for the design and construction of approximately 15,000 linear feet of security/perimeter fence upgrades in various locations on the airport to enhance safety and security. The fencing upgrades are associated with upgrading the airport's access control system to meet Part 139 requirements. The fencing will also serve as a wildlife deterrent.

Cost Estimate | $4,725,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #13: Airfield Lighting Improvements Study (Environmental/Pre-Design)

Description | This study will evaluate the overall airfield lighting system to determine future necessary improvements. Additional projects may emerge from this study that should then be added to the airport's CIP based on priority.

Cost Estimate | $341,300

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #14: Expand Terminal Apron/Relocate Taxiway A

Description | The angled orientation of Taxiway A (future Taxiway C limits aircraft parking space at the terminal building. This project is to shift Taxiway A toward the runway and to add apron space between the terminal building and the relocated taxiway. The total pavement area to be added is approximately 33,800 square yards.

Cost Estimate | $17,600,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #15: Construct USFS Helicopter Parking Apron

Description | Currently, there are two helicopter parking positions located at the northwest end of the airfield. These are used by the USFS for large aerial firefighting helicopters. The paved parking spaces are too small for these large helicopters, and they need to be reconstructed accordingly. This project would remove the existing pavement and construct three larger replacement parking positions. Since it is highly

likely that these helicopter parking positions would be used exclusively by the USFS, no FAA or local funds are anticipated.

Cost Estimate | $3,200,000

Funding Eligibility | FAA – 0% / Airport Sponsor – 100%

Project #16: Acquire 59 Acres for Airspace Protection and Runway Extension

Description | Approximately 59 acres north of the airport are identified for acquisition by the airport. A portion of the land is planned to accommodate the future runway extension and runway protection zone. Another portion will support a new east side airport entrance road, and the remaining will be used for airspace protection. Undeveloped land in this area is estimated at $40,000 per acre.

Cost Estimate | $2,410,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #17: Airfield Lighting Improvements Study (Environmental/Pre-Design)

Description | This project is the construction element of the airfield lighting improvement study completed previously. Various preceding projects will have already addressed portions of the airfield lighting, and this project will address any remaining airfield lighting issues. The cost estimate for this project is a placeholder to be revised following the previous airfield lighting planning study.

Cost Estimate | $6,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #18: Runway/Taxiway Extension (1,997 feet)

Description | As documented in previous chapters, the airport will benefit from a longer runway; however, FAA justification for this does not currently exist. When it can be documented that there are at least 500 annual operations by aircraft that require a longer runway, this justification for federal financial participation will materialize. It is also feasible for this runway extension project to be funded by the USFS or another local resource. This project includes a 1,997-foot-long extension to the north of Runway 16-34 and an extension of the west side parallel taxiway to the new runway threshold. This project could be divided into two phases, with an initial 1,000-foot extension to be followed by a second 997-foot extension. This project would also include relocation of the localizer antenna so that it is outside the runway safety area, which would eliminate the need for declared distances.

Cost Estimate | $42,800,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #19: Construct Replacement Access Road to East Side

Description | With the runway extension, the existing east side access road must be relocated. This project shows one potential location at the north end of the acquired property. The road would extend

from an intersection with Airport Road and lead to a new connection with Old Oregon Trail Road. The new road is planned as a two-lane road that is approximately 2,600 feet long. Due to terrain issues, a short segment of the new road would cross the future runway protection zone. Additional analysis may be required to determine if the new road could be constructed in such a manner to avoid the RPZ completely.

Cost Estimate | $2,100,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #20: Pavement Rehabilitation

Description | On-going pavement maintenance is a requirement for airports to comply with federal grant assurances. Small pavement rehabilitation projects may be funded locally while larger projects may be eligible for federal funding. This project placeholder is intended to provide for a larger pavement rehabilitation project, likely general aviation pavements that are not otherwise specifically identified in the CIP.

Cost Estimate | $2,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Intermediate Term Summary

The intermediate-term projects upgrade visual approach aids and pavement condition. A vertiport and an aircraft wash rack are also considered.

