



Airport Master Plan Open House

Front Range Airport

February 23, 2017



MASTER PLAN PROCESS AND OVERVIEW



MASTER PLAN ELEMENTS

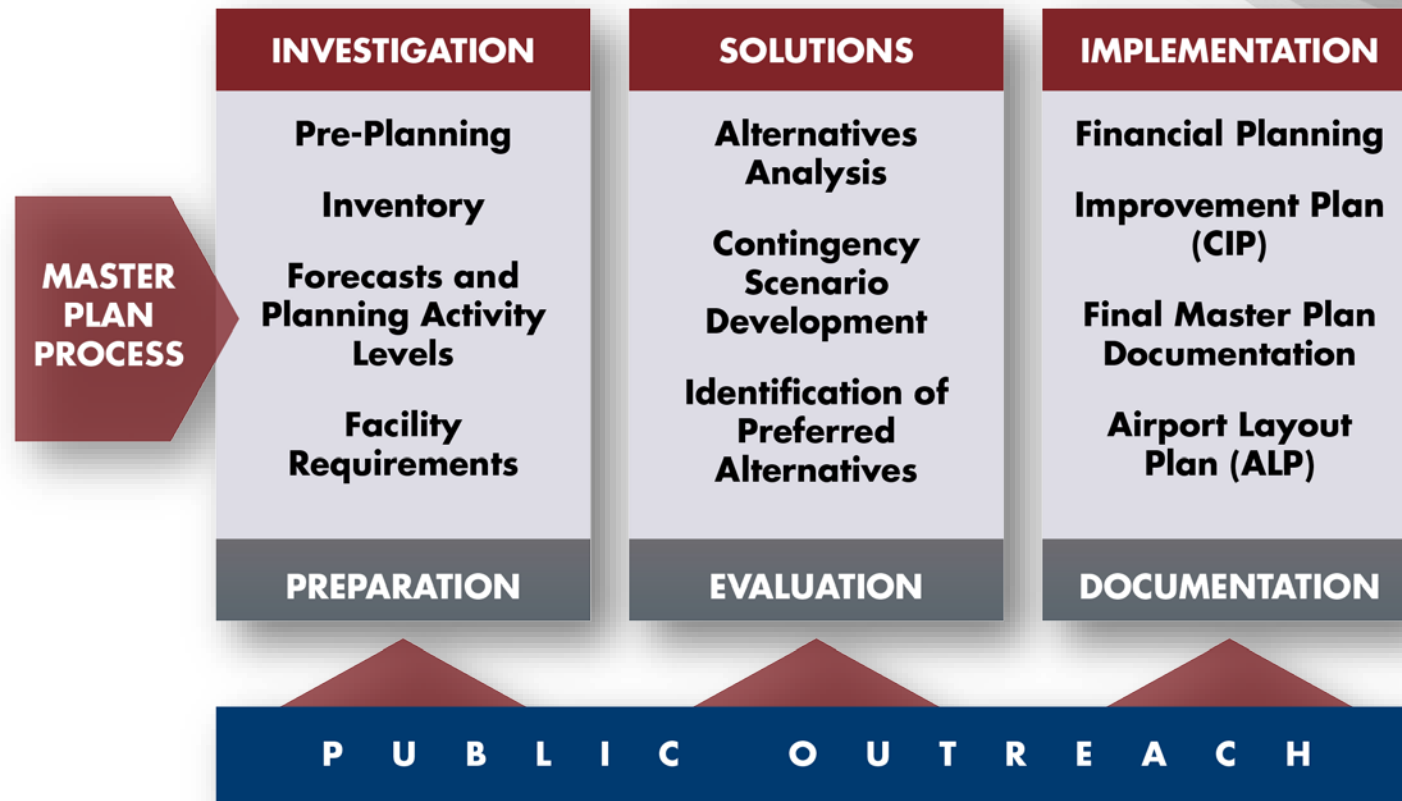
The Master Plan is a **20-year plan** to understand the needs of current and future users of the Airport. This is important to ensure that **safe and orderly development** of the Airport occurs in a manner that is **reflective of community values and goals**. This plan is developed through a **purposeful, inclusive, and educational process**.



Key Features

- Planning is not prejudicial or constrained – *no predetermined outcomes*
- Plan must be based on current conditions, community input, FAA design standards, and forecasts

Master Plan Process



Outreach Efforts

- Planning Advisory Committee
- Stakeholder Meetings
- Community Meetings
 - User and business surveys
 - Project brochure
 - Website project updates
 - Media releases
- Civic and Local Government Outreach
- FAA / CDOT collaboration

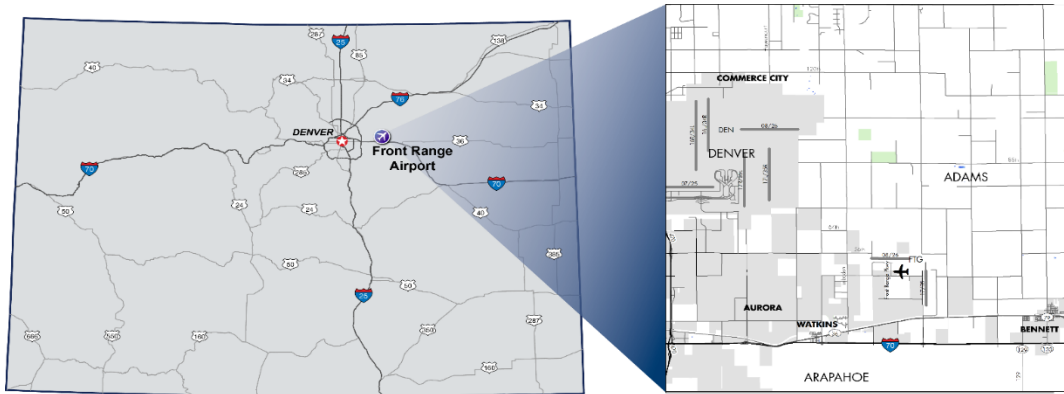


Front Range Airport Mission Statement

- Become an economic engine for Adams County and surrounding areas, providing jobs, revenue, and viable aviation services for a growing market.
- Serve as a model airport for aircraft operations, efficiency, and safety.
- Provides its tenants, users, business community and travelers a professional experience.



