Capital Financial Plan

The master plan concept presented in the previous chapter outlined airside and landside improvements for Mesquite Metro Airport (HQZ) that provide the City of Mesquite with a plan to preserve and develop the airport to meet future aviation demands. Using the development concept as a guide, this chapter will provide a description and overall cost for the projects identified in the capital improvement program (CIP) and development schedule. The program has been evaluated from a variety of perspectives and represents a comparative analysis of basic budget factors, demand, and priority assignments.

The presentation of the capital program is organized into two sections. First, the airport's CIP and associated cost estimates are presented in narrative and graphic form. The CIP has been developed following Federal Aviation Administration (FAA) guidelines for master plans and primarily identifies those projects that are likely eligible for FAA and Texas Department of Transportation (TxDOT) – Aviation Division grant funding. Second, capital improvement funding sources on the federal, state, and local levels are identified and discussed.

AIRPORT CAPITAL IMPROVEMENT PROGRAM

With the recommended concept, specific needs, and improvements for the airport established, the next step is to determine a realistic schedule for project implementation and the associated costs for the plan. The capital program considers the interrelationships among the projects in order to determine an appropriate sequence of projects, while remaining within reasonable fiscal constraints.

The CIP is programmed by planning horizons and has been developed to cover the short-term (1-5 years), intermediate-term (6-10 years), and long-term (11-20 years) planning horizons. By using planning horizons instead of specific years, the City of Mesquite will have greater flexibility to adjust capital needs as demand dictates. **Table 6A** summarizes the key aviation demand milestones projected at HQZ for each of the three planning horizons.

TABLE 6A | Aviation Demand Planning Horizons

	Base Year (2023)	Short-Term (1-5 Years)	Intermediate-Term (6-10 Years)	Long-Term (11-20 Years)
BASED AIRCRAFT				
Single-Engine	147	159	170	193
Multi-Engine	16	14	10	8
Turboprop	7	8	11	14
Jet	10	12	15	22
Helicopter	1	2	2	4
Total Based Aircraft	**181**	**194**	**209**	**241**
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	2	–	–	–
Air Taxi	1,124	1,400	1,700	2,600
General Aviation	25,985	29,700	31,600	35,700
Military	73	95	95	95
Total Itinerant	27,184	31,195	33,395	38,395
Local				
General Aviation	82,375	86,700	94,500	115,500
Military	58	186	186	186
Total Local	82,433	86,886	94,686	115,686
Total Operations	**109,617**	**118,081**	**128,081**	**154,081**

Source: Coffman Associates analysis

A key aspect of this planning document is the use of demand-based planning milestones. The short-term planning horizon contains items of highest need and/or priority, many of which have been previously defined by airport management. As short-term horizon activity levels are reached, planning should begin for the intermediate term, based on the next activity milestones. Likewise, when the intermediate-term milestones are reached, planning should begin for the long-term activity milestones.

Many development items included in the recommended concept will need to follow these demand indicators. For example, the plan includes development of new landside facilities to support aircraft activity. Demand for new based aircraft will be a primary indicator for these projects. If based aircraft growth occurs as projected, additional hangars should be constructed to meet the demand. If growth slows or does not occur as forecast, some projects may be delayed. As a result, capital expenditures are planned on an as-needed basis, leading to more responsible use of capital assets. Some development items do not depend on demand, such as airfield improvements to meet FAA design standards. These projects need to be programmed in a timely manner, regardless of changes in demand indicators, and should be monitored regularly by airport management.

At HQZ, some hangars are owned and managed by the airport and leased to individual tenants, while others are privately owned and managed on land leased from the airport. Because of economic realities, many airports rely on private developers to construct new hangars. In some cases, private developers can keep construction costs lower, which lowers the monthly lease rates necessary to amortize a loan. **The CIP for HQZ assumes development for hangar facilities will be funded either by the sponsor or privately through ground lease agreements with the sponsor.** Ultimately, the City of Mesquite will determine whether to self-fund landside facility development or rely on private developers, based on demand and the specific needs of a potential developer.

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 through architectural and/or engineering analysis. Moreover, a project may require additional infrastructure improvements (e.g., drainage improvements, extension of utilities, etc.) that may increase the estimated cost of the project or the timeline for completion.

Once a list of necessary projects was identified and refined, project-specific cost estimates were prepared. **Capital costs presented here should be viewed only as order-of-magnitude estimates that are subject to further refinement during engineering/architectural design**; nevertheless, they are considered sufficient for planning purposes. Cost estimates for all of the development projects in the CIP are based on present-day construction and administration costs. Adjustments will need to be applied over time to account for inflation, as well as changes in construction and capital equipment costs. Cost estimates for all of the development projects in the CIP are in current (2024) dollars.

Exhibit 6A presents the proposed 20-year CIP for HQZ. Most – but not all – of the projects identified are eligible for *Airport Improvement Program* (AIP)/TxDOT grant funding because this master plan follows TxDOT guidelines and focuses on those projects that are eligible for grant funding. The airport will have a variety of capital expenses that are not eligible for TxDOT funding, and which are not presented in detail in this CIP. **AIP/TxDOT-funded projects are eligible for up to 90 percent of the total project cost; the local sponsor is responsible for a 10 percent match.**

TxDOT utilizes a priority ranking system to help objectively evaluate potential airport projects. Projects are weighted toward safety, infrastructure preservation, standards, and capacity enhancement. TxDOT 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, the project should remain a priority for the airport and funding support should continue to be requested in subsequent years.

The most important feature of the CIP is that future projects for which the airport may request AIP/TxDOT funding are included on the list. The CIP is updated and reviewed with TxDOT on a biennial basis. Projects on the CIP will be moved higher and lower on the list, depending on priority and funding availability. Periodically, new projects will arise that can be added to the CIP presented to TxDOT.