The intermediate-term projects total approximately $121.17 million. The share eligible for FAA funding is estimated at $106.95 million. The total local share is $11.02 million.

LONG-TERM PROJECTS (YEARS 11-20)

The long-term projects are anticipated to be needed within years 11 through 20. These projects are not listed in order of priority. Instead, airport management should continually monitor the potential need for these projects and elevate them to the short-term CIP, as needed. Long-term projects are primarily related to ongoing maintenance and rehabilitation of all pavement surfaces.

Project #21: Expand Terminal Apron/Add RON Positions

Description | This project would construct approximately 50,800 square-yards of new apron to the east of the terminal building. A portion of the apron could be used for remain-overnight (RON) aircraft parking.

Cost Estimate | $26,100,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #22: Reconfigure Runway 12-30

Description | As discussed at length in Chapter 5 – Recommended Master Plan Concept, Runway 12-30 may be eligible for future FAA funding because of new provisions in the *FAA Reauthorization Act of 2024*. If the runway meets anticipated eligibility thresholds, then the runway may be eligible for federal funding, albeit at a level intended to accommodate small aircraft. This project would convert a portion of the existing runway to be 2,850 feet long by 60 feet wide, the standard for small aircraft. Excessive pavement would be removed and a new threshold taxilane to the new end of Runway 12 would be constructed. This project will have the benefit of removing the existing RSA conflict behind Runway 12, in which it crosses Taxiways M and C, and it will open approximately 37 acres of formerly RPZ land for aeronautical development. It should be noted that the future runway is positioned in such a manner that the runway object free area would not conflict with a future east side parallel taxiway.

Cost Estimate | $14,100,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #23: Construct East Side Parallel Taxiway/Connectors

Description | Redding Regional Airport is fortunate in that it has ample land for future aeronautical development on the east side of the runway. However, only Taxiway H currently provides access to the east side. This project would construct a full-length east side parallel taxiway to provide access to the rest of the east side aeronautical development land.

Cost Estimate | $57,600,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #24: Construct Air Cargo Complex (Apron, Building, Parking, Road)

Description | A portion of land adjacent to the existing air cargo facilities is reserved for expansion of air cargo activities. This includes additional apron space (7,400 sy), a second package sort building (15,300 sf), a 20,000 square foot vehicle parking lot, and a new dedicated access road. The access road would extend directly from Airport Road, thus segmenting air cargo delivery truck traffic from regular passenger traffic going to the terminal building. The air cargo access road can be completed as a separate project.

Cost Estimate | $17,700,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #25: Add Terminal Surface Parking

Description | Analysis undertaken in Chapter Three – Facility Requirements indicated a future need for additional vehicle parking to serve the terminal. As shown on Exhibit 6B, approximately 209,000 square feet of new surface parking can be accommodated within the terminal loop road, which equates to approximately 354 new parking spaces. This total exceeds what is projected to necessary, so when the airport looks to implement a parking lot expansion project, additional analysis may be required to determine how much of this project should be undertaken.

Cost Estimate | $8,700,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #26: Construct Transient GA Apron Expansion

Description | There is approximately 178 feet of space from the east edge of the general aviation transient apron and the parallel taxiway object free area (assumes TOFA of 243 feet as centered). This area is planned for the expansion of the transient apron (18,900 sy). An additional 29 aircraft parking positions can be accommodated as a result.

Cost Estimate | $6,700,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #27: Construct GA Taxilanes – Phase I

Description | Once Runway 12-30 is reconfigured, an area of approximately 37 acres will be available for aeronautical development. The CIP provides for general aviation hangar development in three phases. This first phase considers the construction of a taxilane and apron intended to serve future privately developed hangars. This first phase is estimated at 23,500 square yards of new pavement.

Cost Estimate | $10,500,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #28: Construct GA Apron Expansion

Description | This project would provide for a public general aviation apron to support expanded FBO-type hangars. The planned apron area is 53,600 square yards.