A Contributor to Our Local Economy

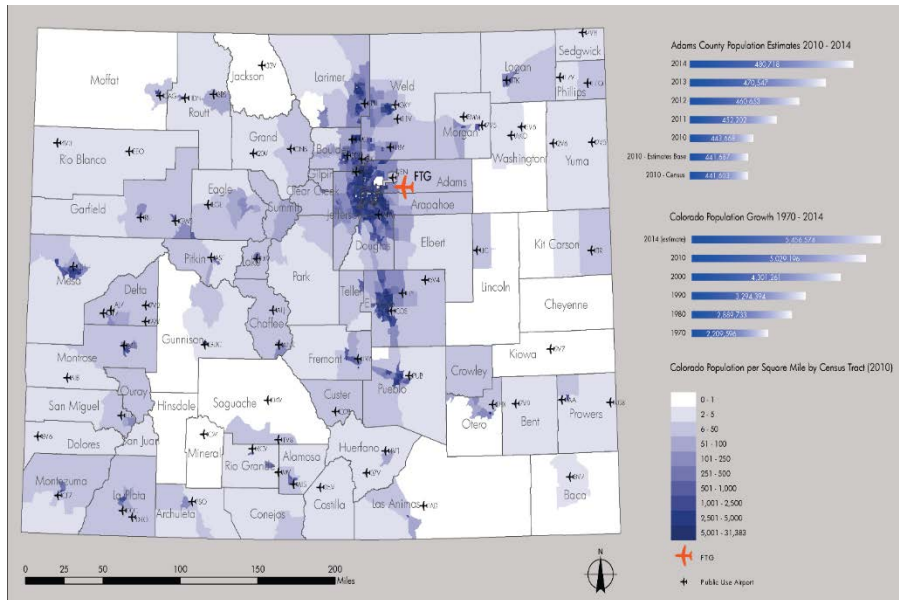


How the Economic Impact of Front Range Airport was Calculated

Initial Impact



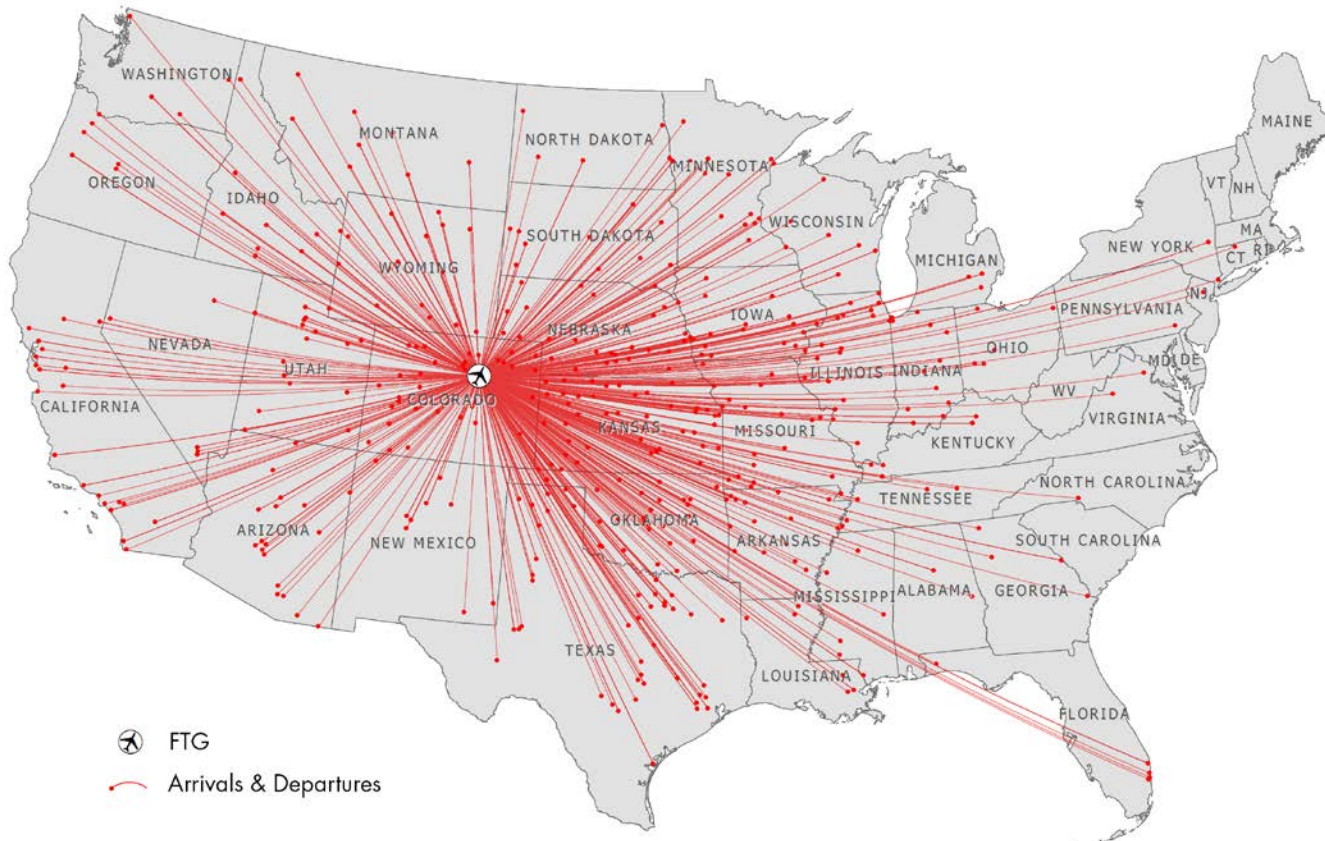
Total Impact



Source: Colorado Division of Aeronautics

FRONT RANGE AIRPORT (FTG)

Instrument Flight Rules Operations February 1, 2016 - February 1, 2017



Total IFR Operations: 2,000

What is the Relationship Between the Spaceport and the Airport Master Plan?

- Airport Master Plan (AMP) Focused on Aircraft & the Facilities Needed to Accommodate Them
- Aviation prepared Spaceport Boundary Layout Plan for Application
- Airport Master Plan will use the Spaceport Plan. AMP will not re-examine the Spaceport
- FAA Airports Division Wants AMP Focused on Airplanes
- FAA AMP Grant not eligible to study Spaceport