Some projects identified in the CIP will require environmental documentation. The level of documentation necessary for each project must be determined in consultation with the FAA and TxDOT. There are three major levels of environmental review to be considered under the *National Environmental Policy Act* (NEPA): categorical exclusion (CATEX), environmental assessment (EA), and environmental impact statement (EIS). Each level requires more time to complete and more detailed information. Guidance on the level of documentation required for a specific project is provided in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures.* The Environmental Overview presented in Chapter Five addresses NEPA and provides an evaluation of various environmental categories for HQZ.

The following sections will describe, in greater detail, the projects identified for the airport over the next 20 years. The projects are grouped based on a detailed evaluation of existing and projected demand, safety, rehabilitation needs, and local priority. While the CIP identifies the priority rankings of the projects,

the list should be evaluated and revised on a regular basis. It is also important to note that certain projects – while listed separately for purposes of evaluation in this study – could be combined with other projects during the time of construction/implementation.

SHORT-TERM PROGRAM

The short-term projects are those anticipated to be needed during fiscal years (FY) 2024 through 2029. The projects listed are subject to change, based on federal and state funding priorities. Projects that relate to safety and maintenance generally have the highest priority. This applies to many of the projects identified in the short-term CIP that are associated with maintaining/rehabilitating existing airfield pavements. The short-term program considers 12 projects for the planning period, as presented on **Exhibit 6A** and depicted on **Exhibit 6B.** The following provides a detailed breakdown of each project.

FY 2024

Project #1: AWOS Replacement
Description: Replacement of the existing automated weather observing system (AWOS) equipment, which has reached the end of its useful life.
Cost Estimate: $165,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #2: STARS Radar Display – Install
Description: Installation of a Standard Terminal Automation Replacement System (STARS) in the airport traffic control tower (ATCT). The STARS display provides controllers with aircraft position data, aircraft status, flight plan information, and general information.
Cost Estimate: $1,650,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

FY 2025

Project #3: Taxilane and Apron – Design
Description: Design and planning for the construction of a new apron and taxilane at the north side of the airfield to support new fixed base operator (FBO) hangars.
Cost Estimate: $180,000
Funding Breakdown: AIP/TxDOT – 95% | Airport Sponsor – 5%
(The *FAA Reauthorization Act of 2024* sets AIP funding at general aviation airports to 95 percent for FY 2025 and FY 2026.)

Project #4: Construct Conventional Hangar (100' x 100') – one unit
Description: Construction of a 10,000-square-foot (sf) hangar facility to support a flight school.
Cost Estimate: $2,754,500
Funding Breakdown: Private – 100%

Fiscal Year	Project No.	Project	Funding Sources: Est. Cost	AIP/TxDOT	Sponsor	Private
Short-Term Projects						
2024	1	AWOS Replacement	$165,000	$148,500	$16,500	$0
2024	2	STAR Radar Display Install	$1,650,000	$1,485,000	$165,000	$0
2025	3	Taxilane and Apron - Design	$180,000	$171,000	$9,000	$0
2025	4	Construct Conventional Hangar (100' x 100') - 1 Unit	$2,754,500	$0	$0	$2,754,500
2025	5	Expand Parking Lot - 11,700 sf	$110,600	$0	$0	$110,600
2026	6	Taxilane and Apron - Construction	$2,000,000	$1,900,000	$100,000	$0
2027	7	Airport Terminal Remodel	$350,000	$0	$350,000	$0
2027	8	Conventional Hangar Construction (124'x100') - FBO	$5,000,000	$0	$0	$5,000,000
2027	9	Construct Parking Lot for North Hangars - 15,900 sf	$150,200	$0	$0	$150,200
2028	10	Runway and Taxiway Joint Sealing	$1,200,000	$1,080,000	$120,000	$0
2028	11	Runway and Taxiway Striping	$150,000	$135,000	$15,000	$0
2029	12	Existing Apron and Taxilane Rehabilitation/Replacement	$2,000,000	$1,800,000	$200,000	$0
Intermediate-Term Projects						
	13	Direct-Access Mitigation (Taxiway D/A4 Removal)	$134,700	$121,230	$13,470	$0
	14	Conventional Hangar Construction (200'x110') - FBO	$5,300,000	$0	$0	$5,300,000
	15	Eqiupment Purchase (Floor Scrubber)	$22,000	$0	$22,000	$0
	16	Equipment Purchase (Zero Turn Mower)	$15,000	$0	$15,000	$0
	17	Equipment Purchase (Type 1 tractor)	$33,000	$0	$33,000	$0
	18	Equipment Purchase (Tractor and Mower)	$160,000	$0	$160,000	$0
	19	Equipment Purchase (Mobile GPU)	$60,000	$0	$60,000	$0
	20	Equipment Purchase (Passenger Golf Cart)	$15,000	$0	$15,000	$0
	21	Equipment Purchase (Aircraft Tow Tractor)	$280,000	$0	$280,000	$0
	22	Landscaping Redesign	$15,000	$0	$15,000	$0
	23	Add Jet A Fuel Tank	$500,000	$0	$500,000	$0
	24	Acquire Avigation Easement - 7.2 Acres	$370,000	$333,000	$37,000	$0
	25	Upgrade MIRL to LED Fixtures	$772,400	$695,160	$77,240	$0
2030-2035	26	Upgrade MITL to LED Fixtures	$880,200	$792,180	$88,020	$0
	27	Expand Terminal Parking Lot	$25,500	$0	$25,500	$0
	28	Expand Tower Parking Lot	$56,700	$0	$56,700	$0
	29	Expand FBO Parking Lot	$168,200	$0	$168,200	$0
	30	Expand Apron (Phase I) - 2,650 sy	$557,600	$501,840	$55,760	$0
	31	Expand Apron (Phase II) - 22,050 sy	$3,107,500	$2,796,750	$310,750	$0
	32	Construct Hangar Taxilanes (Phase I) - 3,700 sy	$1,035,800	$932,220	$103,580	$0
	33	Construct Conventional Hangar - 15,000sf	$4,086,200	$0	$0	$4,086,200
	34	Construct Hangar Taxilanes (Phase II) - 4,200 sy	$1,127,300	$1,014,570	$112,730	$0
	35	Construct Executive Hangars (60' x 60') - 7 Units	$6,802,900	$0	$0	$6,802,900
	36	Construct Access Road and Parking Lots for South Side	$1,452,400	$0	$1,452,400	$0
	37	Construct Hangar Taxilanes (Phase III) - 5,700 sy	$1,401,600	$1,261,440	$140,160	$0
	38	Construct Executive Hangars (60' x 60') - 9 Units	$8,720,600	$0	$0	$8,720,600
	39	Construct Executive Hangars (80' x 80') - 4 Units	$6,909,400	$0	$0	$6,909,400
	40	Routine Pavement Maintenance	$5,000,000	$4,500,000	$500,000	$0

