



**CITY OF BOULDER
CITY COUNCIL AGENDA ITEM**

MEETING DATE: JULY 25, 2024

AGENDA TITLE

Boulder Municipal Airport Community Conversation – Financial Analysis

PRESENTER(S)

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EXECUTIVE SUMMARY

This Agenda Item provides an update to City Council on the Airport Community Conversation and the subsequent financial analysis and additional information requested by City Council regarding the Federal Aviation Administration's (FAA) position on the possibility of decommissioning the Boulder Municipal Airport (BDU) in the future.

From December 2022 to September 2023, the City of Boulder (city) led a community engagement process to understand aspirational goals and desired outcomes for the future operation and/or development of BDU. This process stemmed from recommendations in the Boulder Valley Comprehensive Plan, increased tensions between the airport user community and the broader Boulder community, the need to improve airport facilities, and preparation for a potential future Airport Master Plan Update. The city conducted

conversations with stakeholders and developed a range of four community informed potential long-term scenarios for the future of the airport site. This engagement process and resulting high-level scenario analysis was intended to provide a better understanding of the community's desired future of the airport site for city leadership and City Council. When the project team shared [this process and report](#) with City Council on August 24, 2023, City Council requested additional financial analysis and more information regarding the FAA's position regarding the future use of the airport to better understand the potential ramifications of decisions involving the potential repurposing of this site at the culmination of the city's existing grant obligations.

For the financial analysis, staff developed two scenarios:

- Financial Scenario One: Continue to use the existing site primarily for aviation use, thereby operating and maintaining BDU compliant with FAA grant assurances for the foreseeable future with grants.
- Financial Scenario Two: Assume the existing site will be repurposed in the future, thereby continuing to operate and maintain BDU compliant with FAA grant assurances without grants until lawful closure is feasible.

While these two financial scenarios contain some elements of the four community-informed potential long-term scenarios from the earlier public engagement process, the two financial scenarios described in this memo are distinct from that process and responsive to city council's specific request from the August 2023 meeting.

The purpose of this memo and presentation is to provide City Council with this updated information and receive direction on how best to move forward.

KEY QUESTION FOR COUNCIL

Transportation and Mobility Department staff request the following direction from City Council regarding the future of the BDU:

Given the assumptions and financial analysis set forth in this memo, which next step does City Council want to take?

- Pursue Financial Scenario One
- Pursue Financial Scenario Two

BACKGROUND

The city owns and operates BDU, which is a general aviation airport that offers business, private, and recreational aviation services to the city and surrounding communities and supports emergency aviation services.

From December 2022 to September 2023, the project team held a variety of community engagement activities to better understand the aspirations of impacted stakeholders,

residents and traditionally underserved communities. The community engagement activities and events conducted by the project team included in-depth interviews, a Community Working Group, online questionnaires, public open houses, bilingual community meetings, and City Council presentations. The full report detailing the Airport Community Conversation is provided in Attachment A and was shared with City Council in an Information Packet Memo on February 1, 2024. Throughout the engagement process, community members expressed a desire for near-term action items as well as provided input on long-term options for the airport site.

Staff presented these community engagement efforts and community perspectives at the [August 24, 2023 City Council meeting](#). When the project team shared this process and report with City Council in August 2023, City Council requested additional financial analysis and more information regarding the FAA's position to better understand the viability of the potential decommissioning of the airport site at the termination of our current grant obligations. The project team proceeded with this request¹ by conducting a planning level financial evaluation of two distinct funding and development scenarios. Those two scenarios depend explicitly on the future use of the current BDU site as financial Scenario One assumes the current site will continue to be used for aviation purposes for the foreseeable future while financial Scenario Two assumes the city will continue to use the current BDU site as an airport until our current grant assurances expire, at which point the city will consider repurposing the site for some other use in the future that could include non-aviation uses. Financial assumptions for each scenario must include more diverse revenue streams including strategies such as public private partnerships (P3).

- Financial Scenario One: Continue to use the existing site primarily for aviation use, thereby operating and maintaining BDU compliant with FAA grant assurances for the foreseeable future with grants: Scenario One's capital improvement plan (CIP) is an approximate projection of the capital improvements that were identified in the most recent Airport Master Plan and reflect optimum scope and timing. The costs are associated with maintaining the existing facilities as well as investing in the development of BDU. Considerations for this option were based on continued operation of the airport while accepting FAA and Colorado Department of Transportation (CDOT) grants and achieving financial sustainability through additional private / commercial hangar developments. Cost for this scenario could likely be met through prioritization and timing of capital projects as well as securing additional discretionary grants.
- Financial Scenario Two: Assume the existing site will be repurposed in the future, thereby continuing to operate and maintain BDU compliant with FAA grant assurances without grants until lawful closure is feasible: Scenario Two is an estimate of the capital improvements costs associated with maintaining existing facilities per FAA grant assurances and not accepting additional federal or state grant funding. Projects would focus primarily on priorities, affordability and developing BDU with limited term leases. The last grant received by the FAA

¹ Of note, this memo focuses primarily on the financial analysis. The City Attorney's Office has provided City Council with separate confidential legal analysis responsive to questions involving legal strategy.

was in 2021. Given the 20-year obligation to maintain and operate the airport from the last grant received, 2041, which is 18 years in the future, is used as the feasible closure year.

ANALYSIS

Scenario Assumptions

Assumptions Applicable to Both Scenarios:

- Existing and new leases must be renegotiated as soon as possible. These new lease terms would remove operating and maintenance costs from the airport's annual budget. Absent the new revenues from renegotiated leases, the proposed capital plan could not be delivered.
- New hangar developments and/or new non-aeronautical developments would create airport financial independence and/or minimize subsidies from the city's general fund. This assumption identifies P3's as one way to achieve long-term developments.
- The city would remain compliant with FAA grant assurances and obligations.

Scenario One Assumptions:

- The city would keep the airport open for the foreseeable future.
- The city would continue to accept federal and state grants as deemed necessary.
- All available undeveloped airport property would be made available to third party interests for commercial hangar development, thereby increasing total leasable land and airport revenues.
- Airport facilities would be maintained to a higher degree of permanency given the expectation the airport would remain open and additional improvements would be made to eliminate non-standard conditions on the airfield to comply with FAA grant assurances.

Scenario Two Assumptions:

- The city would pursue a course of action to lawfully close BDU in 2041 – the date staff estimates the city's grant obligations would be fulfilled.
- The city would not accept any additional federal or state grants.
- All available undeveloped airport property would be made available to third party interests for commercial hangar development, thereby increasing total leasable land and airport revenues.
- To attract developments for the short 18-year duration remaining for BDU, some level of lease relief would be identified to attract short-term developments for a portion of the un-amortized development in 2041.
- The city would likely incur additional costs (not yet calculated in this analysis) to remediate the site for any potential future use.

Detailed descriptions of the assumptions can be found in Attachment B and Attachment C.

Long-Term Capital Improvements and Development Analysis

In order to effectively develop a financial analysis of the two scenarios, the project team first identified a reasonable capital improvement plan (CIP) for each scenario. The Long-Term Capital and Development Plan, found in Attachment B, aims to identify a CIP over a 20-year period for each BDU scenario. This includes the results of an existing condition analysis, general guidance related to maintenance, rehabilitation and reconstruction actions, and the estimation of capital improvement costs for existing infrastructure and proposed future development. A separate report, found in Attachment C, provides a summary of airport revenue as well as operations and maintenance costs, along with CIP costs, for each of the two scenarios.

Capital improvements for the airport are based on the following:

- Adopted/approved airport documents.
- FAA obligations, regulations and requirements.
- Colorado Aeronautics Division facility evaluations.
- Airside and landside condition assessments.
- Known operational and maintenance needs.
- City lease commitments.

BDU has had a prolonged absence of proactive pavement maintenance and management. Although the approach balanced the airport budget annually, it narrowed today's pavement remediation options to the more costly approach: rehabilitation and/or reconstruction. The analysis details the poor existing conditions and probable construction costs for maintenance, rehabilitation and reconstruction of pavement.

Current and future demands on the airport's operating and capital budgets will deplete operational reserves by the end of 2025. Modernizing the fuel farms and consolidating them into one centralized fuel farm, while allowing unleaded fuel offerings, will fully deplete the financial reserve alone.

Existing hangar buildings and structures at the airport require varying levels of maintenance that has been deferred. Examples of this deterioration are exhibited in Attachment B.

These financial realities require BDU to take steps aligned with industry strategies regarding lease administration, commercial hangar developments and embracing non-aeronautical development that would produce revenue. Often new development in general aviation airports includes P3 models. This model transfers design, construction, and activation to a third-party in exchange for longer term leases while reducing upfront capital and ongoing maintenance costs for the city.

Financial Analysis

Given the conditions noted and CIP estimates developed in Attachment B, the project team developed a financial analysis. The analysis in Attachment C identifies the financial implications of operating BDU under the two different financial scenarios described above. Each scenario estimates the net annual budget position (surplus or deficit) of the airport. These estimated budgets assume varying levels of accepted grant funding and commercial hangar development that might be undertaken under certain conditions. Scenario One assumes that federal and state grants would continue to be accepted, whereas Scenario Two assumes no additional federal or state grants would be accepted. Both Scenarios are assumed to accept commercial development.

Chart 1: 18 Year Revenue Comparison (Future Dollars) identifies estimated existing and new incoming revenue for each scenario. Lease revenue would be higher in Scenario One given the potential for longer term leases and the ability for people and businesses to invest more given the longer time frame. As noted, grants would be accepted in Scenario One and not in Scenario Two. In Scenario One, it is estimated that \$8.7 million in federal and state grants would be accepted over the next 18 years.

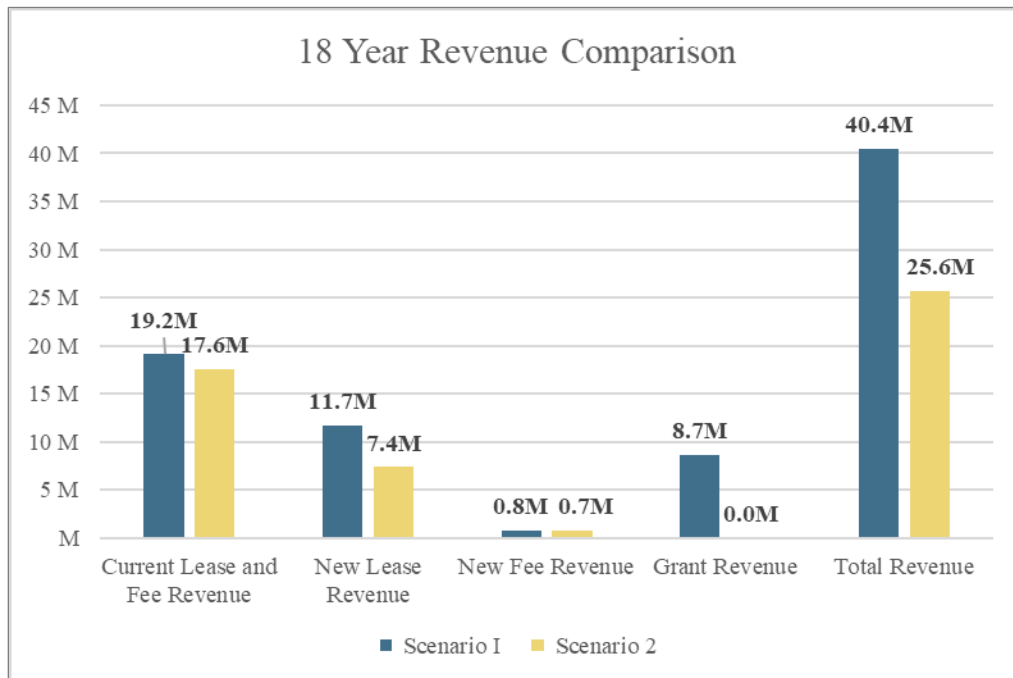


Chart 1: 18 Year Revenue Comparison (Future Dollars)

Total anticipated existing and new expenses are identified in *Chart 2: 18 Year Expense Comparison (Future Dollars)*. Scenario One identifies the need to improve facilities to meet long-term sustainability and operating needs of the airport whereas Scenario Two anticipates meeting only the base needs of existing airport facilities for the next 18 years. Therefore, while operating expenses would remain equal in each scenario at \$23.9 million, the CIP costs are higher in Scenario One.

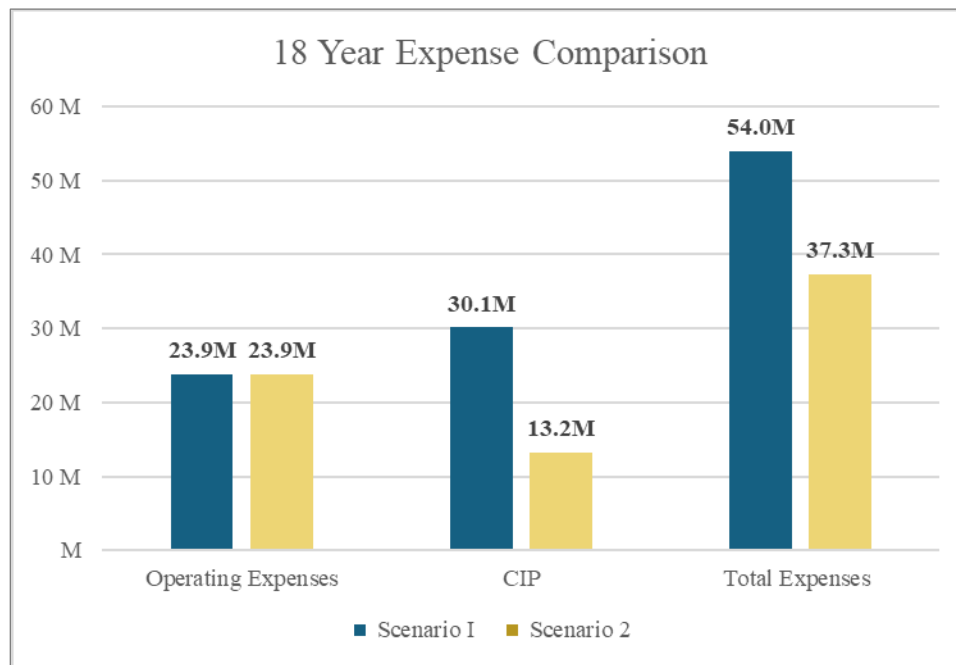


Chart 2: 18 Year Expense Comparison (Future Dollars)

Charts 1 and 2 show the city’s CIP costs in future dollars, adjusted for inflation. The full CIP comes at a much higher cost. The city must renegotiate leases and develop the airport to meet this cost. *Table 1: Total Proposed CIP Funding Source (2024 Dollars) At 100% P3* breaks down the total CIP costs – this includes both the city cost (public) and the lessee / developer costs (private). This public private partnership is essential for the financial viability of each scenario.

Total Proposed CIP Funding Source (2024 Dollars) At 100% P3			
Responsible Party	Intended Use of Funds	Cost (Millions)	
		Scenario One	Scenario Two
Public (City of Boulder)	Airside, Landside, Facilities, etc	\$ 19.50	\$ 5.70
Private (Developers)	Maintain Existing Hangar Aprons	\$ 9.00	\$ 9.00
	Maintain Existing Hangar Buildings/Leasehold Renewals	\$ 3.80	\$ 3.80
	New Hangar/Developer Investment	\$ 101.70	\$ 15.20
Total		\$ 134.00	\$ 33.70

Table 1: Total Proposed CIP Funding Source (2024 Dollars) At 100% P3

As shown in *Chart 3: 18 Year Total City Funded Amount (2024 – 2041)*, the amount of funding needed for each Scenario are similar if both scenarios have P3 developments on 100% of available land for such development. Public private partnerships would stimulate development on the site. Even though Scenario One anticipates higher CIP

costs, the city has the ability in Scenario One to receive federal and state grants which leads to similar unfunded totals. As such, Scenario One allows for more flexibility to meet these financial needs. Scenario Two has limited opportunities to meet financial needs and is very dependent upon market demand for leases and development. The city would be required to take on the entirety of the financial needs in Scenario Two.

- If Scenario One were to move forward:
 - With a 100% P3: the total city funding needed would be \$11.8 million. This stems from revenue of \$40.4 million less expenses of \$54.0 million and an existing fund balance of \$1.8 million.
 - With a 50% P3, the total city funding needed would be \$28.8 million due to a decrease in revenue from leases and a decrease of developed land and the increase of operations and maintenance for the city.
 - With a 0% P3, the total city funding needed would be \$45.4 million due to a decrease in revenue from leases and a decrease of developed land and the increase of operations and maintenance for the city.
- If Scenario Two were to move forward:
 - with a 100% P3, the total city funding needed would be \$9.9 million, This stems from revenue of \$25.6 million less expenses of \$37.3 million and an existing fund balance of \$1.8 million.
 - With a 50% P3, the total city funding needed would be \$36.5 million due to a decrease in revenue from leases and a decrease of developed land and the increase of operations and maintenance for the city.
 - With a 0% P3, the total city funding needed would be \$41.4 million due to a decrease in revenue from leases and a decrease of developed land and the increase of operations and maintenance for the city.

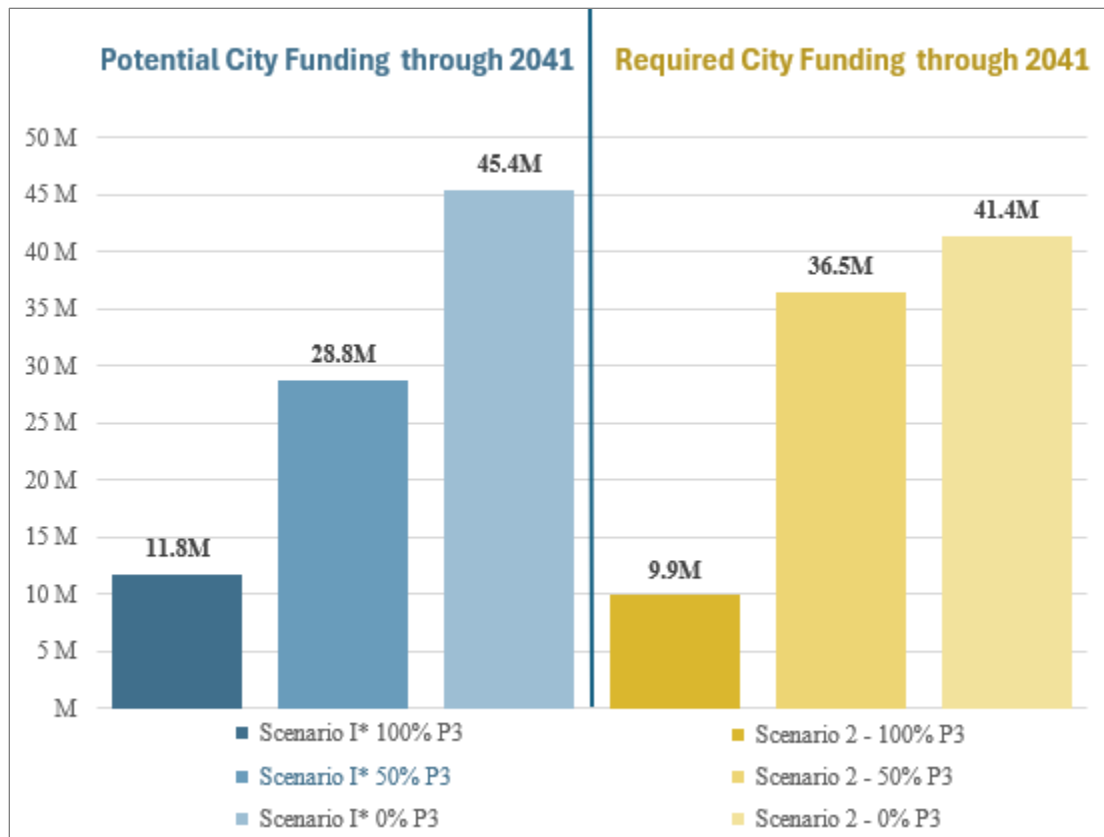


Chart 3: 18 Year Total City Funded Amount (2024 – 2041)

* This scenario can be prioritized, and timelines elongated to meet the affordability of implementation

To detail out further, *Chart 4: Average Annual City Funded Amount*, identifies the yearly financial needs estimated for each scenario.

- If Scenario One were to move forward:
 - With a 100% P3: the annual city funding needed would be ~\$700,000.
 - With a 50% P3, the annual city funding needed would be ~\$1.6 million.
 - With a 0% P3, the annual city funding needed would be ~\$2.5 million.
- If Scenario Two were to move forward:
 - With a 100% P3, the annual city funding needed would be ~\$600,000.
 - With a 50% P3, the annual city funding needed would be ~\$2.0 million.
 - With a 0% P3, the annual city funding needed would be ~\$2.3 million.

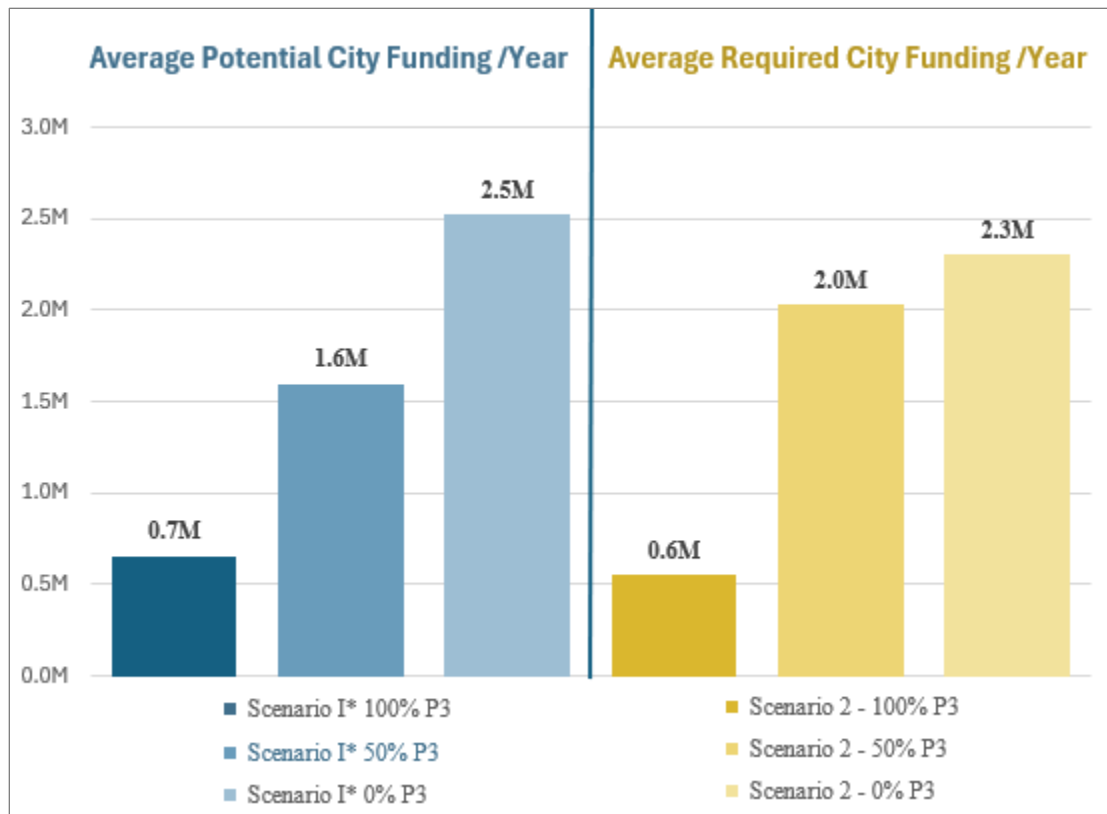


Chart 4: Average Annual City Funded Amount (2024 – 2041)

* This scenario can be prioritized, and timelines elongated to meet the affordability of implementation

Because Scenario Two assumes that all airport property would be sold at fair market value in 2041, it is assumed that a capital and administrative cost will be incurred by the city at the end of the 18 year grant obligation period to cover transaction costs (real estate fees, environmental studies, and legal fees) and some part of unamortized portion of new developments, associated with selling airport property after airport closure.

Using the assumed current market value of \$2,000,000/acre, the current value of the entire 176.4 acres of airport property is estimated at \$352,800,000 in 2024 dollars. Escalating current values to 2041, the airport could be valued at an estimated \$550,247,596 million in 2041. Of this amount, the 2041 value of the land which was not acquired with federal assistance or conveyed by the federal government is estimated at \$431,931,885. According to recent correspondence received from FAA, the city may be required to reimburse FAA at fair market value for its share of land that was acquired with federal assistance. It is assumed that reimbursement to FAA would be required based on land values at future market rates rather than the original grant amount received by the city. Therefore, it is estimated the city would need to repay FAA approximately \$118,315,710 in 2041 for the 37.93 acres acquired using federal funds. This is based on an estimated current market value of \$75,860,000 in 2024 which was then escalated through 2041 to the expected year of sale.

Transaction costs were estimated to be four percent of the total property value. Therefore the 2024 present-day transaction costs to sell all land was estimated to be approximately \$14,112,000. Escalating this amount through the final year transactions would occur, the fee to sell all airport property is estimated to be valued at \$21,986,496 in 2041.

After the sale of all airport land at fair market value and reimbursing the FAA for federal grants received to acquire land, the city could realize a positive balance of \$400,027,984. The city would likely incur additional costs (not yet calculated in this analysis) to remediate the site for any potential future use.

Staff Work Plan Strategies and Elements

Regardless of which scenario is chosen, staff will continue to move forward with high-level work plan elements identified below in order to meet the obligations of the grants provided by the FAA. These elements aim to accomplish the following:

- Reduce risk and enhance safety.
- Restore business acumen – minimize subsidies.
- Create a balanced “Airport Brand” to all stakeholders.
- Create a Community Compatibility Committee empowered to broker reasonable ways to manage impacts from airport operations, with biannual check-ins with City Council.

Work Plan Elements

1. Implement Primary Management Compliance Documents.
2. Develop a rents & fees methodology to determine a cost recovery model.
3. Renegotiate existing leases to spur development and lower operating costs.
4. Initiate long-term leases
 - a. Recruit new hangar developments to increase revenues and lower subsidies from the city.
 - b. Privatize city t-hangars to lower operating costs and lower subsidies from the city.
 - c. Develop commercial parcels that serve non-aeronautical uses. *The determination of ownership for these is pending.*
7. Implement landing fees.
8. Conduct airport planning studies:
 - If either scenario is selected, update the Airport Influence Area Program in 2025.
 - If Scenario One is selected, conduct an update to the Airport Master Plan with updated noise contours.
 - If Scenario Two is selected, conduct an airfield and airspace efficiency analysis with updated noise contours.
 - Develop a Community Compatibility Committee to identify ways to manage impacts of airport operations on the surrounding communities.
9. Upgrade and consolidate fuel farm facilities.

- Develop a short-term strategy to expedite the offering of unleaded fuel.
- Develop long-term strategy to replace infrastructure without subsidies.

NEXT STEPS

The project team will follow City Council direction and move forward with work plan elements of the chosen Scenario. The following are the intended next steps to provide clarity and action moving forward.

- City Council will direct staff as to which Scenario to move forward with.
- City Council will discuss ballot measures on August 15.
- Staff will develop an implementation plan for the chosen path forward.
- After guidance from City Council, staff will move forward and/or adjust the staff work plan elements identified above.
- Staff will develop a Community Compatibility Committee to find realistic, community-oriented ways to manage the impacts of airport operations.
- Staff will identify items that would require additional analysis.

ATTACHMENTS

1. Attachment A: 8/24/23 Airport Community Conversation Study Session Memo
2. Attachment B: Long-Term Capital and Development Plan
3. Attachment C: Financial Requirements Analysis



STUDY SESSION MEMORANDUM

TO: Mayor and Members of City Council

FROM: Nuria Rivera-Vandermyde, City Manager
Chris Meschuk, Deputy City Manager
Natalie Stiffler, Director of Transportation and Mobility
John Kinney, Boulder Airport Senior Manager
Allison Moore-Farrell, Senior Transportation Planner

DATE: August 24, 2023

SUBJECT: Boulder Airport Community Conversation

EXECUTIVE SUMMARY

The City of Boulder (city) has engaged in a community focused process to understand aspirational goals and desired outcomes for the future operation and/or development of the Boulder Municipal Airport (BDU). This process stems from recommendations in policy 6.23 in the Boulder Valley Comprehensive Plan, increased tensions between the airport community and the broader Boulder community, the need to improve airport facilities, and preparation for a potential future Airport Master Plan Update. The City of Boulder, along with a consultant team, has conducted community conversations with stakeholders and developed a range of long-term scenarios for the future of the airport site. This engagement process and resulting high-level scenario analysis is intended to provide a better understanding of the desired future for BDU for city leadership and City Council.

This study is expected to achieve the following:

- Understand community goals and aspirations for the airport and/or airport site.
- Identify key issues and opportunities for consideration.
- Share desired near-term action items.
- Develop and evaluate a range of long-term scenarios.
- Determine next steps for the airport site.

The purpose of this memo and presentation is to provide City Council with an update on the Airport Community Conversation. The project team will use feedback from the study session and will return in early 2024 to present the final report and receive direction on next steps. The memo will share:

- Community engagement activities that have occurred thus far.
- Community input that informed the draft long-term scenarios and near-term action items.
- Community feedback on the draft scenarios and action items.

- An evaluation considerations matrix which qualitatively evaluates how well each scenario aligns with the city’s Sustainability, Equity, and Resilience Framework goals.

QUESTIONS FOR COUNCIL

Transportation and Mobility Department staff request that Boulder City Council offer feedback on the Boulder Airport Community Conversation process. Specific questions include:

1. Do you have questions about the community input or the community feedback that informed the scenarios and action items?
2. How can the project team further refine the scenarios and action items to help inform City Council’s future decision?
3. What further information you would like the project team to gather from the Community Working Group?

BACKGROUND

The city owns and operates BDU, which is a general aviation airport that offers business, private, and recreational aviation services to the city and surrounding communities and supports emergency aviation services as needed.

From January – August 2023, the project team held a variety of community engagement events to better understand the aspirations of impacted stakeholders, residents, and traditionally underserved communities. The community engagement activities and events conducted by the project team are outlined here, and summaries of community input from these activities are provided in the Analysis section and appendices of this memorandum.

Schedule of Engagement Events

Engagement Opportunity	Date/Date Range
In-Depth Interviews	December 14, 2022 – March 6, 2023
City Council Presentation	Thursday, January 12, 2023
Community Working Group (CWG) 1	Tuesday, March 14, 2023
CWG BDU Airport Tour	Wednesday, March 15, 2023
Questionnaire 1	April 6 – May 4, 2023
Public Open House 1	Tuesday, April 11, 2023
CWG Lunch Gathering at Airport	Wednesday, April 12, 2023
CWG 2	Thursday, April 13, 2023
Vista Village Bilingual Community Meeting	Wednesday, April 19, 2023
San Lázaro Bilingual Community Meeting	Monday, April 24, 2023
CWG Virtual Gathering	Wednesday, May 31, 2023
CWG 3	Thursday, June 7, 2023
Public Open House 2	Tuesday, July 18, 2023
CWG 4	Thursday, July 20, 2023
Questionnaire 2	July 12 – August 2, 2023

In-Depth Interviews

In-depth interviews helped the project team understand the key issues and concerns from airport users, community members and both residents and businesses who are near the airport. These interviews served as initial information for the team in organizing the CWG, public open houses and community questionnaires.

Public Open Houses

The public open houses provided community members the opportunity to share their ideas among one another and with the project team.

- Public Open House 1 shared initial input received to date, information about the airport, and requested community input on the future of the airport site.
- Public Open House 2 focused on sharing the desired near-term action items, community input and feedback themes and the draft long-term scenarios. Feedback was gathered on all items presented.



Public Open Houses in April and July 2023

Online Community Questionnaires

- Questionnaire 1 aimed to understand the community desires and ideas for the future of the airport site. There were 775 respondents who reside in the City of Boulder or Boulder County.
- Questionnaire 2 aimed to gather feedback on the desired near-term action items and draft long-term scenarios. There were 961 respondents who reside in the City of Boulder or Boulder County. The project team will use this feedback to refine the scenarios before returning to City Council in early 2024.
- The questionnaire is an engagement tool for collecting feedback from the public. It is not intended to express a scientific, statistically valid representation of all of the city's

residents. In addition, staff is not interpreting the feedback as “votes” for or against future scenarios. The Be Heard Boulder questionnaire is just one of the tools the city uses to solicit input and the city acknowledges the limitations with this type of questionnaire. Nevertheless, it is a useful engagement tool to help identify trends and potential areas of commonality in the community’s opinions on the subject and as a channel for people to provide anonymous feedback without attending a meeting.

Community Working Group (CWG)

- The purpose of the CWG is to provide input and recommendations to the project team to support the community conversation effort. The CWG collaborated with the project team to develop a range of scenarios for the future of BDU. The CWG was mindful of FAA grant obligations.
- The project team relied on the feedback and experience of the CWG. The CWG membership includes airport neighbors, county residents, pilots, and airport tenants. The CWG also had involvement from multiple city departments as well as liaisons from the Planning Board, the Transportation Advisory Board, and the Housing Advisory Board. The project team has met with the CWG four times since the onset of the project and will meet once more. The CWG provided specific feedback that helped the project team craft the evaluation considerations, refine the near-term action items, and develop the draft scenarios.
- In addition to regular CWG meetings, the project team provided additional opportunities for the CWG to meet and discuss the project. These include an airport tour, a group lunch gathering, a virtual conversation session, and virtual office hours with the project manager. The project team intends to host another interim event for the CWG and one additional CWG meeting before returning to City Council in early 2024.



CWG Meetings March – July 2023

Bilingual Community Meetings

- Two bilingual community meetings were hosted by city staff – one at Vista Village which was English first with Spanish translation and one at San Lazaro which was Spanish first with English translation. These communities are located adjacent to the airport. In order to minimize barriers to participation, the project team hosted a working session that went into the same depth and detail as the CWG meetings to understand the concerns and desires of these communities.
- City staff will be hosting two more bilingual community meetings on August 22 and 29, 2023.

ANALYSIS

The project team has prepared four long-term scenarios below using community input received during the community engagement activities outlined above. The scenarios are broad-stroke concepts reflecting generalized areas for each land use and represent a visual of the community feedback heard throughout the process. Listed below are the four long-term scenarios.

Scenario 1: Existing Airport with Enhanced Maintenance

Scenario 2: Airport with Aviation Improvements

Scenario 3: Airport with Neighborhood Serving Uses and Limited Housing

Scenario 4: Decommission Airport and Create New Neighborhood

Throughout the engagement process, community members expressed a desire for near-term action items to be identified in addition to the originally scoped long-term scenarios. As such, the project team gathered ideas from community members for near-term action items that would have a likely time frame of 0-5 years and could be implemented independently from actions considered in the long-term scenarios. Figure 1 details how community input was synthesized at each step of the project process to craft both near-term actions and long-term scenarios.

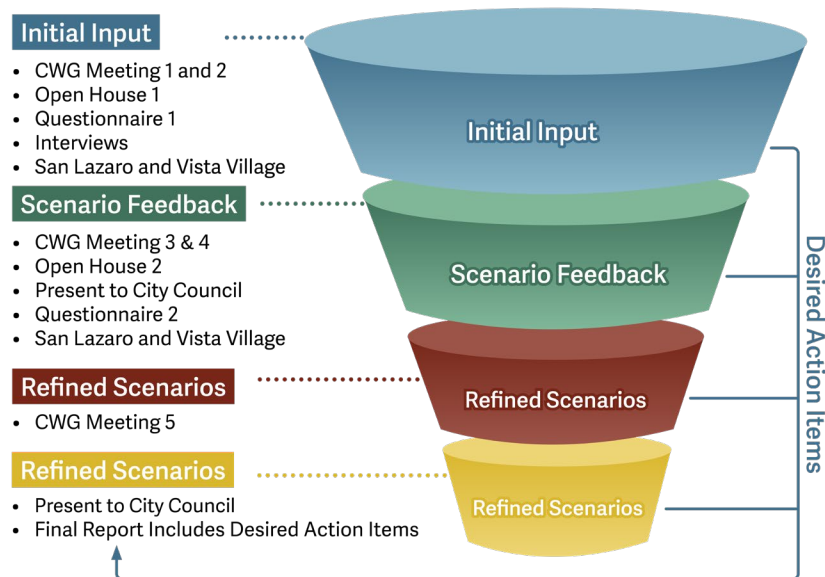


Figure 1: Community Input and Feedback Process

The project team then evaluated these scenarios based on how they align with city goals, as outlined in the [Sustainability, Equity, and Resilience Framework](#).