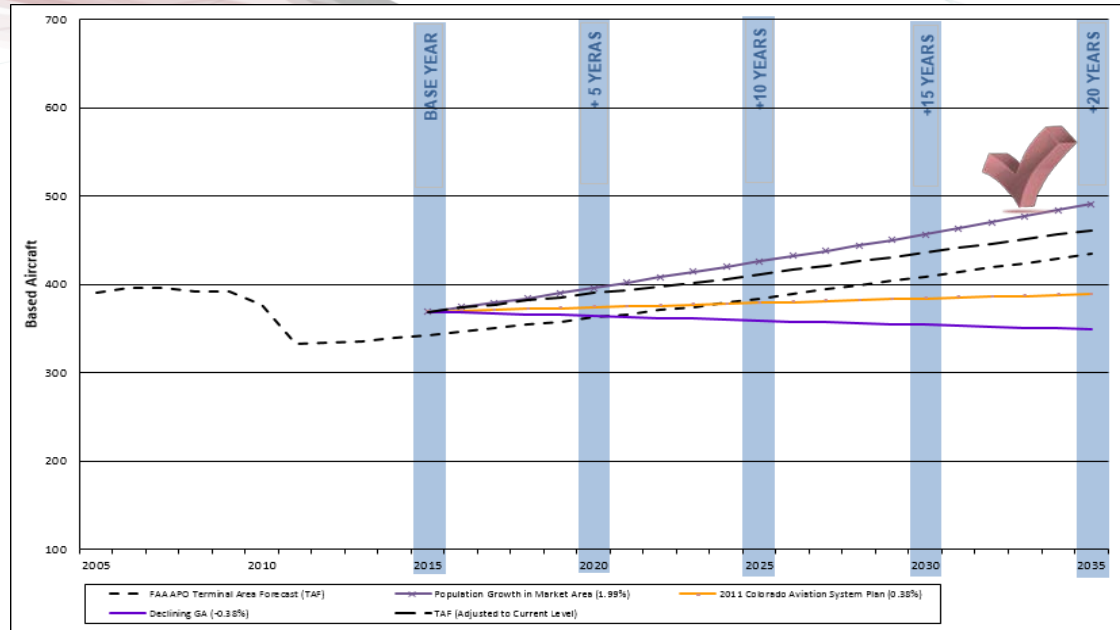


AVIATION DEMAND FORECASTS AND FACILITY REQUIREMENTS

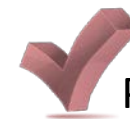
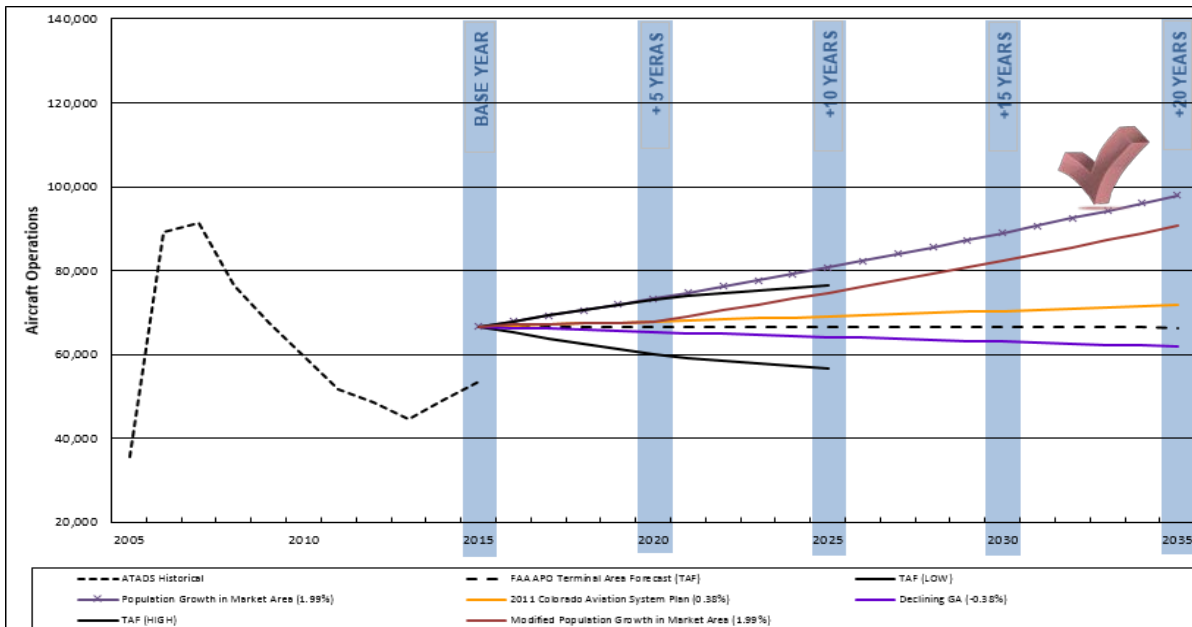


Forecast Scenarios

Based Aircraft



Aircraft Operations



Preferred Forecast

Preferred Forecast

Preferred Forecast

Year	Based Aircraft	Itinerant Operations	Local Operations	Total Operations
2015 ¹	369	23,843	42,734	66,577
2020	396	23,741	44,090	67,831
2025	426	29,879	44,818	74,697
2030	456	32,910	49,364	82,274
2035	491	40,785	49,848	90,633

Aircraft Operations Preferred Forecast

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2015 ¹	23,843	42,734	66,577
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% Split	45%	55%	100%

Corporate Jet Operations at FTG

Aircraft Type	Average Annual Operations*
C25A - Cessna Citation CJ2	55
C500 - Cessna 500/Citation I	24
C510 - Cessna Citation Mustang	44
C525 - Cessna CitationJet/CJ1	99
C550 - Cessna Citation II/Bravo	54
C560 - Cessna Citation V/Ultra/Encore	58
C56X - Cessna Excel/XLS	36
C680 - Cessna Citation Sovereign	14
C750 - Cessna Citation X	24
CL60 - Bombardier Challenger 300/600/604	20
E55P - Embraer Phenom 300	26
EA50 - Eclipse 500	28
F900 - Dassault Falcon 900	14
FA50 - Dassault Falcon/Mystère 50	30
GLF5 - Gulfstream V/G500	15
H25B - BAe HS 125/700-800/Hawker 800	26
LJ35 - Bombardier Learjet 35/36	29
LJ45 - Bombardier Learjet 45	12
LJ60 - Bombardier Learjet 60	14
PRM1 - Raytheon Premier 1/390 Premier 1	12
Other Misc Aircraft	30
TOTAL:	634

Facility Requirements

AVIATION DEMAND CAPACITY ANALYSIS

	2015	2020	2025	2035
Capacity – Annual Service Volume (ASV)	270,000	270,000	270,000	270,000
Demand - Aircraft Operations	66,577	67,831*	74,697*	90,633*
Percent of Capacity	24.7%	25.1%	27.7%	33.6%



DESIGN STANDARDS CLASSIFICATIONS

	Existing	Future	Ultimate*
Aircraft Approach Category (AAC)	C	C	C
Airplane Design Group (ADG)	II	II	IV
Runway Visual Range (RVR)	2400	2400	2400
Runway Design Code (RDC)	C-II 2400	C-II 2400	C-IV 2400
Airport Reference Code (ARC)	C-II	C-II	C-IV
Taxiway Design Code (TDC)	2	2	3