Fiscal Year	Project No.	Project	Funding Sources: Est. Cost	AIP/TxDOT	Sponsor	Private
Long-Term Projects						
2036+	41	Expand Apron (Phase III) - 27,500 sy	$4,205,500	$3,784,950	$420,550	$0
	42	Construct Hangar Taxilanes (Phase IV) - 5,500 sy	$1,365,000	$1,228,500	$136,500	$0
	43	Construct Executive Hangars (80' x 80') - 6 Units	$10,318,700	$0	$0	$10,318,700
	44	Construct Hangar Taxilanes (Phase V) - 32,400 sy	$6,282,400	$5,654,160	$628,240	$0
	45	Construct Conventional Hangars (100' x 250') - 3 Units	$20,066,900	$0	$0	$20,066,900
	46	Relocate AWOS	$159,000	$143,100	$15,900	$0
	47	Relocate Segmented Circle and Lighted Windcone	$80,000	$72,000	$8,000	$0
	48	Runway and Taxiway Shift/Extension	$8,101,600	$7,291,440	$810,160	$0
	49	Update Airfield Signage	$213,300	$191,970	$21,330	$0
	50	Construct Blast Pads	$626,600	$563,940	$62,660	$0
	51	Construct Holding Apron	$690,900	$621,810	$69,090	$0
	52	Reroute Berry Road	$1,426,300	$1,283,670	$142,630	$0
	53	Construct Parallel Taxiway B	$8,508,300	$0	$0	$8,508,300
	54	Routine Pavement Maintenance	$10,000,000	$9,000,000	$1,000,000	$0
Short-Term CIP Subtotal			$15,710,300	$6,719,500	$975,500	$8,015,300
Intermediate-Term CIP Subtotal			$49,009,000	$12,948,390	$4,241,510	$31,819,100
Long-Term CIP Subtotal			$72,044,500	$29,835,540	$3,315,060	$38,893,900
Total Master Plan CIP			$136,763,800	$49,503,430	$8,532,070	$78,728,300

Note: Hangar projects are assumed to be privately funded. Fiscal years are applied only to short-term projects.

LEGEND

- Existing Taxiway Designator
- Ultimate Taxiway Designator
- Short-term Projects
- Intermediate Projects
- Long-term Projects
- Pavement to be Removed
- Airport Property Line
- Runway Protection Zone (RPZ)

NP - Not Pictured

*Acreage is approximate and intended for planning uses only.

N

0 800

FEET

Photo: Google Earth 5/2024

To Lawson Road

Future George Bush Tollway

Lawson Road

Runway 18-36 (6,965' x 100')

300'

40'

179'

7.2 ac*

3.2 ac*

20.6 ac*

18.7 ac*

Airport Boulevard

E Scyene Road

Berry Road

SHORT-TERM PROJECTS (2024-2029)

2024	1	AWOS Replacement
	2	STAR Radar Display Install
2025	3	Taxilane and Apron - Design **NP**
	4	Construct Conventional Hangar (100' x 100') - 1 Unit
	5	Expand Parking Lot - 11,700 sf
2026	6	Taxilane and Apron - Construction
2027	7	Airport Terminal Remodel
	8	Conventional Hangar Construction (124'x100') - FBO
	9	Construct Parking Lot for North Hangars - 15,900 sf
2028	10	Runway and Taxiway Joint Sealing **NP**
	11	Runway and Taxiway Striping **NP**
2029	12	Existing Apron and Taxilane Rehabilitation/Replacement **NP**

INTERMEDIATE-TERM PROJECTS (2030-2035)

13	Direct-Access Mitigation (Taxiway D/A4 Removal)	27	Expand Terminal Parking Lot
14	Conventional Hangar Construction (200'x110') - FBO	28	Expand Tower Parking Lot
15	Eqiupment Purchase (Floor Scrubber) **NP**	29	Expand FBO Parking Lot
16	Equipment Purchase (Zero Turn Mower) **NP**	30	Expand Apron (Phase I) - 2,650 sy
17	Equipment Purchase (Type 1 tractor) **NP**	31	Expand Apron (Phase I) - 22,050 sy
18	Equipment Purchase (Tractor and Mower) **NP**	32	Construct Hangar Taxilanes (Phase I) - 3,700 sy
19	Equipment Purchase (Mobile GPU) **NP**	33	Construct Conventional Hangar - 15,000sf
20	Equipment Purchase (Passenger Golf Cart) **NP**	34	Construct Hangar Taxilanes (Phase II) - 4,200 sy
21	Equipment Purchase (Aircraft Tow Tractor) **NP**	35	Construct Executive Hangars (60' x 60') - 7 Units
22	Landscaping Redesign **NP**	36	Construct Access Road and Parking Lots for South Side
23	Add Jet A Fuel Tank	37	Construct Hangar Taxilanes (Phase III) - 5,700 sy
24	Acquire Avigation Easement - 7.2 Acres	38	Construct Executive Hangars (60' x 60') - 9 Units
25	Upgrade MIRL to LED Fixtures **NP**	39	Construct Executive Hangars (80' x 80') - 4 Units
26	Upgrade MITL to LED Fixtures **NP**	40	Routine Pavement Maintenance **NP**