MATRIX OF OPTIONS

This section includes the desired near-term action items, feedback themes and interests received throughout the process, the draft long-term scenarios, and evaluation considerations. These items have been brought up by community members and will need further study. The project team will further assess these items and share refinements including high level cost, political feasibility, and staff effort in early 2024.

Community Informed Desired Near-Term Action Items

These action items come from direct community input and have not been evaluated for feasibility or cost. In early 2024, the project team will share these near-term action items with City Council and include potential implementation steps for each.

Topic Area	Desired Near-Term Action Items
Noise	• Implement landing fees for both based and non-based aircraft • Explore ways to enforce/encourage compliance of noise procedures • Include South Boulder and Boulder Reservoir in Voluntary Noise Abatement • Update voluntary noise procedures to discourage touch and go, low passes, training and pilot building hours after 5 PM • Change hours of operations to 9-5 PM on weekdays and 9-4 PM on weekends • Limit touch-and-go activity/training flights; explore options with voluntary limits on start and end times • Create glider training area modifications • Identify ways to limit overflights from adjacent airports • Regularly publish noise complaint data • Investigate ways to better measure and report noise • Rework helicopter flight paths to avoid flying over homes • Explore feasibility of mandating quieter muffler/exhaust systems for based aircraft
Health and Environmental Impact	• Expedite the delivery of unleaded aviation fuel to BDU • Establish timeline for discontinuing use of leaded fuel • Evaluate proximity to other natural features/wildlife habitats • Incentivize the use of electric airplanes/eVTOL • Investigate impacts of leaded aviation fuel emissions in Boulder, specifically relating to children's health • Publish regular estimates of lead emissions from BDU operations • Investigate greenhouse gas impact of operations, based on flight data from flights originating/landing at BDU • Report leaded fuel sales and consumption
Community Relations	• Modify and strengthen the influence zone coordination for construction and implement a mandatory disclosure program • Coordinate the airport land use planning with FAA regulatory requirements and compatible land uses

	• Update airport rules and regulations and share with the community at large • Develop and invest in a flight management system/program to educate pilots and community members about actual performances and program awareness • Commit to ongoing coordination between pilots, airport tenants, and neighbors • Promote community events and programs • Deliver quarterly noise complaint summary memo to City Council • Deliver quarterly summary memo to City Council/CDOT/public detailing tenant violations, late fees, improvements, crashes, fuel farm updates • Cease offering flying events at BDU • Introduce community programs for traditionally underserved communities at the airport • Host family-friendly events at the airport with aviation focused activities
Airport Economics	• Update contract/leasing structure and fees to cover costs • Create a maintenance plan for aging infrastructure • Administer an Economic Impact Study for the airport • Make airport economic and budgetary data easily accessible • Investigate the potential for passenger and/or goods transport aviation • Share information about funding sources for BDU – including FAA grants
Safety	• Introduce real time messaging to pilots and geofencing • Comply with Airport Minimum Standards and FAA Compliance Standards • Commit to regular publication of safety data • Collect and make available to the public information about crashes and "prop strikes" • Eliminate non-conforming runway or enforce no simultaneous use with other runways • Remove the "striped fields" training ground flanking Gunbarrel to the east • Investigate requiring pilot insurance of over \$100k • Mitigation of known hazards/risks

Near-Term Action Items – Initial Community Feedback Highlights:

- Varying opinions on purpose and feasibility of implementing landing fees
- Desire to analyze noise abatement procedures and consider changes
- Request to review the runways in use and evaluate their compliance with FAA regulations
- Request to analyze the potential impact of development on open space and surrounding environment

Feedback Themes and Interests

The word cloud below illustrates the feedback themes and interests received throughout the project.



Long-Term Scenarios

Scenario 1: Existing Airport with Enhanced Maintenance

This scenario would bring the current facilities up to a state of good repair. No new facilities would be built.

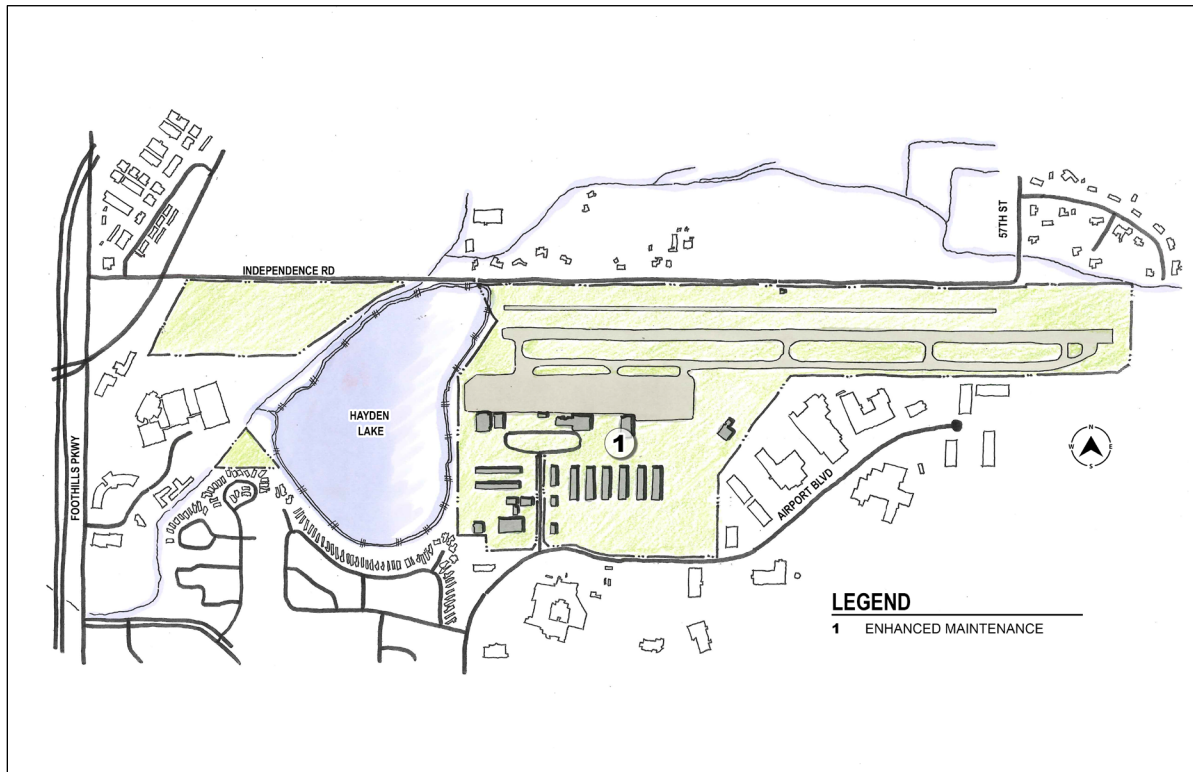


Figure 2: Long-Term Scenario 1

Elements that would remain	Elements that would change
- Existing runways and taxiways - Existing hangar facilities - Existing support buildings	No physical changes outside of enhanced maintenance of existing facilities

Scenario 1 - Community feedback highlights:

Opportunities:

- Improve maintenance
- Less change
- Accommodates emergency response
- Allow for investment
- Maintain current operations
- Support training
- Maintain safety

Constraints:

- Does not advance city goals
- Lack of implementation plans

- Seen as a band-aid on current issues
- Does not address need for housing
- Does not address feedback about flight patterns
- Furthers perception that BDU serves select groups

Further Study/Information Needed

- Economic analysis
- Noise analysis
- Environmental study
- Flight pattern review

Scenario 2: Airport with Aviation Improvements

This scenario would foster aviation development that is responsive to aviation market demand. Includes modernization of general aviation, hangar improvements, and implementing the most recent Airport Master Plan, which would add facility and infrastructure improvements enhancing safety and capacity.

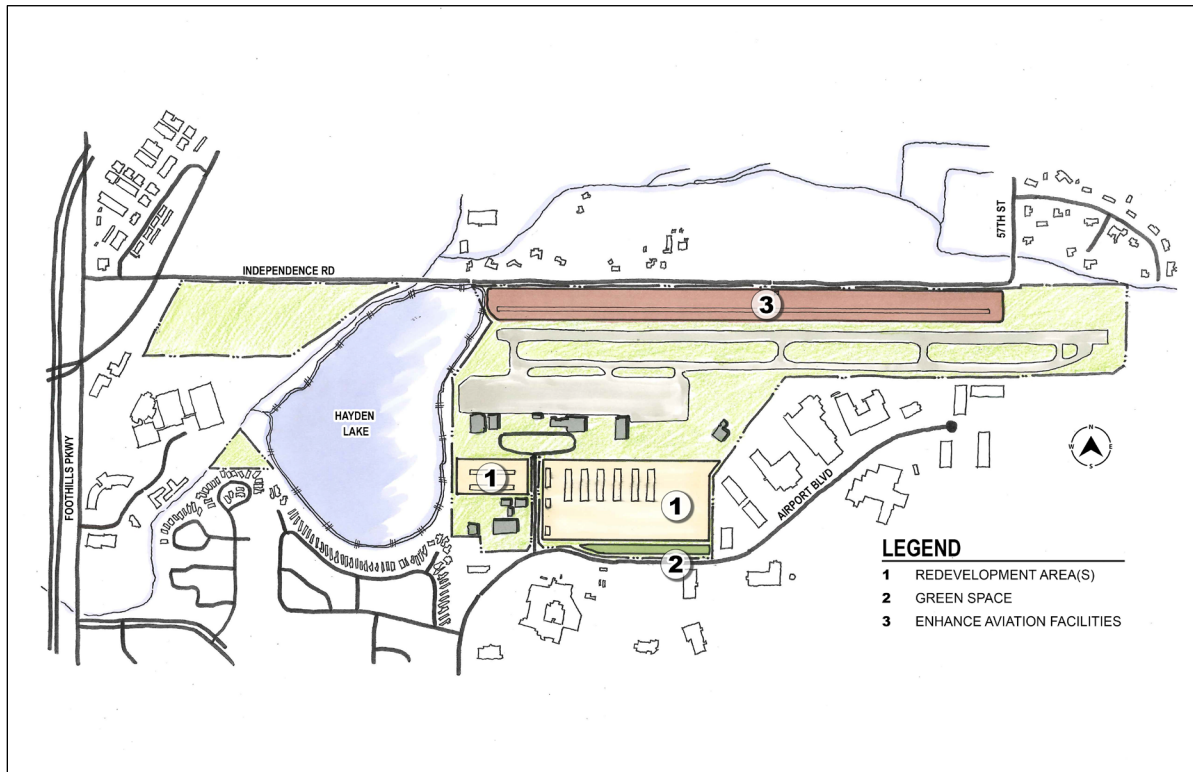


Figure 3: Long-Term Scenario 2

Elements that remain	Elements that change
- Existing runways and taxiways - Existing hangar facilities - Existing support buildings	- Upgrade existing hangars - Development of additional hangars - Enhance aviation facilities - Preserve options to accommodate future modes of travel and goods movement - Upgrade public aviation viewing area

Scenario 2 - Community feedback highlights:

Opportunities:

- Use of new technology in aviation
- Advance use of unleaded fuel
- Could make the airport more inclusive

Constraints:

- May lead to more aviation traffic
- Lead fuel is not addressed

- Equity is not addressed
- Aviation traffic is not addressed
- Sources of funding
- Growth may increase traffic to airport

Further Study/Information Needed

- Economic analysis
- Noise analysis
- Environmental study
- Flight pattern review
- Review of funding sources for BDU

Scenario 3: Airport with Neighborhood Serving Uses and Limited Housing

This scenario would foster aviation development and community development that complement each other. Includes modernization of general aviation and hangar improvements and live/work hangars. Includes a wide range of neighborhood serving uses such as a restaurant or café, science, technology, engineering, and mathematics (STEM) learning center and vocational opportunities for local youth, and a community center that houses meeting spaces for both aviation uses and public uses.

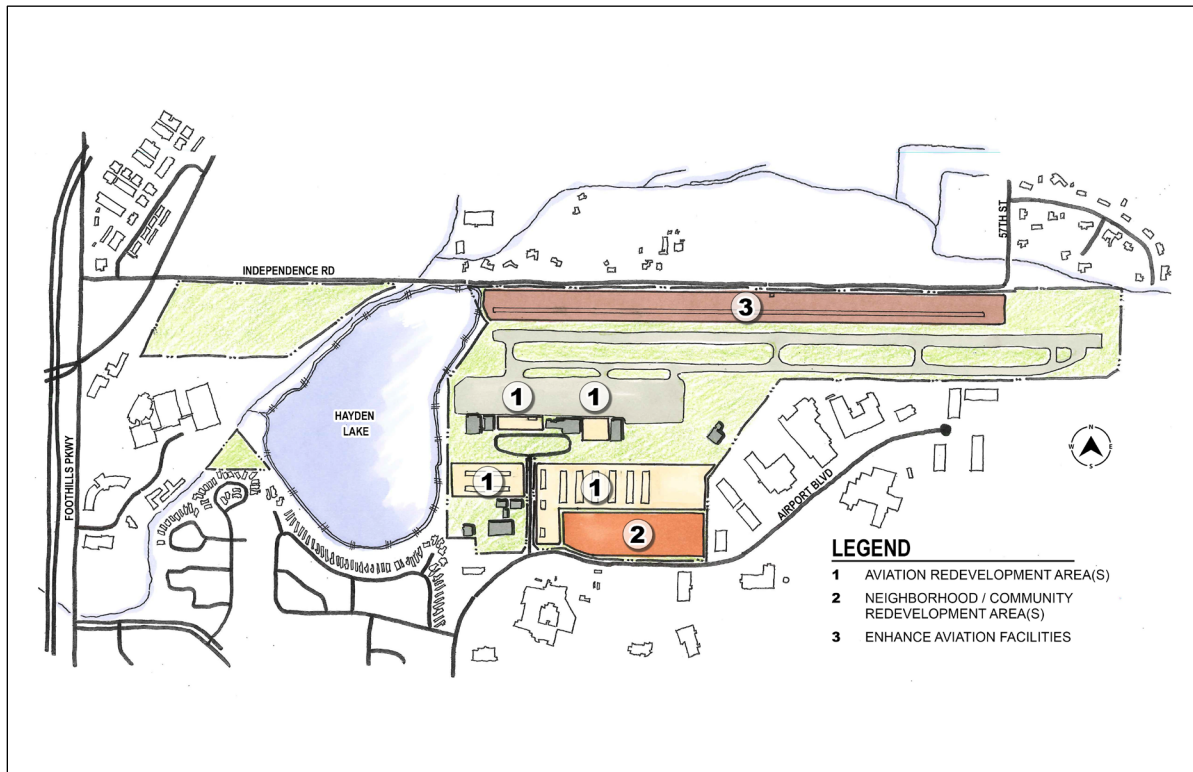


Figure 4: Long-Term Scenario 3

Elements that remain	Elements that change
- Existing runways and taxiways - Existing hangar facilities - Existing support buildings	- Upgrade existing hangars - Develop live/work hangars - Build a restaurant or café - Create a STEM learning center and vocational opportunities for local youth - Enhance aviation facilities - Build a community center that houses meeting spaces

Scenario 3 - Community feedback highlights:

Opportunities:

- Seen as a good middle ground
- Inclusive of community
- Could improve community relations

Constraints:

- May lead to more aviation traffic
- May be too expensive to implement
- Concerns about land use compatibility
- Concerns about environmental impact
- Concerns about noise
- Concerns about safety
- Concerns about equity
- Does not provide enough housing

Further Study/Information Needed

- Study detailing aviation compatible land uses, with special consideration for housing

Scenario 4: Decommission Airport and Create New Neighborhood

Description: This scenario would decommission the airport and create a new, mixed-use neighborhood that may include housing, activity centers, employment hubs, and green space. A portion of land would be set aside for helicopter emergency services that would support the resiliency of the region.

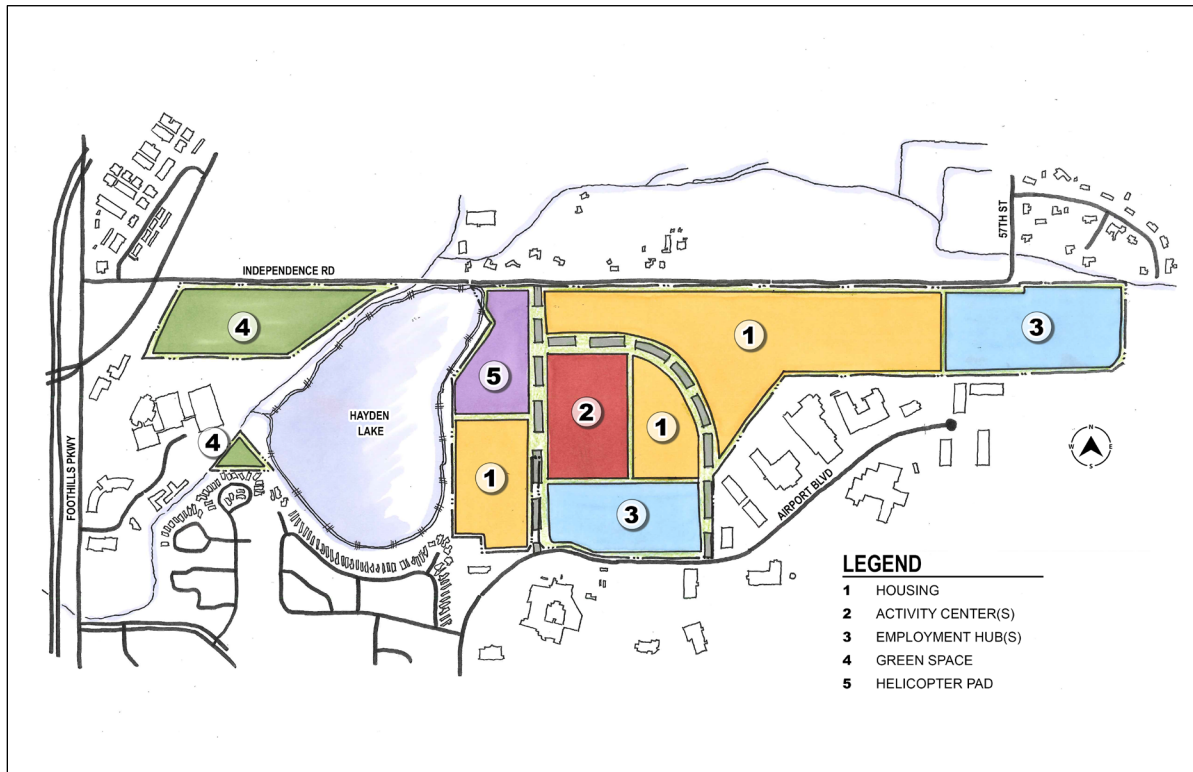


Figure 5: Long-Term Scenario 4

Elements that remain	Elements that change
Aircraft landing area for emergency support services	- Build a range of housing types - Create activity centers - Create employment hubs - Allocate green space for the needs of native plants and animals

Scenario 4 - Community feedback highlights:

Opportunities

- Serves a larger portion of the community
- Supports reduction of leaded fuel impact on community
- Provides additional housing

Constraints

- FAA may not allow
- May not provide affordable living
- Could be a very costly option
- Airspace would likely be utilized by other airports

- Does not provide open space
- Lack of airport could have negative economic impacts

Further Study/Information Needed

- A feasibility study
- This scenario would need to be cognizant of current FAA obligations and the timeline associated with them.

Goals and Evaluation Considerations

The project team is comprised of subject matter experts in transportation planning, aviation planning and engagement professionals who utilized their expertise garnered locally and nationally to conduct a preliminary evaluation of the scenarios. The four scenarios were evaluated based on how they align with city values, which are outlined in the [Sustainability, Equity, and Resilience Framework](#). Building on feedback received from the CWG and the broader community, the project team expanded upon the framework to create the evaluation considerations which have been tailored to the Boulder Municipal Airport site. Each scenario was then qualitatively evaluated (anticipated impacts likely to be unfavorable, neutral, favorable) as to whether each scenario actively contributed or detracted from these goals. This evaluation methodology ensures that each scenario is evenly measured without a pre-determined outcome. We anticipate feedback from the CWG and City Council on these qualitative evaluation considerations.

City of Boulder Sustainability, Equity, and Resilience Goals	Evaluation Considerations
Safe	• Enhance personal and community safety • Increase resiliency through mitigation, response, and recovery • Comply with airport rules and regulations, Federal Aviation Administration Standards, and Boulder Fire Department
Healthy & Socially Thriving	• Create community programming and gathering spaces • Minimize community exposure to site impacts and noise • Provide educational opportunities
Livable	• Diversify site uses • Balance the needs of airport operations and compatible surrounding land uses • Provide amenities for residents
Accessible & Connected	• Increase current and future multi-modal transportation options • Enhance open space, bicycle, and trail connectivity • Accommodate goods movement
Environmentally Sustainable	• Encourage the integration of future clean technology • Incentivize unleaded fuel for aircraft • Minimize impact to wildlife and natural environment and support environmental compatibility
Responsibly Governed	• Provide excellent customer experience • Provide transparency, equity and uniformity with compliance in all leases, regulations, and plans for the airport • Integrate community input regularly (e.g. Formation of Community Advisory Committee, Noise Committee) • Maintain financial autonomy from city general fund subsidies
Economically Vital	• Provide a diverse tax base and stable tax stream • Foster diverse business options

Scenario Evaluation Matrix

Goals and Evaluation Considerations	Alignment with City of Boulder Sustainability, Equity, and Resilience Goals			
	Scenario 1: Existing Airport with Enhanced Maintenance	Scenario 2: Airport with Aviation Improvements	Scenario 3: Airport with Neighborhood Serving Uses and Limited Housing	Scenario 4: Decommission Airport and Create New Neighborhood
Safe	Neutral	Favorable	Favorable	Favorable
Healthy & Socially Thriving	Unfavorable	Neutral	Favorable	Favorable
Livable	Unfavorable	Neutral	Favorable	Favorable
Accessible & Connected	Unfavorable	Neutral	Neutral	Favorable
Environmentally Sustainable	Unfavorable	Favorable	Favorable	Favorable
Responsibly Governed	Neutral	Favorable	Favorable	Neutral
Economically Vital	Unfavorable	Favorable	Favorable	Favorable

NEXT STEPS

The project team will continue the final steps of this engagement process and resulting high-level scenario analysis. The following are the intended next steps in order to provide a better understanding of the desired future for BDU.

- Address City Council questions and obtain additional community feedback as needed
- Conduct CWG Meeting #5 in order to finalize feedback and reflect on process
- Refine the four long-term scenarios and desired near-term action items based upon City Council feedback, CWG feedback, and project team expertise
- Share final report with the following elements:
 - Community Conversation Engagement Process
 - Four Long-Term Scenarios
 - Key physical and programmatic elements
 - High-level estimated cost of implementation
 - Opportunities and constraints

- Alignment with city goals
 - Desired Near-Term Action Items and Implementation Steps
- Present the refined four long-term scenarios and near-term action items to City Council in early 2024
- Request direction from City Council on next steps based upon the information shared in the final report and presentation

ATTACHMENTS

1. In-Depth Interviews Feedback Summary
2. City Council Presentation
3. CWG 1 Meeting Summary
4. Questionnaire 1 Results
5. Public Open House 1 Summary
6. CWG 2 Meeting Summary
7. Bilingual Community Meeting Summaries
 - a. Vista Village Community Meeting Summary
 - b. San Lazaro Community Meeting Summary
8. CWG 3 Meeting Summary
9. Public Open House 2 Summary
10. CWG 4 Meeting Summary
11. Questionnaire 2 Results

BOULDER MUNICIPAL AIRPORT LONG-TERM CAPITAL AND DEVELOPMENT PLAN

Boulder Municipal Airport
3327 Airport Road
Boulder, Colorado 80301

June 2024

Kimley»Horn

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1. Introduction

1.1 Project Background

In March 2024, the City of Boulder (City) retained Kimley-Horn and Associates (Kimley-Horn) to perform a study to evaluate the existing conditions of the airside and landside facilities at the Boulder Municipal Airport (Airport) in which a capital improvement program (CIP) would be determined. In addition, the City has also retained Aeroplex Group Partners, LLC (Aeroplex) to provide a financial analysis of revenue and operational costs based off this CIP. This effort will provide the City with a quantifiable understanding of anticipated capital improvements needed to maintain and operate the facility consistent with FAA Grant Assurance obligations. Included in the financial analysis are City maintenance items anticipated per lease commitments for tenant facilities. The potential for hangar development and apron expansions was explored, which would provide alternative Airport revenue sources to support a sustainable financial future, and allow enhancement of the Airport's existing facilities.

This technical report describes the study, including the results of an existing pavement condition analysis, general guidance related to maintenance, rehabilitation, and reconstruction actions for pavement, and the estimation of capital improvement costs for existing infrastructure and proposed future development. A separate report authored by Aeroplex provides a complete document that provides a summary of Airport revenue as well as operations and maintenance costs, along with CIP costs.

The interpretations, estimates, and exhibits provided throughout this report are not FAA approved plans. The exhibits are not adopted into the master planning documents of the Airport or the City. All data is subject to change and is intended to represent the current Airport and market conditions.

1.2 Goals of Plan Determination

The goal of this study was to complete a Capital Improvement Plan (CIP) over a 20-year period for the Boulder Airport. This included planning level financial evaluation of identified Airport facility and operational projects. Projects planned implementation were applied to two scenarios described below:

1) Scenario No. 1 - Continue to Operate and Maintain Airport

The capital costs associated with maintaining the existing facilities as well as invest in the development of the Airport. Considerations for this option were based on continued operation of the airport while accepting FAA grants and achieving financial sustainability through additional developments.

2) Scenario No. 2 - Maintain Airport Facilities per FAA AIP Grant Assurances

The capital costs associated with maintaining existing facilities per FAA grant assurances and not accepting additional federal or state grant funding. Projects focused primarily on priorities, affordability and developing the Airport per limited term leases.

Project capital improvement costs as well as operations and maintenance costs were determined for each scenario to generate an evaluation of Airport revenue from existing and potential future sources.

1.3 Evaluation Area

This analysis was inclusive of all existing and necessary Airport facilities and procedures, including but not limited to airside and landside pavements, navigational aids (NAVAIDs), operations equipment, environmental documentation, safety and security elements, hangar and office buildings, and Airport planning documentation. These projects associated with maintaining the existing facilities prioritized enhancements to the Airport's safety, security, capacity, environment, and system in compliance with Federal Aviation Administration (FAA) regulations and the Colorado Department of Transportation – Aeronautics Division (CDOT-AD) Colorado airport system recommendations.

Potential development at the Airport is supplemental to the maintenance of existing facilities as described above. More specifically, the developable area remaining on the Airport's property and how it may be best utilized for infrastructure advancement was examined. This analysis provides insight on what additional aeronautical based revenue sources are possible for the Boulder Airport.

1.4 Basis of Evaluation

Capital improvements for the Airport are based on the following:

- Approved Airport documents
- FAA obligations, regulations, and requirements
- Colorado Aeronautics Division facility evaluations
- Airside and landside condition assessments
- Known operational and maintenance needs
- City lease commitments
- Industry practices
- Current Airport business trends.

Airport documents include the city-adopted 2007 Boulder Municipal Airport Master Plan as well as the FAA-approved 2015 Airport Layout Plan (ALP). These documents were used as a basis for project determination. However, provided the age of these documents, some information utilized from these documents were adjusted to accommodate for current economic trends. Changes included switching T-Hangars per the 2015 ALP to small box hangars, as this business model is the trend of airport development that provides storing multiple aircraft in a single unit. Adjacent to the east of this area, T-Hangar expansion was adjusted for Taxilane access and executive box hangars with roadway access were evaluated. Also, additional hangar development areas along the main parking apron were added. Similarly, an expansion of the tie-down apron East of the FBO Terminal and hangar is also included per the potential development analysis but not in the current ALP. However, this expansion would address the current and future demand of small aircraft use and storage that the Airport's current

infrastructure cannot support. These adjustments were evaluated for potential development costs while maximizing the use of existing infrastructure. Proposed adjusted developments shown will require updated, approved, and adopted documents.

The Colorado Aeronautics Division compiled a Colorado Airport System Plan (CASP) in 2020, which evaluated and summarized the services provided to the aviation community and all Colorado Airport facilities. More specifically, this document identifies airport facilities that should be considered for improvement based on their conditions and implementation status. For the Boulder Airport, the CASP mentioned a need to improve the Airport's pavements, as well as the installation of runway end identifier lights (REILS) and the development of a non-precision approach. An evaluation of these recommended projects was made and included in this study under Section 2.2.

2. Existing Conditions

Limited site condition assessments were completed in the field to address airside and landside pavement conditions, as well as T-hangar building conditions. Tenant hangars / office facility conditions and needs were provided by airport staff. Airport facilities and equipment conditions were discussed with operations staff and needs included in the evaluation. Documentation as described in section 1.4 above to was also utilized to define existing condition needs of airport facilities, equipment, etc. as summarized below.

2.1 Existing Airside and Landside Pavements

The Airport's single greatest asset is the operational airfield, including the runways, taxiways, and aprons. The maintenance of these operational pavements is most significant, provided its association with FAA Grant Obligations. All airside and landside pavements were evaluated to understand the current conditions of individual sections of pavement, as well as predict their paths of degradation over time. With this information, careful and thoughtful decisions on how to allocate funding to best maintain pavement areas were made with the goal of maximizing the value and life of the pavement network at the forefront.

Airfield pavements are assessed to determine a condition rating. This pavement condition rating, or pavement condition index (PCI), quantifies the defined distresses in a given pavement section. Condition assessment ranges from an "excellent" usable surface, a maximum PCI of 100 (Newly placed asphalt pavement) to a "failed" surface, a PCI as low as zero (0) (significantly deteriorated and distressed pavement).

Asphalt pavements with PCI ratings of 100 to 70 are recommend for "maintenance" treatments which include minor repairs with asphalt crack sealing and surface seal coats. Condition ratings of below 70 to 55 indicate a pavement that requires "rehabilitation" which can include crack repairs, localized patching, and milling and asphalt overlay of the existing surface. When an asphalt pavements' condition drops below a PCI rating of 55, this is an indication that the pavement is significantly deteriorated and will require "major rehabilitation" or some level of "reconstruction". The determination of a PCI for any given pavement section provides a general sense of the magnitude of work that is required to maintain the useful life of the pavement. Airfield PCI ratings are typically part of an Airport's overall Pavement Management System.

Below is a model that illustrates how pavement deteriorates over time. Interpreting the model, a pavement typically starts with a “Good” condition rating when it is newly constructed. Three to five years through its infrastructure life, a low-cost repair such as crack seal, surface seal treatment, and select full depth patch activities will cost significantly less per square foot. From the model, there is a limited duration of opportunity to perform low-cost maintenance repairs before the pavement, by virtue of further deterioration due to time, would need more substantial repairs, such as larger section area mill and overlay rehabilitation or reconstruction that significantly cost more per square foot.

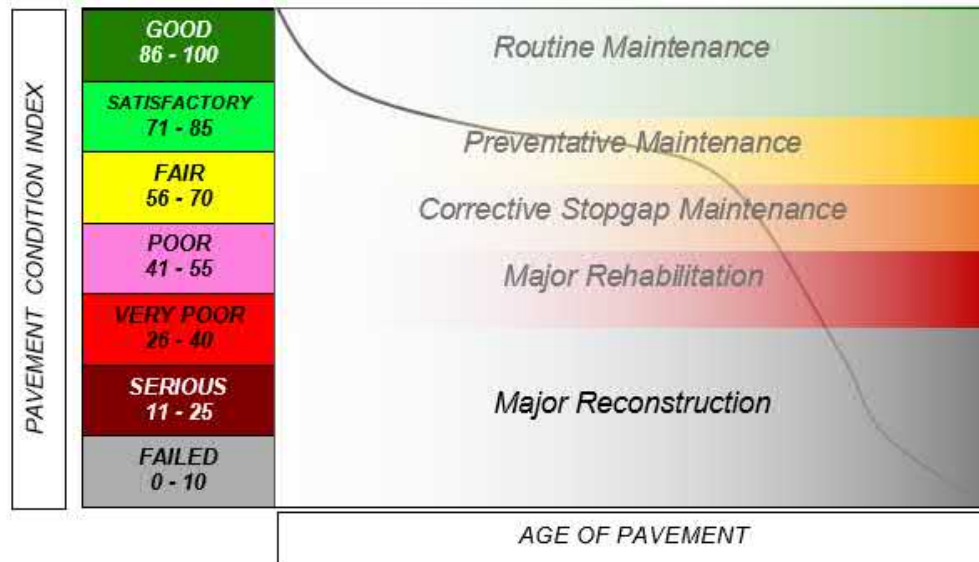


Figure 1. Pavement Condition Indices and Suggested Repairs

Performing timely maintenance, pavement conditions can be improved and can delay steep deterioration and thereby extending the life of an airfield or roadway pavement. Maintenance and rehabilitation costs are significantly lower when the pavement is in better condition. Complete pavement reconstruction can cost roughly 5 to over 10 times as much as minor maintenance or smaller rehabilitation projects.

An airport can use careful pavement management to keep their assets in the good and satisfactory ranges for longer, while slowly reconstructing failed pavements. A reconstructed pavement will then be added to the pavement assets undergoing routine maintenance projects.

To further elaborate, the asphalt pavement section of a traditional, moderately used facility has an approximate design life of 20 years prior to being to be rehabilitated or reconstructed, with the assumption that preventive maintenance is performed. Without regular maintenance the useful life of the pavement reduces significantly quicker. As a result, the cost is substantially more per square foot to resurface or reconstruct pavement for a given section. Alternatively, it costs much less per square foot to seal cracks and complete select or “localized” base repairs, which will extend the useful life of the pavement section.

Prior to evaluating all airside pavements visually, an understanding of current pavement conditions was assessed per the Colorado Department of Transportation (CDOT) Division of Aeronautics forecasted PCIs for the year 2024. The information provided by CDOT is included under Appendix B of this report and is summarized below in Table 1. These airfield pavements are monitored for condition and are eligible for Federal funding to maintain useful life.

Table 1. 2024 Forecasted PCIs

Facility	PCI	Description
Runway 8-26	94	Good
Taxiways A, A1, A2, A3, and A4	82	Satisfactory
Taxiways A, A5, and A6	96	Good
West Terminal Apron	75	Satisfactory
Central Terminal Apron	70	Fair
East Terminal Apron	79	Satisfactory
Southeast Terminal Apron	26	Very Poor

Note that the above PCI study focuses on Airside pavements that are eligible for Federal Funding, and a formal PCI study was not completed for tenant airside pavements or landside pavements. However, general pavement condition assessments were completed for all pavements to provide repair and rehabilitation recommendations for all area. These assessments are presented as “Estimated” pavement conditions.

The surface of Runway 8-26 was rehabilitated in 2020, where a minimum depth of two-and-a-half inches (2.5”) of asphalt was removed and replaced. Under this same contract, the length of Taxiway A between Taxiway connector A4 and the approach end of Runway 26 as well as Taxiway connectors A5 and A6 were reconstructed per six inches (6”) of crushed aggregate base course (P-209) underneath six inches (6”) of bituminous pavement (P-401). Given these recent repairs, it is anticipated that no major rehabilitation or reconstruction projects will need to be completed for these pavements for another fifteen to twenty years beyond the year 2020.