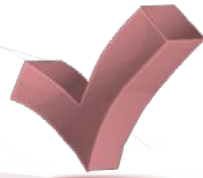
Facility Requirement Recommendations

Facility	Identified Requirement
Airfield Facility Requirements	
Airfield Demand Capacity	– No action required
Airport Design Standards	– No action required
Runways	– Preserve potential runway extensions and widening in Ultimate ALP – Add blast pads to Ultimate ALP per FAA AC 150/5300-13A
Taxiways	– Update fillet standards per FAA AC 150/5300-13A – Eliminate direct access from apron to runway via Taxiways A5, A6 and D7 per FAA AC 150/5300-13A – Resolve potential operational conflicts on Taxiway E – Preserve potential taxiway system expansion in Ultimate ALP
Airfield Pavement	– Investigate existing pavement strength of Runway 17/35 – Investigate potential selected strengthening of taxiways to support Runway 17/35
Airfield Visual Aids	– Install MITLs on Taxiway A, Taxiways A3-A9, Taxiway B, Taxiway C, Taxiways C1-C2, and Taxiway E and E7
Navigation Aids (NAVAIDs)	– No action required
Obstruction Removal	– Recommendations to be incorporated into the ALP set
Landside Facility Requirements	
Terminal Building	– No action required
Aircraft Hangar Requirements	– Prepare for short-term T-hangar development – Preserve / refine hangar development modules
Aircraft Parking Aprons	– Redesign transient apron
Landside Access and Parking Requirements	– No action required
Airport Support Facility Requirements	
Airport Security	– Construct security fence and perimeter road – Install access control – Establish Airport Security Committee
Fuel Storage Requirements	– No action required
Deicing Facilities	– No action required
ARFF / SRE Facilities	– Construct an SRE/maintenance building of 6,400 square feet
Airport Equipment	– Replace SRE and maintenance vehicles as they reach their useful life, as reflected on CIP.
Utilities	– No action required
Spaceport Facilities Requirements	
Spatial Requirements	– Reserve appropriate airport land area required to meet projected facility needs for potential spaceport operations – Ensure that prospective spaceport development areas do not adversely impact traditional airport operational activities.

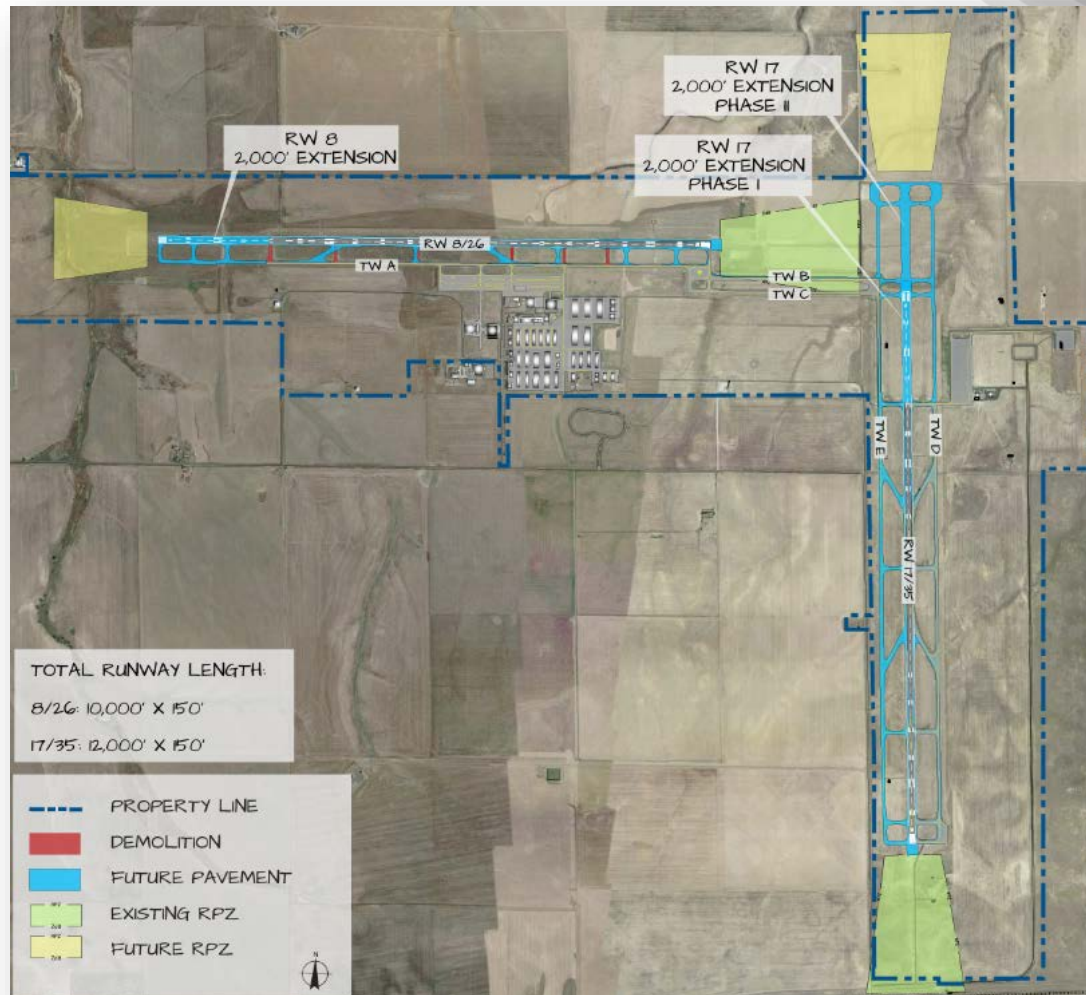


PREFERRED ALTERNATIVES AND IMPLEMENTATION PLAN

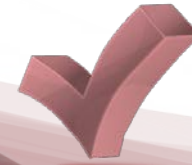




Runway Extensions in Ultimate Airport Layout Plan (ALP)

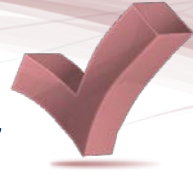


Pavement Strengthening Associated with Runway 17/35



This improvement will allow heavier aircraft to operate at FTG without risk of damaging pavement