LONG-TERM PROJECTS (2036+)

41	Expand Apron (Phase III) - 27,500 sy	48	Runway and Taxiway A Shift/Extension
42	Construct Hangar Taxilanes (Phase IV) - 5,500 sy	49	Update Airfield Signage **NP**
43	Construct Executive Hangars (80' x 80') - 6 Units	50	Construct Blast Pads
44	Construct Hangar Taxilanes (Phase V) - 32,400 sy	51	Construct Holding Apron
45	Construct Conventional Hangars (100' x 250') - 3 Units	52	Reroute Berry Road
46	Relocate AWOS	53	Construct Parallel Taxiway B
47	Relocate Segmented Circle and Lighted Windcone	54	Routine Pavement Maintenance **NP**

Project #5: Expand Parking Lot – 11,700 sf
Description: Expansion of the auxiliary parking lot adjacent to the north apron to add approximately 50 new spaces in support of a new flight school operation.
Cost Estimate: $110,600
Funding Breakdown: Private – 100%

FY 2026

Project #6: Taxilane and Apron – Construction
Description: Construction of a new 6,600-square-yard (sy) apron and taxilane access to support new FBO hangars on the north side of the airport.
Cost Estimate: $2,000,000
Funding Breakdown: AIP/TxDOT – 95% | Airport Sponsor – 5%
(The *FAA Reauthorization Act of 2024* sets AIP funding at general aviation airports to 95 percent for FY 2025 and FY 2026.)

FY 2027

Project #7: Airport Terminal Remodel
Description: New paint, furniture, and artwork, restrooms remodel, and general repair items.
Cost Estimate: $350,000
Funding Breakdown: Airport Sponsor – 100%

Project #8: Conventional Hangar Construction (124' x 100') – FBO
Description: Construction of a new FBO hangar on the north side of the airfield.
Cost Estimate: $5,000,000
Funding Breakdown: Private – 100%

Project #9: Construct Parking Lot for North Hangars – 15,900 sf
Description: Construction of a new vehicle parking lot to support a new FBO hangar on the north side of the airfield.
Cost Estimate: $150,200
Funding Breakdown: Private – 100%

Project #10: Runway and Taxiway Joint Sealing
Description: Replacement of the joint sealant to preserve the life of the concrete.
Cost Estimate: $1,200,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

FY 2028

Project #11: Runway and Taxiway Striping
Description: Painting of new markings throughout the airport.
Cost Estimate: $150,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

FY 2029

Project #12: Existing Apron and Taxilane Rehabilitation/Replacement
Description: Replacement of old and worn-out pavement.
Cost Estimate: $2,000,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Short-Term Program Summary

The short-term CIP includes projects that enhance the overall safety, efficiency, and maintenance of the airfield. The total investment necessary for the short-term CIP is approximately $15.7 million, as detailed on **Exhibit 6A**. Of the overall short-term CIP total, approximately $6.7 million is eligible for federal and state funding assistance. Sponsor funding is estimated at approximately $975,500 for the short-term program.

INTERMEDIATE-TERM PROGRAM

The intermediate-term projects are those that are anticipated to be necessary in years six through 10 of the master plan. These projects are not tied to specific years of implementation; instead, they have been prioritized so that airport management has the flexibility to determine when they need to be pursued, based on current conditions. It is not unusual for certain projects to be delayed or advanced because of changing conditions, such as funding availability or changes in the aviation industry. This planning horizon includes 28 projects for the five-year timeframe, as listed on **Exhibit 6A** and depicted on **Exhibit 6B**. The following section includes a description of each project.

Project #13: Direct-Access Mitigation (Taxiway D/A4 Removal)
Description: Removal of an existing taxiway stub to mitigate a direct-access point.
Cost Estimate: $134,700
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #14: Conventional Hangar Construction (200' x 110') – FBO
Description: Construction of a new FBO hangar on the north side of the airfield.
Cost Estimate: $5,300,000
Funding Breakdown: Private – 100%

Projects #15 - #21: Equipment Purchases
Description: Acquisition of equipment, including a floor scrubber, a zero-turn mower, a Type 1 tractor, a tractor and batwing mower, a mobile ground power unit (GPU), a six- to eight-passenger golf cart, and an aircraft tow tractor for larger aircraft.
Cost Estimate: $585,000 (total combined cost; individual costs are included on **Exhibit 6A**)
Funding Breakdown: Airport Sponsor – 100%

Project #22: Landscaping Redesign
Description: Airport aesthetics improvements.
Cost Estimate: $15,000
Funding Breakdown: Airport Sponsor – 100%

Project #23: Add Jet A Fuel Tank
Description: Installation of a 12,000-gallon Jet A fuel storage tank.
Cost Estimate: $500,000
Funding Breakdown: Airport Sponsor – 100%

Project #24: Acquire Avigation Easement – 7.2 acres
Description: Avigation easement to protect the Runway 18 runway protection zone (RPZ).
Cost Estimate: $370,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #25: Upgrade MIRL to LED Fixtures
Description: Replacement of existing medium intensity runway lighting (MIRL) incandescent fixtures with light-emitting diode (LED) fixtures.
Cost Estimate: $772,400
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #26: Upgrade MITL to LED Fixtures
Description: Replacement of existing medium intensity taxiway lighting (MITL) incandescent fixtures with LEDs.
Cost Estimate: $880,200
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #27: Expand Terminal Parking Lot
Description: Addition of approximately 16 new parking spaces.
Cost Estimate: $25,500
Funding Breakdown: Airport Sponsor – 100%