Runway 8G-26G, Boulder’s primary glider runway, lies approximately 190 feet North of the main Runway 8-26, centerline-to-centerline. This facility reflects poor asphalt pavement conditions, and the runway is due for a rehabilitation project within the next few years. However, considering its non-compliance with FAA standards, no enhancements beyond surface condition repairs can be made. The FAA has stated on several occasions, this runway and/or landing surface area does not meet standards and is not eligible to receive FAA Grant funding. Surface maintenance treatments for Runway 8G-26G were included with this analysis. A major rehabilitation of Runway 8G-26G was not included.



A visual inspection of the terminal apron verified the projections of the PCI values listed in Table 1. Figures 2 through 4 shown below, depict the severity of longitudinal and transverse cracking reflected on the pavement's surface. As seen in the figures, these distresses stretch upwards of a few inches wide.

**Figure 2. Central Terminal Apron
Longitudinal Cracking**





Figure 3. Central Terminal Apron Major Longitudinal Cracking



Figure 4. East Terminal Apron Longitudinal Cracking

Considering the seriousness of these cracks, foreign object debris (FOD) upwards of six inches (6") in length (Figure 5) is emerging present-day, demonstrating the need for rehabilitation of the Central apron's pavement. The southwest apron's last major rehabilitation was in 1996 and is currently rated at a PCI of 26. This indicates a severely damaged pavement requiring a reconstruction.



Figure 5. East Terminal Apron Foreign Object Debris (FOD)

Pavements surrounding hangar complexes were also evaluated. The inspection of the West T-Hangar apron pavement indicates a multi-decades old pavement showing significant block cracking. The pavement appears to be very aged and brittle and is at the end of its useful life. This pavement is due for a reconstruction. The conditions of the East T-Hangar apron pavement indicate some failing areas, surface drainage issues, and significant cracks. This pavement is at a transition point of major rehabilitation and a reconstruction. The estimation is that the pavement will require reconstruction to restore useful life.

Provided the current conditions of the Far East Taxilane pavement, regular iterations of maintenance repairs along with a reconstruction project is recommended to take place over the next twenty years. However, due to limited use of the taxiway, this facility was determined to be a low priority and not included in this analysis.

Landside roadway and parking lot pavements reflect significant deterioration and failing conditions. The terminal loop road is severely failing which is indicated by significant cracking and numerous band-aid approach patch repairs. This pavement needs a full reconstruction. The FBO parking lot also shows severe deterioration to the point where the pavement is breaking down back to a gravelly surface. This pavement needs a full reconstruction. These pavements whose characteristics convey that their useful life has long since passed, and thus demand the need for full depth reconstruction.

2.2 Existing FAA Navigational Aids Facilities and Safety Enhancements

Safety is the Airport's main priority, so understanding the Airport's facilities that support operational safety was also included in this evaluation. The primary navigational aids (NAVAIDs) on the Airport include the Automated Weather Observation System (AWOS) and the Precision Approach Path Indicators (PAPIs). The FAA recently replaced the PAPIs per the 2020 runway rehabilitation project, whereas the Airport's AWOS is in need of replacement. Currently, there are no Runway End Identifier Lights (REILs), although they have been recommended to be installed per the CDOT Aeronautics Division - Colorado Airport System Plan (CASP) as well as identified on the current 5-year Airports CIP.

The Air Operations Area (AOA) fence in its present-day condition does not encompass the entire airfield. For example, community access to Hayden Lake is not separated from the AOA, where any member of the community could access the west airfield if they desired to do so. Sections of adequate wildlife fencing circle the northeast airfield; however, to the west of this wildlife fence, the fencing does not adequately eliminate the entry of wild animals due to its limited height and material qualities. Wooden fencing in poor condition is present south of the west hangar facilities, which also needs to be replaced. However, lengths of black chain-link fence were installed sporadically on the south side of the airfield within the last three years. Further, between the lengths of useable fence that serve its purpose, sufficient fencing needs to be added or replaced to protect the AOA from wildlife intrusion and define clear limits between public landside access and active airside areas.

2.3 Existing Operations Equipment

The Airport has been limited to one operations pickup truck, which doubles as the Airport's snow removal vehicle and has been stated as the oldest City of Boulder fleet vehicle in use today. To facilitate basic airport operations' responsibilities efficiently, several equipment acquisitions are recommended, including specific snow removal equipment, an airport broom to maintain operational pavement surfaces, management and operations vehicles, and vegetation mowing equipment to maintain runway and taxiway operational safety areas

2.4 Airport Facilities

Additional facilities identified on the current 5-year BDU CIP are included in this cost evaluation, including the AOA fencing per the discussion under section 2.2 of this report and the relocation of the fuel facility.

2.5 Existing Hangar Buildings and Structures

Existing T- and box hangars were reviewed with Airport staff to determine each facilities' maintenance needs. A detailed site review of each facility was not completed; however, a visual inspection of the Airport's hangar facilities was completed to understand what repairs need to be completed, where images from that evaluation are provided below.

Boulder Airport hangars on the airfield demand everything between minor renovations, such as applications of interior and exterior paint, all the way up to full building demolition or reconstruction. The conditions of each building's flooring, roofing, heating, ventilation, and air conditioning (HVAC) systems, gutters/drainage, electrical, lighting, and power, windows, and hangar doors were among the items considered when determining the costs of renovation projects.



Figure 6. West T-Hangar Interior Walls and Floor



Figure 7. East T-Hangar Interior and Manual Hangar Door Operation



Figure 8. East T-Hangar Asphalt Flooring



Figure 9. East T-Hangar Exterior, Door, and Gutter Conditions



Figure 10. Typical Box Hangar and Office Space

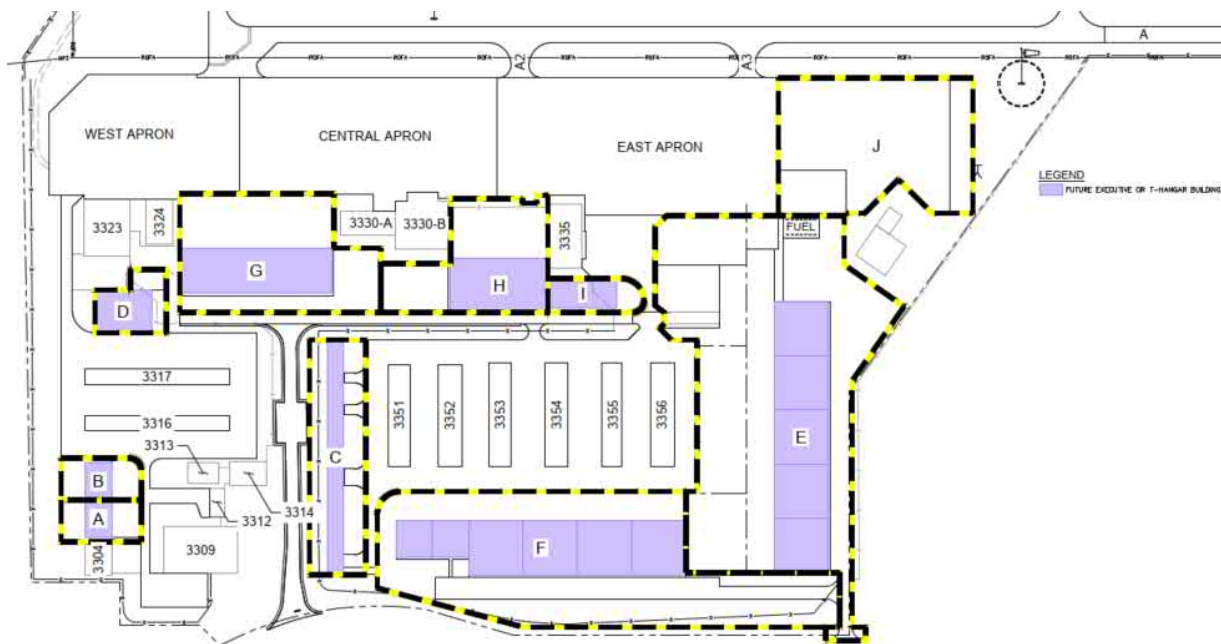
2.6 Existing Environmental and Planning Documentation

The latest editions of the Airport Master Plan (APM) and the Airport Layout Plan (ALP) were completed in 2007 and 2015, respectively. These documents are typically updated every 10-years as needed. Both current editions of these documents are considered in need of an update. In addition, several guiding documents are completed for any airport that outline operational parameters as well as regulation compliance, examples of which include a Wildlife Management Plan and a Stormwater Management Plan. Also, as a Federally obligated airport, capital projects impacting the airfield are required to meet NEPA requirements, where most projects on the airfield are environmentally cleared using the Categorical Exclusion (Cat Ex) process. Additional environmental and planning documentation that needs to be updated and is included in the cost estimate includes but is not limited to the following:

- Airport CATEX
- Airport Master Plan and Noise Contours
- Airport Layout Plan (ALP)
- Airport Exhibit A – Property Map
- Avigation Easements (West End Runway Protection Zones (RPZ))

2.7 Development Opportunity

The Airport's property offers approximately twenty acres of area for future hangar, apron, roadway, and parking development. Kimley-Horn developed a series of graphics for how these areas may be developed Using these graphics the Potential Future Development Exhibit per Appendix J of this report was developed, which was considered in the development of both scenario layouts and estimates.



3. Opinion of Probable Construction Costs

3.1 Project Determination

Project determination for this Boulder Airport long-term Capital Improvement Program (CIP) began with the assessment of the current 5-year CIP project list. A robust, 20-year project list was then developed that addressed all airfield / landside operational pavements, facility / equipment needs, airport operational / planning requirements, as well as the buildings and hangars. Site assessments were completed as needed to define a specific project. Project cost estimates were developed based on material quantity calculations and unit price costing based on current construction costs. Project rehabilitation techniques were determined based on the parameters described below. In addition, proposed development of hangars and associated pavements were determined based on the Boulder Airports' current planning documents.

This robust project list was applied to the two scenarios listed here.

- Scenario No. 1 – Continue to Operate and Maintain the Airport
[Accept Grant Funding and with Developments]
- Scenario No. 2 – Maintain the Airport Facilities per FAA Grant Assurances
[No Grants - with Developments - Lease Offerings with Buyout Clause]

As a Federally obligated airport, the Boulder Airport is required to follow FAA guidance on facility operation and maintenance of the airfield. FAA guidance was utilized in determination of project costs. Projects were applied to each scenario to maintain compliance with obligations.

Three types of repair projects were proposed depending on the severity of pavement distresses that were observed:

- Maintenance
- Rehabilitation
- Reconstruction

Maintenance projects comprise of minor pavement patches, seal coats, crack seal applications, and pavement marking where applicable. The assumptions made associated with any maintenance project include the following:

- Partial-depth, or “patching”, repairs will be required on three percent (3%) of the total project’s pavement surface area. All proposed partial-depth repairs assume three-inch (3”) depths on any airfield pavements and two-inch (2”) depths on any landside pavements. One application of bituminous tack coat is proposed prior to paving any single layer of asphalt pavement.
- No grading improvements were considered.

To extend the useful life of the pavements one maintenance project per section of pavement is recommended every three to five years.

Rehabilitation projects are implemented for pavements that exhibit moderate distresses now or are anticipated to appear within the twenty-year horizon. Rehabilitation of a pavement was proposed depending on the availability of funding and/or the priorities set per the defined scenario. Any rehabilitation project, which assumes a partial-depth removal and replacement of the surface course across the full project area, assumes the following:

- A depth of three inches (3") of asphalt removal and replacement was considered for any airfield pavement rehabilitation project, whereas a depth of two inches (2") was considered for any landside pavement rehabilitation project.
- No grading improvements were assumed except for the Runways 8-26 rehabilitation project. Drainage issues were identified in the infield areas between the main runway and the primary glider runway. Cost estimating included the addition of unclassified excavation and topsoiling specifically for this area.

Reconstruction is for pavements that exhibit distresses beyond the application of partial-depth repairs, a reconstruction project may have been proposed depending on the availability of funding and/or the priorities set per the defined scenario. These reconstruction projects recommend a full-depth removal and replacement of the existing pavement. Any reconstruction project assumes the following:

- Any airside pavement reconstruction project considers six inches (6") of hot mix asphalt (P-401) on six inches (6") of crushed aggregate base course (P-209) pavement section. Any landside pavement reconstruction projects assume four inches (4") of hot mix asphalt (CDOT-403) on six inches (6") of crushed aggregate base course (CDOT-304).
- Re-grading of the project area is required between a depth of three- and six-inches as far as ten feet outside of the project's geometric limits.

Cost estimating on the projects utilized industry-based construction pricing for quantified materials for a given project. In addition, typical construction soft costs were estimated for each project. Regardless of the pavement repair type (maintenance, rehabilitation, or reconstruction), the following assumptions were made:

Costs associated with the following line items and their listed percentages were considered where applicable:

- Contractor Quality Control Program (CQCP) (3%)
- SWMP Installation, Maintenance, and Inspection (1%)
- Mobilization (10%)
- Survey, Layout, and Staking (3%)

These line items multiply only the material installation costs by the associated percentages.

Federal Aviation Administration material technical specifications will be utilized for any airside projects whereas Colorado Department of Transportation material specifications will be utilized

for any landside projects. These distinctions were made to better reflect the expected material unit cost differences associated with airside versus landside projects.

Project costs also include anticipated professional services costs to complete each project. The following costs accommodate Engineering design and competitive bidding efforts, as well as Construction Administration and quality assurance testing services. The amounts represent below are an estimated average percent of anticipated construction costs. In addition, the full scope of any given project represented here is not known, and a project contingency is also added to accommodate the unknowns of these planning level estimates. The below line items and their listed percentages were considered where applicable:

- Engineering (10%)
- Construction Administration / Quality Assurance (10%)
- Contingency (20%)

These line items multiply the anticipated infrastructure construction costs by the associated percentages.

These same assumptions listed in the list above were made for other development, navigation aids, and facilities projects where applicable. Hangar repairs and maintenance items were considered to be directly contracted by the airport. Most anticipated directly contracted items do not include percentages discussed above. The unit pricing of many items were based on actual quotes received by airport staff for ongoing maintenance efforts for Boulder Airport facilities.

3.2 Facility Useful Life

Guidance from FAA was used to estimate the useful life of the airfield pavements and several other airport facilities. Guidance for an airfield asphalt pavement is estimated to need “maintenance” every three to five years, subject to a condition assessment. A pavement’s minimum useful life is typically 10-years, after which the necessity of a “rehabilitation” is assessed. Pavements that have experienced significant distress and have a low condition rating may necessitate a “reconstruction.”

Scenario No. 1 implemented the following durations to maintain useful pavements for Airport users.

- Maintenance cycle of crack sealing and seal coating the pavement is implemented in the CIP every 5-years
- Rehabilitation of a pavement was anticipated to be required at the 20-year point from the last major rehabilitation of that pavement. This exceeds the anticipated minimum useful life of 10-years by double. Rehabilitation included surface milling and replacement with an asphalt overlay. This timing is implemented on all pavements airside and landside. One exception to this is Runway 8-26. The rehabilitation interval anticipated for this runway was 15-years. Simply due to the critical nature of a runways operational surface.

- Reconstruction of a pavement was estimated based on the a given pavements current or anticipated low condition rating. This estimated a full depth reconstruction of a given pavement.
- Once a rehabilitation or reconstruction is completed, the pavement was then put into the maintenance cycle of every 5 years.

Scenario No. 2 implemented a variation of cycles discussed above. The durations to maintain useful pavements for Airport users if Scenario No. 2 was implemented are discussed below.

- Airfield pavements were placed in a maintenance cycle of every 5-years. This was done to simply maintain the usefulness of each pavement to get to the closure year of 2041, without a longer-term vision.
- It should be noted, that as a given airfield pavement ages and deteriorates, if its condition rating drops too low, a rehabilitation may be required to meet the federal grant assurances.
- If maintenance cycles are skipped or pushed back, a pavements deterioration will typically accelerate which will require additional work at additional cost.

Each scenario with the implementation of maintenance or rehabilitation cycles for a given pavement was discussed at length. The durations presented here are at the maximums recommended. However, actual field conditions will dictate the actual implementation.

3.3 Estimate Project Costs

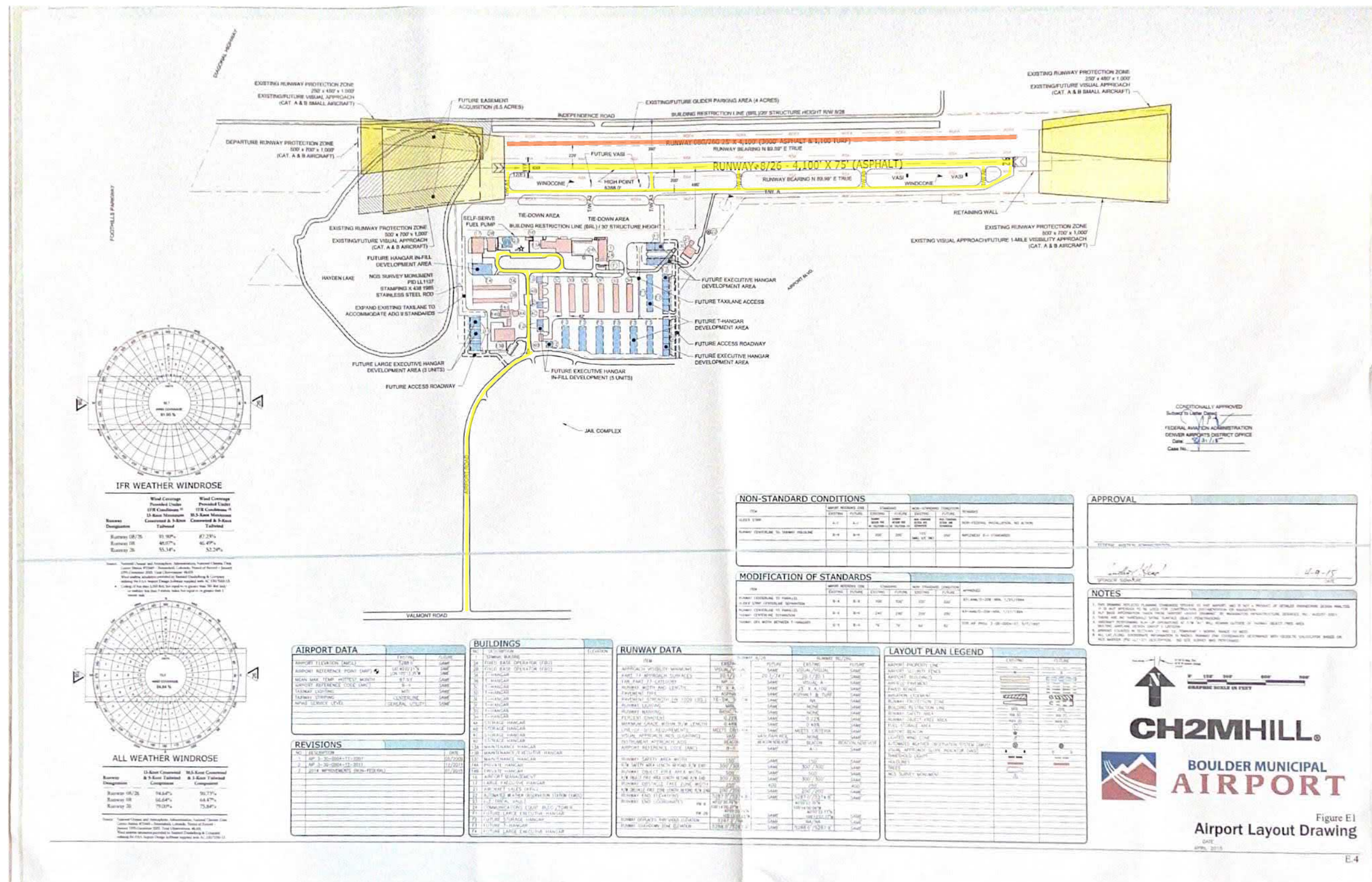
Estimated project costs, as well as when they may be expected to take place, are included under Appendices C through E of this report. The individual costs associated with each projects are documented per Appendix I.

3.4 Exhibits

Exhibits were developed to depict the pavement areas, buildings, facilities, etc. associated with each project listed in either scenario's cost estimate. These illustrations and the costs associated with each project were developed based on the Basis of Evaluation described in section 1.4 of this report. These exhibits for Scenarios 1 and 2 are attached per Appendices F, G, and H, respectively, of this report.

The Potential Future Development exhibit, which captures the proposed development of the available land on the Airport's property, is included in Appendix J of this report. Note that any development as part of Scenarios 1 and 2 is featured in this graphic.

APPENDIX A – Boulder Municipal Airport Layout Plan



APPENDIX B – Colorado Department of Transportation (CDOT) Division of Aeronautics 2024 Forecasted PCIs

Information provide below is part of the Colorado Department of Transportation - Division of Aeronautics (CDOA) Airport Pavement Management System (APMS).



Historical Section PCIs

The following table summarizes historical PCI information for this airport. Displayed PCIs pavement inspections or construction records.

Branch ID	Section ID	Last Construction Year	2014	2015	2018	2020	2021
A01BO	01	2011	-	96	83	-	84
A01BO	02	1996	-	46	41	-	36
A01BO	03	2014	100	100	86	-	81
A01BO	04	2008	-	98	84	-	76
A01BO	05	2014	100	100	100	-	93
R08BO	01	2020	-	65	62	100	100
TABO	01	2020	-	57	49	100	100
TABO	02	2008	-	94	87	-	90
TABO	03	2020	-	94	87	100	100

Latest Inspection and Forecasted Section PCIs

 Export to print

The following table summarizes latest inspection and forecasted section PCI information for this airport. The 2021 PCIs are from the most recent inspection, except where a section was not inspected due to poor condition, planned rehabilitation, or at CDOA's discretion. For sections not inspected in 2021, a forecasted 2021 value is shown, based on the last inspection and the applicable performance models. The values displayed for years 2022 through 2026 are projected values based on no pavement-related work being performed during that period.

Branch ID	Section ID	2021 (Inspection)	2022	2023	2024	2025	2026
A01BO	01	84	82	81	79	77	75
A01BO	02	36	32	29	26	22	19
A01BO	03	81	79	77	75	74	72
A01BO	04	76	74	72	70	68	65
A01BO	05	93	91	89	87	86	84
R08BO	01	100	97	94	92	90	87
TABO	01	100	99	98	96	94	92
TABO	02	90	87	85	82	80	77
TABO	03	100	98	96	94	92	90

APPENDIX C – Scenario 1 Projects, Base Year Costs, and Timeline

Year	Base Year Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	
Scenario No. 1 - Continue to Operate and Maintain the Airport [Accept Grant Funding and with Developments]																								
Airside Pavements																								
Runways																								
Rehabilitate Runway 8-26 (LMR 2020) (PCI 94)	\$ 3,444,000												X											
Seal Coat / Crack Seal Runway 8-26	\$ 531,000		X					X									X						X	
Seal Coat / Crack Seal Runway 8G-26G	\$ 114,000		X					X					X				X						X	
Runways - Base Year Costs SUBTOTAL	\$ 4,089,000																							
Taxiways																								
Rehabilitate Taxiways A, A1, A2, A3, and A4 (LMR 2008) (PCI 82)	\$ 934,000					X																		
Seal Coat / Crack Seal Taxiways A, A1, A2, A3, and A4	\$ 162,000		X								X					X					X			
Rehabilitate Taxiways A, A5, and A6 (LMR 2020) (PCI 96)	\$ 790,000																	X						
Seal Coat / Crack Seal Taxiways A, A5, and A6	\$ 138,000		X					X					X										X	
Taxiways - Base Year Costs SUBTOTAL	\$ 2,024,000																							
Aprons / AOA Service Roads																								
Rehabilitate West Apron (LMR 2014) (PCI 75)	\$ 1,561,000											X												
Seal Coat / Crack Seal West Apron	\$ 160,000		X					X									X					X		
Rehabilitate Central Apron (LMR 2008) (PCI 70)	\$ 1,931,000					X																		
Seal Coat / Crack Seal Central Apron	\$ 207,000		X								X					X					X			
Rehabilitate East Apron (LMR 2011) (PCI 79)	\$ 1,736,000								X															
Seal Coat / Crack Seal East Apron	\$ 251,000			X										X					X					
Reconstruct Southeast Apron (PCI 26)	\$ 560,000			X																				
Seal Coat / Crack Seal Southeast Apron	\$ 39,000								X					X					X					
Install Vehicle Service Road (VSR) Millings - 1	\$ 335,000					X																		
Aprons / AOA Service Roads - Base Year Costs SUBTOTAL	\$ 12,893,000																							
Grant Eligible Airside Pavements	\$ 12,444,000																							
Airside Pavements - Base Year Costs SUBTOTAL	\$ 12,893,000																							
Landside Roadways / Parking Facilities																								
Reconstruct Airport Entrance (Loop) Road (EPCI 30)	\$ 1,147,000						X																	
Seal Coat / Crack Seal Airport Entrance (Loop) Road	\$ 341,000											X					X					X		
Roadways / Parking Facilities - Base Year Costs SUBTOTAL	\$ 1,488,000																							
Navigational Aids																								
Replace Automated Weather Observation Stations (AWOS)	\$ 200,000		X																					
Replace Airport Beacon	\$ 100,000						X																	
Navigational Aids - Base Year Costs SUBTOTAL	\$ 300,000																							
Equipment																								
Acquire Snow Removal Equipment (SRE) - Broom	\$ 40,000							X																
Acquire Mowing Tractor w/ Attachments	\$ 30,000		X																					
Equipment - Base Year Costs SUBTOTAL	\$ 70,000																							
Facilities																								
Install East AOA Fencing	\$ 272,000		X																					
Relocate and Replace Fuel Facility	\$ 1,992,000					X																		
Apply Runway, Taxiway, and Apron Markings	\$ 219,000		X			X			X			X			X		X				X			
Install Electrical Vehicle Charging Stations	\$ 480,000													X										
Maintain Airport Office (3327)	\$ 42,000								X															
Facilities - Base Year Costs SUBTOTAL	\$ 3,005,000																							
Environmental / Planning																								
Develop Airport CATEX	\$ 150,000		X			X					X						X							
Update Master Plan and Airport Layout Plan	\$ 700,000			X																				
Noise Contours per Master Plan Update	\$ 150,000			X																				
Update Airport Exhibit A	\$ 250,000							X										X						
Aviation Easements (West End RPZs)	\$ 500,000										X													
Environmental / Planning - Base Year Costs SUBTOTAL	\$ 1,750,000																							
COB - Base Year Costs SUBTOTAL	\$ 19,506,000																	PLANNING ESTIMATE - INFORMATION PROVIDED HEREIN IS FOR DISCUSSIONS						

Notes: 1 - Project to be completed following the implementation of the Master Plan.

EPCI = ESTIMATED Pavement Condition Index (Present-Day)

LMR = Last Major Reconstruction/Rehabilitation

PCI = Pavement Condition Index per CDOT Forecast (Present-Day)

Pavement	100	85	70	55	40	25	10	0
Condition	Good	Satisfactory	Fair	Poor	Very Poor	Serious	Failed	
Index	Maintenance		Rehabilitation		Reconstruction			

PLANNING ESTIMATE - INFORMATION PROVIDED HEREIN IS FOR DISCUSSIONS ON AIRFIELD CAPACITY FOR POTENTIAL DEVELOPMENT. THIS ESTIMATE IS NOT AN APPROVED FAA DOCUMENT. THIS EXHIBIT IS NOT AN APPROVED OR ADOPTED MASTER PLANNING DOCUMENT OF THE BOULDER AIRPORT OR THE CITY OF BOULDER.

Year	Base Year Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045
Scenario No. 1 - Continue to Operate and Maintain the Airport [Accept Grant Funding and with Developments]																							
Maintain Existing Hangar Aprons																							
Reconstruct West T-Hangar Apron (EPCI 45) - 3	\$ 2,938,000	Renegotiate																					
Seal Coat / Crack Seal West T-Hangar Apron	\$ 169,000	Renegotiate																					
Reconstruct East T-Hangar Apron (EPCI 65) - 3	\$ 4,438,000	Renegotiate																					
Seal Coat / Crack Seal East T-Hangar Apron	\$ 258,000	Renegotiate																					
Reconstruct Far East Apron (EPCI 35) - 3	\$ 87,000	Renegotiate																					
Seal Coat / Crack Seal Far East Apron	\$ 13,000	Renegotiate																					
Reconstruct Far East Apron Access Road (EPCI 40)	\$ 346,000	Renegotiate																					
Seal Coat / Crack Seal Far East Apron Access Road	\$ 26,000	Renegotiate																					
Reconstruct FBO Parking Area (EPCI 15)	\$ 495,000	Renegotiate																					
Seal Coat / Crack Seal FBO Parking Area	\$ 190,000	Renegotiate																					
Glider Terminal Area Electrical - 3	\$ 50,000	Renegotiate																					
Existing Hangar Aprons - Base Year Costs SUBTOTAL	\$ 9,010,000																						
Maintain Existing Hangar Buildings / Leasehold Renewals																							
Maintain Brunguard #2 Corp Box Hangar / Office (3309) - 2	\$ 203,000	Renegotiate																					
Maintain Tango One Box Hangar / Office (3312) - 2	\$ 21,000	Renegotiate																					
Maintain COB Box Hangar / Office (3313) - 2	\$ 29,000	Renegotiate																					
Maintain West T-Hangars (3316) - 3	\$ 458,000	Renegotiate																					
Maintain West T-Hangars (3317) - 3	\$ 458,000	Renegotiate																					
Maintain Brungard Hangar #1 (3323) - 2	\$ 152,000	Renegotiate																					
Maintain Specialty Flight Hangar (3324) - 2	\$ 207,000	Renegotiate																					
Maintain Air Comm Corp Box Hangar (3330-A) - 2	\$ 119,000	Renegotiate																					
Maintain Neon Box Hangars (3330-B) - 2	\$ 248,000	Renegotiate																					
Maintain Journey FBO Terminal / Hangar (3335) - 2	\$ 402,000	Renegotiate																					
Maintain East T-Hangars (3351) - 3	\$ 243,000	Renegotiate																					
Maintain East T-Hangars (3352) - 3	\$ 147,000	Renegotiate																					
Maintain East T-Hangars (3353) - 3	\$ 243,000	Renegotiate																					
Maintain East T-Hangars (3354) - 3	\$ 243,000	Renegotiate																					
Maintain East T-Hangars (3355) - 3	\$ 243,000	Renegotiate																					
Maintain East T-Hangars (3356) - 3	\$ 147,000	Renegotiate																					
Maintain Private Box Hangar (3393) - 2	\$ 191,000	Renegotiate																					
Maintain Private Office (3394) - 2	\$ 42,000	Renegotiate																					
Existing Hangar Buildings / Renewals - Base Year Costs SUBTOTAL	\$ 3,796,000																						
Existing Hangar / Apron Maintenance - Base Year Costs SUBTOTAL	\$ 12,806,000																						

New Hangars / Developers Investment / Cost - Minimal Cost to COB																							
Construct A Hangar and Apron	\$ 1,943,000	Negotiate				X																	
Construct B Hangar and Apron	\$ 1,959,000	Negotiate				X																	
Construct C Hangars and Pavement	\$ 6,935,000	Negotiate					X																
Redevelop Wooden Hangar (3341) - 4	\$ 10,000	Negotiate					X																
Redevelop Wooden Hangar (3344) - 4	\$ 10,000	Negotiate					X																
Redevelop Wooden Hangar (3346) - 4	\$ 20,000	Negotiate					X																
Construct D Hangar and Parking	\$ 4,315,000	Negotiate					X																
Construct Taxilane E	\$ 2,741,000	Negotiate							X														
Construct E Hangars	\$ 25,882,000	Negotiate							X														
Construct E Roadway and Parking Facility	\$ 998,000	Negotiate							X														
Construct Taxilane F	\$ 925,000	Negotiate								X													
Construct F Hangars	\$ 25,307,000	Negotiate								X													
Construct F Roadway and Parking Facility	\$ 554,000	Negotiate								X													
Construct G Hangars with Apron and Parking Expansion	\$ 13,886,000	Negotiate								X													
Construct H Hangar, Apron, and Parking	\$ 10,409,000	Negotiate										X											
Construct I Hangar	\$ 3,505,000	Negotiate												X									
Construct J Tie-Down Apron Expansion	\$ 2,341,000	Negotiate												X									
New Hangars / Developers Cost - Base Year Costs SUBTOTAL	\$ 101,740,000																						
Developer / Hangar Lessee - Base Year Costs TOTAL	\$ 114,546,000																						
COB - Base Year Costs SUBTOTAL	\$ 19,506,000																						
Scenario No. 1 - Base Year Costs TOTAL	\$ 134,052,000																						

Notes:

- 2 - Existing lease to be renegotiated to include O&M and capital costs.
- 3 - Hangar Management to be privatized through RFP.
- 4 - Hangar to be demolished and space to be redeveloped with Hangar C Development
- EPCI = ESTIMATED Pavement Condition Index (Present-Day)

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APPENDIX D – Scenario 2 Projects, Base Year Costs, and Timeline

Year	Base Year Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
FAA Grant Obligation Year		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Scenario No. 2 - Maintain the Airport Facilities per FAA Grant Assurances [No Grants - with Developments - Lease Offerings with Buyout Clause]																			
Airside Pavements																			
Runways																			
Seal Coat / Crack Seal Runway 8-26	\$ 531,000		X					X					X					X	
Runways - Base Year Costs SUBTOTAL	\$ 531,000																		
Taxiways																			
Seal Coat / Crack Seal Taxiways A, A1, A2, A3, and A4	\$ 162,000		X					X					X					X	
Seal Coat / Crack Seal Taxiways A, A5, and A6	\$ 138,000		X					X					X					X	
Taxiways - Base Year Costs SUBTOTAL	\$ 300,000																		
Aprons / AOA Service Roads																			
Seal Coat / Crack Seal West Apron	\$ 160,000		X					X					X					X	
Seal Coat / Crack Seal Central Apron	\$ 207,000		X					X					X					X	
Seal Coat / Crack Seal East Apron	\$ 251,000		X					X					X					X	
Seal Coat / Crack Seal Southeast Terminal Apron	\$ 39,000		X					X					X					X	
Aprons / AOA Service Roads - Base Year Costs SUBTOTAL	\$ 657,000																		
Airside Pavements - Base Year Costs SUBTOTAL	\$ 1,488,000																		
Landside Roadways / Parking Facilities																			
Reconstruct Airport Entrance (Loop) Road (EPCI 30)	\$ 1,147,000						X												
Roadways / Parking Facilities - Base Year Costs SUBTOTAL	\$ 1,147,000																		
Navigational Aids																			
Replace Automated Weather Observation Stations (AWOS)	\$ 200,000		X																
Navigational Aids - Base Year Costs SUBTOTAL	\$ 200,000																		
Equipment																			
Acquire Snow Removal Equipment (SRE) - Broom	\$ 40,000							X											
Acquire Mowing Tractor w/ Attachments	\$ 30,000		X																
Equipment - Base Year Costs SUBTOTAL	\$ 70,000																		
Facilities																			
Install East AOA Fencing	\$ 272,000		X																
Relocate and Replace Fuel Facility	\$ 1,992,000					X													
Apply Runway, Taxiway, and Apron Markings	\$ 219,000					X						X						X	
Maintain Airport Office (3327)	\$ 42,000								X										
Facilities - Base Year Costs SUBTOTAL	\$ 2,525,000																		
Environmental / Planning																			
Update Airport Exhibit A	\$ 250,000							X											
Environmental / Planning - Base Year Costs SUBTOTAL	\$ 250,000																		
COB - Base Year Costs SUBTOTAL	\$ 5,680,000																		

Notes:

EPCI = ESTIMATED Pavement Condition Index (Present-Day)

Pavement	100	85	70	55	40	25	10	0
Condition	Good	Satisfactory	Fair	Poor	Very Poor	Serious	Failed	
Index	Maintenance		Rehabilitation		Reconstruction			