Cost Estimate | $16,500,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #29: Construct GA Taxilanes – Phase II

Description | This project is phase II of the development of additional general aviation facilities (Project #27). This project includes the construction of two taxilanes (13,900 sy) to support additional T-hangar development.

Cost Estimate | $5,900,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #30: Construct GA Taxilanes – Phase III

Description | This project is phase III of the development of additional general aviation facilities (Project #27/#29). This project includes the construction of two taxilanes (11,000 sy) to support additional T-hangar and/or connected box hangar development.

Cost Estimate | $4,900,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #31: Pavement Rehabilitation

Description | Ongoing pavement maintenance is a requirement for airports to comply with federal grant assurances. Small pavement rehabilitation projects may be funded locally, while larger projects may be eligible for federal funding. This project placeholder is intended to provide for a larger pavement rehabilitation project, likely general aviation pavements that are not otherwise specifically identified in the CIP.

Cost Estimate | $4,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #32: East Side Apron Expansion

Description | This project would expand the existing east side apron that extends from Taxiway H. This project will only be necessary if demand materializes. Demand could be demonstrated by the development of additional hangars that would face the planned new apron. As shown, the new apron would be approximately 18,400 square yards of pavement.

Cost Estimate | $5,700,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Project #30: Master Plan Update

Description | FAA indicates that airports should follow a continuous planning process, and that their primary planning documents, such as master plans and airport layout plans (ALPs), should be updated periodically. For commercial service airports, like RDD, a master plan should be updated approximately every seven to 10 years. In that timeframe, aviation demand and FAA design standards can change significantly, and revised planning efforts are necessary to address those changes.

Cost Estimate | $2,000,000

Funding Eligibility | FAA – 90.66% / Airport Sponsor – 9.34%

Long Term Summary

The long-term projects are largely placeholders for pavement rehabilitation and reconstruction. Each project will need to be reevaluated over time to further define its scope.

The long-term projects total approximately $180.40 million. The share eligible for FAA funding is estimated at $163.55 million. The local share is estimated at $16.85 million.

CAPITAL IMPROVEMENT PROGRAM SUMMARY

The capital improvement program (CIP) is intended for use as a road map of airport improvements to help guide the airport sponsor, the FAA, and state aviation officials regarding necessary projects. The plan, as presented, will meet the forecast demand over the next 20 years and (in many instances) beyond. The first five years of the CIP represent the highest priority projects for the airport. The sequence of

projects will likely change due to availability of funds or changing priorities in the years to come; nevertheless, the CIP provides a comprehensive list of capital improvement projects the airport should consider in the next 20 years.

The total CIP is estimated at approximately $383.89 million. The share eligible for FAA funding is estimated at $346.48 million. State-funded projects are estimated at 2.94 million. The local share is estimated at $34.21 million.

CAPITAL IMPROVEMENT FUNDING SOURCES

Financing capital improvements at RDD will not rely solely on the financial resources of the airport. Capital improvement funding is available through various grant-in-aid programs on both the federal and state levels. Historically, the airport has received both federal and state funding. While more funds could be available in some years, the CIP was developed with project phasing to remain realistic and within the range of anticipated grant assistance. The following discussion outlines key sources of funding potentially available for capital improvements at the airport.

Access to these sources of financing varies widely among airports. Some large airports maintain substantial cash reserves, while smaller commercial service and general aviation airports often require subsidies from local governments to fund operating expenses and finance modest improvements.

FEDERAL GRANTS

Through federal legislation over the years, various grant-in-aid programs have been established to develop and maintain a system of public-use airports across the United States. The purposes of this system and its federal funding are to maintain national defense and to promote interstate commerce. The most recent legislation that affects federal funding is the *FAA Reauthorization Act of 2024*, which expires after four years (September 30, 2028), and U.S. Congress must pass appropriations annually. The FAA's Airport Improvement Program (AIP) expires periodically, and federal reauthorization is required for it to continue.