Project #28: Expand Tower Parking Lot
Description: Addition of approximately 15 new parking spaces.
Cost Estimate: $56,700
Funding Breakdown: Airport Sponsor – 100%

Project #29: Expand FBO Parking Lot
Description: Addition of approximately 34 new parking spaces.
Cost Estimate: $168,200
Funding Breakdown: Airport Sponsor – 100%

Project #30: Expand Apron (Phase I) – 2,650 sy
Description: Construction of new apron pavement to expand aircraft parking capacity.
Cost Estimate: $557,600
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #31: Expand Apron (Phase II) – 22,050 sy
Description: Construction of new apron pavement to expand aircraft parking capacity and provide development potential for new hangars on the south side of the airfield.
Cost Estimate: $3,107,500
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #32: Construct Hangar Taxilanes (Phase I) – 3,700 sy
Description: Extension of taxilane pavement from the airfield to support new hangar development.
Cost Estimate: $1,035,800
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #33: Construct Conventional Hangar – 15,000 sf
Description: New hangar construction (as dictated by demand).
Cost Estimate: $4,086,200
Funding Breakdown: Private – 100%

Project #34: Construct Hangar Taxilanes (Phase II) – 4,200 sy
Description: Extension of taxilane pavement from the airfield to support new hangar development.
Cost Estimate: $1,127,300
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #35: Construct Executive Hangars (60' x 60') – seven units
Description: New hangar construction (as dictated by demand).
Cost Estimate: $6,802,900
Funding Breakdown: Private – 100%

Project #36: Construct Access Road and Parking Lots for South Side
Description: Extension of surface roads and construction of parking lots to support future hangar development.
Cost Estimate: $1,452,400
Funding Breakdown: Airport Sponsor – 100%

Project #37: Construct Hangar Taxilanes (Phase III) – 5,700 sy
Description: Extension of taxilane pavement from the airfield to support new hangar development.
Cost Estimate: $1,401,600
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #38: Construct Executive Hangars (60' x 60') – nine units
Description: New hangar construction (as dictated by demand).
Cost Estimate: $8,720,600
Funding Breakdown: Private – 100%

Project #39: Construct Executive Hangars (80' x 80') – four units
Description: New hangar construction (as dictated by demand).
Cost Estimate: $6,909,400
Funding Breakdown: Private – 100%

Project #40: Routine Pavement Maintenance
Description: Airfield pavement rehabilitation to preserve useful life.
Cost Estimate: $5,000,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Intermediate-Term Program Summary

The total costs associated with the intermediate-term program are estimated at $49.0 million and presented on **Exhibit 6A**. Of this total, approximately $12.9 million could be eligible for federal/state funding, and the airport sponsor share is projected at $4.2 million.

LONG-TERM PROGRAM

The long-term planning horizon considers 14 projects for the 10+ year period that are mainly demand-driven. These projects and their associated costs are listed on **Exhibit 6A** and graphically depicted on **Exhibit 6B**.

Project #41: Expand Apron (Phase III) – 27,500 sy
Description: Construction of new apron pavement to expand aircraft parking capacity and provide development potential for new hangars on the south side of the airfield.
Cost Estimate: $4,205,500
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #42: Construct Hangar Taxilanes (Phase IV) – 5,500 sy
Description: Extension of taxilane pavement from the airfield to support new hangar development.
Cost Estimate: $1,365,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #43: Construct Executive Hangars (80' x 80') – 6 units
Description: New hangar construction (as dictated by demand).
Cost Estimate: $10,318,700
Funding Breakdown: Private – 100%

Project #44: Construct Hangar Taxilanes (Phase V) – 32,400 sy
Description: Extension of taxilane pavement from the airfield to support new hangar development.
Cost Estimate: $6,282,400
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #45: Construct Conventional Hangars (100' x 250') – three units
Description: New hangar construction (as dictated by demand).
Cost Estimate: $20,066,900
Funding Breakdown: Private – 100%

Project #46: Relocate AWOS
Description: Relocation of the AWOS equipment outside the ultimate runway object free area (ROFA) to provide clearance for the construction of Taxiway B.
Cost Estimate: $159,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #47: Relocate Segmented Circle and Lighted Windcone
Description: Relocation of the segmented circle and lighted wind cone outside the ultimate ROFA to provide clearance for the construction of Taxiway B.
Cost Estimate: $80,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #48: Runway and Taxiway A Shift/Extension
Description: Removal of 400 feet of the runway on the north end and extension 1,365 feet to the south for a full length of 6,965 feet. This allows the runway to meet the ultimate runway design code (RDC) C-II-4000 runway safety area (RSA)/ROFA design standards and provides additional utility for the runway during hotter periods of the year.
Cost Estimate: $8,101,600
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #49: Update Airfield Signage
Description: Replacement of existing signage with LED fixtures and addition of new signs to coincide with the runway/taxiway extension. New signage will reflect ultimate taxiway designations.
Cost Estimate: $213,300
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #50: Construct Blast Pads
Description: Addition of blast pads at each end of the runway to prevent soil erosion from jet blast.
Cost Estimate: $626,600
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #51: Construct Holding Apron
Description: Addition of a holding apron at the south end of Taxiway A to support preflight checks and improve circulation efficiency.
Cost Estimate: $690,900
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #52: Reroute Berry Road
Description: Rerouting of Berry Road so it falls outside the ultimate Runway 36 RPZ.
Cost Estimate: $1,426,300
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Project #53: Construct Parallel Taxiway B
Description: Addition of a full-length parallel taxiway on the east side of Runway 18-36 to support a through-the-fence operation.
Cost Estimate: $1,426,300
Funding Breakdown: Private – 100%

Project #54: Routine Pavement Maintenance
Description: Airfield pavement rehabilitation to preserve useful life.
Cost Estimate: $10,000,000
Funding Breakdown: AIP/TxDOT – 90% | Airport Sponsor – 10%

Long-Term Program Summary

The total investment necessary for the long-term CIP (detailed on **Exhibit 6A**) is approximately $72.0 million. Approximately $29.8 million is eligible for federal/state funding assistance. The sponsor share of long-term projects is projected at $3.3 million.