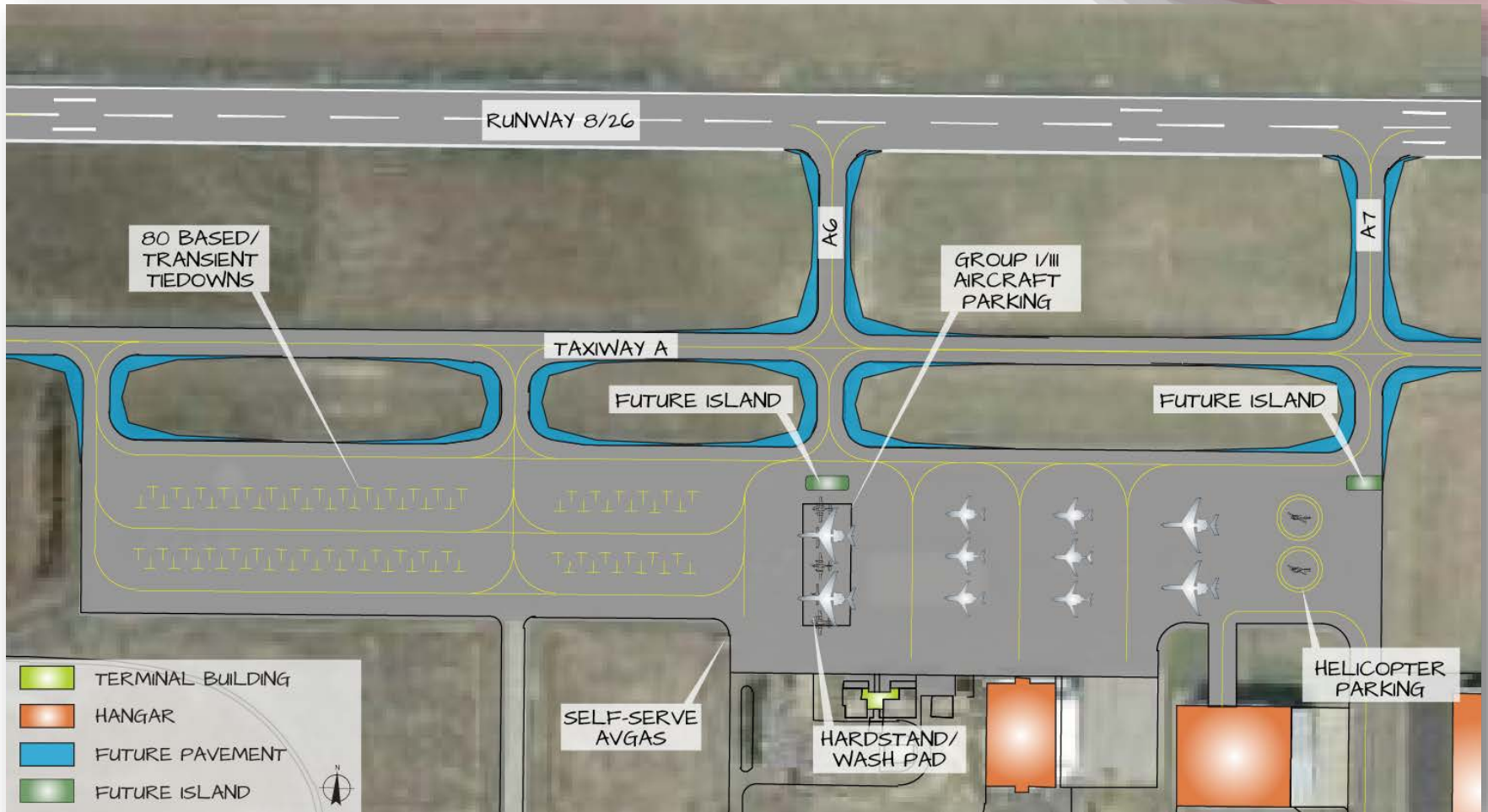
Taxiway E Hold Bay



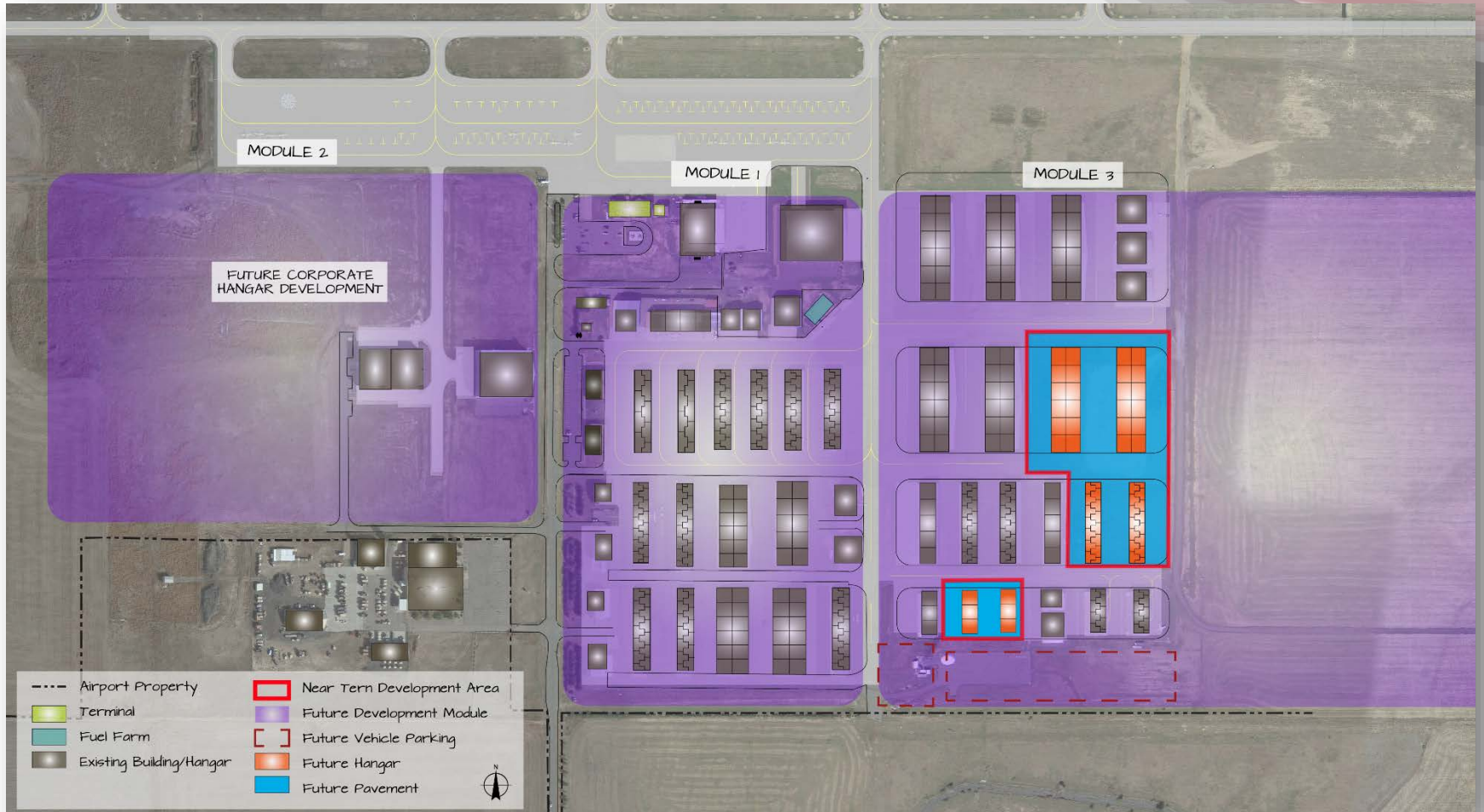
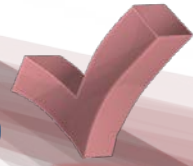
This improvement will help eliminate potential taxiway conflicts for aircraft transitioning to/from the terminal area