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Year	Base Year Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
FAA Grant Obligation Year		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Scenario No. 2 - Maintain the Airport Facilities per FAA Grant Assurances [No Grants - with Developments - Lease Offerings with Buyout Clause]																			
Maintain Existing Hangar Aprons																			
Reconstruct West T-Hangar Apron (EPCI 45) - 3	\$ 2,938,000	Renegotiate																	
Seal Coat / Crack Seal West T-Hangar Apron	\$ 169,000	Renegotiate																	
Reconstruct East T-Hangar Apron (EPCI 65) - 3	\$ 4,438,000	Renegotiate																	
Seal Coat / Crack Seal East T-Hangar Apron	\$ 258,000	Renegotiate																	
Reconstruct Far East Apron (EPCI 35) - 3	\$ 87,000	Renegotiate																	
Seal Coat / Crack Seal Far East Apron	\$ 13,000	Renegotiate																	
Reconstruct Far East Apron Access Road (EPCI 40)	\$ 346,000	Renegotiate																	
Seal Coat / Crack Seal Far East Apron Access Road	\$ 26,000	Renegotiate																	
Reconstruct FBO Parking Area (EPCI 15)	\$ 495,000	Renegotiate																	
Seal Coat / Crack Seal FBO Parking Area	\$ 190,000	Renegotiate																	
Glider Terminal Area Electrical - 3	\$ 50,000	Renegotiate																	
Existing Hangar Aprons - Base Year Costs SUBTOTAL	\$ 9,010,000																		
Maintain Existing Hangar Buildings / Leasehold Renewals																			
Maintain Brunguard #2 Corp Box Hangar / Office (3309) - 2	\$ 203,000	Renegotiate																	
Maintain Tango One Box Hangar / Office (3312) - 2	\$ 21,000	Renegotiate																	
Maintain COB Box Hangar / Office (3313) - 2	\$ 29,000	Renegotiate																	
Maintain West T-Hangars (3316) - 3	\$ 458,000	Renegotiate																	
Maintain West T-Hangars (3317) - 3	\$ 458,000	Renegotiate																	
Maintain Brungard Hangar #1 (3323) - 2	\$ 152,000	Renegotiate																	
Maintain Specialty Flight Hangar (3324) - 2	\$ 207,000	Renegotiate																	
Maintain Air Comm Corp Box Hangar (3330-A) - 2	\$ 119,000	Renegotiate																	
Maintain Neon Box Hangars (3330-B) - 2	\$ 248,000	Renegotiate																	
Maintain Journey FBO Terminal / Hangar (3335) - 2	\$ 402,000	Renegotiate																	
Maintain East T-Hangars (3351) - 3	\$ 243,000	Renegotiate																	
Maintain East T-Hangars (3352) - 3	\$ 147,000	Renegotiate																	
Maintain East T-Hangars (3353) - 3	\$ 243,000	Renegotiate																	
Maintain East T-Hangars (3354) - 3	\$ 243,000	Renegotiate																	
Maintain East T-Hangars (3355) - 3	\$ 243,000	Renegotiate																	
Maintain East T-Hangars (3356) - 3	\$ 147,000	Renegotiate																	
Maintain Private Box Hangar (3393) - 2	\$ 191,000	Renegotiate																	
Maintain Private Office (3394) - 2	\$ 42,000	Renegotiate																	
Existing Hangar Buildings / Renewals - Base Year Costs SUBTOTAL	\$ 3,796,000																		
Existing Hangar / Apron Maintenance - Base Year Costs SUBTOTAL	\$ 12,806,000																		

New Hangars / Developers Investment / Cost - Minimal Cost to COB																			
Construct A Hangar and Apron	\$ 1,943,000	Negotiate			X														
Construct B Hangar and Apron	\$ 1,959,000	Negotiate		X															
Construct C Hangars and Pavement	\$ 6,935,000	Negotiate				X													
Redevelop Wooden Hangar (3341) - 4	\$ 10,000	Negotiate				X													
Redevelop Wooden Hangar (3344) - 4	\$ 10,000	Negotiate				X													
Redevelop Wooden Hangar (3346) - 4	\$ 20,000	Negotiate				X													
Construct D Hangar and Parking	\$ 4,315,000	Negotiate				X													
Construct Taxilane E	\$ 2,741,000	Negotiate					X												
Construct E Hangars	\$ 25,882,000	Negotiate					X												
Construct E Roadway and Parking Facility	\$ 998,000	Negotiate					X												
Construct Taxilane F	\$ 925,000	Negotiate						X											
Construct F Hangars	\$ 25,307,000	Negotiate						X											
Construct F Roadway and Parking Facility	\$ 554,000	Negotiate						X											
Construct G Hangars with Apron and Parking Expansion	\$ 13,886,000	Negotiate					X												
Construct H Hangar, Apron, and Parking	\$ 10,409,000	Negotiate							X										
Construct I Hangar	\$ 3,505,000	Negotiate											X						
Construct J Tie-Down Apron Expansion	\$ 2,341,000	Negotiate											X						
New Hangars / Developers Cost - Base Year Costs SUBTOTAL	\$ 101,740,000						Development After this Date will Become Challenging to Amortize												

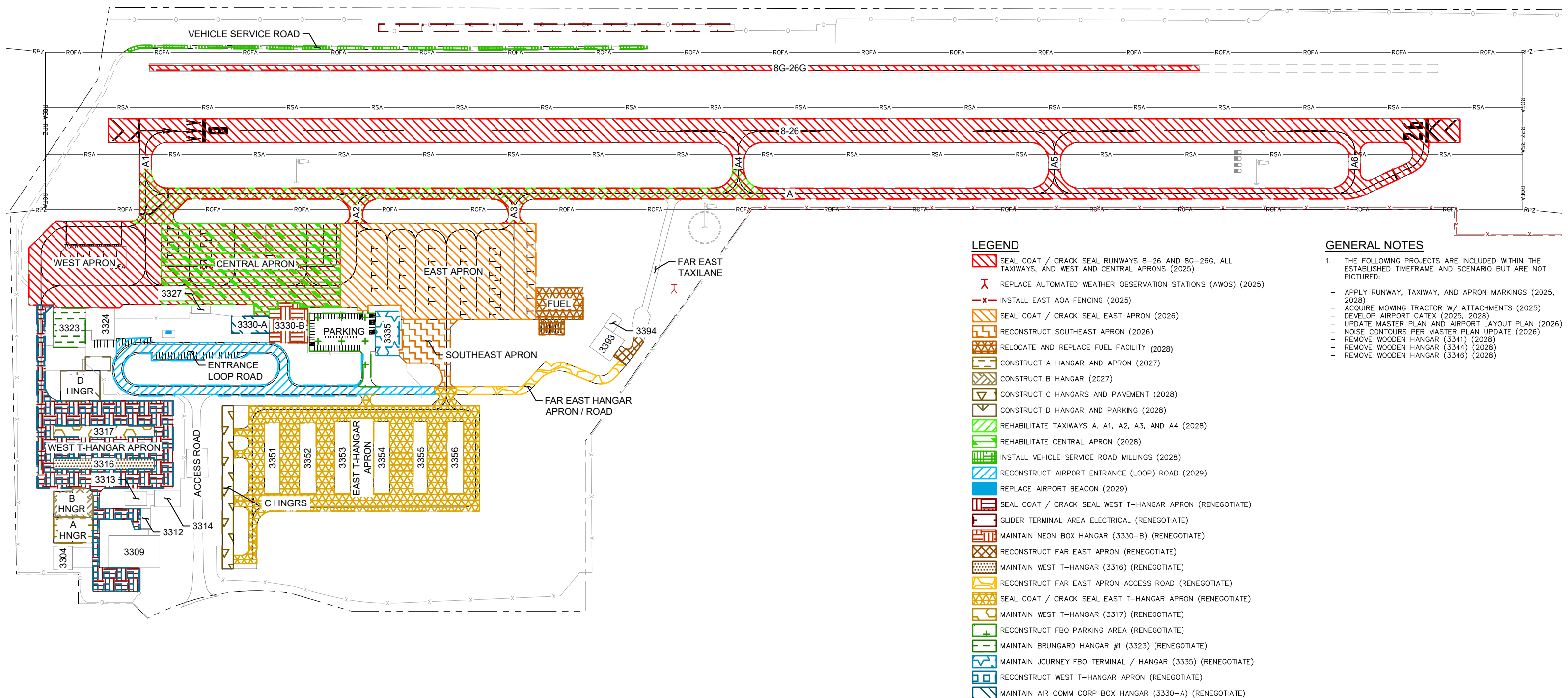
Developer / Hangar Lessee - Base Year Costs TOTAL	\$ 114,546,000
COB - Base Year Costs SUBTOTAL	\$ 5,680,000
Scenario No. 2 - Base Year Costs TOTAL	\$ 120,114,000

Notes:

- 2 - Existing lease to be renegotiated to include O&M and capital costs.
- 3 - Hangar Management to be privatized through RFP.
- 4 - Hangar to be demolished and space to be redeveloped with Hangar C Development
- EPCI = ESTIMATED Pavement Condition Index (Present-Day)

PLANNING ESTIMATE - INFORMATION PROVIDED HEREIN IS FOR DISCUSSIONS ON AIRFIELD CAPACITY FOR POTENTIAL DEVELOPMENT. THIS ESTIMATE IS NOT AN APPROVED FAA DOCUMENT. THIS EXHIBIT IS NOT AN APPROVED OR ADOPTED MASTER PLANNING DOCUMENT OF THE BOULDER AIRPORT OR THE CITY OF BOULDER.

APPENDIX E – Scenario 1 Five-Year Exhibits



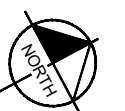
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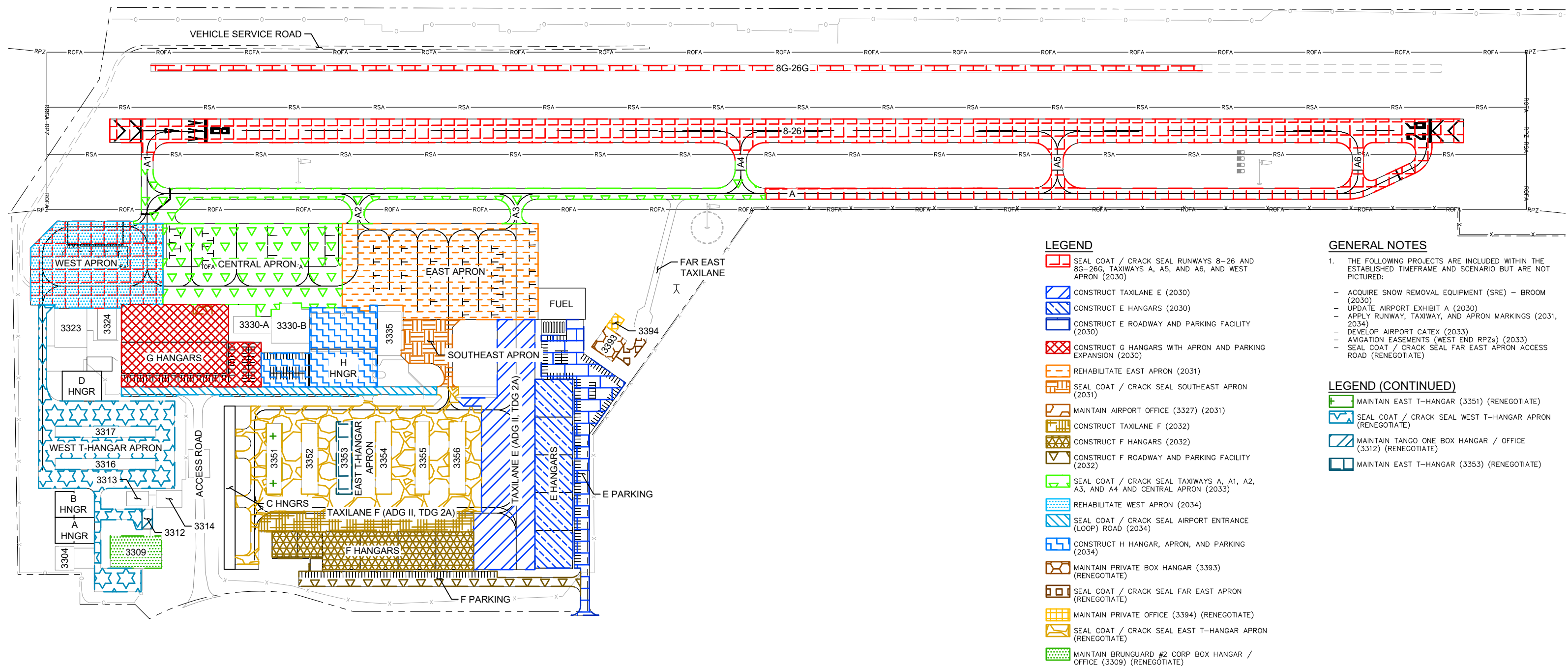
LONG-TERM CAPITAL PLANNING

SCENARIO NO. 1, 2025 THROUGH 2029

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BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

SCENARIO NO. 1, 2030 THROUGH 2034

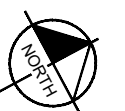
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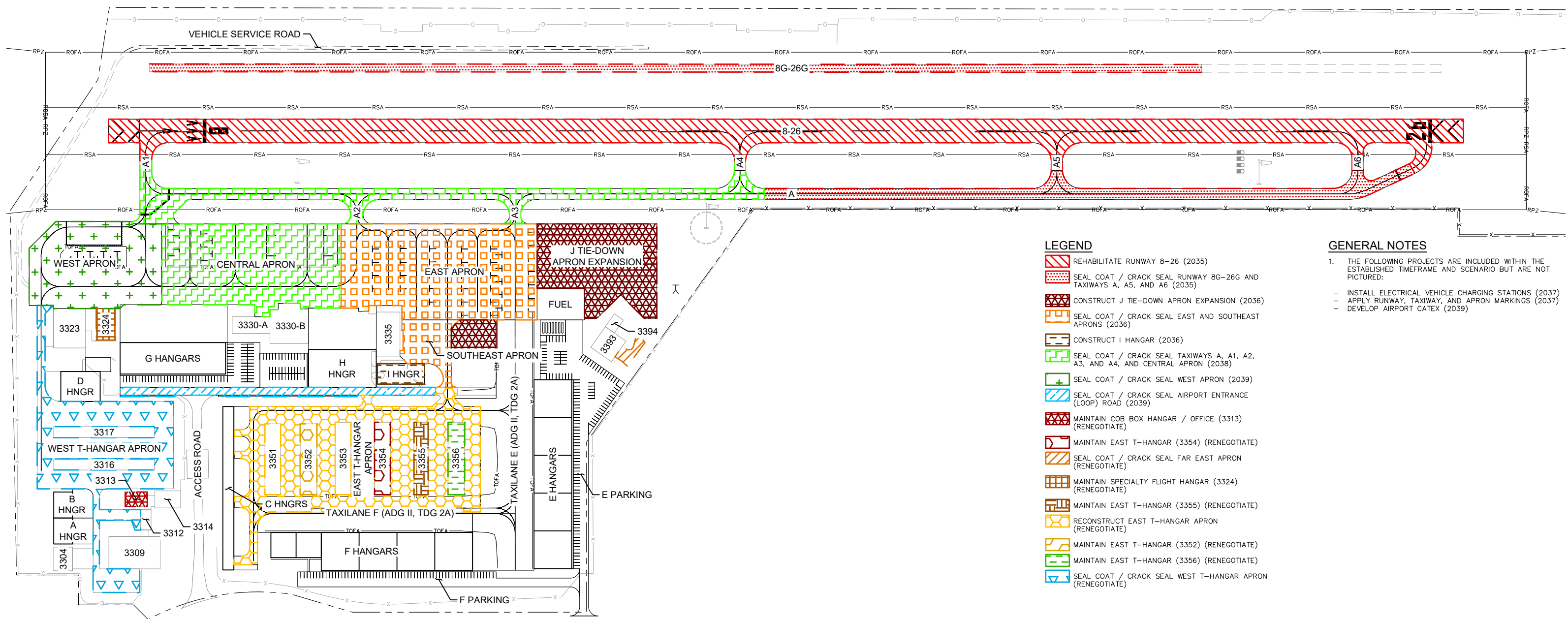
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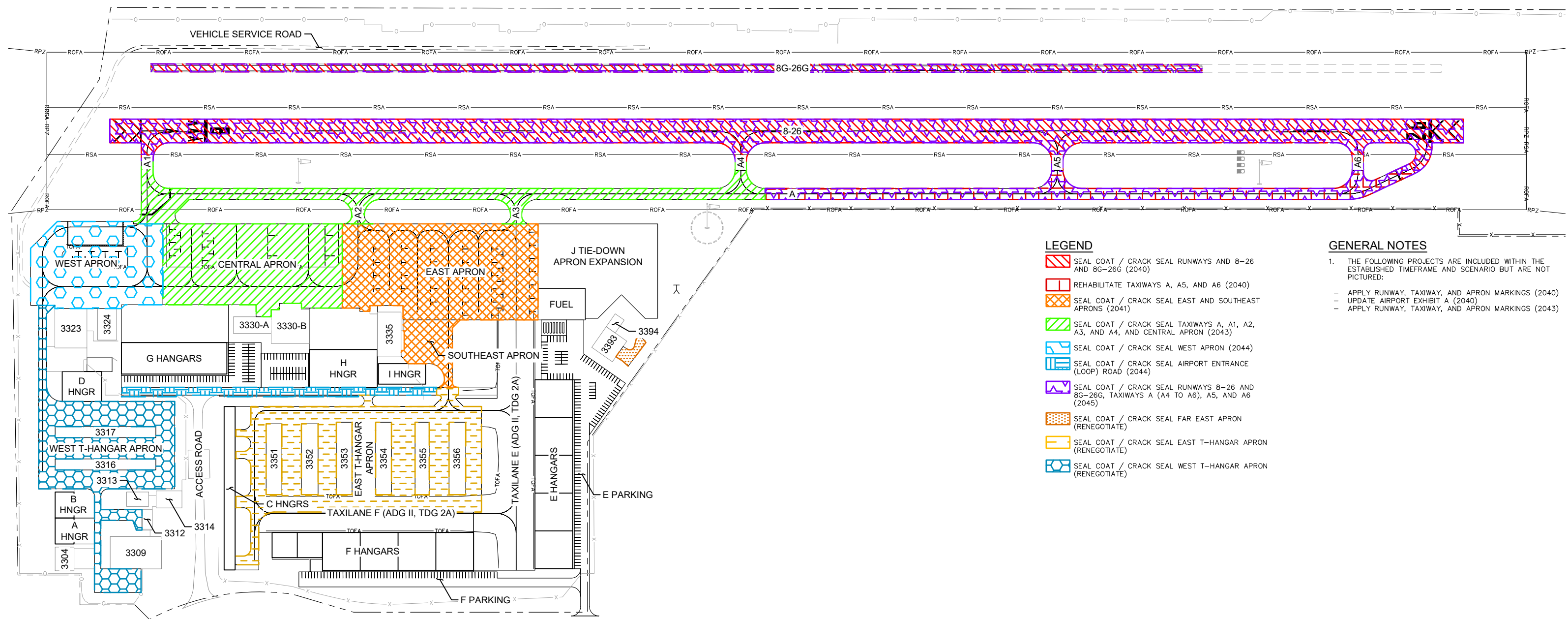
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SCALE IN FEET



- REHABILITATE RUNWAY 8-26 (2035)
- SEAL COAT / CRACK SEAL RUNWAY 8G-26G AND TAXIWAYS A, A5, AND A6 (2035)
- CONSTRUCT J

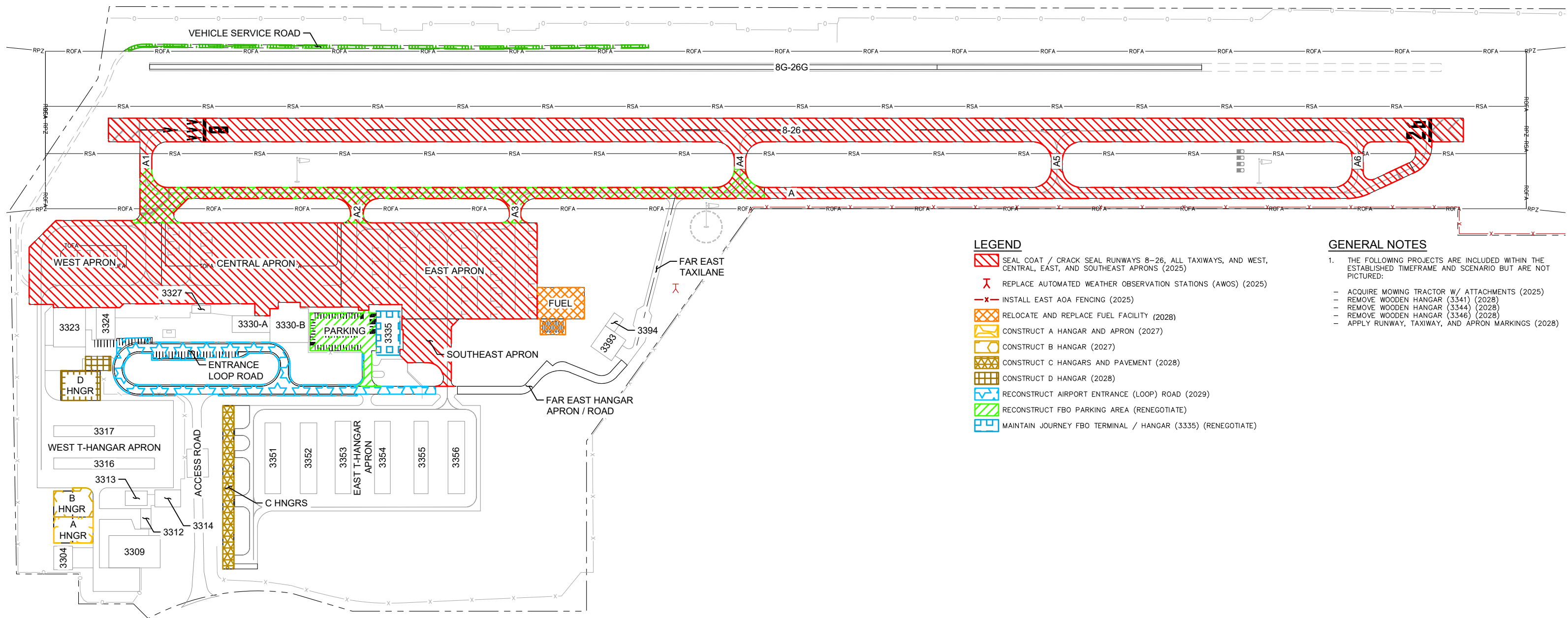


BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

SCENARIO NO. 1, 2040 THROUGH 2045

APPENDIX F – Scenario 2 Five-Year Exhibits



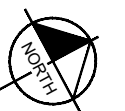
BOULDER MUNICIPAL AIRPORT (BDU)

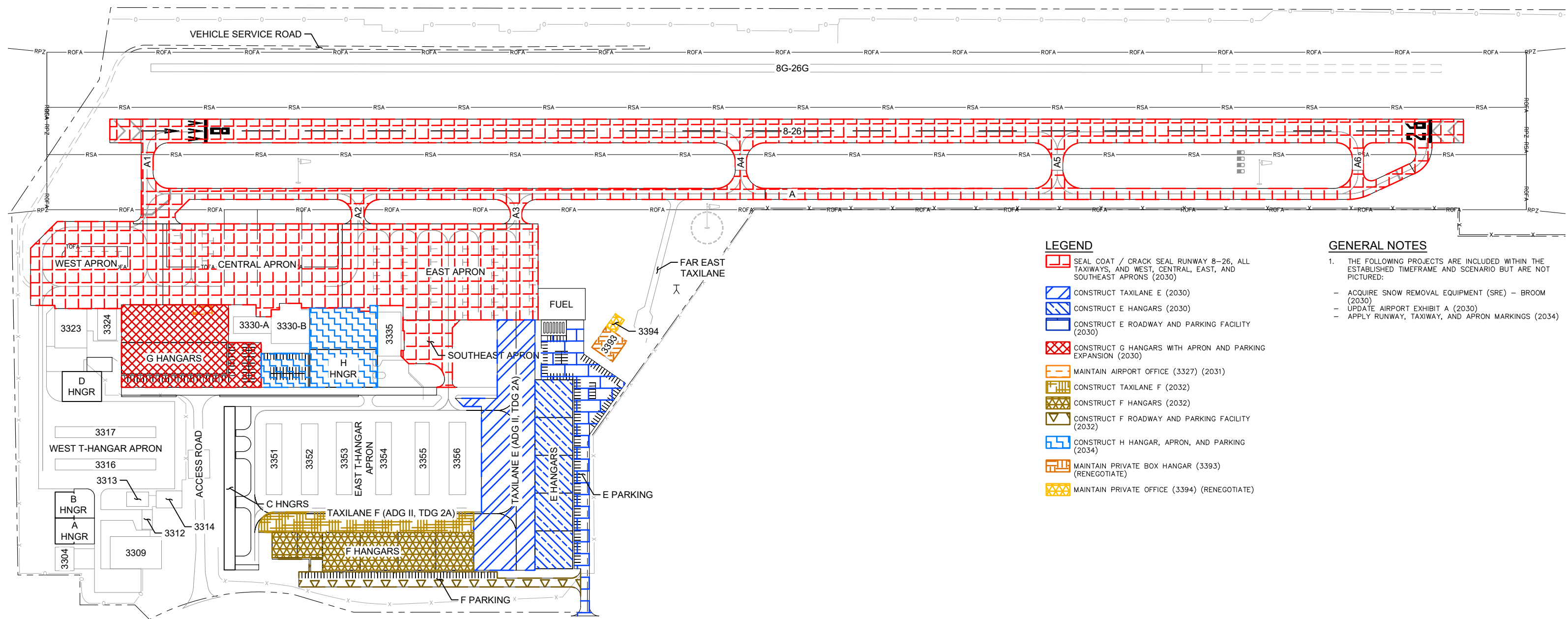
LONG-TERM CAPITAL PLANNING

SCENARIO NO. 2, 2025 THROUGH 2029

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LEGEND

- SEAL COAT / CRACK SEAL RUNWAY 8-26, ALL TAXIWAYS, AND WEST, CENTRAL, EAST, AND SOUTHEAST APRONS (2030)
- CONSTRUCT TAXILANE E (2030)
- CONSTRUCT E HANGARS (2030)
- CONSTRUCT E ROADWAY AND PARKING FACILITY (2030)
- CONSTRUCT G HANGARS WITH APRON AND PARKING EXPANSION (2030)
- MAINTAIN AIRPORT OFFICE (3327) (2031)
- CONSTRUCT TAXILANE F (2032)
- CONSTRUCT F HANGARS (2032)
- CONSTRUCT F ROADWAY AND PARKING FACILITY (2032)
- CONSTRUCT H HANGAR, APRON, AND PARKING (2034)
- MAINTAIN PRIVATE BOX HANGAR (3393) (RENEGOTIATE)
- MAINTAIN PRIVATE OFFICE (3394) (RENEGOTIATE)

GENERAL NOTES

- THE FOLLOWING PROJECTS ARE INCLUDED WITHIN THE ESTABLISHED TIMEFRAME AND SCENARIO BUT ARE NOT PICTURED:
 - ACQUIRE SNOW REMOVAL EQUIPMENT (SRE) – BROOM (2030)
 - UPDATE AIRPORT EXHIBIT A (2030)
 - APPLY RUNWAY, TAXIWAY, AND APRON MARKINGS (2034)

BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

SCENARIO NO. 2, 2030 THROUGH 2034

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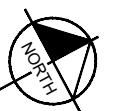
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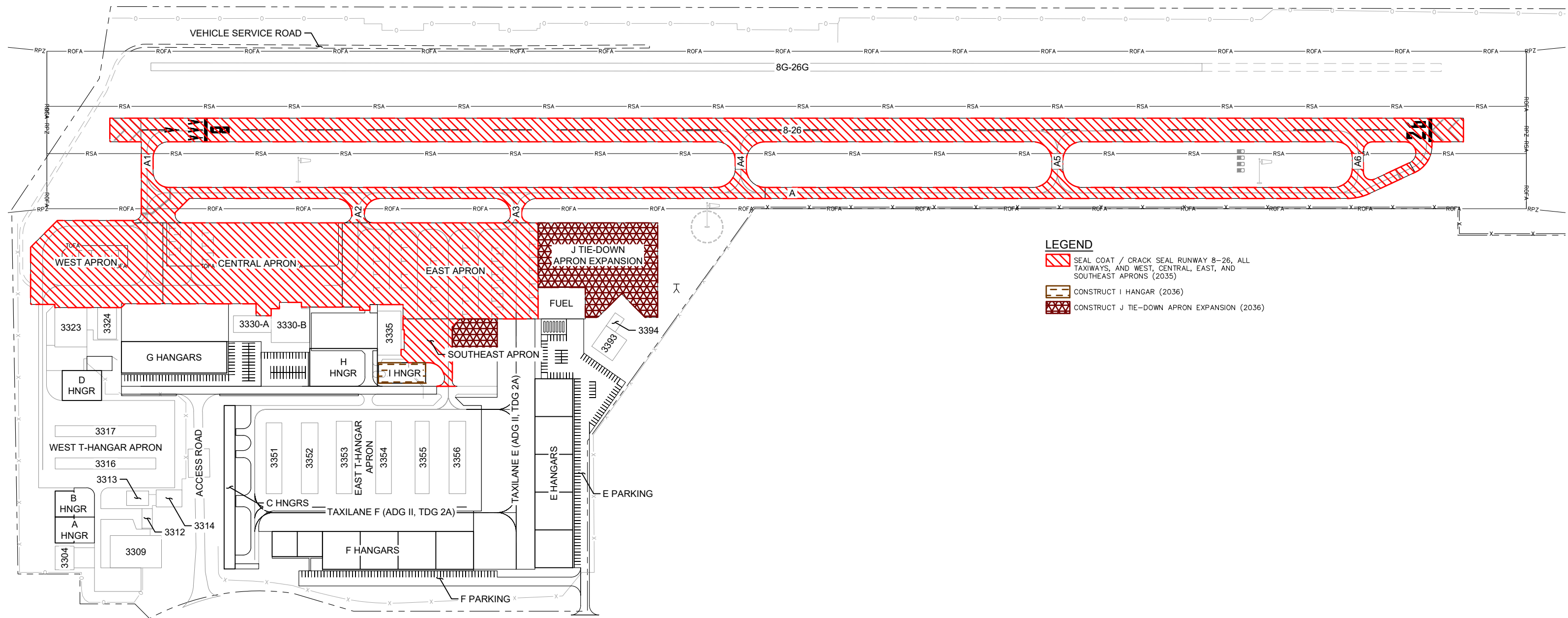
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SCALE IN FEET



BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

SCENARIO NO. 2, 2035 THROUGH 2039

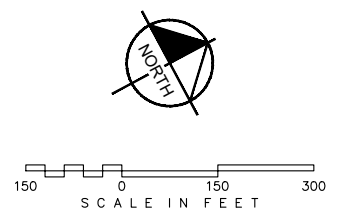
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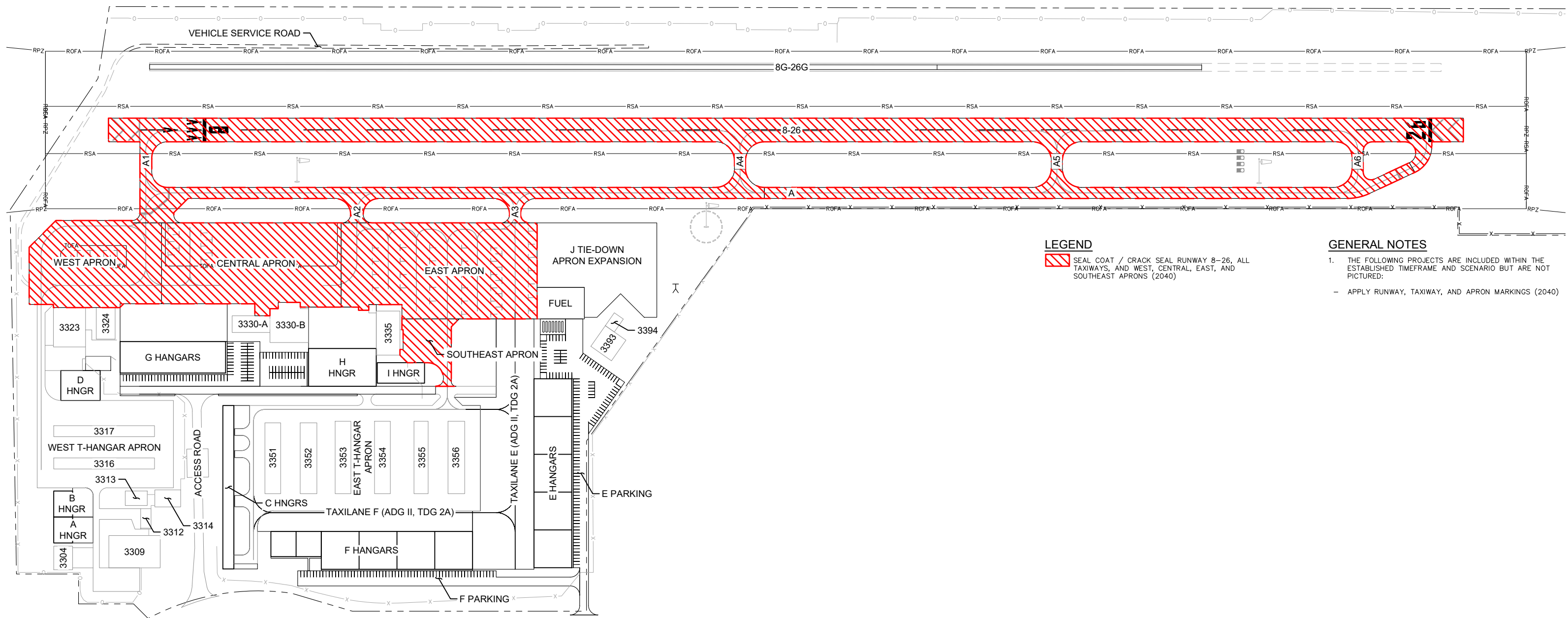
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BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

SCENARIO NO. 2, 2040 THROUGH 2041

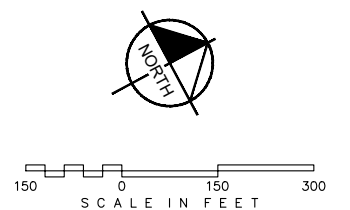
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APPENDIX G – Individual Project Cost Estimates

Specification	Description	Unit	Quantity	Unit Cost	Total
Seal Coat/Crack Seal Runway 8-26					\$ 531,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 9,965	\$ 9,965
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 3,322	\$ 3,322
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 33,217	\$ 33,217
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	1133	\$ 12	\$ 13,596
P-401-8.1	Bituminous Pavement Surface Course	TON	198	\$ 220	\$ 43,560
P-603-5.1	Bituminous Tack Coat	GAL	170	\$ 8	\$ 1,360
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	37755	\$ 5	\$ 188,775
P-620-5.2	Temporary Pavement Marking	SF	8319	\$ 2	\$ 16,638
P-620-5.3	Permanent Pavement Marking with Beads	SF	8319	\$ 7	\$ 58,233
	Engineering (10%)				\$ 37,867
	Construction Administration / Quality Assurance (10%)				\$ 37,867
	Contingency (20%)				\$ 75,733

Seal Coat/Crack Seal Runway 8G-26G					\$ 114,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 2,126	\$ 2,126
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 709	\$ 709
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 7,086	\$ 7,086
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	279	\$ 12	\$ 3,348
P-401-8.1	Bituminous Pavement Surface Course	TON	49	\$ 220	\$ 10,780
P-603-5.1	Bituminous Tack Coat	GAL	42	\$ 8	\$ 336
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	9278	\$ 5	\$ 46,390
	Engineering (10%)				\$ 8,078
	Construction Administration / Quality Assurance (10%)				\$ 8,078
	Contingency (20%)				\$ 16,155