When an airport accepts an FAA grant, the airport sponsor must agree to 39 grant assurances. Grant assurances require the recipient to maintain and operate its airport safely, efficiently, and in accordance with specified conditions. The duration of the grant assurances obligation depends on the type of recipient (i.e., airport sponsor, planning agency, noise compatibility project, block grant state, etc.), the useful life of the facility being developed, and other stipulations outlined in the assurances.

Airport Improvement Program

The *FAA Reauthorization Act of 2024* authorizes the AIP at $4.0 billion for fiscal years 2025 through 2028. Eligible airports – which include those in the *National Plan of Integrated Airport Systems* (NPIAS), such as RDD – can apply for airport improvement grants. Primary commercial service airports (those with more than 10,000 annual enplanements) receive at least $1.3 million annually in AIP development grants.

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement, in which the FAA typically provides up to 90 percent of the cost and the airport sponsor invests the remaining 10 percent. In states with a high percentage of federal lands, the federal share of AIP grants is higher. This applies to California commercial service airports, like RDD, where the federal share is 90.66 percent, and the local share is 9.34 percent. In exchange for this level of funding, the airport sponsor is required to meet various grant assurances, including maintaining the grant-funded improvement for its useful life (usually 20 years). The new bill increases the federal share to 95 percent for fiscal years 2025 and 2026.

The source for AIP funds is the Aviation Trust Fund, which was established in 1970 to provide funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Aviation Trust Fund also finances the operation of the FAA. It is funded by user fees, including taxes on airline tickets, aviation fuel, and various aircraft parts.

Infrastructure Investment and Jobs Act (IIJA)

In 2021, the federal *Infrastructure Investment and Jobs Act* (IIJA) passed. This act provides approximately $20 billion in grants for infrastructure development at U.S. airports for fiscal years 2022 through 2026. This funding is comprised of three elements:

- $15 billion has been allotted for airport infrastructure via the Airport Infrastructure Grants (AIG).
- $5 billion has been allotted for airport terminal development via the Airport Terminal Program (ATP).
- $5 billion has been allotted for air traffic facilities, including sponsor-owned control towers participating in the FAA Contract Tower program, via competitive infrastructure funds (FCT Competitive program).

RDD is eligible for funding through the IIJA program. An additional $5 billion was made available to the FAA's Air Traffic Organization (ATO) for improvements to FAA-owned facilities and equipment.

The federal share for AIG is the same as an AIP grant (90.66 percent with a 9.34 percent local match), while the federal share for ATP grants is 95 percent. The same grant assurances that apply to AIP grants also apply to BIL grants. BIL and AIP grants cannot be combined into a single grant. **Table 6B** outlines the funding availability for BIL grants, the deadlines associated with these grants, and the amounts allocated to RDD for use on eligible infrastructure projects.

TABLE 6B | AIG Funding Availability

Fiscal Year (FY) Funds are First Made Available	AIG Funds Available to RDD	Funds Must Be Obligated (Under Grant) By*:	Any Unobligated Funds Must Be Obligated (Under Grant) in FY:	Awarded	Awarded Project
2022	$1,033,485	Sept. 30, 2025	2026	$0	-
2023	$1,033,084	Sept. 30, 2026	2027	$960,756	Access Road
2024	$1,354,056	Sept. 30, 2027	2028	$0	-
2025	$1,352,791	Sept. 30, 2028	2029	$0	-
2026	$1,355,000 (est.)	Sept. 30, 2029	2030	$0	-

*Applications for grants should be submitted by June to meet the September 30th obligation date.

Source: https://www.faa.gov/general/bipartisan-infrastructure-law-airport-infrastructure-grant-funding-amounts

STATE AID TO AIRPORTS

The State of California recognizes the valuable contribution of airports to the state's transportation economy. The California Department of Transportation – Division of Aeronautics (Caltrans) administers several funding programs for airports. Airport seeking Caltrans funding must have the project included in the state's CIP. Projects not included in the current CIP are ineligible, as cited in the California Code of Regulations Title 21, Division 2.5, Chapter 4 Article 3 Section 4062.1. In addition, per Section 4059, projects that have started or been completed prior to State allocation are ineligible for funding.