CAPITAL IMPROVEMENT PROGRAM SUMMARY

The CIP is intended as a road map of improvements to help guide the City of Mesquite and TxDOT – Aviation Division. The plan, as presented, will help accommodate increases in forecast demand at HQZ over the next 20 years and beyond. The sequence of projects may change due to availability of funds or changing priorities, based on the annual review by airport management, the FAA, and TxDOT; nevertheless, this is a comprehensive list of capital projects the airport should consider in the next 20 years.

The total CIP proposes approximately $136.8 million in airport development needs. Of this total, approximately $49.5 million could be eligible for federal and/or state funding assistance. The sponsor funding estimate for the proposed CIP is $8.5 million.

CAPITAL IMPROVEMENT FUNDING SOURCES

Generally, four different sources of funds are used to finance airport development:

- Airport cash flow
- Revenue and general obligation bonds
- Federal/state/local grants
- Passenger facility charges (PFCs) (reserved for commercial service airports)

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

Financing for capital improvements at HQZ will not rely solely on the financial resources of the City of Mesquite. 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 grants. While more funds could be available 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 potential funding for capital improvements at the airport.

FEDERAL GRANTS

Through federal legislation over the years, various grant-in-aid programs have been established to develop and maintain the system of public-use airports across the United States. The purpose of this system and its federally based funding is to maintain national defense and promote interstate commerce. Recently, the *FAA Reauthorization Act of 2024* (enacted on May 16, 2024) authorized the FAA's AIP at $4.0 billion for fiscal years 2025 through 2028. Section 708 of the law increases the federal share of allowable AIP-funded project costs at nonhub and nonprimary airports to 95 percent for FY 2025 and FY 2026. After FY 2026, the federal share reverts to 90 percent for AIP-funded projects.

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.

Several projects identified in the CIP are eligible for FAA funding through the AIP, which provides entitlement funds to airports based (in part) on their annual enplaned passengers and pounds of landed cargo weight. Additional AIP funds that are designated as discretionary may also be used for eligible projects, based on the FAA's national priority system. Although the AIP has been reauthorized several times and the funding formulas have been periodically revised to reflect changing national priorities, the program has remained essentially the same. Public-use airports that serve civil aviation – like HQZ – may receive AIP funding for eligible projects, as described in the FAA's *Airport Improvement Program Handbook*. The airport must fund the remaining project costs through a combination of other funding sources, which are discussed in the following sections.

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement in which the FAA/TxDOT provides up to 90 percent of the cost and the airport sponsor invests the remaining 10 percent. In exchange for this level of funding, the airport sponsor is required to meet various grant assurances, including maintaining the improvement for its useful life (usually 20 years).

Another source for federal grants is the *Infrastructure Investment and Jobs Act* (IIJA) – also known as the *Bipartisan Infrastructure Law* (BIL) – which was signed into law in 2022 and plans for $25 billion to be invested into America's airports over a five-year period. BIL funds are sourced from the U.S. Treasury

General Fund and are split into two funding buckets: $20 billion for Airport Infrastructure Grants (AIG) and $4.85 billion for the Airport Terminal Program (ATP). **Under the BIL, HQZ will receive $294,000[1] in allocated AIG funding in FY 2024.** This money can be used for repair and maintenance of existing infrastructure or construction of new facilities (i.e., airfield pavement, navigational aids, lighting, terminal building, etc.). ATP grants can be used for multimodal terminal development and relocating, reconstructing, repairing, or improving an airport traffic control tower. The federal share for AIG is the same as an AIP grant (90 percent with a local 10 percent match), while the federal share for ATP grants is 95 percent for nonprimary airports. The grant assurances that apply to AIP grants also apply to BIL grants.

Apportionment (Entitlement) Funds

The AIP provides funding for eligible projects at airports through an apportionment (entitlement) program. Nonprimary airports that are included in the *National Plan of Integrated Airport Systems* (NPIAS), such as HQZ, receive a guaranteed minimum level of $150,000 each year in nonprimary entitlement (NPE) funds. These funds can be carried over and combined for up to four years, thereby allowing for the completion of a more expensive project.

The FAA also provides a state apportionment, based on a federal formula that considers land area and population. TxDOT distributes these funds for projects at various airports throughout the State of Texas.

Small Airport Fund

If a large- or medium-hub commercial service airport chooses to institute a PFC – which is a fee of up to $4.50 per airline ticket for the funding of capital improvement projects – its apportionment is reduced. A portion of the reduced apportionment goes to the small airport fund. The *FAA Reauthorization Act of 2024* includes a pilot program that will allow general aviation airports to use the Small Airport Fund for runway extension projects that might otherwise be ineligible under the AIP.

The Small Airport Fund is reserved for small-hub primary commercial service, nonhub commercial service, reliever, and general aviation airports. As a reliever airport, HQZ is eligible for funds from this source.

Discretionary Funds

An airport may face major projects that will require funds in excess of the airport's annual entitlements; thus, additional funds from discretionary apportionments under the AIP become desirable. The primary element of discretionary funds is that they are distributed on a priority basis. The priorities are established by the FAA, using a code system under which projects are ranked by purpose. Projects ensuring airport safety and security are ranked as the most important priorities, followed by maintaining current infrastructure development, mitigating noise and other environmental impacts, meeting design standards, and increasing system capacity.