Seal Coat/Crack Seal Taxiways A, A1, A2, A3, and A4					\$ 162,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 3,033	\$ 3,033
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,011	\$ 1,011
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 10,110	\$ 10,110
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	321	\$ 12	\$ 3,852
P-401-8.1	Bituminous Pavement Surface Course	TON	56	\$ 220	\$ 12,320
P-603-5.1	Bituminous Tack Coat	GAL	49	\$ 8	\$ 392
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	10681	\$ 5	\$ 53,405
P-620-5.2	Temporary Pavement Marking	SF	2347	\$ 2	\$ 4,694
P-620-5.3	Permanent Pavement Marking with Beads	SF	2347	\$ 7	\$ 16,429
	Engineering (10%)				\$ 11,525
	Construction Administration / Quality Assurance (10%)				\$ 11,525
	Contingency (20%)				\$ 23,049

Specification	Description	Unit	Quantity	Unit Cost	Total
Seal Coat/Crack Seal Taxiways A, A5, and A6					\$ 138,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 2,590	\$ 2,590
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 864	\$ 864
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 8,633	\$ 8,633
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	271	\$ 12	\$ 3,252
P-401-8.1	Bituminous Pavement Surface Course	TON	48	\$ 220	\$ 10,560
P-603-5.1	Bituminous Tack Coat	GAL	41	\$ 8	\$ 328
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	9012	\$ 5	\$ 45,060
P-620-5.2	Temporary Pavement Marking	SF	1903	\$ 2	\$ 3,806
P-620-5.3	Permanent Pavement Marking with Beads	SF	1903	\$ 7	\$ 13,321
	Engineering (10%)				\$ 9,841
	Construction Administration / Quality Assurance (10%)				\$ 9,841
	Contingency (20%)				\$ 19,683

Seal Coat/Crack Seal West Apron					\$ 160,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 3,000	\$ 3,000
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,000	\$ 1,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 9,998	\$ 9,998
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	366	\$ 12	\$ 4,392
P-401-8.1	Bituminous Pavement Surface Course	TON	64	\$ 220	\$ 14,080
P-603-5.1	Bituminous Tack Coat	GAL	55	\$ 8	\$ 440
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	12185	\$ 5	\$ 60,925
P-620-5.2	Temporary Pavement Marking	SF	1126	\$ 2	\$ 2,252
P-620-5.3	Permanent Pavement Marking with Beads	SF	1126	\$ 7	\$ 7,882
	Engineering (10%)				\$ 11,397
	Construction Administration / Quality Assurance (10%)				\$ 11,397
	Contingency (20%)				\$ 22,794

Seal Coat/Crack Seal Central Apron					\$ 207,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 3,874	\$ 3,874
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,292	\$ 1,292
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 12,913	\$ 12,913
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	500	\$ 12	\$ 6,000
P-401-8.1	Bituminous Pavement Surface Course	TON	88	\$ 220	\$ 19,360
P-603-5.1	Bituminous Tack Coat	GAL	75	\$ 8	\$ 600
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	16641	\$ 5	\$ 83,205
P-620-5.2	Temporary Pavement Marking	SF	1107	\$ 2	\$ 2,214
P-620-5.3	Permanent Pavement Marking with Beads	SF	1107	\$ 7	\$ 7,749
	Engineering (10%)				\$ 14,721
	Construction Administration / Quality Assurance (10%)				\$ 14,721
	Contingency (20%)				\$ 29,441

Specification	Description	Unit	Quantity	Unit Cost	Total
Seal Coat/Crack Seal East Apron					\$ 251,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 4,711	\$ 4,711
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,571	\$ 1,571
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 15,702	\$ 15,702
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	607	\$ 12	\$ 7,284
P-401-8.1	Bituminous Pavement Surface Course	TON	106	\$ 220	\$ 23,320
P-603-5.1	Bituminous Tack Coat	GAL	91	\$ 8	\$ 728
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	20219	\$ 5	\$ 101,095
P-620-5.2	Temporary Pavement Marking	SF	1621	\$ 2	\$ 3,242
P-620-5.3	Permanent Pavement Marking with Beads	SF	1621	\$ 7	\$ 11,347
	Engineering (10%)				\$ 17,900
	Construction Administration / Quality Assurance (10%)				\$ 17,900
	Contingency (20%)				\$ 35,800

Seal Coat/Crack Seal West T-Hangar Apron					\$ 169,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 3,165	\$ 3,165
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,055	\$ 1,055
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 10,548	\$ 10,548
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	426	\$ 12	\$ 5,112
P-401-8.1	Bituminous Pavement Surface Course	TON	75	\$ 220	\$ 16,500
P-603-5.1	Bituminous Tack Coat	GAL	64	\$ 8	\$ 512
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	14197	\$ 5	\$ 70,985
P-620-5.2	Temporary Pavement Marking	SF	263	\$ 2	\$ 526
P-620-5.3	Permanent Pavement Marking with Beads	SF	263	\$ 7	\$ 1,841
	Engineering (10%)				\$ 12,024
	Construction Administration / Quality Assurance (10%)				\$ 12,024
	Contingency (20%)				\$ 24,049

Seal Coat/Crack Seal East T-Hangar Apron					\$ 258,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 4,838	\$ 4,838
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,613	\$ 1,613
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 16,125	\$ 16,125
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	643	\$ 12	\$ 7,716
P-401-8.1	Bituminous Pavement Surface Course	TON	113	\$ 220	\$ 24,860
P-603-5.1	Bituminous Tack Coat	GAL	97	\$ 8	\$ 776
P-605-5.1	Crack Seal	TON	1	\$ 10,000	\$ 10,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	21416	\$ 5	\$ 107,080
P-620-5.2	Temporary Pavement Marking	SF	1202	\$ 2	\$ 2,404
P-620-5.3	Permanent Pavement Marking with Beads	SF	1202	\$ 7	\$ 8,414
	Engineering (10%)				\$ 18,383
	Construction Administration / Quality Assurance (10%)				\$ 18,383
	Contingency (20%)				\$ 36,765

Seal Coat/Crack Seal Far East Apron					\$ 13,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 234	\$ 234
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 78	\$ 78
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 780	\$ 780
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	12	\$ 12	\$ 144
P-401-8.1	Bituminous Pavement Surface Course	TON	3	\$ 220	\$ 660
P-603-5.1	Bituminous Tack Coat	GAL	2	\$ 8	\$ 16
P-605-5.1	Crack Seal	TON	0.5	\$ 10,000	\$ 5,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	396	\$ 5	\$ 1,980
	Engineering (10%)				\$ 889
	Construction Administration / Quality Assurance (10%)				\$ 889
	Contingency (20%)				\$ 1,778

Specification	Description	Unit	Quantity	Unit Cost	Total
Seal Coat/Crack Seal Southeast Terminal Apron					\$ 39,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 718	\$ 718
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 240	\$ 240
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 2,393	\$ 2,393
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	82	\$ 12	\$ 984
P-401-8.1	Bituminous Pavement Surface Course	TON	15	\$ 220	\$ 3,300
P-603-5.1	Bituminous Tack Coat	GAL	13	\$ 8	\$ 104
P-605-5.1	Crack Seal	TON	0.5	\$ 10,000	\$ 5,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	2715	\$ 5	\$ 13,575
P-620-5.2	Temporary Pavement Marking	SF	107	\$ 2	\$ 214
P-620-5.3	Permanent Pavement Marking with Beads	SF	107	\$ 7	\$ 749
	Engineering (10%)				\$ 2,728
	Construction Administration / Quality Assurance (10%)				\$ 2,728
	Contingency (20%)				\$ 5,455

Seal Coat/Crack Seal Airport Entrance (Loop) Road					\$ 341,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 6,406	\$ 6,406
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 2,136	\$ 2,136
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 21,353	\$ 21,353
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	178	\$ 12	\$ 2,136
P-603-5.1	Bituminous Tack Coat	GAL	27	\$ 8	\$ 216
P-605-5.1	Crack Seal	TON	0.5	\$ 10,000	\$ 5,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	5927	\$ 5	\$ 29,635
CDOT-403	Hot Mix Asphalt	TON	1001	\$ 175	\$ 175,175
CDOT-708	Paint	SF	342	\$ 4	\$ 1,368
	Engineering (10%)				\$ 24,343
	Construction Administration / Quality Assurance (10%)				\$ 24,343
	Contingency (20%)				\$ 48,685

Seal Coat/Crack Seal FBO Parking Area					\$ 190,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 3,558	\$ 3,558
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 1,186	\$ 1,186
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 11,860	\$ 11,860
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	96	\$ 12	\$ 1,152
P-603-5.1	Bituminous Tack Coat	GAL	15	\$ 8	\$ 120
P-605-5.1	Crack Seal	TON	0.5	\$ 10,000	\$ 5,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	3178	\$ 5	\$ 15,890
CDOT-403	Hot Mix Asphalt	TON	537	\$ 175	\$ 93,975
CDOT-708	Paint	SF	615	\$ 4	\$ 2,460
	Engineering (10%)				\$ 13,520
	Construction Administration / Quality Assurance (10%)				\$ 13,520
	Contingency (20%)				\$ 27,040

Seal Coat/Crack Seal Far East Access Road					\$ 26,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 480	\$ 480
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 160	\$ 160
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 1,597	\$ 1,597
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	50	\$ 12	\$ 600
P-401-8.1	Bituminous Pavement Surface Course	TON	9	\$ 220	\$ 1,980
P-603-5.1	Bituminous Tack Coat	GAL	8	\$ 8	\$ 64
P-605-5.1	Crack Seal	TON	0.5	\$ 10,000	\$ 5,000
P-608-5.1	Emulsified Asphalt Seal Coat	SY	1665	\$ 5	\$ 8,325
	Engineering (10%)				\$ 1,821
	Construction Administration / Quality Assurance (10%)				\$ 1,821
	Contingency (20%)				\$ 3,641

Specification	Description	Unit	Quantity	Unit Cost	Total
Rehabilitate Runway 8-26					\$ 3,444,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 63,074	\$ 63,074
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 21,025	\$ 21,025
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 210,246	\$ 210,246
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 63,074	\$ 63,074
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	37755	\$ 12	\$ 453,060
P-152-4.1	Unclassified Excavation	CY	3704	\$ 25	\$ 92,600
P-401-8.1	Bituminous Pavement Surface Course	TON	6584	\$ 220	\$ 1,448,480
P-603-5.1	Bituminous Tack Coat	GAL	5664	\$ 8	\$ 45,312
P-620-5.2	Temporary Pavement Marking	SF	7000	\$ 2	\$ 14,000
P-620-5.3	Permanent Pavement Marking with Beads	SF	7000	\$ 7	\$ 49,000
	Engineering (10%)				\$ 245,987
	Construction Administration / Quality Assurance (10%)				\$ 245,987
	Contingency (20%)				\$ 491,974

Rehabilitate Taxiways A, A1, A2, A3, and A4					\$ 934,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 17,099	\$ 17,099
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 5,700	\$ 5,700
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 56,995	\$ 56,995
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 17,099	\$ 17,099
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	10681	\$ 12	\$ 128,172
P-401-8.1	Bituminous Pavement Surface Course	TON	1863	\$ 220	\$ 409,860
P-603-5.1	Bituminous Tack Coat	GAL	1603	\$ 8	\$ 12,824
P-620-5.2	Temporary Pavement Marking	SF	2121	\$ 2	\$ 4,242
P-620-5.3	Permanent Pavement Marking with Beads	SF	2121	\$ 7	\$ 14,847
	Engineering (10%)				\$ 66,684
	Construction Administration / Quality Assurance (10%)				\$ 66,684
	Contingency (20%)				\$ 133,368

Rehabilitate Taxiways A, A5, and A6					\$ 790,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 14,458	\$ 14,458
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 4,820	\$ 4,820
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 48,193	\$ 48,193
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 14,458	\$ 14,458
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	9012	\$ 12	\$ 108,144
P-401-8.1	Bituminous Pavement Surface Course	TON	1572	\$ 220	\$ 345,840
P-603-5.1	Bituminous Tack Coat	GAL	1352	\$ 8	\$ 10,816
P-620-5.2	Temporary Pavement Marking	SF	1903	\$ 2	\$ 3,806
P-620-5.3	Permanent Pavement Marking with Beads	SF	1903	\$ 7	\$ 13,321
	Engineering (10%)				\$ 56,386
	Construction Administration / Quality Assurance (10%)				\$ 56,386
	Contingency (20%)				\$ 112,771

Specification	Description	Unit	Quantity	Unit Cost	Total
Rehabilitate East Apron					\$ 1,736,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 31,787	\$ 31,787
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 10,596	\$ 10,596
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 105,955	\$ 105,955
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 31,787	\$ 31,787
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	20219	\$ 12	\$ 242,628
P-401-8.1	Bituminous Pavement Surface Course	TON	3526	\$ 220	\$ 775,720
P-603-5.1	Bituminous Tack Coat	GAL	3033	\$ 8	\$ 24,264
P-620-5.2	Temporary Pavement Marking	SF	1882	\$ 2	\$ 3,764
P-620-5.3	Permanent Pavement Marking with Beads	SF	1882	\$ 7	\$ 13,174
	Engineering (10%)				\$ 123,968
	Construction Administration / Quality Assurance (10%)				\$ 123,968
	Contingency (20%)				\$ 247,935

Rehabilitate Central Apron					\$ 1,931,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 31,787	\$ 31,787
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 10,596	\$ 10,596
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 105,955	\$ 105,955
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 31,787	\$ 31,787
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	16772	\$ 12	\$ 201,264
P-401-8.1	Bituminous Pavement Surface Course	TON	3900	\$ 220	\$ 858,000
P-401-8.2	Major Crack Repair	LF	3020	\$ 48	\$ 144,960
P-603-5.1	Bituminous Tack Coat	GAL	5032	\$ 8	\$ 40,256
P-620-5.2	Temporary Pavement Marking	SF	1107	\$ 2	\$ 2,214
P-620-5.3	Permanent Pavement Marking with Beads	SF	1107	\$ 7	\$ 7,749
	Engineering (10%)				\$ 123,968
	Construction Administration / Quality Assurance (10%)				\$ 123,968
	Contingency (20%)				\$ 247,935

Rehabilitate West Apron					\$ 1,561,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 31,787	\$ 31,787
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 10,596	\$ 10,596
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 105,955	\$ 105,955
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 31,787	\$ 31,787
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	12277	\$ 12	\$ 147,324
P-401-8.1	Bituminous Pavement Surface Course	TON	2855	\$ 220	\$ 628,100
P-401-8.2	Major Crack Repair	LF	1441	\$ 48	\$ 69,168
P-603-5.1	Bituminous Tack Coat	GAL	3683	\$ 8	\$ 29,464
P-620-5.2	Temporary Pavement Marking	SF	1126	\$ 2	\$ 2,252
P-620-5.3	Permanent Pavement Marking with Beads	SF	1126	\$ 7	\$ 7,882
	Engineering (10%)				\$ 123,968
	Construction Administration / Quality Assurance (10%)				\$ 123,968
	Contingency (20%)				\$ 247,935

Specification	Description	Unit	Quantity	Unit Cost	Total
Reconstruct West T-Hangar Apron					\$ 2,938,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 53,805	\$ 53,805
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 17,935	\$ 17,935
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 179,348	\$ 179,348
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 53,805	\$ 53,805
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	14197	\$ 11	\$ 156,167
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	12	\$ 12	\$ 144
P-152-4.1	Unclassified Excavation	CY	1452	\$ 25	\$ 36,300
P-152-4.4	Subgrade Preparation	SY	14197	\$ 20	\$ 283,940
P-209-5.1	Crushed Aggregate Base Course	CY	2367	\$ 88	\$ 208,296
P-401-8.1	Bituminous Pavement Surface Course	TON	4951	\$ 220	\$ 1,089,220
P-603-5.1	Bituminous Tack Coat	GAL	2130	\$ 8	\$ 17,040
P-620-5.2	Temporary Pavement Marking	SF	263	\$ 2	\$ 526
P-620-5.3	Permanent Pavement Marking with Beads	SF	263	\$ 7	\$ 1,841
	Engineering (10%)				\$ 209,837
	Construction Administration / Quality Assurance (10%)				\$ 209,837
	Contingency (20%)				\$ 419,673

Reconstruct East T-Hangar Apron					\$ 4,438,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 81,264	\$ 81,264
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 27,088	\$ 27,088
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 270,880	\$ 270,880
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 81,264	\$ 81,264
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	21416	\$ 11	\$ 235,576
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	27	\$ 12	\$ 324
P-152-4.1	Unclassified Excavation	CY	2029	\$ 25	\$ 50,725
P-152-4.4	Subgrade Preparation	SY	21416	\$ 20	\$ 428,320
P-209-5.1	Crushed Aggregate Base Course	CY	3570	\$ 88	\$ 314,160
P-401-8.1	Bituminous Pavement Surface Course	TON	7469	\$ 220	\$ 1,643,180
P-603-5.1	Bituminous Tack Coat	GAL	3213	\$ 8	\$ 25,704
P-620-5.2	Temporary Pavement Marking	SF	1201	\$ 2	\$ 2,402
P-620-5.3	Permanent Pavement Marking with Beads	SF	1201	\$ 7	\$ 8,407
	Engineering (10%)				\$ 316,929
	Construction Administration / Quality Assurance (10%)				\$ 316,929
	Contingency (20%)				\$ 633,859

Reconstruct Far East Apron					\$ 87,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 1,587	\$ 1,587
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 529	\$ 529
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 5,287	\$ 5,287
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 1,587	\$ 1,587
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	396	\$ 11	\$ 4,356
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	23	\$ 12	\$ 276
P-152-4.1	Unclassified Excavation	CY	138	\$ 25	\$ 3,450
P-152-4.4	Subgrade Preparation	SY	396	\$ 20	\$ 7,920
P-209-5.1	Crushed Aggregate Base Course	CY	66	\$ 88	\$ 5,808
P-401-8.1	Bituminous Pavement Surface Course	TON	139	\$ 220	\$ 30,580
P-603-5.1	Bituminous Tack Coat	GAL	60	\$ 8	\$ 480
	Engineering (10%)				\$ 6,186
	Construction Administration / Quality Assurance (10%)				\$ 6,186
	Contingency (20%)				\$ 12,372

Specification	Description	Unit	Quantity	Unit Cost	Total
Reconstruct Southeast Terminal Apron					\$ 560,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 10,244	\$ 10,244
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 3,415	\$ 3,415
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 34,146	\$ 34,146
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 10,244	\$ 10,244
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	2715	\$ 11	\$ 29,865
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	12	\$ 12	\$ 144
P-152-4.1	Unclassified Excavation	CY	227	\$ 25	\$ 5,675
P-152-4.4	Subgrade Preparation	SY	2715	\$ 20	\$ 54,300
P-209-5.1	Crushed Aggregate Base Course	CY	453	\$ 88	\$ 39,864
P-401-8.1	Bituminous Pavement Surface Course	TON	947	\$ 220	\$ 208,340
P-603-5.1	Bituminous Tack Coat	GAL	408	\$ 8	\$ 3,264
	Engineering (10%)				\$ 39,950
	Construction Administration / Quality Assurance (10%)				\$ 39,950
	Contingency (20%)				\$ 79,900

Construct Millings Vehicle Service Road (VSR)					\$ 335,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 2,106.00	\$ 2,106
X-XXX-X.17	Place and Compact Asphalt Millings	SY	1847	\$ 150	\$ 277,050
	Contingency (20%)				\$ 55,831

Reconstruct Airport Entrance Loop Road					\$ 1,147,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 20,991	\$ 20,991
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 6,997	\$ 6,997
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 69,968	\$ 69,968
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 20,991	\$ 20,991
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	5927	\$ 11	\$ 65,197
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	14	\$ 12	\$ 168
P-152-4.1	Unclassified Excavation	CY	786	\$ 25	\$ 19,650
P-152-4.4	Subgrade Preparation	SY	5927	\$ 20	\$ 118,540
P-603-5.1	Bituminous Tack Coat	GAL	890	\$ 8	\$ 7,120
T-901-5.1	Seeding with Hydromulch	AC	1	\$ 2,240	\$ 2,240
T-905-5.1	Strip and Stockpile Topsoil (4-Inch Depth)	AC	1	\$ 4,900	\$ 4,900
T-905-5.2	Place Topsoil (4-Inch Depth)	AC	1	\$ 8,000	\$ 8,000
CDOT-304	Aggregate Base Course	CY	988	\$ 62	\$ 61,256
CDOT-403	Hot Mix Asphalt	TON	1334	\$ 175	\$ 233,450
CDOT-608-3	Concrete Pavement - 4" Depth	SY	1582	\$ 47	\$ 73,827
CDOT-708	Paint	SF	300	\$ 4	\$ 1,200
X-XXX-X.48	Install Curb and Gutter	LF	3471	\$ 30	\$ 104,130
	Engineering (10%)				\$ 81,863
	Construction Administration / Quality Assurance (10%)				\$ 81,863
	Contingency (20%)				\$ 163,725

Specification	Description	Unit	Quantity	Unit Cost	Total
Reconstruct Far East Access Road					\$ 346,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 6,321	\$ 6,321
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 2,107	\$ 2,107
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 21,070	\$ 21,070
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 6,321	\$ 6,321
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	1665	\$ 11	\$ 18,315
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	12	\$ 12	\$ 144
P-152-4.1	Unclassified Excavation	CY	186	\$ 25	\$ 4,650
P-152-4.4	Subgrade Preparation	SY	1665	\$ 20	\$ 33,300
P-209-5.1	Crushed Aggregate Base Course	CY	278	\$ 88	\$ 24,464
P-401-8.1	Bituminous Pavement Surface Course	TON	581	\$ 220	\$ 127,820
P-603-5.1	Bituminous Tack Coat	GAL	250	\$ 8	\$ 2,000
	Engineering (10%)				\$ 24,651
	Construction Administration / Quality Assurance (10%)				\$ 24,651
	Contingency (20%)				\$ 49,302

Reconstruct FBO Parking Lot					\$ 495,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 8,292	\$ 8,292
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 2,764	\$ 2,764
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 27,639	\$ 27,639
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 8,292	\$ 8,292
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	3178	\$ 11	\$ 34,958
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	19	\$ 12	\$ 228
P-152-4.1	Unclassified Excavation	CY	82	\$ 25	\$ 2,050
P-152-4.4	Subgrade Preparation	SY	3178	\$ 20	\$ 63,560
T-901-5.1	Seeding with Hydromulch	AC	1	\$ 2,240	\$ 2,240
T-905-5.1	Strip and Stockpile Topsoil (4-Inch Depth)	AC	1	\$ 4,900	\$ 4,900
T-905-5.2	Place Topsoil (4-Inch Depth)	AC	1	\$ 8,000	\$ 8,000
CDOT-304	Aggregate Base Course	CY	530	\$ 62	\$ 32,860
CDOT-403	Hot Mix Asphalt	TON	715	\$ 175	\$ 125,125
CDOT-708	Paint	SF	615	\$ 4	\$ 2,460
X-XXX-X.48	Install Curb and Gutter	LF	992	\$ 30	\$ 29,760
	Engineering (10%)				\$ 35,313
	Construction Administration / Quality Assurance (10%)				\$ 35,313
	Contingency (20%)				\$ 70,626

Specification	Description	Unit	Quantity	Unit Cost	Total
Replace Automated Weather Observation Stations (AWOS)					\$ 200,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 12,000	\$ 12,000
X-XXX-X.14	Remove Automated Weather Observing System	LS	1	\$ 20,000	\$ 20,000
X-XXX-X.15	Install Automated Weather Observing System	LS	1	\$ 100,000	\$ 100,000
	Engineering (10%)				\$ 13,200
	Construction Administration / Quality Assurance (10%)				\$ 13,200
	Contingency (20%)				\$ 26,400
Glider Terminal Area Electrical					\$ 50,000
Replace Airport Beacon					\$ 100,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Acquire Snow Removal Equipment (SRE) - Broom					\$ 40,000
Acquire Mowing Tractor w/ Attachments					\$ 30,000
X-XXX-X.26	Mowing Tractor with Attachments	EA	1	\$ 25,000	\$ 25,000
	Contingency (20%)				\$ 5,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Install East AOA Fencing					\$ 272,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 17,658	\$ 17,658
F-162-5.2	Install Wildlife Fence	LF	4905	\$ 36	\$ 176,580
	Engineering (10%)				\$ 19,424
	Construction Administration / Quality Assurance (10%)				\$ 19,424
	Contingency (20%)				\$ 38,848
Relocate and Replace Fuel Facility					\$ 1,992,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 36,476	\$ 36,476
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 12,159	\$ 12,159
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 121,584	\$ 121,584
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 36,476	\$ 36,476
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	23	\$ 12	\$ 276
P-152-4.1	Unclassified Excavation	CY	893	\$ 25	\$ 22,325
P-152-4.4	Subgrade Preparation	SY	2112	\$ 20	\$ 42,240
P-209-5.1	Crushed Aggregate Base Course	CY	352	\$ 88	\$ 30,976
P-401-8.1	Bituminous Pavement Surface Course	TON	582	\$ 220	\$ 128,040
P-501-8.2	Concrete Pavement - 11" Depth	SY	445	\$ 125	\$ 55,625
P-603-5.1	Bituminous Tack Coat	GAL	250	\$ 8	\$ 2,000
P-620-5.2	Temporary Pavement Marking	SF	564	\$ 2	\$ 1,128
P-620-5.3	Permanent Pavement Marking with Beads	SF	500	\$ 7	\$ 3,500
X-XXX-X.47	Relocate Fuel Facility	LS	1	\$ 930,000	\$ 930,000
	Engineering (10%)				\$ 142,281
	Construction Administration / Quality Assurance (10%)				\$ 142,281
	Contingency (20%)				\$ 284,561
Apply Runway, Taxiway, and Apron Markings					\$ 219,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 4,457	\$ 4,457
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 14,856	\$ 14,856
P-620-5.2	Temporary Pavement Marking	SF	16506	\$ 2	\$ 33,012
P-620-5.3	Permanent Pavement Marking with Beads	SF	16506	\$ 7	\$ 115,542
	Construction Administration / Quality Assurance (10%)				\$ 16,787
	Contingency (20%)				\$ 33,573

Specification	Description	Unit	Quantity	Unit Cost	Total
Develop Airport CATEX					\$ 150,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Update Master Plan and Airport Layout Plan					\$ 700,000
Noise Study per Master Plan Update					\$ 150,000
Update Airport Exhibit A					\$ 250,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Maintain Brunguard #2 Corp Box Hangar / Office (3309)					\$ 203,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	205	\$ 34.00	\$ 6,970
	Seal Coat Existing Steel Roof	SY	1857	\$ 49.50	\$ 91,922
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	2	\$ 15,000.00	\$ 30,000
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	531	\$ 63.00	\$ 33,453
OFFICE					
X-XXX-X.31	Replace Office HVAC System	EA	1	\$ 40,000.00	\$ 40,000
Maintain Tango One Box Hangar / Office (3312)					\$ 21,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	66	\$ 34.00	\$ 2,244
X-XXX-X.19	Seal Coat Roof	SY	228	\$ 49.50	\$ 11,286
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	189	\$ 35.00	\$ 6,615
Maintain COB Box Hangar / Office (3313)					\$ 29,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	92	\$ 34.00	\$ 3,128
X-XXX-X.19	Seal Coat Roof	SY	358	\$ 49.50	\$ 17,721
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	232	\$ 35.00	\$ 8,120
Maintain West T-Hangars (3316)					\$ 458,000
X-XXX-X.18	Remove and Replace Gutters	LF	640	\$ 34.00	\$ 21,760
	Replace Metal Roof w/ Insulated Metal Panels	SY	1245	\$ 162.00	\$ 201,690
X-XXX-X.20	Remove and Replace Sliding Hangar Door (40'x12') (10 Doors)	SF	4800	\$ 39.00	\$ 187,200
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
	Install Wild Life Mitigation	LS	1	\$ 2,000.00	\$ 2,000
Maintain West T-Hangars (3317)					\$ 458,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	640	\$ 34.00	\$ 21,760
	Replace Metal Roof w/ Insulated Metal Panels	SY	1245	\$ 162.00	\$ 201,690
X-XXX-X.20	Remove and Replace Sliding Hangar Door (40x12) (10 Doors)	SF	4800	\$ 39.00	\$ 187,200
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
	Install Wild Life Mitigation	LS	1	\$ 2,000.00	\$ 2,000
Maintain Brungard Hangar #1 (3323)					\$ 152,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	250	\$ 34.00	\$ 8,500
X-XXX-X.19	Seal Coat Roof	SY	1390	\$ 49.50	\$ 68,805
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	3	\$ 15,000.00	\$ 45,000
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	470	\$ 63.00	\$ 29,610
Maintain Specialty Flight Hangar (3324)					\$ 207,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	200	\$ 34.00	\$ 6,800
X-XXX-X.19	Seal Coat Roof	SY	675	\$ 49.50	\$ 33,413
X-XXX-X.20	Remove and Replace Sliding Hangar Door (60'x14')	SF	840	\$ 85.00	\$ 71,400
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	2	\$ 15,000.00	\$ 30,000
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	320	\$ 63.00	\$ 20,160
OFFICE					
X-XXX-X.31	Replace Office HVAC System - (Old Boiler)	EA	1	\$ 15,000.00	\$ 15,000
	Mini-Spits	EA	2	\$ 15,000.00	\$ 30,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Maintain Airport Office (3327)					\$ 42,000
OFFICE					
X-XXX-X.18	Remove and Replace Gutters	LF	120	\$ 34.00	\$ 4,080
X-XXX-X.19	New Roof - Asphalt Shingles	SY	170	\$ 54.00	\$ 9,180
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	172	\$ 23.00	\$ 3,956
X-XXX-X.31	Replace Office HVAC System	EA	1	\$ 18,000.00	\$ 18,000
X-XXX-X.40	Paint Interior Walls (Less than 25 Foot Tall Building)	LF	172	\$ 23.00	\$ 3,956
	Install New Flooring Finish	SF	172	\$ 12.00	\$ 2,064
Maintain Air Comm Corp Box Hangar (3330-A)					\$ 119,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	240	\$ 34.00	\$ 8,160
X-XXX-X.19	Seal Coat Roof	SY	660	\$ 49.50	\$ 32,670
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	2	\$ 15,000.00	\$ 30,000
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	340	\$ 35.00	\$ 11,900
OFFICE					
X-XXX-X.31	Replace Office HVAC System	EA	2	\$ 18,000.00	\$ 36,000
Maintain Neon Box Hangars (3330-B)					\$ 248,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	200	\$ 34.00	\$ 6,800
X-XXX-X.19	Seal Coat Roof	SY	1400	\$ 49.50	\$ 69,300
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	6	\$ 15,000.00	\$ 90,000
	Replace Hangar HVAC Unit - Roof Top (Swamp Cooler)	EA	2	\$ 18,000.00	\$ 36,000
OFFICE					
X-XXX-X.31	Replace Office HVAC System	EA	2	\$ 20,000.00	\$ 40,000
X-XXX-X.40	Paint Interior Walls (Less than 25 Foot Tall Building)	LF	240	\$ 23.00	\$ 5,520
Maintain Journey FBO Terminal / Hangar (3335)					\$ 402,000
HANGAR					
	Replace Membrane Roof	SY	1150	\$ 153.00	\$ 175,950
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	3	\$ 15,000.00	\$ 45,000
	Replace Hangar HVAC Unit - Roof Top	EA	2	\$ 40,000.00	\$ 80,000
X-XXX-X.34	Paint Exterior Walls (More than 25 Foot Tall Building)	LF	430	\$ 65.00	\$ 27,950
OFFICE					
X-XXX-X.31	Replace Office HVAC System	EA	2	\$ 18,000.00	\$ 36,000
X-XXX-X.40	Paint Interior Walls (Less than 25 Foot Tall Building)	LF	1600	\$ 23.00	\$ 36,800
Remove Wooden Hangar (3341)					\$ 10,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 822.80	\$ 823
X-XXX-X.30	Demolish Building	SY	242	\$ 34.00	\$ 8,228
Remove Wooden Hangar (3344)					\$ 10,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 843.20	\$ 843
X-XXX-X.30	Demolish Building	SY	248	\$ 34.00	\$ 8,432
Remove Wooden Hangar (3346)					\$ 20,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 1,808.80	\$ 1,809
X-XXX-X.30	Demolish Building	SY	532	\$ 34.00	\$ 18,088

Specification	Description	Unit	Quantity	Unit Cost	Total
Maintain East T-Hangars (3351)					\$ 243,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1250	\$ 49.50	\$ 61,875
	Reskin Bi-fold door (40'w x 15' T) (10 Doors)	EA	10	\$ 10,000.00	\$ 100,000
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
Maintain East T-Hangars (3352)					\$ 147,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1330	\$ 49.50	\$ 65,835
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
Maintain East T-Hangars (3353)					\$ 243,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1250	\$ 49.50	\$ 61,875
	Reskin Bi-fold door (40'w x 15' T) (10 Doors)	EA	10	\$ 10,000.00	\$ 100,000
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
Maintain East T-Hangars (3354)					\$ 243,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1250	\$ 49.50	\$ 61,875
	Reskin Bi-fold door (40'w x 15' T) (10 Doors)	EA	10	\$ 10,000.00	\$ 100,000
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
Maintain East T-Hangars (3355)					\$ 243,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1250	\$ 49.50	\$ 61,875
	Reskin Bi-fold door (40'w x 15' T) (10 Doors)	EA	10	\$ 10,000.00	\$ 100,000
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000
Maintain East T-Hangars (3356)					\$ 147,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	550	\$ 34.00	\$ 18,700
	Seal Coat Roof	SY	1330	\$ 49.50	\$ 65,835
	Paint Exterior Walls (14Foot Tall Building)	LF	560	\$ 30.00	\$ 16,800
	Relocate Electrical Service Panel	LS	1	\$ 25,000.00	\$ 25,000
	Install Interior Electrical Power to Units	LS	1	\$ 20,000.00	\$ 20,000

Specification	Description	Unit	Quantity	Unit Cost	Total
Maintain Private Box Hangar (3393)					\$ 191,000
	Update Building Structure	LS	1	\$ 40,000.00	\$ 40,000
HANGAR					
X-XXX-X.18	Remove and Replace Gutters	LF	160	\$ 34.00	\$ 5,440
X-XXX-X.19	Replace Metal Roof w/ only Sheeting	SY	712	\$ 49.50	\$ 35,244
X-XXX-X.20	Remove and Replace Sliding Hangar Door (50'W x 14'T)	SF	700	\$ 85.00	\$ 59,500
	Replace Hangar Radiant Tube Heaters (HVAC)	EA	2	\$ 15,000.00	\$ 30,000
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	320	\$ 65.00	\$ 20,800
Maintain Private Office (3394)					\$ 42,000
OFFICE					
X-XXX-X.18	Remove and Replace Gutters	LF	160	\$ 34.00	\$ 5,440
X-XXX-X.19	New Roof - Asphalt Shingles	SY	150	\$ 54.00	\$ 8,100
X-XXX-X.34	Paint Exterior Walls (Less than 25 Foot Tall Building)	LF	150	\$ 35.00	\$ 5,250
X-XXX-X.31	Replace Office HVAC System	EA	1	\$ 18,000.00	\$ 18,000
X-XXX-X.40	Paint Interior Walls (Less than 25 Foot Tall Building)	LF	200	\$ 23.00	\$ 4,600

Specification	Description	Unit	Quantity	Unit Cost	Total
Construct A Hangar and Apron					\$ 1,943,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 36,514	\$ 36,514
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 12,172	\$ 12,172
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 121,711	\$ 121,711
P-152-4.1	Unclassified Excavation	CY	96	\$ 25	\$ 2,400
P-152-4.4	Subgrade Preparation	SY	596	\$ 20	\$ 11,920
P-209-5.1	Crushed Aggregate Base Course	CY	199	\$ 88	\$ 17,512
P-501-8.1	Concrete Pavement - 9" Depth	SY	596	\$ 120	\$ 71,520
X-XXX-X.28	Construct New Box Hangar	SF	4950	\$ 225	\$ 1,113,750
	Engineering (10%)				\$ 138,750
	Construction Administration / Quality Assurance (10%)				\$ 138,750
	Contingency (20%)				\$ 277,500