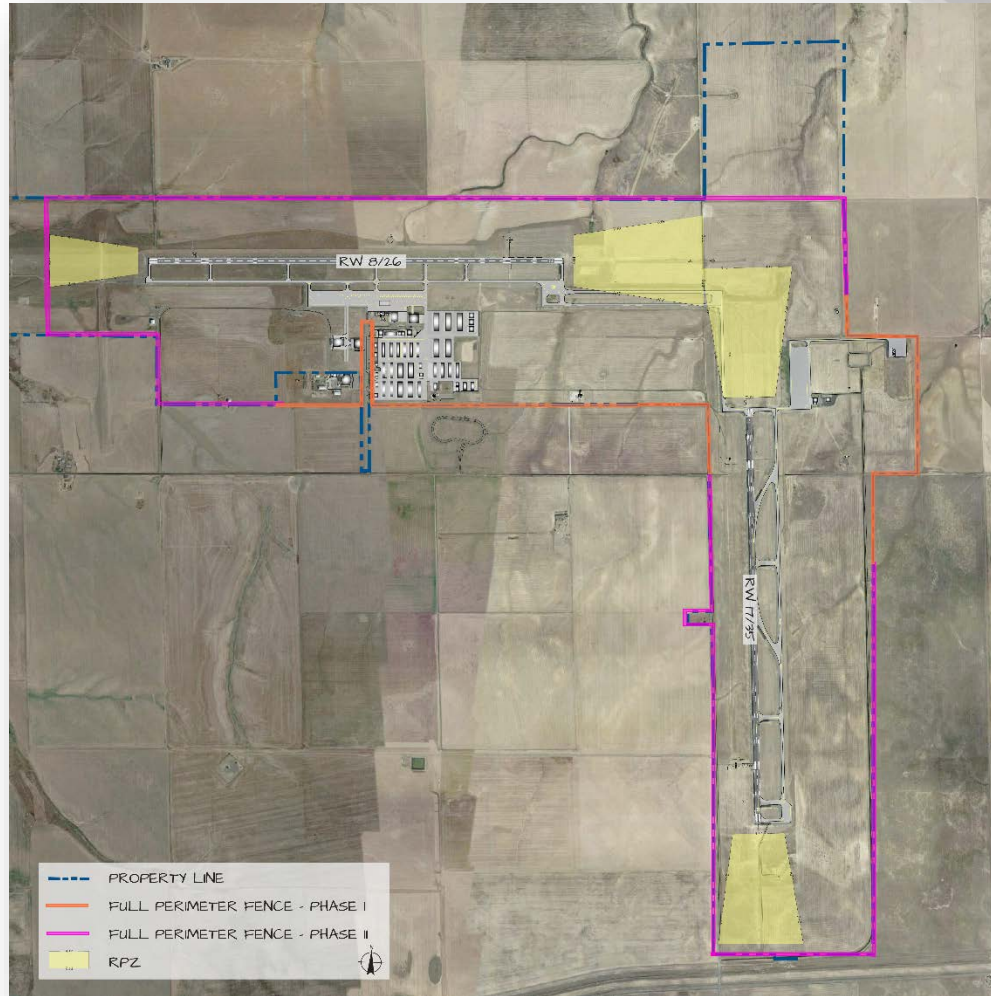
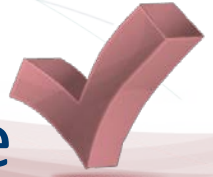
Terminal Apron Redesign



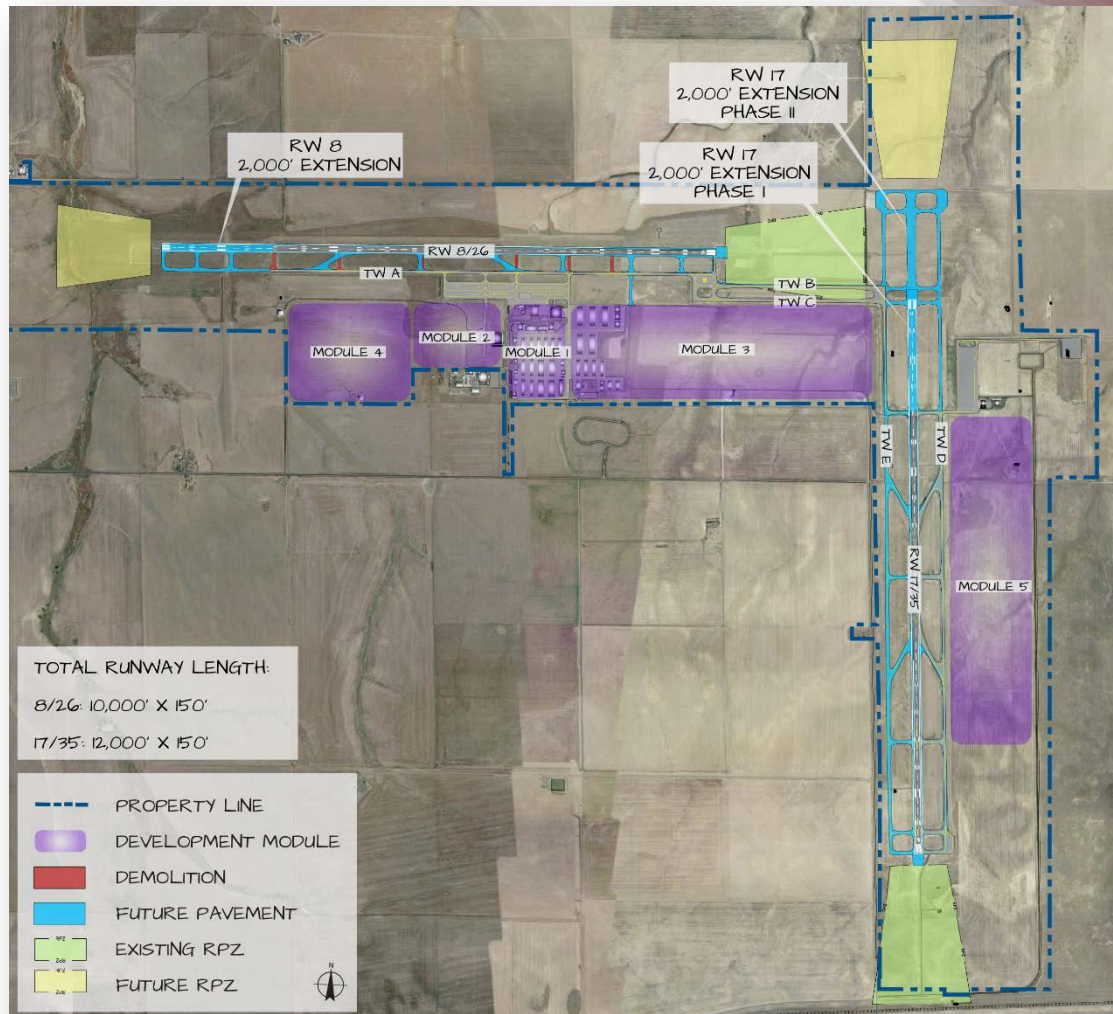
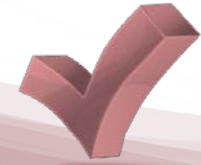
Hangar Development (Short Term)