[1] https://www.faa.gov/bil/airport-infrastructure

It is important to note that competition for discretionary funding is not limited to airports in the State of Texas or those within the FAA's Southwest Region. The funds are distributed to all airports in the country and, as such, are more difficult to obtain. High priority projects will often fare favorably, while lower priority projects may not receive discretionary grants.

Set-Aside Funds

Portions of AIP funds are set-asides that are designed to achieve specific funding minimums for noise compatibility planning and implementation, certain former military airfields (Military Airports Program), and certain reliever airports. As a reliever airport, HQZ qualifies for set-aside funding.

FAA Facilities and Equipment (F&E) Program

The Airway Facilities Division of the FAA administers the F&E Program. This program provides funding for the installation and maintenance of various navigational aids and equipment of the National Airspace System (NAS). Under the F&E Program, funding is provided for FAA airport traffic control towers (ATCTs), enroute navigational aids, on-airport navigational aids, and approach lighting systems.

While the F&E Program still installs and maintains some navigational aids, on-airport facilities at general aviation airports have not been prioritized; therefore, airports often request funding assistance for navigational aids through the AIP and maintain the equipment on their own[2].

STATE FUNDING PROGRAMS

The State of Texas participates in the federal State Block Grant Program. Under this program, the FAA annually distributes general aviation state apportionment and discretionary funds to TxDOT, which distributes grants to airports within the state. In compliance with TxDOT's legislative mandate to "apply for, receive, and disburse" federal funds for general aviation airports, TxDOT acts as the agent of the local airport sponsor. Although these grants are distributed by TxDOT, they include all federal obligations.

The State of Texas also distributes funding to general aviation airports from the Highway Trust Fund through the Texas Aviation Facilities Development Program. These funds are appropriated each year by state legislature. Once distributed, these grants include state obligations only.

The establishment of a CIP for the state requires identification of the need, followed by the establishment of a ranking or priority system. Identifying all state airport project needs allows TxDOT to establish a biennial program and budget for development costs. The currently approved TxDOT CIP, *Aviation Capital Improvement Program 2024-2026*, assumes approximately $19 million in annual state apportionment, plus $24 million earmarked for NPEs, $12 million in annual federal discretionary funding, and $36 million in IIJA AIG funds. In terms of state funding, the program includes $15 million per year for

[2] Guidance on the eligibility of a project for federal AIP grant funding can be found in FAA Order 5100.38D, *Airport Improvement Program Handbook*, Change 1 (effective February 26, 2019). This document will be updated as a result of the *FAA Reauthorization Act of 2024*; however, an updated version is not available, as of the time of this writing.

airport development, as well as $42 million in additional funding for FY 2024 and FY 2025, an additional $15 million in competitive state funding, and $58 million in legislative riders. Combined state funding totals $130 million for FY 2024, $57 million for FY 2025, and $15 million for FY 2026.

The TxDOT biennial program sets a project priority system established by the Texas Transportation Commission to make the best use of limited state and federal airport development funds. **Table 6B** presents the priority objectives and their associated descriptions, listed in order of importance.

TABLE 6B | TxDOT Project Priorities

PRIORITY OBJECTIVE	DESCRIPTION
Safety	Projects needed to make the facility safe for aircraft operations.
Preservation	Projects to preserve the functional or structural integrity of the airport.
Standards	Improvements required to bring the airport up to design standards for current user aircraft.
Upgrade	Improvements required to allow the airport to accommodate larger aircraft or longer stage lengths.
Capacity	Expansion required to accommodate more aircraft or higher levels of activity.
New Access	A new airport to provide new air access to a previously unserved area.
New Capacity	A new airport needed to add capacity or relieve congestion at other area airports.

Source: TxDOT Aviation Capital Improvement Program, 2024-2026

Each project for the airport must be identified and programmed into the state CIP and must compete with other airport projects in the state for both federal and state funds. In Texas, airport development projects that meet TxDOT's discretionary funding eligibility requirements can receive 90 percent funding from the AIP State Block Grant Program. Eligible projects include airfield and apron facilities. Historically, revenue-generating improvements (such as fuel facilities, utilities, and hangars) have not been eligible for AIP funding; however, FAA funding legislation has historically provided an allowance of NPE funds to be used for hangar or fuel farm construction if all other airfield needs have been addressed.

The availability of grant funds can fluctuate from year to year. Typically, an airport can expect a grant to cover several projects in one grant cycle, and the next grant opportunity may not occur for several years. This cycle occurs because TxDOT must administer grants for more than 300 airports and has relatively limited resources. As a result, local budgeting for future capital improvements should consider sporadic grant availabilities.

Routine Airport Maintenance Program (RAMP)

TxDOT has established the RAMP to help general aviation airports maintain and, in some instances, construct new facilities. The program was initially designed to help airports maintain airside and landside pavements but has since been expanded to include construction of new facilities. RAMP is an annual funding source through which TxDOT will provide a 50 percent funding match for projects up to $100,000. **Table 6C** outlines the projects that are eligible under RAMP. It should be noted that several projects listed in the airport's proposed CIP are also eligible for RAMP funding.

TABLE 6C | RAMP Eligible Projects

AIRSIDE MAINTENANCE
Pavement Crack Seal/Slurry Seal/Fog Seal/Rejuvenator
Pavement Markings
Drainage Maintenance
Sweeping
Herbicide Application on Airside Pavement
Replacement Bulbs/Lamps for Airside Lights, Approach Aids
Eligible Air Traffic and Operations Equipment, Installation, and Subscription Costs
AWOS Parts Replacement
AFTER AIRSIDE MAINTENANCE IS ADDRESSED
Seal Coats/Chip Seal/Crack Seal for Non-Airside Pavement
Hangar/Terminal Painting and Repairs (airport-owned only)
Security Camera Systems (excluding monitoring fees)
Game-Proof or Security Fencing and Gates; Electric Gate Openers
Access Roads for AWOS Installations
AWOS National Airspace Data Interchange Network (NADIN) Interface Charges
Airport Entrance Signs
Repair/Replacement of Fuel Systems, Including Tanks (airport-owned only)
Storm Water Pollution Prevention Plans; Spill Prevention Control and Countermeasure Plans
Airfield Foreign Object Debris (FOD) Sweeper
HVAC Repairs in Terminal Building/Tower
CAPITAL IMPROVEMENT PROJECTS (WITH TXDOT GUIDANCE)
New Public Vehicle Parking Areas
New Entrance Roads and Hangar Access Roads
Aircraft Wash Racks
Aircraft Parking Aprons
Extension of Runway Lighting Systems
Drainage Improvements
Small General Aviation Terminal Buildings
Beacon/Tower Replacement
Preparation of FAA Form 7460-1 for RAMP Projects