The State Capital Improvement Plan (SCIP) is a ten-year, fiscally unconstrained listing of capital and planning projects submitted by airports to the California Department of Transportation (Caltrans). These projects are predominantly based on airport master plans or other comparable long-range planning documents (i.e., ALP updates). The CIP is compiled biennially (every two years) in accordance with the California Public Utilities Code (PUC) and is presented to the California Transportation Commission (Commission) for review, comment, and approval.

Inclusion in the CIP is an eligibility requirement for the Airport Improvement Program (AIP) matching grant and the Aeronautics' Acquisition and Development (A&D) Program grants. These programs provide financial assistance to local sponsors to establish, maintain, and improve the statewide system of airports.

Airport Improvement Program (AIP) Matching Grant | The State AIP matching rate is 5.0 percent of the federal portion of the grant, up to $150,000 per project. Once a Federal Aviation Administration (FAA) AIP grant has been executed, the sponsoring agency may apply to the State for an AIP matching grant. Grants are processed in the order received and awarded until all funds are fully exhausted. Depending upon the number of grant applications received, processing time can range from two to three weeks. Although the amounts shown are eligible by formula, recent policy has been to cap participation at a lower number. Caltrans should be consulted closer to project implementation to confirm the most current policy.

Acquisition and Development (A&D) Program | These grants are provided by Caltrans for eligible projects in the CIP that are for General Aviation capital improvement and planning purposes. An A&D grant constitutes 90 percent of a project cost. The remaining 10 percent is matched by the local sponsor.

Every even-numbered year, Caltrans prepares—and the Commission approves—the Aeronautics Program, a two-year list of CIP grant projects that are eligible for funding. Projects are selected for the Aeronautics Program based on eligibility and ranking. The Priority Ranking Matrix is used to rank projects based on project category and project description. Project categories listed in priority are safety, capacity, and security. Other selection criteria may be used as well, such as input from the Caltrans Office of Airports and the sponsor.

Airport Land Use Compatibility Plans | A&D grants are also provided to local sponsors to prepare or update Airport Land Use Compatibility Plans (ALUCP). ALUCPs are prepared by County Airport Land Use Commissions, as required by the PUC, and contain land use measures that minimize the public's exposure to safety hazards within two miles of public-use airports. Protecting people and property on the ground from the potential consequences of near-airport aircraft accidents is a fundamental land use compatibility planning objective.

The Division of Aeronautics recommends a comprehensive review and update of an ALUCP at least every five years. Consistent funding for ALUCPs is vital for the protection of the California air transportation system and those communities surrounding the airports. The Commission has historically set 25 percent of the A&D Grant Program to help fund the preparation of ALUCPs.

Shasta County is the responsible party for the local ALUCP. The Redding Regional Airport can help with an ALUCP update by accessing A&D grants, but the county would have to apply for the grant and oversee the study.

Appendix G of this study provides detailed land use compatibility analysis for RDD. This information may be used for any upcoming update to the ALUCP.

Local Airport Loan Program | The Local Airport Loan Program provides discretionary State loans to eligible airports for projects that enhance an airport's ability to provide general aviation (GA) services (hangars, GA terminals, utilities, GA fueling facilities, A&D-eligible projects, etc.). A loan may also provide the local share for an AIP grant. Such a loan can be used in conjunction with a State-funded AIP matching grant. The loan program cannot be used for the local match of a state A&D grant or for projects intended to accommodate scheduled air carriers. The maximum term of a loan is 17 years. The interest rates match the latest California General Obligation Bond sale interest rate. RDD may be eligible for this program if the project in question is specifically to enhance general aviation facilities.