Airport Security and Wildlife Perimeter Fence



Ultimate Airfield Development Concept



Funding Sources



FAA Grants – typically provide 90% of the total cost of an *eligible* capital project

- The Airport’s Capital Improvement Plan (CIP) is updated annually
- The FAA funding will be reauthorized in 2017 and funding levels may change

Recommended Improvement Plan

2017 - 2022

Pavement Maintenance Projects
Terminal Apron (East) Rehabilitation
Taxiway A & C Lighting Installation

Taxilane A7 Rehabilitation
Maintenance Equipment Acquisitions
Taxiway C Rehabilitation



2023 - 2026

Pavement Maintenance Projects
Maintenance Equipment Acquisitions

Runway 17/35 Rehabilitation Design &
Construction



2025 - 2035

Pavement Maintenance Projects
Maintenance Equipment Acquisitions
Airfield Perimeter Fence Installation
SRE Facility Expansion

Taxilanes A7D, A8A, A8D, A8C Rehabilitation
Runway 8/26 Rehabilitation
Terminal Apron (West) Rehabilitation
Taxiway Construction & Strengthening

Recommended Improvement Plan Phase I (2017-2022)

CIP ID	Project	Primary Funding Source	Estimated Capital Costs	Federal	State	Local	Other/ Private
A	Rehab Taxilane A7 into Hangar Area	FAA	\$500,000	\$450,000	\$25,000	\$25,000	\$0
B	Fog Seal Terminal Ramp (East)	Local	\$379,225	\$0	\$0	\$379,225	\$0
C	Acquire Airport Maintenance Equipment – Replace Loader	Local	\$200,000	\$0	\$0	\$200,000	\$0
D	Fog Seal Terminal Ramp (West)	Local	\$416,764	\$0	\$0	\$416,764	\$0
E	Fog Seal Runway 8/26	Local	\$780,319	\$0	\$0	\$780,319	\$0
F	Acquire Airport Maintenance Equipment - Replace Loader & Snow Blower Attachment	Local	\$530,000	\$0	\$0	\$530,000	\$0
G	Fog Seal Taxiways A, B, and E	Local	\$331,420	\$0	\$0	\$331,420	\$0
H	Acquire Airport Maintenance Equipment – Replace SRE Truck	Local	\$654,000	\$0	\$0	\$654,000	\$0
I	Rehabilitate Terminal Apron (East) (Phase 1)	FAA	\$1,210,539	\$1,089,485	\$55,556	\$65,498	\$0
J	Rehabilitate Taxiway C & Install Lighting on Taxiways A & C	FAA	\$2,015,925	\$1,814,333	\$100,796	\$100,796	\$0
K	Acquire Airport Maintenance Equipment – Replace High-speed Runway Blower:	Local	\$672,000	\$0	\$0	\$672,000	\$0
Phase 1 Program Totals			\$7,690,192	\$3,353,818	\$181,352	\$4,155,022	\$0

Recommended Improvement Plan Phase II (2022-2026)

CIP ID	Project	Primary Funding Source	Estimated Capital Costs	Federal	State	Local	Other/Private
L	Fog Seal Runway 17/35	Local	\$828,782	\$0	\$0	\$828,782	\$0
M	Acquire Airport Maintenance Equipment – Replace Runway Broom	Local	\$690,000	\$0	\$0	\$690,000	\$0
N	Fog Seal Taxiway A7	Local	\$64,900	\$0	\$0	\$64,900	\$0
O	Acquire Airport Maintenance Equipment – Replace SRE Truck	Local	\$708,000	\$0	\$0	\$708,000	\$0
P	Fog Seal Taxiway D	Local	\$313,910	\$0	\$0	\$313,910	\$0
Q	Rehabilitate Runway 17/35 (Design)	FAA	\$413,333	\$372,000	\$20,666	\$20,667	\$0
R	Rehabilitate Runway 17/35 (Construct)	FAA	\$7,620,000	\$6,858,000	\$381,000	\$381,000	\$0
S	Fog Seal Taxiway A, B, E	State	\$386,150	\$0	\$347,535	\$38,615	\$0
Phase II Program Totals			\$11,025,075	\$7,230,000	\$749,201	\$3,045,874	\$0