Construct B Hangar					\$ 1,959,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 36,811	\$ 36,811
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 12,271	\$ 12,271
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 122,702	\$ 122,702
P-152-4.1	Unclassified Excavation	CY	101	\$ 25	\$ 2,525
P-152-4.4	Subgrade Preparation	SY	654	\$ 20	\$ 13,080
P-209-5.1	Crushed Aggregate Base Course	CY	218	\$ 88	\$ 19,184
P-501-8.1	Concrete Pavement - 9" Depth	SY	654	\$ 120	\$ 78,480
X-XXX-X.28	Construct New Box Hangar	SF	4950	\$ 225	\$ 1,113,750
	Engineering (10%)				\$ 139,880
	Construction Administration / Quality Assurance (10%)				\$ 139,880
	Contingency (20%)				\$ 279,761

Construct C Hangars and Pavement					\$ 6,935,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 130,343	\$ 130,343
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 43,448	\$ 43,448
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 434,474	\$ 434,474
P-152-4.1	Unclassified Excavation	CY	169	\$ 25	\$ 4,225
P-152-4.4	Subgrade Preparation	SY	2249	\$ 20	\$ 44,980
P-209-5.1	Crushed Aggregate Base Course	CY	375	\$ 88	\$ 33,000
P-401-8.1	Bituminous Pavement Surface Course	TON	785	\$ 220	\$ 172,700
P-603-5.1	Bituminous Tack Coat	GAL	338	\$ 8	\$ 2,704
X-XXX-X.70	Construct New T-Hangar	SF	18165	\$ 225	\$ 4,087,125
	Engineering (10%)				\$ 495,300
	Construction Administration / Quality Assurance (10%)				\$ 495,300
	Contingency (20%)				\$ 990,600

Construct D Hangar and Parking					\$ 4,315,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 81,102	\$ 81,102
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 27,034	\$ 27,034
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 270,338	\$ 270,338
P-152-4.1	Unclassified Excavation	CY	144	\$ 25	\$ 3,600
P-152-4.4	Subgrade Preparation	SY	400	\$ 20	\$ 8,000
CDOT-304	Aggregate Base Course	CY	67	\$ 62	\$ 4,154
CDOT-403	Hot Mix Asphalt	TON	90	\$ 175	\$ 15,750
X-XXX-X.28	Construct New Box Hangar	SF	11875	\$ 225	\$ 2,671,875
	Engineering (10%)				\$ 308,185
	Construction Administration / Quality Assurance (10%)				\$ 308,185
	Contingency (20%)				\$ 616,371

Specification	Description	Unit	Quantity	Unit Cost	Total
Construct Taxilane E					\$ 2,741,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 50,184	\$ 50,184
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 16,728	\$ 16,728
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 167,278	\$ 167,278
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 50,184	\$ 50,184
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	1665	\$ 11	\$ 18,315
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	128	\$ 12	\$ 1,536
P-152-4.1	Unclassified Excavation	CY	1196	\$ 25	\$ 29,900
P-152-4.4	Subgrade Preparation	SY	14350	\$ 20	\$ 287,000
P-209-5.1	Crushed Aggregate Base Course	CY	2392	\$ 88	\$ 210,496
P-401-8.1	Bituminous Pavement Surface Course	TON	5005	\$ 220	\$ 1,101,100
P-603-5.1	Bituminous Tack Coat	GAL	2153	\$ 8	\$ 17,224
P-620-5.2	Temporary Pavement Marking	SF	800	\$ 2	\$ 1,600
P-620-5.3	Permanent Pavement Marking with Beads	SF	800	\$ 7	\$ 5,600
	Engineering (10%)				\$ 195,715
	Construction Administration / Quality Assurance (10%)				\$ 195,715
	Contingency (20%)				\$ 391,429

Construct E Hangars					\$ 25,882,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 486,501	\$ 486,501
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 162,167	\$ 162,167
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 1,621,668	\$ 1,621,668
P-152-4.1	Unclassified Excavation	CY	667	\$ 25	\$ 16,675
X-XXX-X.28	Construct New Box Hangar	SF	72000	\$ 225	\$ 16,200,000
	Engineering (10%)				\$ 1,848,701
	Construction Administration / Quality Assurance (10%)				\$ 1,848,701
	Contingency (20%)				\$ 3,697,402

Construct E Roadway and Parking Facility					\$ 998,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 18,272	\$ 18,272
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 6,091	\$ 6,091
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 60,905	\$ 60,905
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 18,272	\$ 18,272
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	750	\$ 11	\$ 8,250
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	20	\$ 12	\$ 240
P-152-4.1	Unclassified Excavation	CY	750	\$ 25	\$ 18,750
P-152-4.4	Subgrade Preparation	SY	7822	\$ 20	\$ 156,440
P-603-5.1	Bituminous Tack Coat	GAL	1174	\$ 8	\$ 9,392
CDOT-304	Aggregate Base Course	CY	1304	\$ 62	\$ 80,848
CDOT-403	Hot Mix Asphalt	TON	1760	\$ 175	\$ 308,000
CDOT-608-1	Concrete Pavement - 6" Depth	SY	334	\$ 70	\$ 23,380
CDOT-708	Paint	SF	936	\$ 4	\$ 3,744
	Engineering (10%)				\$ 71,258
	Construction Administration / Quality Assurance (10%)				\$ 71,258
	Contingency (20%)				\$ 142,517

Specification	Description	Unit	Quantity	Unit Cost	Total
Construct Taxilane F					\$ 925,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 16,936	\$ 16,936
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 5,646	\$ 5,646
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 56,453	\$ 56,453
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 16,936	\$ 16,936
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	172	\$ 12	\$ 2,064
P-152-4.1	Unclassified Excavation	CY	406	\$ 25	\$ 10,150
P-152-4.4	Subgrade Preparation	SY	4870	\$ 20	\$ 97,400
P-209-5.1	Crushed Aggregate Base Course	CY	812	\$ 88	\$ 71,456
P-401-8.1	Bituminous Pavement Surface Course	TON	1699	\$ 220	\$ 373,780
P-603-5.1	Bituminous Tack Coat	GAL	731	\$ 8	\$ 5,848
P-620-5.2	Temporary Pavement Marking	SF	425	\$ 2	\$ 850
P-620-5.3	Permanent Pavement Marking with Beads	SF	425	\$ 7	\$ 2,975
	Engineering (10%)				\$ 66,049
	Construction Administration / Quality Assurance (10%)				\$ 66,049
	Contingency (20%)				\$ 132,099

Construct F Hangars					\$ 25,307,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 475,689	\$ 475,689
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 158,563	\$ 158,563
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 1,585,630	\$ 1,585,630
P-152-4.1	Unclassified Excavation	CY	652	\$ 25	\$ 16,300
X-XXX-X.28	Construct New Box Hangar	SF	70400	\$ 225	\$ 15,840,000
	Engineering (10%)				\$ 1,807,618
	Construction Administration / Quality Assurance (10%)				\$ 1,807,618
	Contingency (20%)				\$ 3,615,236

Construct F Roadway and Parking Facility					\$ 554,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 10,406	\$ 10,406
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 3,469	\$ 3,469
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 34,687	\$ 34,687
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 18,272	\$ 18,272
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	20	\$ 12	\$ 240
P-152-4.1	Unclassified Excavation	CY	528	\$ 25	\$ 13,200
P-152-4.4	Subgrade Preparation	SY	4606	\$ 20	\$ 92,120
P-603-5.1	Bituminous Tack Coat	GAL	635	\$ 8	\$ 5,080
CDOT-304	Aggregate Base Course	CY	705	\$ 62	\$ 43,710
CDOT-403	Hot Mix Asphalt	TON	835	\$ 175	\$ 146,125
CDOT-608-1	Concrete Pavement - 6" Depth	SY	378	\$ 70	\$ 26,460
CDOT-708	Paint	SF	414	\$ 4	\$ 1,656
	Engineering (10%)				\$ 39,543
	Construction Administration / Quality Assurance (10%)				\$ 39,543
	Contingency (20%)				\$ 79,085

Specification	Description	Unit	Quantity	Unit Cost	Total
Construct G Hangars with Apron and Parking Expansion					\$ 13,886,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 261,000	\$ 261,000
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 87,000	\$ 87,000
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 870,000	\$ 870,000
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	2981	\$ 11	\$ 32,791
P-152-4.1	Unclassified Excavation	CY	1096	\$ 25	\$ 27,400
P-152-4.4	Subgrade Preparation	SY	11206	\$ 20	\$ 224,120
P-209-5.1	Crushed Aggregate Base Course	CY	1512	\$ 88	\$ 133,056
P-501-8.1	Concrete Pavement - 9" Depth	SY	4534	\$ 120	\$ 544,080
P-603-5.1	Bituminous Tack Coat	GAL	456	\$ 8	\$ 3,648
CDOT-304	Aggregate Base Course	CY	507	\$ 62	\$ 31,434
CDOT-403	Hot Mix Asphalt	TON	684	\$ 175	\$ 119,700
CDOT-608-2	Concrete Pavement - 5" Depth	SY	245	\$ 58	\$ 14,210
CDOT-708	Paint	SF	514	\$ 4	\$ 2,056
X-XXX-X.28	Construct New Box Hangar	SF	33500	\$ 225	\$ 7,537,500
X-XXX-X.31	Demolish Building	SF	1500	\$ 20	\$ 30,000
	Engineering (10%)				\$ 991,800
	Construction Administration / Quality Assurance (10%)				\$ 991,800
	Contingency (20%)				\$ 1,983,599

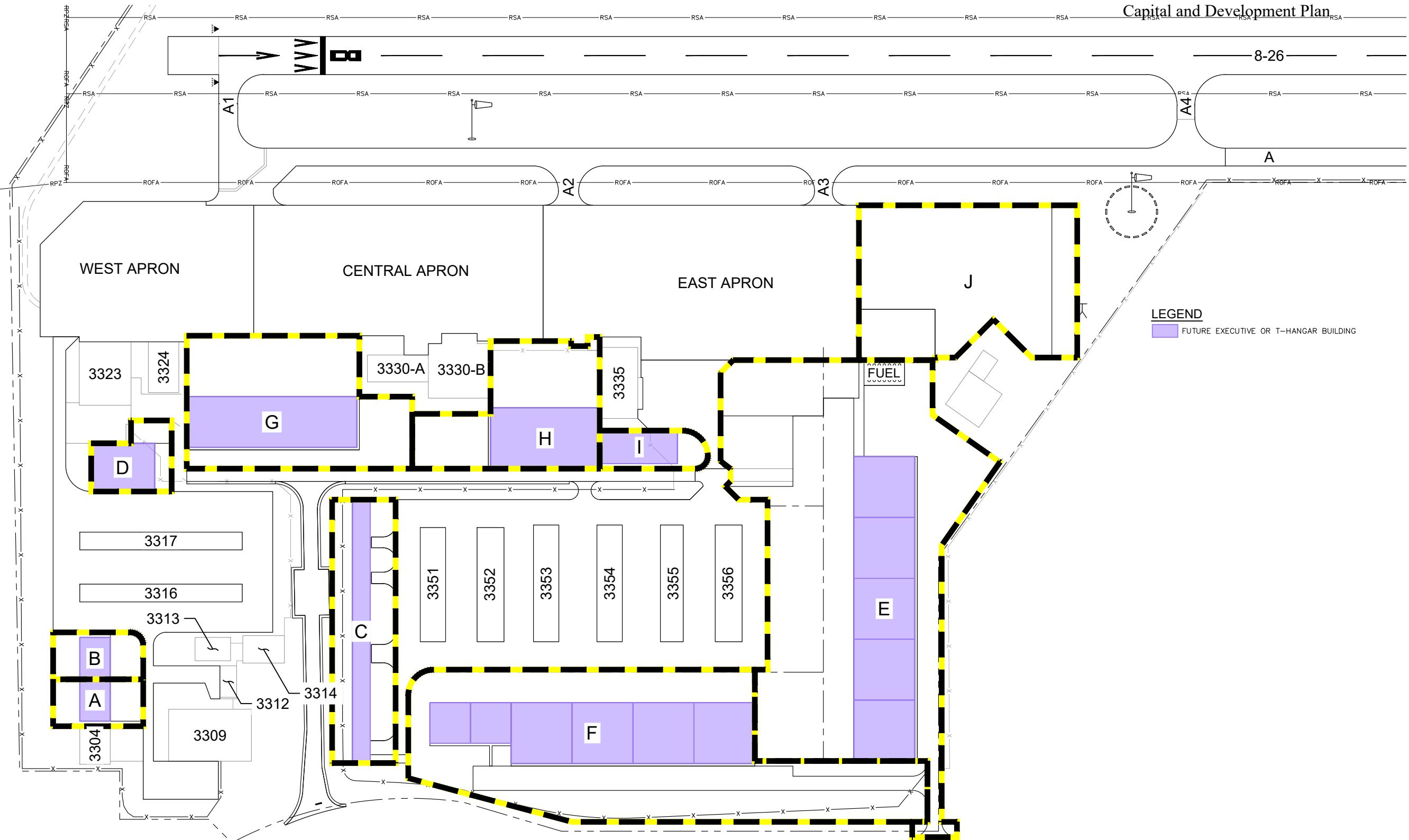
Construct H Hangar, Apron, and Parking					\$ 10,409,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 195,658	\$ 195,658
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 65,220	\$ 65,220
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 652,191	\$ 652,191
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	3178	\$ 11	\$ 34,958
P-152-4.1	Unclassified Excavation	CY	2615	\$ 25	\$ 65,375
P-152-4.4	Subgrade Preparation	SY	4978	\$ 20	\$ 99,560
P-209-5.1	Crushed Aggregate Base Course	CY	522	\$ 88	\$ 45,936
P-501-8.1	Concrete Pavement - 9" Depth	SY	3127	\$ 120	\$ 375,240
P-603-5.1	Bituminous Tack Coat	GAL	270	\$ 8	\$ 2,160
CDOT-304	Aggregate Base Course	CY	300	\$ 62	\$ 18,600
CDOT-403	Hot Mix Asphalt	TON	405	\$ 175	\$ 70,875
CDOT-608-2	Concrete Pavement - 5" Depth	SY	52	\$ 58	\$ 3,016
CDOT-708	Paint	SF	297	\$ 4	\$ 1,188
X-XXX-X.28	Construct New Box Hangar	SF	25800	\$ 225	\$ 5,805,000
	Engineering (10%)				\$ 743,498
	Construction Administration / Quality Assurance (10%)				\$ 743,498
	Contingency (20%)				\$ 1,486,995

Construct I Hangar					\$ 3,505,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 65,881	\$ 65,881
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 21,961	\$ 21,961
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 219,603	\$ 219,603
P-152-4.1	Unclassified Excavation	CY	91	\$ 25	\$ 2,275
X-XXX-X.28	Construct New Box Hangar	SF	9750	\$ 225	\$ 2,193,750
	Engineering (10%)				\$ 250,347
	Construction Administration / Quality Assurance (10%)				\$ 250,347
	Contingency (20%)				\$ 500,694

Specification	Description	Unit	Quantity	Unit Cost	Total
Construct J Tie-Down Apron Expansion					\$ 2,341,000
C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	LS	1	\$ 42,874	\$ 42,874
C-102-5.1	SWMP Installation, Maintenance, and Inspection (1%)	LS	1	\$ 14,292	\$ 14,292
C-105-6.1	Mobilization/De-Mobilization (10%)	LS	1	\$ 142,914	\$ 142,914
P-103-6.1	Survey, Layout, & Staking (3%)	LS	1	\$ 42,874	\$ 42,874
P-101-5.3	Full-Depth Bituminous Pavement Removal by Milling	SY	1282	\$ 11	\$ 14,102
P-101-5.4	Partial-Depth Bituminous Pavement Removal by Milling	SY	153	\$ 12	\$ 1,836
P-152-4.1	Unclassified Excavation	CY	1014	\$ 25	\$ 25,350
P-152-4.4	Subgrade Preparation	SY	12166	\$ 20	\$ 243,320
P-209-5.1	Crushed Aggregate Base Course	CY	2028	\$ 88	\$ 178,464
P-401-8.1	Bituminous Pavement Surface Course	TON	4243	\$ 220	\$ 933,460
P-603-5.1	Bituminous Tack Coat	GAL	1825	\$ 8	\$ 14,600
P-620-5.2	Temporary Pavement Marking	SF	2000	\$ 2	\$ 4,000
P-620-5.3	Permanent Pavement Marking with Beads	SF	2000	\$ 7	\$ 14,000
	Engineering (10%)				\$ 167,209
	Construction Administration / Quality Assurance (10%)				\$ 167,209
	Contingency (20%)				\$ 334,417
Aviation Easements (West End RPZs)					\$ 500,000
Install Electrical Vehicle Charging Stations					\$ 480,000

APPENDIX H – Potential Future Development Exhibit

8-26



LEGEND

FUTURE EXECUTIVE OR T-HANGAR BUILDING

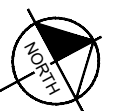
BOULDER MUNICIPAL AIRPORT (BDU)

LONG-TERM CAPITAL PLANNING

POTENTIAL FUTURE DEVELOPMENT

DRAFT EXHIBIT

INFORMATION PROVIDED HEREIN IS FOR DISCUSSIONS ON AIRFIELD CAPACITY FOR POTENTIAL DEVELOPMENT ONLY. THIS EXHIBIT IS NOT AN FAA APPROVED PLAN. THIS EXHIBIT IS NOT AN APPROVED OR ADOPTED MASTER PLANNING DOCUMENT OF THE BOULDER AIRPORT OR THE CITY OF BOULDER.



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BOULDER MUNICIPAL AIRPORT FINANCIAL REQUIREMENTS ANALYSIS

FINAL REPORT

July 11, 2024

Boulder Municipal Airport

Financial Requirements Analysis

To Operate in Compliance with FAA Obligations

Final July 11, 2024

Introduction

The City of Boulder (city) led a Community Conversation project to help City Council understand the community's desired future for the Boulder Municipal Airport (BDU). The City Council then requested an analysis of the financial implications of operating BDU under several possible funding and development scenarios. Long-term options for the airport include continuing to operate, maintain, and develop the airport or to lawfully close the airport at such time that it is feasible. The scenarios differ as to whether federal/state grants will be accepted in the future and the amount of development that could reasonably occur were BDU to remain open or lawfully close.

The scenarios estimate the net annual budget position (surplus or deficit) of the airport assuming varying levels of grant funding and various amounts of development that might be undertaken. Scenario 1 assumes that BDU would remain open and the city would resume accepting federal and state grants, whereas Scenario 2 assumes no additional grants will be accepted and BDU would lawfully close at the expiration of its last federal grant agreement.

This analysis is intended to provide a high-level assessment of the financial requirements to operate BDU under these two scenarios. The analysis makes many assumptions regarding possible market conditions, future development opportunities, third party investment opportunities, and where data was not readily available. Therefore, the analysis only provides a rough order of magnitude of the financial possibilities. The analysis should only be used as a general indicator of the financial position of the airport under the two scenarios.

Summary

Historic facility maintenance practices and leasing terms have created significant budget problems for the future. Past practices have deferred required maintenance to future years, while leasing policies have not generated sufficient revenues to adequately cover operating and maintenance expenses. Boulder Airport has operated at a budget deficit in three out of the four previous years and budget deficits are predicted to continue into the foreseeable future. This analysis concludes that significant budget deficits will occur under both scenarios unless meaningful changes in leasing policies and development strategies are made. A summary of the possible scenarios follows.

Scenario 1: Maintain and develop the Airport. This scenario assumes the airport would remain open indefinitely and the city would therefore resume accepting federal and state grants. This scenario assumes that all available undeveloped airport property would be leased to third party interests for development thereby increasing the total leasable land and airport revenues. Airport facilities would be maintained to a higher degree of permanency given the expectation the airport would remain open and additional improvements would be necessary to eliminate non-standard conditions on the airfield. The analysis suggests that the airport could be at a deficit of as much as (\$11,814,591) over the next 18 years. This CIP version does not prioritize projects or sequence their timing with affordability in mind. This study focus was to quantify a scope of magnitude illustrating capital needs with an optimum timing. The affordability of this plan was outside of this projects scope.

Important to note, this Scenario One was developed as a comprehensive review of the capital improvement needs of BDU using optimal FAA and CDOT standards but did not take the additional steps to prioritize projects or adjust the timing of project to achieve affordability of implementation within a given budget. Rather, this scenario was developed to demonstrate the order of magnitude of a responsive CIP program and the optimum timing. This scenario can be prioritized, and timelines elongated to meet the affordability of implementation under an additional scope of effort.

Scenario 2: Operate the airport compliant with grant assurances until lawful closure is feasible. This scenario assumes the city pursues a course of action to lawfully close the airport at the earliest practical time (assumed, for the purpose of this report, to be 18 years) and therefore would not accept any additional federal or state grants. As detailed in the Background section (below), the duration and applicability of each grant is 20 years. The most recent grant the city received was in 2021 and as such, the 18-year time frame was used in this analysis. Consequently, the city's grant obligations are assumed to expire in 2041¹. This scenario assumes that the city would not make capital improvements to the airport except those required to maintain the airport in accordance with federal grant assurances. This scenario changes the timing of maintenance projects suggested in Scenario 1 to improve affordability while maintaining compliance with grant assurances in implementing the capital program. Under this scenario the city would be solely responsible for the financial requirements to maintain, manage, and operate the airport, and the city would need to cover the monetary shortfall caused by loss of grant funds. The shortfall would be minimized through limited new facility developments. The analysis suggests that it could cost the city as much as (\$9,917,670) to operate and manage the airport over the next 18 years. However, these costs could be recouped by selling airport property after the airport lawfully closes. If all

¹ We understand that the FAA has suggested that certain of the city's obligations apply in perpetuity. For the purposes of this financial analysis, we assume that the city could lawfully close the airport at the expiration of its most recent grant agreement, which is further assumed to have a term of 20 years.

airport property were sold at fair market value, the net cash position would be approximately \$400,027,984.

New Revenue Assumptions

To offset budget deficits that are predicted under each scenario, this analysis makes several assumptions regarding changes in leasing policy, maintenance responsibility, development strategies, and revenue producing charges in an effort to cover costs. Primary elements of the consultants' analysis include the following assumptions and intended goals.

1. **Renegotiate Existing leases:** Regardless of their "maturity dates" offer existing tenants an opportunity to convert existing leases to longer terms (~30 to ~40 years) with appropriate rent adjustments on developed and undeveloped parcels equivalent to current Boulder market values. This will transfer ongoing O&M and capital expenses to lessees.

Goal: Increase revenues and lower the airport's annual operating costs and deficit.

2. **New leases /developments:** Tenants will assume initial and ongoing operating and maintenance and capital cost in exchange for long term leases ~ 30 to ~ 40-years. The details of this concept described in Sections 1.4 through 1.7 on page 7 of this report.

Goal: Increase revenues and lower the airport's annual operating costs and deficit with minimal to no upfront development cost to the airport/city.

a. Under Scenario Two (BDU lawfully closes in 2041) Long term lease offerings need to be offered at ~ 30 to ~40 years allowing adequate time to amortize capital investments. In 2042 if BDU is repurposed, some level of lease relief may be necessary to address the unamortized portions of any initial capital investment at fair market value. The specific formula requires further review. Proceeds from the sale of the airport land would be used to address this cost. **Goal:** Increase revenues and lower the annual operating budget with minimal to no upfront development cost to the airport/city. Unamortized lease buyout would be budget neutral since buyouts would be paid from land sale proceeds.

3. **Consumer Price Index (CPI)** adjustments will be applied to all new lease rent formulas annually.

Goal: Increase revenues annually commensurate to Boulder market conditions and cost. Potential revenues from CPI adjustments are variable depending on the assumptions in each scenario.

4. **Hangar Redevelopments:** Current facilities whose O&M and capital cost exceed lease rent revenues, will be demolished and redeveloped. Lease terms for replacement facilities would be negotiated as described in Sections 1.4 through 1.7 on page 7 of this report.

Goal: Increase revenues and lower the annual airport operating budget with minimal to no upfront development cost to the airport/city.

5. **Privatize City T-Hangars through awarding a management lease.** Transfer ongoing O&M and capital cost to the master lessee in exchange for long-term lease.

Goal: Reduces the airport annual operating budget for ongoing maintenance, preserves existing hangar revenues.

6. **Commercial non-aeronautical developments:** Three parcels to the west of the airport, separated from the runway/taxiway by Hayden Lake and shown on the Airport Master Development record, conceptually can be rezoned, and developed into leasable commercial developments. Annual commercial rate revenues would bolster the airport enterprise fund accelerating delivery of capital projects:

Goal: Increase revenues and reduces City of Boulder general fund subsidies proportionately to revenues received.

The cost recovery opportunities discussed above are examples of actions that could be considered in attempt to establish a balanced budget. **Table 1 - Potential new revenue sources** provides an extreme approximation of additional revenues that might be possible for each of the revenue concepts discussed above. The estimated revenues for the potential new revenue sources are maximum values based on many variables including market conditions, tenant negotiations, and the assumptions that would be included in each scenario.

Potential New Revenue Source	Potential New Revenues	Annual Budget Savings
Renegotiate existing leases	\$124,298 (annual)	\$120,000 (begins in 2026)
New leases / developments	\$419,482 (annual)	-
Consumer Price Index (CPI)	~\$229,800 (annual avg.)*	-
Commercial non-aeronautical Development	\$267,273 (annual)	-
Total	\$1,040,853	\$120,000

Table 1 - Potential new revenue sources

*Based on 3.1% annual CPI increase compounded over 18 years for total \$4,136,403

1. Background

Boulder Airport has had a prolonged absence of proactive pavement maintenance and management in prior years. Although the approach balanced the airport budget annually, it has contributed to existing

pavement conditions that narrow future remediation choices to more costly options of rehabilitation and or reconstruction.

Furthermore, in many cases tenant lease rates have not been adjusted regularly to keep pace with increases in the consumer price index. This has resulted in the Airport's inability to generate the revenues needed to overcome rising costs in operating and capital expenditures.

These factors are contributors to the Airport operating at a budget deficit in three out of the past four years. Current and future demands on the airport's operating and capital budgets will deplete operational reserves by the end of 2025. Modernizing the fuel farms and consolidating them into one while allowing unleaded fuel offerings, will fully deplete the financial reserve alone absent any additional attention to significant pavement issues.

Existing pavement and facility conditions suggest that BDU will continue to operate at a budget deficit unless measures are taken to enhance airport revenues and minimize capital and operating expenditures. These financial realities require BDU to take steps aligned with industry strategies regarding lease administration, developments and embracing non-aeronautical revenue producing initiatives. The most effective airport leasing strategies embrace an equalizing approach to the risk and rewards between a landlord and lessee forming partnerships.

The analysis makes various assumptions specific to the goals for each scenario. A summary of the assumptions for each scenario follows.

1.1 Scenario Assumptions

Scenario 1 – Continue to operate and develop the Airport.

- Federal and state grants will be accepted in the future,
- All undeveloped land within the airport operations area would be developed by third parties
- A more extensive capital improvement program is proposed to accommodate long-term operation of the airport.

Scenario 2 – Operate the Airport compliant with grant assurances until lawful closure is feasible.

- Federal and state grants will not be accepted in the future,
- Development of vacant airport property would occur in response to market conditions,
- All airport property will be sold at fair market value after the airport lawfully closes,
- A responsive capital improvement program is proposed in anticipation of lawful closure of the airport, and
- Lease relief is included to account for lawful closure of the airport for private investments which are not fully amortized.

Although each scenario has specific assumptions that apply to them individually, the scenarios also include assumptions about changes in policies and baseline revenues over the next 18 years that are common in both scenarios. Baseline assumptions applicable to both scenarios include:

- Budget and economic assumptions,
- Vacant land development, including non-aeronautical where revenues would support the airport enterprise fund
- Establishing landing fees and adjusting fuel flowage fees,
- Lease renegotiation requirements for O&M and capital investment in exchange for term
- Hangar privatization of the City owned T-Hangar buildings by outside entities assuming O&M and capital requirements,
- Ongoing hangar maintenance and leasehold O&M,
- Grant practices, and
- General land ownership.

Criteria common to both scenarios are discussed in greater detail below.

1.2 Budget and Economic Assumptions

Financial projections were developed using the City of Boulder's standard budget categories. The financial analysis estimated revenues and expenses for base year 2024, by evaluating recent airport budgets and consulting with the city's budget analyst. The base year budget represents the consultant's professional opinion of the cost for individual budget line items to operate and manage the airport. Base year costs were then escalated each year over the next 18 years to estimate future annual budget revenues, and O&M expenses through 2041.

Revenue sources include ground and facility rent from airport tenants, fuel flowage fees, and other revenue categories found in the Boulder Municipal Airport annual budget. Future revenue projections include additional revenues that might be possible if additional land were leased to third parties as noted in each scenario.

Revenues were escalated using several methods depending on the specific revenue line item. For some line items, revenues are tied to the number of aircraft operations or the number of based aircraft; and therefore, as aircraft operations or based aircraft increase, revenues could increase. For example, as aircraft operations increase, it is assumed more fuel will be sold and therefore fuel flowage fee revenues will increase.

Revenues for some budget line items are tied to average market conditions. Therefore, as the general market improves, revenues are projected to increase accordingly. For example, individual ground lease rates and hangar pad fees may increase over time according to adjustments in consumer prices. Therefore, some line items were escalated at consumer price index CPI rates. CPI rates were determined using the city's budget projections.

Expenses include operating and maintenance costs which the city has historically incurred. Operating and maintenance expenses include such items as employee salaries, employee benefits, materials and supplies, utilities, professional services, legal services, travel, and all other miscellaneous expenses. Operating and maintenance expenditures are generally associated with the general economy and

therefore, as consumer prices increase, operating and maintenance expenditures are assumed to increase in similar patterns. Therefore, future operating and maintenance expenditures were estimated based on forecasted changes in the consumer price index.

1.3 Fuel Flowage Fee Adjustment

To bring the airport in line with market rates at comparable airports and move towards achieving financial autonomy from general fund subsidies, the fuel flowage fee is assumed to increase in 2025 from \$.06 cents per gallon to \$.08 cents per gallon. After 2025, the fee would be adjusted annually in accordance with assumed increases in the local CPI.

1.4 Lease Rate Adjustment

The scenarios assume that future land lease rates would be updated to be in alignment with comparable airports and the Boulder Airport market. For the purposes of this analysis, land lease rates are assumed to be \$.45/sf.

1.5 Lease Renegotiation

The scenarios assume that lease rates for expired leases would be renegotiated as soon as possible, with half of all leases being renegotiated in 2025 and the remaining half of all leases being renegotiated in 2026. An evaluation of all current leases suggests that by renegotiating leases, it could increase annual airport revenues by approximately \$124,298.88 over the next 18 years. Following renegotiation of rates, the lease rates would be adjusted annually in alignment with increases in the Consumer Price Index (CPI).

1.6 City T-Hangar Privatization

The scenarios assume that all t-hangars would be privatized to encourage investment in existing facilities by third parties. This opportunity assumes that a long-term lease would be offered in exchange for sufficient capital investment in t-hangars to maintain and upgrade existing facilities. This concept would shift future maintenance costs to third parties removing those costs from the airport budget. To avoid a reduction in existing revenues, the concept would require a Minimum Annual Guarantee (MAG) be included in lease negotiations. The MAG is assumed to be equal to the revenues currently received from hangar rentals, which is estimated at \$310,000 annually.

1.7 Ongoing Hangar Maintenance

In addition to renegotiating expired lease rates, the responsibility for ongoing maintenance of each hangar is proposed to be transferred to third parties in exchange for longer lease terms. It is assumed that rows of t-hangars would no longer be managed by airport staff but would be leased to one or more FBOs or hangar management companies. Consequently, ongoing maintenance of individual hangars would become the responsibility of individual hangar tenants, and third-party management companies for rows of t-hangars. It is assumed that half of all leases would be transferred to other parties during 2025, thereby reducing airport maintenance costs by \$60,000 annually. The second half of all leases would be transferred to other parties during 2026, thereby reducing airport maintenance costs by an additional \$60,000 annually. Beginning in 2026, it is assumed that airport maintenance costs would be reduced by a total of \$120,000 annually and thereafter. Creative ideas like these are necessary to remove costs from

airport expenses in order to close the gap between airport revenues and expenses. A summary of the potential costs that would be negotiated with tenants to maintain existing facilities is shown below in **Table 2 - Estimated facility maintenance costs.**

Year	Base Year Costs	FY 2024
Scenario No. 1 - Continue to Operate and Maintain the Airport		
Maintain Existing Hangar Aprons		
Reconstruct West T-Hangar Apron (EPCI 45) - 3	\$ 2,938,000	Renegotiate
Seal Coat / Crack Seal West T-Hangar Apron	\$ 169,000	Renegotiate
Reconstruct East T-Hangar Apron (EPCI 65) - 3	\$ 4,438,000	Renegotiate
Seal Coat / Crack Seal East T-Hangar Apron	\$ 258,000	Renegotiate
Reconstruct Far East Apron (EPCI 35) - 3	\$ 87,000	Renegotiate
Seal Coat / Crack Seal Far East Apron	\$ 13,000	Renegotiate
Reconstruct Far East Apron Access Road (EPCI 40)	\$ 346,000	Renegotiate
Seal Coat / Crack Seal Far East Apron Access Road	\$ 26,000	Renegotiate
Reconstruct FBO Parking Area (EPCI 15)	\$ 495,000	Renegotiate
Seal Coat / Crack Seal FBO Parking Area	\$ 190,000	Renegotiate
Glider Terminal Area Electrical - 3	\$ 50,000	Renegotiate
Existing Hangar Aprons - Base Year Costs SUBTOTAL	\$ 9,010,000	
Maintain Existing Hangar Buildings / Leasehold Renewals		
Maintain Brungard #2 Corp Box Hangar / Office (3309) - 2	\$ 203,000	Renegotiate
Maintain Tango One Box Hangar / Office (3312) - 2	\$ 21,000	Renegotiate
Maintain COB Box Hangar / Office (3313) - 2	\$ 29,000	Renegotiate
Maintain West T-Hangars (3316) - 3	\$ 458,000	Renegotiate
Maintain West T-Hangars (3317) - 3	\$ 458,000	Renegotiate
Maintain Brungard Hangar #1 (3323) - 2	\$ 152,000	Renegotiate
Maintain Specialty Flight Hangar (3324) - 2	\$ 207,000	Renegotiate
Maintain Air Comm Corp Box Hangar (3330-A) - 2	\$ 119,000	Renegotiate
Maintain Neon Box Hangars (3330-B) - 2	\$ 248,000	Renegotiate
Maintain Journey FBO Terminal / Hangar (3335) - 2	\$ 402,000	Renegotiate
Maintain East T-Hangars (3351) - 3	\$ 243,000	Renegotiate
Maintain East T-Hangars (3352) - 3	\$ 147,000	Renegotiate
Maintain East T-Hangars (3353) - 3	\$ 243,000	Renegotiate
Maintain East T-Hangars (3354) - 3	\$ 243,000	Renegotiate
Maintain East T-Hangars (3355) - 3	\$ 243,000	Renegotiate
Maintain East T-Hangars (3356) - 3	\$ 147,000	Renegotiate
Maintain Private Box Hangar (3393) - 2	\$ 191,000	Renegotiate
Maintain Private Office (3394) - 2	\$ 42,000	Renegotiate
Existing Hangar Buildings / Renewals - Base Year Costs SUBTOTAL	\$ 3,796,000	
Existing Hangar / Apron Maintenance - Base Year Costs SUBTOTAL	\$ 12,806,000	

Table 2 - Estimated facility maintenance costs

Source: Kimley Horn

1.8 Implement Landing Fees

A survey of landing fees at comparable airports was not conducted. However, landing fees could be explored as a potential source of cost-recovery. Assessing landing fees for non-based aircraft may be an option for consideration to make local rates lower. It is estimated that charging \$2.50 per landing for non-based aircraft could generate as much as \$35,000 annually. This amount would be escalated each year in alignment with adjustments in the CPI.

1.9 Federal and state grant program

49 U.S. Code Ch. 471 *Airport Development* establishes the authority for the federal government to issue grants to public agencies for planning and development of public-use airports. Grants are issued to public agencies and airports in accordance with the policies outlined in the Airport Improvement Program (AIP). In accordance with AIP guidance, the city is entitled to receive \$150,000 annually in federal grants from the FAA. To help small airports undertake meaningful projects, grants may be grouped and issued in \$600,000 increments every 4 years.