Source: TxDOT RAMP (2024)

Other State Airport Programs

TxDOT also provides a funding mechanism for terminal buildings and ATCT improvements. TxDOT funds terminal building construction on a 50/50 basis, up to a $1 million total project cost. It should be noted that TxDOT has recently considered upgrading the total cost allowance on a case-by-case basis.

TxDOT also funds the construction of up to two ATCTs within the state each year. TxDOT has improved the program so that ATCT funding could be provided on a 90/10 basis, up to a total construction cost of $1.67 million.

LOCAL FUNDING

After consideration has been given to grants, the balance of project costs must be funded through local resources. A goal for any airport is to generate enough revenue to cover all operating and capital expenditures, if possible. There are several local financing options to consider when funding future

development at airports, including airport revenues, issuance of a variety of bond types, leasehold financing, implementing a customer facility charge (CFC), pursuing non-aviation development potential, and collecting money from special events. These strategies could be used to fund the local matching share or complete a project if grant funding cannot be arranged. The following is a brief description of the most common local funding options.

Airport Revenues

An airport's daily operations are conducted through the collection of various rates and charges. These airport revenues are generated specifically by airport operations. There are restrictions on the use of revenues collected by the airport. All receipts – excluding bond proceeds or related grants and interest – are irrevocably pledged to the punctual payment of operating and maintenance expenses, payment of debt service for as long as bonds remain outstanding, or additions or improvements to airport facilities.

All airports should establish standard basis rates for various leases. All lease rates should be set to adjust to a standard index, such as the consumer price index (CPI), to ensure that fair and equitable rates continue to be charged in the future. Many factors will impact what the standard lease rate should be for a particular facility or ground parcel. For example, ground leases for aviation-related facilities should have a different lease rate than non-aviation leases. A separate facility lease rate should be charged for airport-owned hangars. The lease rate for any individual parcel or hangar may vary due to availability of utilities, condition, location, and other factors; nevertheless, standard lease rates should fall within an acceptable range.

Bonding

Bonding is a common method of financing large capital projects at airports. A bond is an instrument of indebtedness of the bond issuer to the bond holder(s); 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/Third-Party Financing

Leasehold or third-party financing refers to a developer or tenant financing improvements under a long-term ground lease. The advantage of this arrangement is that it relieves the airport of the responsibility of raising capital funds for the improvement. As an example, a hangar developer might consider constructing hangars and charging fair market lease rates, while paying the airport for a ground lease. A fuel farm can be established in the same manner, with the developer of the facility paying the airport a fuel flowage fee.

Many airports use third-party (private entity) funding when the planned improvements will primarily be used by a private business or other organization. Such projects are not ordinarily eligible for federal funding. Projects of this kind typically include hangars, fixed base operator facilities, fuel storage, exclusive aircraft parking aprons, industrial aviation-use facilities, non-aviation office/commercial/industrial

developments, and other similar projects. Private development proposals are considered on a case-by-case basis. Airport funds for infrastructure, preliminary site work, and site access are often required to facilitate privately developed projects on airport property.

Customer Facility Charge (CFC)

A CFC is the imposition of an additional fee charged to customers for the use of certain facilities. The most common example is when an airport constructs a consolidated rental car facility and imposes a fee for each rental car contract. That fee is then used by the airport to pay down the debt incurred from building the facility.

Non-Aeronautical Development

In addition to generating revenue from traditional aviation sources, airports with excess land can permit compatible non-aeronautical development. Generally, an airport will extend a long-term lease for land that is not anticipated to be needed for aviation purposes in the future. The developer will then pay the monthly lease rate and construct and use a compatible facility. The recommended master plan concept includes the development of a 3.2-acre site in the northwest corner of the airport along E Scyene Road for a restaurant. All other planned development is aeronautical in nature. It should be noted that any proposed non-aviation development must be reviewed and approved by both the FAA and TxDOT.

Special Events

Another common revenue-generating option is permitted use of airport property for temporary or single events. Airports can permit portions of their facilities to be used for non-aviation special events, such as car shows or video production of commercials. This type of revenue generation must be approved by the FAA.

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, such as based aircraft, hangar demand, and operations. The issues upon which this master plan is based will remain valid for several years. The primary goal is for HQZ to best serve the air transportation needs of the region while achieving economic self-sufficiency.

The CIP and phasing program presented will change over time. An effort has been made to identify and prioritize all major capital projects that would require federal or state grant funding; nevertheless, the airport and TxDOT review the five-year CIP on an annual basis.

The primary value of this study lies in keeping the issues and objectives at the forefront of the minds of decision-makers. In addition to adjustments in aviation demand, decisions on when to undertake 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 allowing for simple adjustments to the timing of project implementation. Updates can be done by airport management, thereby improving the plan's effectiveness; nevertheless, airports are typically encouraged to update their master plans every seven to 10 years, or sooner if significant changes occur in the interim.

In summary, the planning process requires the City of Mesquite to consistently monitor the progress of the airport. The information obtained from continually monitoring activity will provide the data necessary to determine if the development schedule should be accelerated or decelerated.