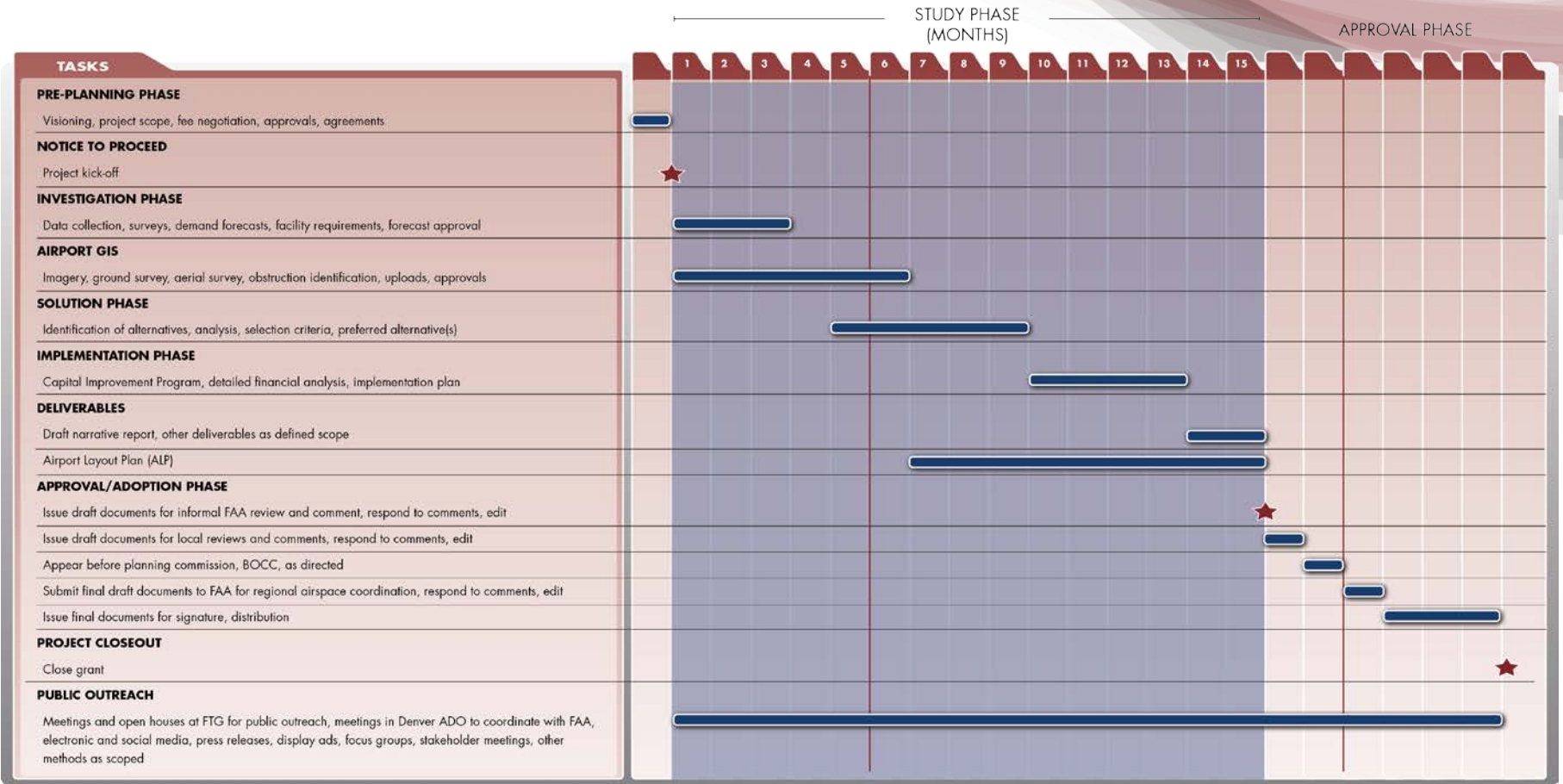
Recommended Improvement Plan Phase III (2027-2036)

CIP ID	Project	Primary Funding Source	Estimated Capital Costs	Federal	State	Local	Other/Private
T	Fog Seal 8/26	State	\$979,080	\$0	\$881,172	\$97,908	\$0
U	Acquire Airport Maintenance Equipment – Replace ARFF Truck (Index B)	Local	\$1,064,000	\$0	\$0	\$1,064,000	\$0
V	Install Airfield Perimeter Fencing	FAA	\$3,950,100	\$3,555,090	\$197,505	\$197,505	\$0
W	Fog Seal Taxiway A	State	\$245,868	\$0	\$221,281	\$24,587	\$0
X	Rehabilitate Runway 8/26	FAA	\$6,859,800	\$6,173,820	\$342,990	\$342,990	\$0
Y	Fog Seal Runway 17/35	State	\$1,109,847	\$0	\$998,862	\$110,985	\$0
Z	Reconstruct & Strengthen East Ramp (Phase 1) & Taxiway D7	FAA	\$9,180,300	\$8,262,270	\$459,015	\$459,015	\$0
AA	Strengthen Taxiways D1 & D2	FAA	\$3,140,000	\$2,826,000	\$157,000	\$157,000	\$0
BB	Rehabilitate Terminal Apron (East) (Phase 2)	FAA	\$2,355,000	\$2,119,500	\$117,750	\$117,750	\$0
CC	Expand Existing SRE Facility	Local	\$1,056,610	\$0	\$0	\$1,056,610	\$0
DD	Construct Taxiway E Holding Bay	FAA	\$1,405,150	\$1,264,635	\$70,257	\$70,258	\$0
EE	Rehabilitate Taxilane A7D	FAA	\$523,333	\$471,000	\$26,166	\$26,167	\$0
FF	Rehabilitate Taxilane A8A	FAA	\$523,333	\$471,000	\$26,166	\$26,167	\$0
GG	Rehabilitate Taxilane A8B	FAA	\$523,333	\$471,000	\$26,166	\$26,167	\$0
HH	Rehabilitate Taxilane A8C	FAA	\$523,333	\$471,000	\$26,166	\$26,167	\$0
II	Construct New Taxiway from Taxiway A to Hangars	FAA	\$2,355,000	\$2,119,500	\$117,750	\$117,750	\$0
JJ	Rehabilitate Terminal Apron (West)	FAA	\$4,710,000	\$4,239,000	\$235,500	\$235,500	\$0
KK	Reconstruct East Apron (Phase 2)	FAA	\$15,700,000	\$14,130,000	\$785,000	\$785,000	\$0
LL	Construct Large FBO Hangar	Local	\$6,280,000	\$0	\$0	\$6,280,000	\$0
Phase III Program Totals			\$62,484,087	\$46,573,815	\$4,688,746	\$11,221,526	\$0

NEXT STEPS



Project Timeline



* This schedule is preliminary and subject to adjustment following the project scoping process.

Next Steps

- Finalize Airport Layout Plan (ALP)
- Coordinate comments from FAA and CDOT
- Briefing of Airport Board & Elected Officials
- Final adoption of Master Plan and ALP by Adams County Commissioners
- Submittal of ALP to FAA for review and signature



Questions, Comments:

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