In addition to funds the city is entitled to receive under the AIP program, the FAA often issues discretionary grants to fund larger capital projects that airports would otherwise be unable to afford. The FAA has occasionally provided additional discretionary grants to the city to fund larger capital projects. As the name suggests, discretionary grants are issued at the discretion of the FAA based on the needs of all airports within the entire air transportation system, and there is no guarantee as to when or the amount of funds the city could receive in the future.

In past years, the City of Boulder has accepted various FAA and state grants to help fund new or maintain existing infrastructure. FAA funds have been used for a wide range of projects including purchasing capital equipment, maintaining pavements, and acquiring land. As a condition of receiving federal funds the city agrees to comply with certain obligations (or assurances) to maintain and operate airport facilities safely and efficiently and in accordance with specified conditions promulgated by FAA. The duration of such obligations is generally 20 years from the date each grant agreement is executed ².

The city has historically received approximately \$11,846,000 in federal grants since 1982 (an average of \$289,000/yr.). In addition to federal grants, the city has received approximately \$2,165,000 in state funding since 1992. Since 2020, the city has been offered approximately \$1,701,000 in grants, of which \$31,000 has been accepted and used. Recently, a grant offer from the Colorado Division of Aeronautics for \$300,000 was declined by the city leaving \$1,370,000 in grants that the city could still accept. A summary of recent grant offers is shown in **Table 3 - Grants made available to city**.

² We understand that the FAA has suggested that certain of the city's obligations apply in perpetuity. For the purposes of this financial analysis, we assume that the city could lawfully close the airport at the expiration of its most recent grant agreement, which is further assumed to have a term of 20 years.

Grant Type	Amount	Year Available
BIL	\$145,000	2021
BIL	\$145,000	2022
BIL	\$145,000	2023
BIL	\$145,000	2024
BIL	\$145,000	2025
CARES	\$31,000	2020*
ARPA	\$32,000	2021
CRRSAA	\$13,000	2022
CO DoA	\$300,000	2024
FAA Ent.	\$600,000	2025
Total	\$1,701,000	
* Grant accepted		

Table 3 - Grants made available to city

1.10 Airport Property

Airport property interests consist of both fee title rights and easements. A Property Map - Exhibit A was prepared as part of the Airport Master Plan completed in 2007. At the time of the 2007 Airport Master Plan, the airport encompassed approximately 179 acres. However, since completion of the master plan, approximately 2.6 acres of land were sold for private development leaving 176.4 acres of airport land. In addition to the fee title land, the city also holds aviation easements over approximately 14.33 acres. Over the history of the Airport, property interests were acquired through a combination of using city funds and federal grants. Several tracts of land located west of Hayden Lake are owned by the city although they are not contiguous to the airport. **Figure 1 - Property map** shows the location of the various property interests acquired by the city.

Of the 176.4 acres currently comprising airport property, two parcels (Tract 1 and Tract 4 Parcel I) were acquired in fee title using federal funds. These tracts encompass 37.93 acres, resulting in 138.47 acres of remaining airport property which was not acquired with federal assistance or conveyed by the federal government.

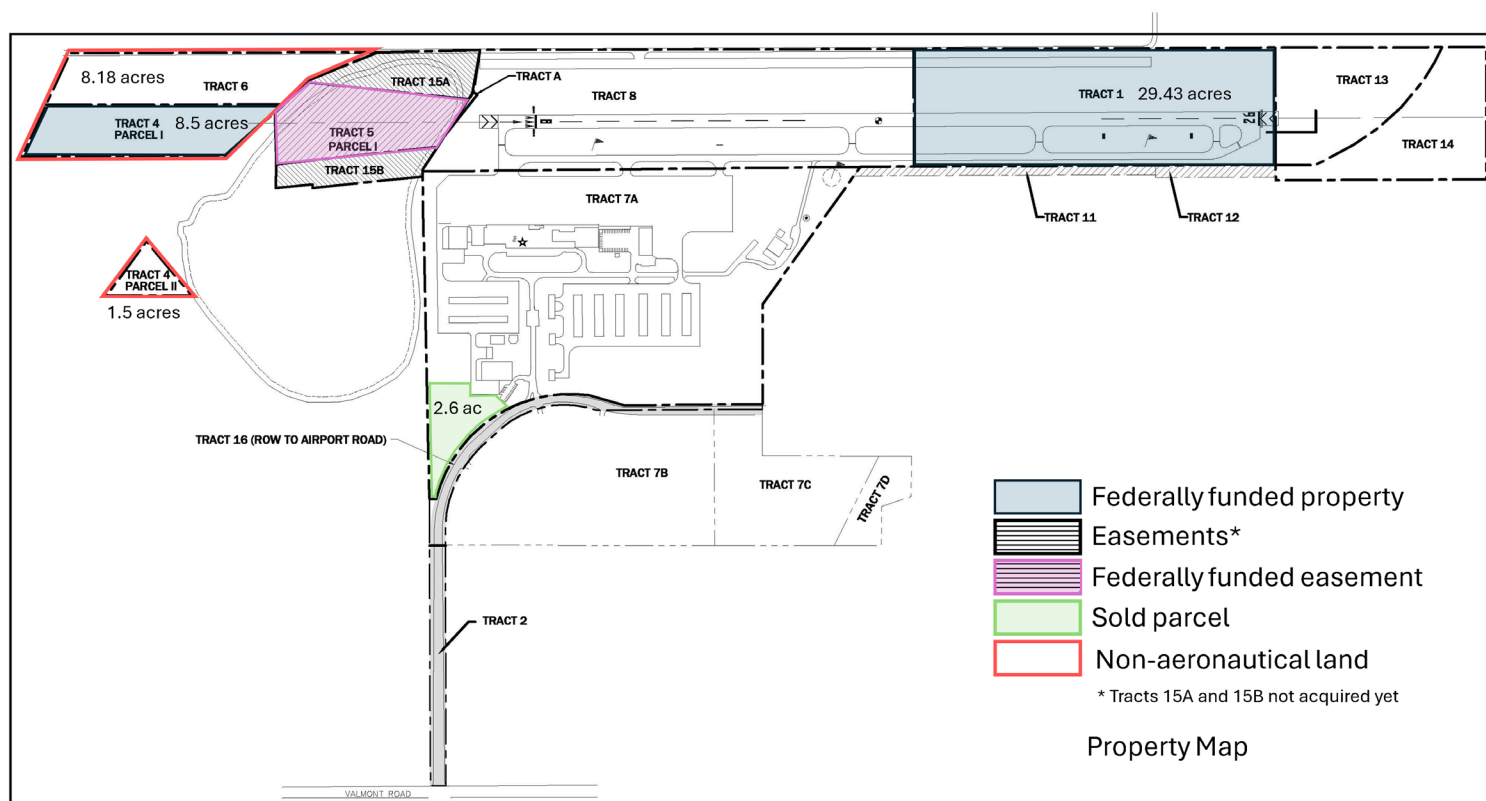


Figure 1 - Property map

Source: Barnard Dunkelberg & Company

In addition to fee title parcels, Tract 5-Parcel 1 of approximately 8.2 acres, and Tract 5-Parcel 2 of approximately 3.3 acres are aviation easements that were acquired using federal funds. **Table 4 - Summary of land interests** shows the various property interests acquired by the city.

Interests	Fee Title (acres)	Easements (acres)
City funded	141.07	2.83
FAA funded	37.93	11.5
Total	179	14.33
Interests sold*	-2.6	0
Remaining	176.4	14.33

Table 4 - Summary of land interests

*Velo Development

1.11 Non-Aeronautical Development Opportunities

Three tracts of airport land (Tract 6, Tract 4 Parcel I, and Tract 4 Parcel II) are not contiguous to the primary airport property and the existing infrastructure, and therefore access to runways and taxiways is not possible. Consequently, these tracts can only be developed for non-aeronautical uses. For the purposes of this analysis, it is assumed that these three parcels would be leased by the Airport to generate additional airport enterprise fund revenues to offset potential airport budget deficits. We modelled a development scenario consistent with FAA direction regarding these parcels as an alternative revenue source to address financial shortfalls.

Since two of the tracts are located along the extended runway centreline, it is assumed that only 75% of the available land could be leased to account for potential height limitations and runway protection zone. For the purposes of this analysis, it is assumed the tracts could be leased beginning in 2030 for non-aeronautical purposes at \$.45/sf, which is the same as the assumed future rates on the airport. However, non-aeronautical use of airport property must generally be at fair market value rent. Accordingly, a real estate appraisal is needed to determine the appropriate non-aeronautical lease rates for commercial property in this area ensuring compliance with FAA grant assurances.

As shown in **Table 5 - Potential revenue from non-aeronautical leases**, leasing these three parcels west of the contiguous airport land could increase land lease revenues by approximately \$267,273 per year in today's dollars. This amount is then assumed to increase by 3.1% annually in alignment with CPI. The analysis assumes that several years would be required to change zoning, advertise, receive proposals, negotiate agreements, and build before the tracts could be leased. Therefore, the non-aeronautical parcels are added to the airport revenues in 2030. Again, it is assumed that the land would be leased at current airport ground lease rates, however an appraisal is recommended to determine the fair market rental value for these parcels, ensuring compliance with Boulder's FAA grant assurances.

Tract	Area (acres)	Assumed Developable Area (75%)	Assumed Lease Rate/sf	Potential Annual Lease Revenue
4 Parcel 1	8.50	6.38	\$0.45	\$124,963
4 Parcel II	1.50	1.13	\$0.45	\$22,052
6	8.18	6.14	\$0.45	\$120,258
Total	18.18	13.64		\$267,273

Table 5 - Potential revenue from non-aeronautical leases

1.12 Proposed Capital Projects

In addition to annual O&M expenditures, the City of Boulder will likely incur costs for capital equipment and facilities that need to be maintained to preserve the airport in compliance with FAA standards and to satisfy lease obligations. Therefore, numerous projects and several pieces of equipment are included in the financial analysis. Project needs for each scenario were determined through discussions with the

Airport Manager; the Airport's Facilities / Operations Manager; Airport On Call technical vendors; the airport's engineering consultant; considering prudent industry practices for maintaining pavements, buildings, and equipment; considering industry practices for equipment replacement; reviewing the scope and timing of previous capital improvements; reviewing estimates of equipment/facility existing conditions and life expectancies; considering future growth and demand for facilities; and the consultants best professional judgement regarding practices to properly manage and maintain a public use airport.

Capital project types vary based on their purpose. Certain projects will be required to maintain the existing airport infrastructure and ensure continuous operation of facilities in their current physical condition; while others may be required to replace worn, obsolete, and failing equipment and facilities because they are expected to reach the end of their useful life.

Costs for projects were estimated in 2024 dollars to establish baseline costs assuming the projects were implemented, or equipment acquired today. The probable year of equipment acquisition or project implementation was estimated by applying best engineering practices to determine the number of years that baseline costs would need to be escalated for each capital item. Capital costs were then escalated annually at 3.1 % based on future projections of consumer price indices.

2. Analysis

2.1 Scenario 1 – Maintain and Develop Airport

Scenario 1 assumes there is significant unmet demand for aviation facilities in the region and that BDU could be developed to meet regional demands and increase airport lease revenues. Therefore, Scenario 1 assumes the airport would remain open. The city would continue to accept federal and state grants and leverage developments for additional revenues to pay for ongoing capital expenses while seeking financial autonomy from general fund subsidies.

2.1.1 Scenario 1 Assumptions

Scenario 1 assumes that all vacant property within the airport operations area would be made available for development by third parties. This approach requires significant changes to airport lease terms while rates and charges would be adjusted to align with comparable airports thereby moving the airport towards self-sufficiency from any general fund subsidies. The scenario assumes that the future lease rate would be approximately \$0.45/sf. The proposed lease rate is greater than existing lease rates because it has been several years since leases were negotiated and rates should be brought to current market values. This rate is an assumption requiring further assessment of Boulder Airport's rents and charges to included comparable airports and the actual expenses needed to be covered by airport funds. Further analyses was outside of the scope of this effort therefore the assumption of \$.45 per square foot was made for pre-planning efforts of this study.

Because facilities would continue to operate indefinitely, it is assumed that airfield pavements and facilities would be maintained to a higher degree and therefore pavements would be rehabilitated and/or reconstructed as needed to ensure long-term usefulness. This scenario assumes that pavement maintenance would occur at regular intervals consistent with industry practices. It is assumed that crack seals and seal coat maintenance would occur every five (5) years, major airfield rehabilitation would occur

once every 15 years, and other pavement maintenance projects would occur every 20 years. In addition, buildings, facility and equipment maintenance and repairs would occur at regular intervals to extend the useful life of each facility. The proposed capital projects would also include improvements for fencing and weather equipment.

Important to note, this Scenario One was developed as a comprehensive review of the capital improvement needs of BDU using optimal FAA and CDOT standards but did not take the additional steps to prioritize projects or adjust the timing of project to achieve affordability of implementation within a given budget. Rather, this scenario was developed to demonstrate the order of magnitude of a responsive CIP program and the optimum timing. This scenario can be prioritized, and timelines elongated to meet the affordability of implementation under an additional scope of effort.

2.1.2 Scenario 1 Potential Development

The scenario assumes that all undeveloped airport property would be made available to third party interests for development thereby increasing total leasable land and airport revenues. **Figure 2 - Draft conceptual capital development plan** shows the maximum developable area that is available for third party development. The map shows various parcels that could be developed incrementally over several years in response to market demands. Approximately 21.40 additional acres of land could be leased under this scenario.

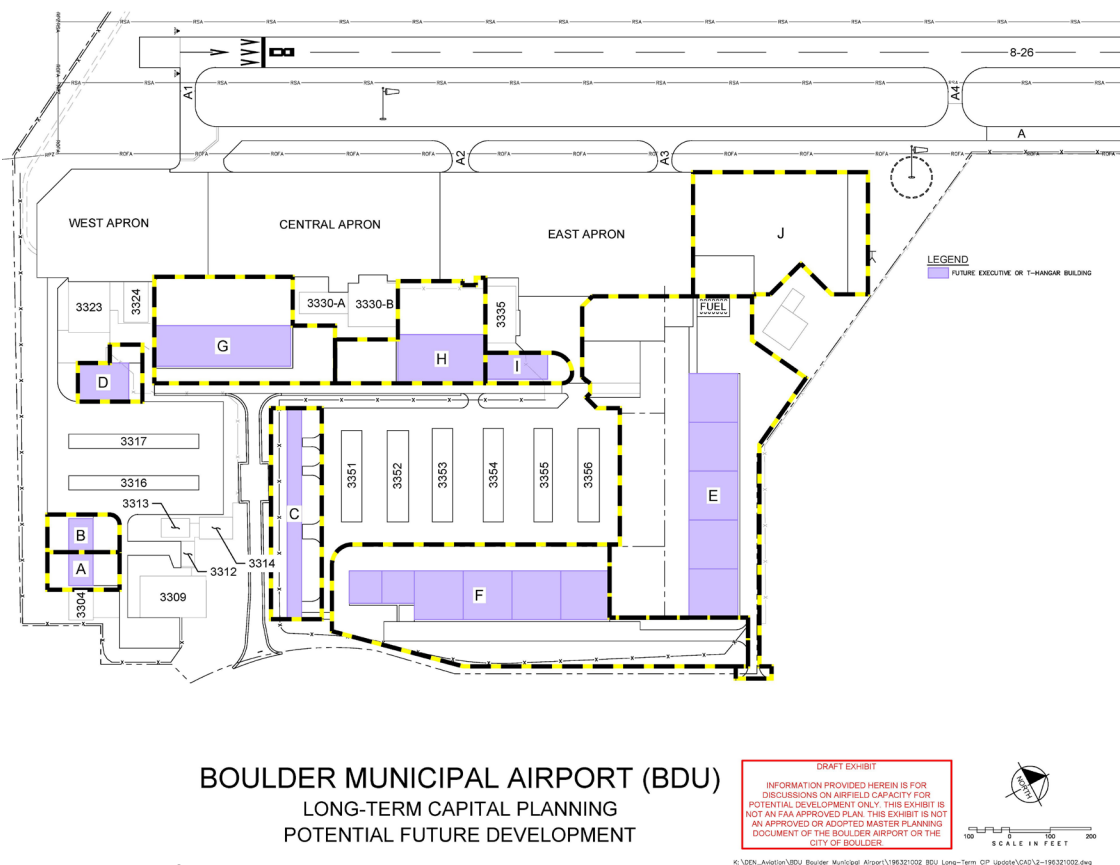


Figure 2 - Draft conceptual capital development plan
Source: Kimley Horn

To offset predicted budget deficits more quickly, it is assumed that significant portions of available airport property could be developed before 2030 and the airport property would be fully developed by 2036. Development scenarios assume that a reasonable amount of time is needed to solicit proposals, negotiate lease terms, and then to design and construct facilities. These assumptions are used to estimate when additional land lease revenues could be added to total revenues. As shown in **Table 6 - Assumed development schedule and potential lease revenues**, future development is assumed to occur in multiple phases over several years and begin generating revenues in 2027. Additional development would be completed in the years indicated. Scenario 1 assumes also that existing lease rates would be escalated in the future in alignment with adjustments in the CPI.

Parcel	Area (acres)	Assumed Lease Rate/sf	Proposed Development Year	Potential Annual Lease Revenue
A	0.33	\$0.45	2027	\$6,468.66
B	0.33	\$0.45	2027	\$6,468.66
C	1.67	\$0.45	2028	\$32,735.34
D	0.52	\$0.45	2028	\$10,193.04
E	7.64	\$0.45	2030	\$149,759.28
F	4.52	\$0.45	2032	\$88,601.04
G	2.1	\$0.45	2030	\$41,164.20
H	1.1	\$0.45	2034	\$21,562.20
I	0.32	\$0.45	2034	\$6,272.64
J	2.87	\$0.45	2036	\$56,257.74
Total	21.4			\$419,482.80

Table 6 - Assumed development schedule and potential lease revenues

It is assumed that all parcels would be leased at \$.45/sf although the rate for each parcel would most likely vary depending on negotiations with prospective tenants. Lease revenues are projected to increase in increments as development occurs. Maximum revenues would only be realized after all land is developed.

Table 6 - Assumed development schedule and potential lease revenues indicates that annual airport revenues in today's dollars could increase by \$419,482 per year once all parcels are developed. After development of each parcel is completed, it is assumed that revenues would be escalated by 3.1% annually thereby increasing total revenue by an estimated \$5,324,196 between 2027 through 2041. This rate is an assumption requiring further assessment of Boulder Airport's rents and charges to included comparable airports and the actual expenses needed to be covered by airport funds. This level of analyses is outside of the scope of this effort therefore the assumption of \$.45 per square foot for pre-planning efforts of this study is being used to illustrate a rough order of magnitude.

Scenario 1 predicts growth in based aircraft and operations because of the possible development of additional hangars by third parties. This scenario therefore assumes an additional increase in fuel sales caused by increased aviation activity.

The Scenario 1 analysis suggests that the net cash needed to operate and manage the airport could be approximately (\$11,814,591) over the next 18 years. In accordance with federal grant assurance obligations, all revenues would need to be reinvested in the airport.

2.2 Scenario 2 – Operate the Airport Compliant with Grant Assurances until Closure is Feasible

City Council is seeking to understand the financial feasibility of managing, maintaining, and operating the airport by using only revenues generated at the airport or subsidies from general fund revenues if airport closure is lawfully pursued. A budget evaluation was performed using the same process in Scenario 2 as was used for Scenario 1 although the assumptions have been changed to align with the intended goal.

Scenario 2 assumes the city would need to fulfil current federal grant obligations throughout the duration of the most recent grant agreement. The most recent FAA Airport Improvement Program (AIP) grant was accepted in 2021. Because two years has already passed, the city is obligated to maintain and operate the airport for an additional 18 years or until 2041. After 2041, it is assumed for the purposes of this financial analysis that the city would lawfully close the airport. This scenario also assumes that the city would be required to reimburse the FAA for federal funds received by the city to purchase airport land.

Scenario 2 assumes no grants will be accepted over the next 18 years requiring the City of Boulder to absorb any monetary shortfall caused by loss of grant funds. The choice to accept federal and state grants is voluntary; however, the contractual obligations to comply with grant assurances for 20 years begins each time a new federal grant is accepted. Therefore, it should be noted that if the city decides to accept any AIP grant over the next 18 years, its grant assurance obligations will be renewed for an additional 20 years from the date a grant is accepted.

2.2.1 Scenario 2 Assumptions

Scenario 2 assumes no additional federal or state grants would be accepted in the future, the airport would be lawfully closed at the end of 18 years, and at that time in 2041, all airport property would be sold at fair market value following airport closure.

Scenario 2 scenario assumes the airport will remain in its current physical configuration with the exception that minimal development of hangars would be considered to be constructed by third parties, with the understanding that the airport would lawfully close in 2041 (18 years). Third party capital improvements to develop hangars are assumed to receive lease terms of up to 40 years with some level of “lease relief” in the form of a refund for a portion of the unamortized development.

It is also assumed that development after 2030 would likely not be realistic since the remaining use of a facility would be only 10 years making investment difficult at best to recoup. This assumption should be further studied beyond this effort especially for smaller developments in the context of lease offerings of 20 years with some form of “lease relief” in the form of a refund for a portion of the unamortized development.

Given the previously mentioned “lease relief” clause allowing for a partial refund for a portion of the unamortized improvement to occur to attract developments and minimize general fund subsidies, the

consideration of additional development under this scenario is a theoretical example that is highly variable subject to market conditions, the economy, and negotiations with the interested party.

2.2.2 Scenario 2 Methodology

To evaluate the financial feasibility of lawfully closing the airport, annual budget projections were prepared to estimate the surplus and/or deficit that would occur each year if FAA and state grant funds were no longer accepted. The financial analysis uses a traditional budgetary methodology to estimate airport revenues and expenditures in each of the future 18 years.

Other increases in rates and charges assumed in Scenario 1 are also assumed in Scenario 2. Revenue projections explicitly exclude FAA and Colorado State entitlement and discretionary grants. This is because the scenario assumes that the city will not accept any grants to avoid extending its grant assurance obligations another 20 years.

Scenario 2 assumes that the number of based aircraft would increase only slightly if additional development occurs, but the number of aircraft operations would increase consistent with the FAA's Terminal Area Forecast modelling tool.

2.3 Scenario 2 Potential Development

Scenario 2 assumes that only portions of undeveloped airport property would likely be developed due to the proposed lawful closure of the airport assumed to occur 2041. Scenario 2 assumes a similar timeline is needed to solicit proposals, negotiate lease terms, and then to design and construct facilities. Therefore, it is assumed that new development would occur in 2027 and that no other development would be initiated after 2030. As shown in **Table 7 - Assumed development schedule for Scenario 2**, potential additional development would be completed in the years indicated. Scenario 2 assumes also that existing lease rates would be escalated in the future in alignment with adjustments in the CPI.

Parcel	Area (acres)	Assumed Lease Rate/sf	Proposed Development Year	Potential Annual Lease Revenue
A	0.33	\$0.45	2027	\$6,468.66
B	0.33	\$0.45	2027	\$6,468.66
C	1.67	\$0.45	2028	\$32,735.34
D	0.52	\$0.45	2028	\$10,193.04
Total	2.85			\$55,865.70

Table 7 - Assumed development schedule for Scenario 2

2.4 Boulder Colorado Land Value Assumptions

City staff discussions with local real estate agents and local builders recommend that property values at the airport would be closer to \$2,000,000 per acre in today's dollars. For the purposes of this analysis \$2,000,000/acre was used to estimate 2024 land values. For a more accurate estimate of land values, a formal real estate appraisal is recommended.

2.5 Assumptions Regarding Sale of Airport Property

Because Scenario 2 assumes that all airport property would be sold at fair market value at the end of the scenario horizon, it is assumed that a capital and administrative cost will be incurred at the end of the 18-year grant obligation period to cover transaction costs (real estate fees, environmental studies, and legal fees) and some part of unamortized portion of new developments, associated with selling airport property after airport closure.

Using the assumed current market value of \$2,000,000/acre, the current value of the entire 176.4 acres of airport property is estimated at \$352,800,000 in 2024 dollars. Escalating current values to 2041, the airport could be valued at an estimated \$550,247,596 million in 2041. Of this amount, the 2041 value of the land which was not acquired with federal assistance or conveyed by the federal government is estimated at \$431,931,885.

Transaction costs were estimated to be four percent of the total property value. Therefore the 2024 present-day transaction costs to sell all land was estimated to be approximately \$14,112,000. Escalating this amount through the final year transactions would occur, the fee to sell all airport property is estimated to be valued at \$21,986,496 in 2041.

According to recent correspondence received from FAA, the city may be required to reimburse FAA at fair market value for its share of land that was acquired with federal assistance.

It is assumed that reimbursement to FAA would be required based on land values at future market rates rather than the original grant amount received by the city. Therefore, it is estimated the city would need to repay FAA approximately \$118,315,710 in 2041 for the 37.93 acres acquired using federal funds³. This is based on an estimated current market value of \$75,860,000 in 2024 which was then escalated through 2041 to the expected year of sale. **Table 8 - Estimated land transaction costs** shows a summary of the costs related to land values and sale.

³ Because the purpose of the easement is to ensure land use compatibility with the airport, we assume for the purposes of this report that the easements would be of no further value were the airport to lawfully close.

Description	Area (acres)	Assumed Land Value (2024)	Estimated land Value (2024)	Estimated Land Value (2041)	Real Estate Transaction Costs (4%)	Estimated Revenue (2041)
Entire Airport	176.4	\$2,000,000	\$352,800,000	\$550,247,595	\$21,986,496	\$528,261,099
FAA Funded Land	37.93	\$2,000,000	\$75,860,000	\$118,315,710	\$4,732,628	-
City Funded Land	138.47	\$2,000,000	\$276,940,000	\$431,931,885	\$17,253,868	\$414,678,017

Table 8 - Estimated land transaction costs

2.6 Summary of Scenario 2

The analysis indicates that BDU will operate at a deficit each year throughout the future without the support of FAA and state grants. Over the next 18 years the net cash position to continue operating the airport in compliance with FAA grant assurances is estimated at negative (\$9,917,670). Over 18 years, an annual average City of Boulder subsidies of \$550,982 would be necessary to fund ongoing operation of the airport until it lawfully closes. Following lawful airport closure, the property could be sold to reimburse the city general fund. After sale of all airport land at fair market value and reimbursing FAA for federal grants received to acquire land, the city would realize a positive balance of \$400,027,984.

3. Scenario Comparison

A comparison of the Scenarios 1 and 2 is shown below in **Table 9 - Scenario comparison**.

Scenario	Capital Program Cost	Potential revenue from additional land lease	18-year budget deficit/surplus before land sale	18-year budget deficit/surplus after FAA land sale	Estimated net revenue after all land sales
Scenario 1	\$30,120,000	\$11,726,432	(\$11,814,591)	(\$11,814,591)	\$0
Scenario 2	\$13,185,000	\$7,383,089	(\$9,917,670)	(\$14,645,265)	\$400,027,984

Table 9 - Scenario comparison

4. Rates and Charges Analysis

Grant Assurance 24, Airport Fees and Rents, requires the airport to maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport. Airport proprietors must employ a reasonable, consistent, and 'transparent' (i.e., clear and fully justified) method of establishing rates and charges, and adjustments on a timely and predictable schedule. FAA will not ordinarily investigate the reasonableness of a general aviation airport's fees absent evidence of a progressive accumulation of surplus aeronautical revenues. In establishing new fees, and generating revenues from all sources, airport owners and operators should not seek to create revenue surpluses that exceed the amounts to be used for airport purposes, including reasonable reserves and other funds to facilitate financing and to cover contingencies.

A market-based survey of rates and charges was conducted on a Peer Set of eighteen comparable airports, including Boulder. Four hundred and sixty-nine (469) publicly-owned, public use airports in Colorado and surrounding states (CO, UT, WY, NE, KS, OK, NM, AZ) were evaluated to select the most similar airports to BDU for inclusion in the Peer Set. The top twelve airports from the evaluation were selected for the Peer Set along with six additional airports included for reference.

FAA ID	Name	City	State	Runway (ft)	Acres	NPIAS Role	ILS	ATCT	Based AC	CII Ops	Distance
BDU	BOULDER MUNI	BOULDER	CO	4100	136	Local	N	N	59	0	0
EAN	PHIFER AIRFIELD	WHEATLAND	WY	5900	157	Local	N	N	27	0	140
AJZ	BLAKE FLD	DELTA	CO	5598	220	Local	N	N	58	0	174
3K3	SYRACUSE-HAMILTON COUNTY MUNI	SYRACUSE	KS	4600	148	Local	N	N	24	0	234
LND	HUNT FLD	LANDER	WY	5000	135	Regional	N	N	48	2	264
GNB	GRANBY-GRAND COUNTY	GRANBY	CO	5001	108	Basic	N	N	12	0	37
AHQ	WAHOO MUNI	WAHOO	NE	4100	126	Local	N	N	34	0	460
JHN	STANTON COUNTY MUNI	JOHNSON	KS	5200	312	Local	N	N	36	0	253
ANK	SALIDA/HARRIETT ALEXANDER FLD	SALIDA	CO	7351	161	Local	N	N	46	10	113
1L8	GENERAL DICK STOUT FLD	HURRICANE	UT	3282	170	Local	N	N	49	0	480
07K	CENTRAL CITY MUNI/LARRY REINEKE FLD	CENTRAL CITY	NE	3700	124	Local	N	N	19	0	384
STK	STERLING MUNI	STERLING	CO	5201	340	Local	N	N	22	0	111
EIK	ERIE MUNI	ERIE	CO	4700	115	Local	N	N	135	743	10
TEX	TELLURIDE RGNL	TELLURIDE	CO	7111	542	Local	N	N	27	1394	204
HCR	HEBER VALLEY	HEBER	UT	6898	401	National	N	N	100	1156	328
LMO	VANCE BRAND	LONGMONT	CO	4799	261	Regional	N	N	219	18	9
BJC	ROCKY MOUNTAIN METRO	DENVER	CO	9000	1700	National	Y	Y	476	4975	11
APA	CENTENNIAL	DENVER	CO	10001	1400	National	Y	Y	868	11564	38

Figure 3. Comparable Airports

Source: FAA 5010-5 Master Record reports. Based aircraft numbers and airport acreage for BDU are assumed to be inaccurate in the FAA 5010-5 Master Record.

Seven criteria were used in the evaluation: National Plan of Integrated Airport Systems (NPIAS) role, number of based aircraft, Traffic Flow Management System Count (TFMSC) C-II operations, acreage, distance from BDU, non-towered, and instrument approach procedures. Data was acquired from the FAA Form 5010-1 Airport Master Record database. The NPIAS role is based on the two systems of categorization for Primary and Non-primary airports. Non-primary airports are categorized as Unclassified, Basic, Local, Regional, and National while Primary airports are categorized as Non-Hub, Small-, Medium-, and Large-hub. The TFMS operations for Airport Reference Code C-II aircraft or above was acquired from the FAA Aviation System Performance Metrics Web Data System for the 2022 calendar year. All airports in the Peer Set were scored on each of the seven criteria by indexing the value for each airport minus the value for BDU on a scale of 0 to 1 with the highest score given to airports identical to BDU and the lowest score given to airports most dissimilar to BDU.

Airports in the Peer Set were surveyed by telephone and email to collect data on the following rates and charges: improved ground rent, unimproved ground rent, T-hangar rent, box hangar rent, fuel flowage fee, lease assignment fee, and subleasing revenue.

4.1 Ground Lease Rate

Ground or land lease rates at airports are difficult to compare because most property leases are uniquely determined based on existing improvements, access to the airfield, negotiation between parties, appraisals, and/or comparative properties. Surveying annual ground lease rates (price per square foot) is informative but such rates are not universally comparable from airport to airport. Ground lease rates are typically influenced by terms specified in the lease, such as required scheduled improvements over the

lease term or conditions such as reversion requirements at the end of the term. Rates are often bifurcated for unimproved sites with no utilities or taxiway access and improved sites that have utilities and taxiway access. The most common structure in the survey was a single aeronautical ground lease rate for improved and unimproved parcels. Non-aeronautical ground lease rates must generally be established at fair market value, as determined by a qualified appraiser.

The rates displayed in **Figure 5. Ground Rent Rate.** are for improved aeronautical sites at Peer Set airports, unless otherwise indicated. Note, BDU does not have an improved ground rent rate, only an unimproved ground rent rate.

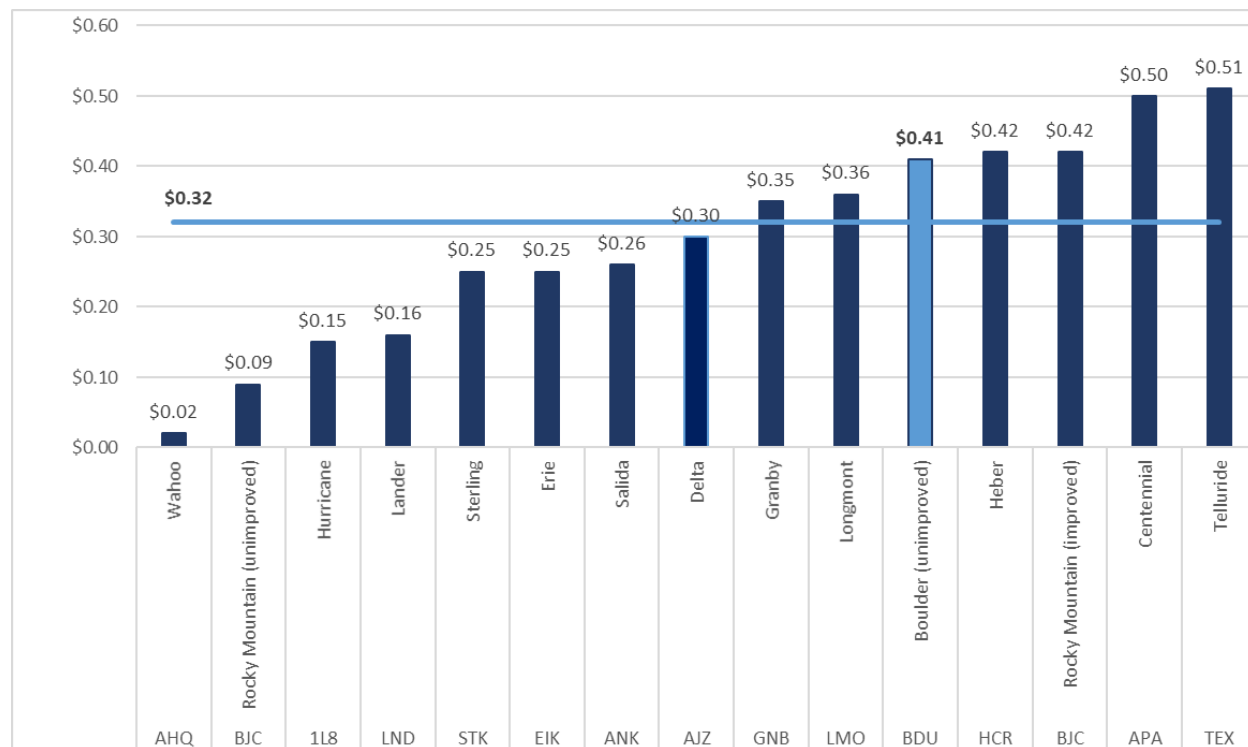


Figure 4. Ground Rent Rate.

Boulder's unimproved ground lease rate of \$0.41 / sq ft annually is above the market average of \$0.32 / sq ft for improved ground rent. As such, no change is recommended to aeronautical ground lease rates, however, annually adjusting rates by the Denver-Aurora-Lakewood, CO Metropolitan CPI in the airport fee schedule is suggested.

4.2 Hangar Rent

Airport hangar leases are subject to similar variables as ground leases and are subject to specific terms and conditions of the lease. Hangar condition is dependent on age since construction, improvement/investment schedule over the lease term, and construction style which is typically differentiated between T- and box-style hangars. Boulder operates three different types of T-hangars, for which rents are compared relative to Peer Set airports in **Figure 6 - Hangar Rent** below.