There are three different types of loans available under this program:

- Revenue Generating
- Matching Funds
- Airport Development

Annual Credit Grants | Annual Credit Grants of $10,000 per year are provided to eligible public-use and publicly owned airports. Airports not classified by the Federal Aviation Administration (FAA) as Commercial or Reliever are eligible, as set forth in Section 21682 of the Public Utilities Code. Aeronautics will retain funds for eligible airports for a period not to exceed five fiscal years. Airports can request $10,000 each year or request a greater amount from a future year once funds have accumulated. There is no required local match for the annual credit grant. Eligible project types include obstruction removal, radios, land acquisition, lighting, fencing, transient aircraft parking, bond service, NAVAIDs, pavement markings, noise monitoring equipment, runway and taxiway pavements, service roads, airport planning, fuel facilities, restrooms, and wash racks. As a commercial service airport, RDD is not eligible for this program.

LOCAL FUNDING

After consideration has been given to grants, the balance of project costs must be funded through local resources. The goal of any airport is to generate enough revenue to cover all operating and capital expenditures. For many general aviation airports, this goal is not always possible and other financing methods are needed.

There are several alternatives for local financing options for future development at the airport, including airport revenues, direct funding from the airport sponsor, bonds, and leasehold financing. These strategies could be used to fund the local matching share or complete a project if grant funding cannot be arranged.

Airport Revenues

An airport's daily operations are funded through the collection of various rates and charges generated by airport operations. Airports that serve both the commercial service sector and the general aviation sector have more potential revenue streams available to them. Potential revenue streams may include landing fees, fuel flowage fees, aircraft parking and remain-overnight fees, terminal building space, hangar space, and land leases.

Bonding

Bonding is a common method to finance large capital projects at airports. A bond is an instrument of indebtedness of the bond issuer to the bond holders; a bond is a form of loan or IOU. While bond terms are negotiable, the bond issuer is typically obligated to pay the bond holder interest at regular intervals and/or repay the principal at a later date.

Leasehold Financing

Leasehold financing refers to a developer or tenant financing improvements under a long-term ground lease. The obvious advantage of such an arrangement is that it relieves an airport sponsor of all responsibility for raising the capital funds for the improvement; however, the private development of facilities on a ground lease, particularly on property owned by an airport, produces a unique set of concerns. It may be more difficult for the tenant or developer to obtain private financing, as only the improvements and the right to continue the lease can be utilized as collateral. A ground lease at a public airport typically provides for reversion of improvements to the airport sponsor at the end of the lease term, which reduces the potential value to a lender taking possession in a default situation. Also, companies that want to own their property as a matter of financial policy may not locate where land is only available for lease.

Public/Private Partnerships

In addition to leasehold financing, it is acceptable for an airport to enter some form of public/private partnership for various airport projects. Typically, these projects would be limited to hangar construction, but a private developer might construct a project (e.g., a taxilane) and deed it to the airport for ongoing maintenance. When entering into any such arrangement, the airport must ensure the private developer does not gain an economic advantage over other airport tenants.

MASTER PLAN IMPLEMENTATION

To implement the master plan recommendations, it is key to recognize that planning is a continuous process and does not end with approval of this document. The airport should implement measures that allow it to track various demand indicators, passenger enplanements, based aircraft, hangar demand, and operations. The issues on which this master plan is based will remain valid for several years. A primary goal is for the airport to best serve the air transportation needs of the region while striving to be economically self-sufficient.

The actual need for facilities is best established by airport activity levels, rather than a specified date. For example, projections have been made regarding when additional hangars may be needed at the airport. In reality, the timeframe in which the development is needed may be substantially different from these projections. Actual demand may be slower to develop than expected, or high levels of demand may establish the need to accelerate development. Although every effort has been made in this master planning process to conservatively estimate when facility development may be needed, aviation demand will dictate timing of facility improvements.

The value of a master plan lies in keeping the issues and objectives at the forefront of the minds of managers and decision-makers. In addition to adjustments in aviation demand, the timing of undertaking the improvements recommended in this master plan will impact how long the plan remains valid. The format of this plan reduces the need for formal and costly updates by simply adjusting the timing of project implementation. Updates can be made by airport management, thereby improving the plan's effectiveness.

In summary, the planning process requires airport staff to consistently monitor operations and based aircraft, as well as the conditions of airfield pavements. Analysis of aviation demand is critical to the timing and need for new airport facilities.