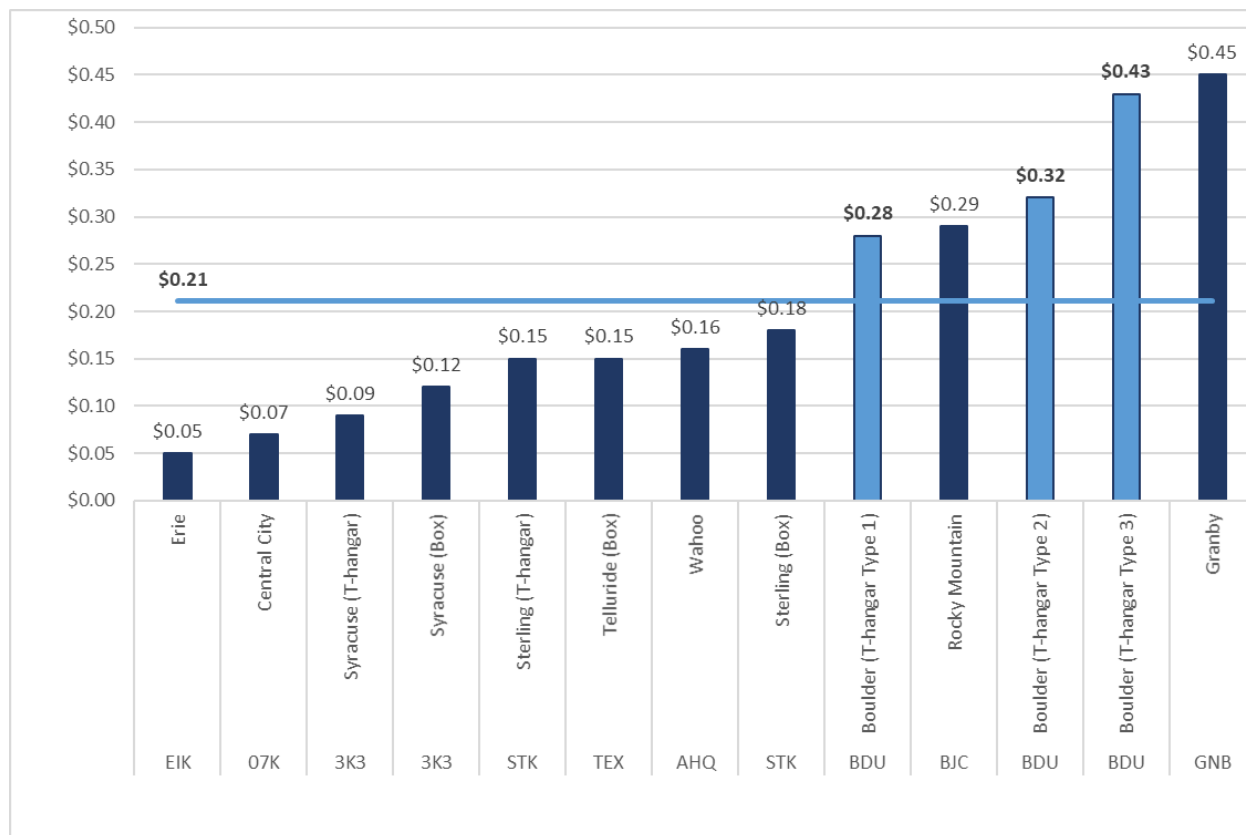


Figure 5 - Hangar Rent

4.3 Fuel Flowage Fee

Fuel flowage fees are a local charge on fuel sales by Fixed Base Operators retained for the capital or operating expenses of the Airport. **Figure 7 - Fuel Flowage Fee** shows the jet fuel flowage fee for Peer Set airports.

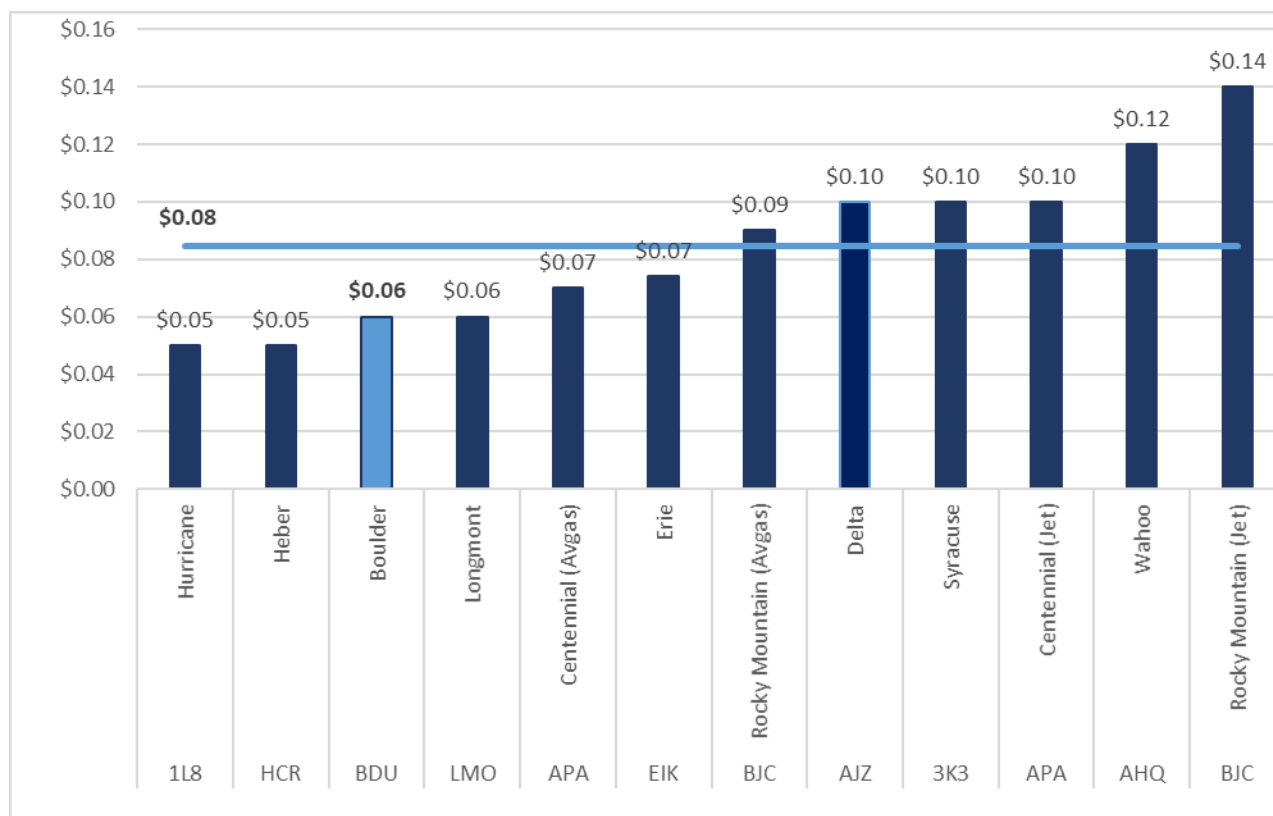


Figure 6 - Fuel Flowage Fee

The Airport's existing fee of \$0.06 / gallon is slightly below the average of \$0.08 / gallon and just above the range floor. Increasing the BDU fuel flowage fee to \$0.08 / gallon would bring BDU in line with market rates.

4.4 Other Fees

Airports in the Peer Set were selected on characteristics similar to those found at BDU. However, many other circumstances influence the revenue-generating ability of the airport to cover capital and operating expenses toward the FAA's stated goal of self-sufficiency described in Grant Assurance 24. Some airports in the Peer Set operate proprietary-exclusive FBOs, airport-owned hangar developments and aircraft parking ramps that generate additional sources of revenue not available to BDU. **Thus, comparable market rates are informative in determining appropriate rates at BDU, but market rates may reflect other budget-balancing revenue sources that are not available to the City. Ultimately, rates and charges at BDU should be set to achieve the FAA's goal of airport self-sufficiency following any reasonable, consistent, and transparent methodology to establish rates that are not unjustly discriminatory.**

Adjusting existing rents and charges is not a viable means of generating significant incremental revenue needed at BDU to operate the airport compliant with FAA grant assurances. Ground and hangar rents are above comparable market values and any increase in rates would not generate immediate revenue but would be realized over decades on new or renewed leases. In addition, fuel flowage volumes are not substantial enough to generate the funds required for necessary capital improvements.

Leasing undeveloped aeronautical and non-aeronautical land offers the best opportunity for increased revenue at the Airport. BDU has over 40 acres of undeveloped land that could generate significant and immediate revenues.

5. Revenue Opportunities

5.1 Administrative Fees

Several administrative fees could be initiated to recover the cost of services provided to tenants and customers. Examples of administrative fees could include document preparation for lease development and updates, performing hangar safety inspections, and similar. Unfortunately, the amount of revenue that could be generated from administrative fees is relatively small compared to the overall airport budget. Although several thousands of dollars could be generated annually, it is an insignificant amount and would not change the overall budget outlook.

6. Airport Privatization

Airport privatization is a concept where governments and private enterprises work together to improve airport services, facilities, and operations. Privatization allows airports to offer more services without government interference, thereby reducing the need for public funds. Privatization invites private businesses to invest in the airport in exchange for the opportunity to generate a reasonable return on their investment. Third party developers are often able to bring additional capital to airports to build new facilities, maintain existing ones, and provide new services that local governments may not be able to. An additional benefit for local governments is that they may be able to shed operating and maintenance costs to the third-party developer.

Privatization can occur in several forms from single service contracts, management contracts for specific facilities, or long-term lease of the entire airport. For privatization to work, local market conditions must be suitable to foster growth of the airport, especially in aviation segments that have the greatest potential to generate high rates of return. Often this means attracting and accommodating corporate aviation customers who are pro-business, purchase more fuel, and require more specialized services.

Since BDU is a small airport located in a semi-rural area, which primarily accommodates small single engine aircraft, gliders, and recreational pilots, it is opined the market is not suitable for full scale privatization and therefore was eliminated from further consideration.

7. General Assumptions and Disclaimers

Numerous assumptions were made in preparation of this analysis because of the need to estimate unknown operation, management, and development costs. The most recent airport master plan was completed in 2007, which included forecasts predicting growth in both operations and based aircraft. However, the 2007 Master Plan forecasts are believed to be obsolete due to changes in the aviation industry and particularly at BDU. A cursory review of Master Plan forecasts compared to 2024 baseline data indicates the number of operations and based aircraft has declined since 2007 rather than increasing as predicted in the Master Plan. Recent data provided by airport staff suggest that aircraft activity is 58,932 operations annually, with an additional 5,982 flyovers. Aircraft operations are projected to

increase slightly from current activity levels each year at a rate consistent with the FAA Terminal Area Forecast (TAF). The slight increase in aircraft operations is to account for high regional demand which will likely cause more flight training to occur at BDU.

This analysis is a planning level evaluation based on reasonable assumptions and the engineering judgement of the consultant. Assumptions were required because many details regarding the city's administrative policies, airport development plans and economic conditions are uncertain and unpredictable given the multitude on variables in play and under consideration and discussion. Assumptions of base year revenues, expenditures, and present-day capital costs were developed in collaboration with the city's Budget Analyst, Airport Manager, discussions with the city's airport consulting engineer, other industry professionals and industry research. The analysis is based on numerous assumptions where data and/or policy direction is unavailable or unknown.

The analysis assumes that all airport facilities will be maintained in a safe and operable condition until the end of each facility's useful life. Once a facility reaches the end of its useful life, the facility will be replaced to allow for continued operation. Capital expenditures that are included in the analysis are those that would be required to ensure the airport is well-maintained, efficient, safe, and operable, sufficient to minimize risks and liability in accordance with FAA requirements and industry best practices.

BDU AIRPORT FINANCIAL ANALYSIS SCENARIO NO.1

Aviation Activity Assumption: This financial scenario assumes that aircraft operations would grow; however, based aircraft would remain consistent till 2040. At that point in time both operations and based aircraft would decline.

Date: June 26, 2024

	Actuals						Base Year (In today's dollars)																									Totals
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041							
Aviation Activity (Source)	43,905	49,352	49,352	49,352	50,027	58,932		59,757	60,594	61,442	62,302	63,174	64,059	64,956	65,865	66,787	67,722	68,670	69,632	70,606	71,595	72,597	73,614	74,644	75,689							
Aircraft Operations (Airport Records) / Growth Rate is Based on Current TAF Based Aircraft (Airport Records) / Growth Rate is Based on Current TAF	190	190	190	190	190	190		191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208							
Starting Cash Position (Cumulative)	\$ 1,826,776	\$ 1,989,129	\$ 2,143,303	\$ 1,975,428	\$ 2,130,026	\$ 1,983,527	\$ 1,716,603	\$ 1,716,603	\$ 1,810,320	\$ 104,414	\$ (1,351,736)	\$ (1,153,538)	\$ (7,338,565)	\$ (8,581,627)	\$ (9,335,711)	\$ (10,900,004)	\$ (10,095,675)	\$ (10,456,342)	\$ (12,444,123)	\$ (12,229,441)	\$ (11,684,719)	\$ (11,402,050)	\$ (10,953,021)	\$ (10,917,210)	\$ (12,413,214)							
Revenues																																
475495 Airport Rental ⁽¹⁾	\$ 628,769	\$ 472,686	\$ 554,803	\$ 598,429	\$ 650,749	\$ 792,508	\$ 719,000	\$ 761,565	\$ 785,173	\$ 809,514	\$ 834,609	\$ 860,481	\$ 887,156	\$ 914,658	\$ 943,013	\$ 972,246	\$ 1,002,386	\$ 1,033,460	\$ 1,065,497	\$ 1,098,527	\$ 1,132,562	\$ 1,167,692	\$ 1,203,890	\$ 1,241,211	\$ 1,279,688	\$ 17,993,347						
Revenue From New Lease Terms	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 62,149	\$ 124,298	\$ 128,151	\$ 132,124	\$ 136,220	\$ 140,443	\$ 144,796	\$ 149,285	\$ 153,913	\$ 158,684	\$ 163,603	\$ 168,675	\$ 173,904	\$ 179,295	\$ 184,853	\$ 190,584	\$ 196,492	\$ 2,587,468						
Landing Fees ⁽²⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,871	\$ 38,401	\$ 38,939	\$ 39,484	\$ 40,037	\$ 40,597	\$ 41,166	\$ 41,742	\$ 42,326	\$ 42,919	\$ 43,520	\$ 44,129	\$ 44,747	\$ 45,373	\$ 46,009	\$ 46,653	\$ 47,306	\$ 721,218						
420695 Fuel Flowage Fees ⁽²⁾	\$ 5,822	\$ 6,622	\$ 5,655	\$ 6,445	\$ 5,254	\$ 6,225	\$ 6,000	\$ 6,498	\$ 8,781	\$ 9,053	\$ 9,334	\$ 9,623	\$ 9,921	\$ 10,229	\$ 10,546	\$ 10,873	\$ 11,210	\$ 11,557	\$ 11,916	\$ 12,285	\$ 12,666	\$ 13,058	\$ 13,463	\$ 13,881	\$ 14,311	\$ 199,203						
420695 Utilities ⁽²⁾	\$ 3,943	\$ 10,100	\$ 7,997	\$ 12,311	\$ 15,059	\$ 16,700	\$ 17,000	\$ 17,527	\$ 18,070	\$ 18,631	\$ 19,208	\$ 19,804	\$ 20,417	\$ 21,050	\$ 21,703	\$ 22,376	\$ 23,069	\$ 23,785	\$ 24,522	\$ 25,282	\$ 26,066	\$ 26,874	\$ 27,707	\$ 28,566	\$ 29,451	\$ 414,107						
420695 Leases Rents Royalties ⁽³⁾	\$ -	\$ 16,244	\$ 23,002	\$ 14,851	\$ 13,965	\$ 11,719	\$ 12,000	\$ 12,372	\$ 12,756	\$ 13,151	\$ 13,559	\$ 13,979	\$ 14,412	\$ 14,859	\$ 15,320	\$ 15,795	\$ 16,284	\$ 16,789	\$ 17,310	\$ 17,846	\$ 18,399	\$ 18,970	\$ 19,558	\$ 20,164	\$ 20,789	\$ 292,311						
Construct Hangar A - New Ground Lease Revenue ⁽¹⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar A - New Ground Lease Revenue ⁽¹⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar B - New Ground Lease Revenue ⁽¹⁵⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar C & Parking - New Ground Lease Revenue ⁽¹⁶⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar D and Parking - New Ground Lease Revenue ⁽¹⁷⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar E and Parking - New Ground Lease Revenue ⁽¹⁸⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar F and Parking - New Ground Lease Revenue ⁽¹⁹⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar G & Parking - New Ground Lease Revenue ⁽²⁰⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar H and Parking - New Ground Lease Revenue ⁽²¹⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct Hangar I - New Ground Lease Revenue ⁽²²⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
Construct J Tie-Down Expansion - New Ground Lease Revenue ⁽²³⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
465105 AIR Federal Grant ⁽⁴⁾	\$ -	\$ 326,575	\$ 5,074,724	\$ 30,000	\$ 34,780	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 6,953,000						
N/A BIL Federal Grant ⁽⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 294,000	\$ 294,000	\$ 147,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
465150 State Grant Discretionary & State Match (5%) ⁽⁴⁾	\$ -	\$ 1,200	\$ 14,400	\$ -	\$ -	\$ 28,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -						
473005 Interest on Investments ⁽¹²⁾	\$ 23,504	\$ 39,490	\$ 43,692	\$ 32,536	\$ 27,320	\$ 44,617	\$ 45,000	\$ 53,901	\$ 70,965	\$ 4,250	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 129,116						
460095 Intergovernmental Tax Revenue ⁽²¹⁾	\$ -	\$ -	\$ 5,314	\$ 23,723	\$ 6,674	\$ 7,756	\$ 9,417	\$ 9,279	\$ 9,567	\$ 9,863	\$ 10,169	\$ 10,484	\$ 10,809	\$ 11,144	\$ 11,490	\$ 11,846	\$ 12,213	\$ 12,592	\$ 12,982	\$ 13,385	\$ 13,800	\$ 14,227	\$ 14,668	\$ 15,123	\$ 15,592	\$ 219,233						
Ground Lease Collected from Tract 4 & 6 ⁽¹³⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 267,273	\$ 275,558	\$ 284,101	\$ 292,908	\$ 301,988	\$ 311,350	\$ 321,002	\$ 330,953	\$ 341,212	\$ 351,790	\$ 373,939						
Total Revenue:	\$ 669,669	\$ 881,106	\$ 5,751,044	\$ 841,853	\$ 756,723	\$ 909,309	\$ 808,000	\$ 1,305,142	\$ 1,449,331	\$ 1,324,160	\$ 1,276,904	\$ 1,352,245	\$ 1,386,983	\$ 1,880,985	\$ 1,932,096	\$ 2,073,382	\$ 2,130,437	\$ 2,210,813	\$ 6,685,259	\$ 2,397,825	\$ 2,464,897	\$ 2,534,038	\$ 2,605,312	\$ 2,678,784	\$ 2,754,524	\$ 40,443,117						
O & M Expenditures ⁽⁶⁾																																
Airport Management	\$ 431,800	\$ 278,703	\$ 369,253	\$ 416,711	\$ 299,540	\$ 361,251	\$ 445,000	\$ 458,795	\$ 488,367	\$ 503,506	\$ 519,115	\$ 535,208	\$ 551,799	\$ 568,905	\$ 586,541	\$ 604,724	\$ 623,470	\$ 642,798	\$ 662,724	\$ 683,269	\$ 704,450	\$ 726,288	\$ 748,803	\$ 772,016	\$ 795,948	\$ 11,176,727						
Operations, Maintenance & Capital Expenses ⁽⁶⁾	\$ 31,131	\$ 403,664	\$ 5,504,432	\$ 225,310	\$ 559,941	\$ 781,491	\$ 697,000	\$ 718,607	\$ 479,453	\$ 434,316	\$ 447,780	\$ 461,661	\$ 475,973	\$ 490,728	\$ 505,940	\$ 521,624	\$ 537,795	\$ 554,466	\$ 571,655	\$ 589,376	\$ 607,647	\$ 626,484	\$ 645,905	\$ 665,928	\$ 686,572	\$ 10,021,908						
Cost Allocation ⁽²⁵⁾	\$ 44,386	\$ 44,565	\$ 45,234	\$ 45,234	\$ 43,741	\$ 33,491	\$ 33,000	\$ 34,023	\$ 101,417	\$ 106,488	\$ 111,812	\$ 117,403	\$ 123,273	\$ 129,437	\$ 135,908	\$ 142,704	\$ 149,639	\$ 157,331	\$ 165,198	\$ 173,457	\$ 182,130	\$ 191,237	\$ 200,799	\$ 210,839	\$ 221,381	\$ 2,654,675						
Total O&M Expenditures:	\$ 507,317	\$ 726,932	\$ 5,918,919	\$ 687,255	\$ 903,222	\$ 1,176,233	\$ 1,175,000	\$ 1,211,425	\$ 1,069,237	\$ 1,044,310	\$ 1,078,707	\$ 1,114,272	\$ 1,151,045	\$ 1,189,069	\$ 1,228,390	\$ 1,269,052	\$ 1,311,104	\$ 1,354,595	\$ 1,399,577	\$ 1,446,102	\$ 1,494,227	\$ 1,544,009	\$ 1,595,507	\$ 1,648,783	\$ 1,703,901	\$ 23,853,310						
Total Revenue - Less O&M Expenditures	\$ 162,352	\$ 154,174	\$ (167,875)	\$ 154,598	\$ (146,499)	\$ (266,924)	\$ -	\$ 93,717	\$ 380,094	\$ 279,850	\$ 198,197	\$ 237,973	\$ 235,939	\$ 691,916	\$ 703,706	\$ 804,330	\$ 819,333	\$ 856,218	\$ 5,285,682	\$ 951,722	\$ 970,670	\$ 990,029	\$ 1,009,805	\$ 1,030,002	\$ 1,050,623	\$ 16,589,806						
End Cash Position Before Reserves (Cumulative)	\$ 1,989,128	\$ 2,143,303	\$ 1,975,428	\$ 2,130,026	\$ 1,983,527	\$ 1,716,603	\$ -	\$ 1,810,320	\$ 2,190,414	\$ 384,264	\$ (1,153,538)	\$ (915,565)	\$ (7,102,627)	\$ (7,889,711)	\$ (8,632,004)	\$ (10,095,675)	\$ (9,276,342)	\$ (9,600,123)	\$ (7,158,441)	\$ (11,277,719)	\$ (10,714,050)	\$ (10,412,021)	\$ (9,943,215)	\$ (9,887,214)	\$ (11,362,591)							

BDU AIRPORT FINANCIAL ANALYSIS SCENARIO NO.2

Date: June 26, 2024

Aviation Activity Assumption: This financial scenario assumes that aircraft operations would grow; however, based aircraft would remain consistent till 2040. At that point in time both operations and based aircraft would decline.

	Actuals					Base Year (In today's dollars)																			Totals		
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041			
Aviation Activity (Source)																											
Aircraft Operations (Airport Records) / Growth Rate is Based on Current TAF	43,905	49,352	49,352	49,352	50,027	58,932		59,757	60,594	61,442	62,302	63,174	64,059	64,956	65,865	66,787	67,722	68,670	69,632	70,606	71,595	72,597	73,614	36,807	18,403		
Based Aircraft (Airport Records) / Growth Rate is Based on Current TAF	190	190	190	190	190	190		190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	95	48		
Starting Cash Position (Cumulative)	\$ 1,826,776	\$ 1,989,129	\$ 2,143,303	\$ 1,975,428	\$ 2,130,026	\$ 1,983,927	\$ 1,716,603	\$ 1,716,603	\$ 1,366,320	\$ (827,990)	\$ (849,390)	\$ (861,193)	\$ (3,387,220)	\$ (4,721,281)	\$ (6,594,288)	\$ (6,349,424)	\$ (6,046,639)	\$ (5,737,889)	\$ (5,717,134)	\$ (7,438,341)	\$ (7,111,481)	\$ (6,778,535)	\$ (6,439,488)	\$ (6,094,336)	\$ (8,249,145)		
Revenues																											
475495 Airport Rental ⁽¹⁾	\$ 628,769	\$ 472,686	\$ 554,803	\$ 598,429	\$ 650,749	\$ 792,508	\$ 719,000	\$ 761,565	\$ 785,173	\$ 809,514	\$ 834,609	\$ 860,481	\$ 887,156	\$ 914,658	\$ 943,013	\$ 972,246	\$ 1,002,386	\$ 1,033,460	\$ 1,065,497	\$ 1,098,527	\$ 1,132,582	\$ 1,167,692	\$ 1,203,890	\$ 601,945	\$ 300,973	\$ 16,375,366	
Revenue From New Lease Terms	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 62,149	\$ 124,298	\$ 128,151	\$ 132,124	\$ 136,220	\$ 140,443	\$ 144,796	\$ 149,285	\$ 153,913	\$ 158,684	\$ 163,603	\$ 168,675	\$ 173,904	\$ 179,295	\$ 184,853	\$ 190,584	\$ 196,492	\$ -	\$ 2,587,468	
Landing Fees ⁽²⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,871	\$ 38,401	\$ 38,930	\$ 39,484	\$ 40,037	\$ 40,597	\$ 41,166	\$ 41,742	\$ 42,326	\$ 42,919	\$ 43,520	\$ 44,129	\$ 44,747	\$ 45,373	\$ 46,009	\$ 46,650	\$ 47,304	\$ 11,502	\$ 661,766	
420695 Fuel Flowage Fees ⁽³⁾	\$ 5,822	\$ 6,622	\$ 5,655	\$ 6,445	\$ 5,254	\$ 6,225	\$ 6,000	\$ 6,498	\$ 8,781	\$ 9,053	\$ 9,334	\$ 9,623	\$ 9,921	\$ 10,229	\$ 10,546	\$ 10,873	\$ 11,210	\$ 11,557	\$ 11,916	\$ 12,285	\$ 12,666	\$ 13,058	\$ 13,463	\$ 6,732	\$ 3,366	\$ 181,109	
420695 Utilities ⁽³⁾	\$ 3,943	\$ 10,100	\$ 7,997	\$ 12,311	\$ 15,059	\$ 16,700	\$ 17,000	\$ 17,527	\$ 18,070	\$ 18,631	\$ 19,208	\$ 19,804	\$ 20,417	\$ 21,050	\$ 21,703	\$ 22,376	\$ 23,069	\$ 23,785	\$ 24,522	\$ 25,282	\$ 26,066	\$ 26,874	\$ 27,707	\$ 28,566	\$ 29,451	\$ 414,107	
420695 Leases Rents Royalties ⁽³⁾	\$ -	\$ 16,244	\$ 23,002	\$ 14,851	\$ 13,965	\$ 11,719	\$ 12,000	\$ 12,372	\$ 12,756	\$ 13,151	\$ 13,559	\$ 13,979	\$ 14,412	\$ 14,859	\$ 15,320	\$ 15,795	\$ 16,284	\$ 16,789	\$ 17,310	\$ 17,846	\$ 18,399	\$ 18,970	\$ 19,558	\$ 20,164	\$ 20,789	\$ 292,311	
Construct Hangar A - New Ground Lease Revenue ⁽¹⁶⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,468	\$ 6,669	\$ 6,876	\$ 7,089	\$ 7,308	\$ 7,535	\$ 7,769	\$ 8,009	\$ 8,258	\$ 8,514	\$ 8,778	\$ 9,050	\$ 9,330	\$ 9,620	\$ 9,918	\$ 121,189	
Construct Hangar B - New Ground Lease Revenue ⁽¹⁷⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,468	\$ 6,669	\$ 6,876	\$ 7,089	\$ 7,308	\$ 7,535	\$ 7,769	\$ 8,009	\$ 8,258	\$ 8,514	\$ 8,778	\$ 9,050	\$ 9,330	\$ 9,620	\$ 9,918	\$ 121,189	
Construct Hangar C Hangars & Pavement - New Ground Lease Revenue ⁽¹⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,735	\$ 33,750	\$ 34,796	\$ 35,875	\$ 36,987	\$ 38,134	\$ 39,316	\$ 40,533	\$ 41,791	\$ 43,087	\$ 44,422	\$ 45,800	\$ 47,219	\$ 48,683	\$ 563,130	\$ -	
Construct D Hangar and Parking - New Ground Lease Revenue ⁽¹⁹⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,193	\$ 10,509	\$ 10,835	\$ 11,171	\$ 11,517	\$ 11,874	\$ 12,242	\$ 12,621	\$ 13,013	\$ 13,416	\$ 13,832	\$ 14,261	\$ 14,703	\$ 15,159	\$ 175,345	\$ -	
465105 AIP Federal Grant ⁽⁴⁾	\$ -	\$ 326,575	\$ 5,074,724	\$ 30,000	\$ 34,780	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NIA BIL Federal Grant ⁽⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
465150 State Grant ⁽⁴⁾	\$ -	\$ 1,200	\$ 14,400	\$ -	\$ -	\$ 28,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
470305 Interest on Investments ⁽¹²⁾	\$ 23,504	\$ 39,490	\$ 43,892	\$ 32,536	\$ 27,320	\$ 44,617	\$ 45,000	\$ 53,901	\$ 53,560																		\$ 107,461
460095 Intergovernmental Tax Revenue ⁽²⁾	\$ -	\$ 5,314	\$ 23,723	\$ 6,674	\$ 7,756	\$ 9,417	\$ 9,000	\$ 9,279	\$ 9,567	\$ 9,863	\$ 10,169	\$ 10,484	\$ 10,809	\$ 11,144	\$ 11,490	\$ 11,846	\$ 12,213	\$ 12,592	\$ 12,982	\$ 13,385	\$ 13,800	\$ 14,227	\$ 14,668	\$ 15,123	\$ 15,592	\$ 219,233	
Ground Lease Collected from Tract 4 & 6 ⁽¹³⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Proceeds from Sell of 37.93 Acres FAA Land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,860,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Proceeds from Sell of Remaining 138.47 Acres ⁽¹⁴⁾	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 276,940,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Revenue:	\$ 669,669	\$ 881,106	\$ 5,751,044	\$ 841,853	\$ 756,723	\$ 909,309	\$ 353,608,000	\$ 861,142	\$ 987,926	\$ 1,022,910	\$ 1,066,904	\$ 1,142,245	\$ 1,176,983	\$ 1,480,062	\$ 1,625,254	\$ 1,671,837	\$ 1,619,854	\$ 1,669,360	\$ 1,720,370	\$ 1,772,962	\$ 1,827,174	\$ 1,883,055	\$ 1,940,659	\$ 1,929,974	\$ 1,035,780	\$ 25,634,442	
O&M Expenditures ⁽⁵⁾																											
Airport Management	\$ 431,800	\$ 278,703	\$ 369,253	\$ 416,711	\$ 299,540	\$ 361,251	\$ 445,000	\$ 458,795	\$ 488,367	\$ 503,506	\$ 519,115	\$ 535,208	\$ 551,799	\$ 568,905	\$ 586,541	\$ 604,724	\$ 623,470	\$ 642,798	\$ 662,724	\$ 683,269	\$ 704,450	\$ 726,288	\$ 748,803	\$ 772,016	\$ 795,948	\$ 11,176,727	
Operations, Maintenance & Capital Expenses ⁽⁶⁾	\$ 31,131	\$ 403,664	\$ 5,504,432	\$ 225,310	\$ 559,941	\$ 781,491	\$ 697,000	\$ 718,607	\$ 479,453	\$ 434,316	\$ 447,780	\$ 461,661	\$ 475,973	\$ 490,728	\$ 505,940	\$ 521,624	\$ 537,795	\$ 554,466	\$ 571,655	\$ 589,376	\$ 607,647	\$ 626,484	\$ 645,905	\$ 665,928	\$ 686,572	\$ 10,021,908	
Cost Allocation ⁽²⁾⁽¹⁾	\$ 44,386	\$ 44,565	\$ 45,234	\$ 45,234	\$ 43,741	\$ 33,491	\$ 33,000	\$ 34,023	\$ 101,417	\$ 106,488	\$ 111,812	\$ 117,403	\$ 123,273	\$ 129,437	\$ 135,908	\$ 142,704	\$ 149,839	\$ 157,331	\$ 165,198	\$ 173,457	\$ 182,130	\$ 191,237	\$ 200,799	\$ 210,839	\$ 221,381	\$ 2,654,675	
Total O&M Expenditures:	\$ 507,317	\$ 726,932	\$ 5,918,919	\$ 687,255	\$ 903,222	\$ 1,176,233	\$ 1,175,000	\$ 1,211,425	\$ 1,069,237	\$ 1,044,310	\$ 1,078,707	\$ 1,114,272	\$ 1,151,045	\$ 1,189,069	\$ 1,228,390	\$ 1,269,052	\$ 1,311,104	\$ 1,354,595	\$ 1,399,577	\$ 1,446,102	\$ 1,494,227	\$ 1,544,009	\$ 1,595,507	\$ 1,648,783	\$ 1,703,901	\$ 23,853,310	
Total Revenue - Less O&M Expenditures	\$ 162,352	\$ 154,174	\$ (167,875)	\$ 154,598	\$ (146,499)	\$ (266,924)	\$ (350,283)	\$ (81,311)	\$ (21,400)	\$ (11,803)	\$ 27,973	\$ 25,939	\$ 290,993	\$ 296,864	\$ 302,785	\$ 308,750	\$ 314,755	\$ 320,793	\$ 326,859	\$ 332,946	\$ 339,046	\$ 345,152	\$ (318,809)	\$ (668,120)	\$ 1,761,132	\$ 1,781,132	
End Cash Position Before Reserves (Cumulative)	\$ 1,989,128	\$ 2,143,303	\$ 1,975,428	\$ 2,130,026	\$ 1,983,527	\$ 1,716,603	\$ 1,366,320	\$ 1,285,010	\$ (849,390)	\$ (861,193)	\$ (833,220)	\$ (3,361,281)	\$ (4,430,288)	\$ (6,297,424)	\$ (6,046,639)	\$ (5,737,889)	\$ (5,423,134)	\$ (5,096,341)	\$ (4,711,481)	\$ (4,278,535)	\$ (3,783,488)	\$ (3,238,535)	\$ (2,633,488)	\$ (1,968,535)	\$ (1,243,588)	\$ (49,145)	\$ (9,917,265)
Reserves																											
Designated ⁽⁷⁾	\$ 113,635	\$ 113,904	\$ 100,205	\$ 98,771	\$ 149,863	\$ 149,663	\$ 150,000	\$ 196,626	\$ 161,626	\$ 156,616	\$ 161,471	\$ 166,477	\$ 171,638	\$ 176,959	\$ 182,444	\$ 188,100	\$ 193,931	\$ 199,943	\$ 206,141	\$ 212,532	\$ 219,120	\$ 225,913	\$ 232,916	\$ 240,137	\$ 247,581	\$ 3,540,172	
Pay Period 27 (2024) ⁽⁸⁾	\$ 8,808	\$ 8,989	\$ 6,458	\$ 6,458	\$ 6,555	\$ 6,555	\$ 7,000	\$ 7,217																			\$ 7,217
Total Reserves:	\$ 138,275	\$ 139,200	\$ 123,459	\$ 122,529	\$ 156,518	\$ 156,518	\$ 157,000	\$ 203,843	\$ 161,626	\$ 156,616	\$ 161,471	\$ 166,477	\$ 171,638	\$ 176,959	\$ 182,444	\$ 188,100	\$ 193,931	\$ 199,943	\$ 206,141	\$ 212,532	\$ 219,120	\$ 225,913	\$ 232,916	\$ 240,137	\$ 247,581	\$ 3,547,389	
End Cash Position After Reserves (Cumulative)	\$ 1,850,853	\$ 2,004,103	\$ 1,851,969	\$ 2,007,497	\$ 1,827,009	\$ 1,560,085	\$ 1,162,477	\$ 1,162,477	\$ 1,123,384	\$ (1,006,007)	\$ (1,022,664)	\$ (999,697)	\$ (3,532,919)	\$ (4,607,247)	\$ (6												

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