



DEN CAPITAL IMPROVEMENT PLAN (CIP)

MAY 4, 2022

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- Vision 100 Context
- Vision 100 New CIP Planning Process
- Ranking Asset Management Projects
- DEN by the Numbers
- Current Capital Improvement Plan (CIP): 2018 – 2022
- Future Capital Improvement Plan (CIP): 2023 – 2027
- Projected Financial Metrics & Capital Structure

- DEN is a self-sustaining enterprise fund of the City:
 - All revenue generated is used to pay for airport expenses
 - FAA restricts the use of DEN revenues for airport specific purposes
 - No tax dollars fund DEN operations
- City Council approvals
 - Financial plans developed by DEN Finance and City Department of Finance
 - Contracts over \$500K
 - Construction and design contracts over \$5M



100 MILLION ANNUAL PASSENGERS

- SUSTAINABILITY & RESILIENCY • EQUITY, DIVERSITY & INCLUSION
- CONTINUOUS STAKEHOLDER INPUT/FEEDBACK • ENHANCING THE CUSTOMER EXPERIENCE

PILLAR 1



POWERING OUR PEOPLE

- Develop Workforce Leadership Strategy
- Establish Center of Excellence and Equity in Aviation
- Implement Career Pathways Program

PILLAR 2



GROWING OUR INFRASTRUCTURE

- Complete Major Infrastructure Projects
- Update Airport Master Plan
- Develop Infrastructure Plan for DEN Real Estate

PILLAR 3



MAINTAINING WHAT WE HAVE

- Complete Concourse Renewal Program
- Update Strategic Asset Management Plan
- Develop Science-Based Greenhouse Gas Emissions Target

PILLAR 4



EXPANDING OUR GLOBAL CONNECTIONS

- Identify Air Cargo Opportunities
- Expand to Disconnected Destinations
- Grow Domestic Network

- Vision 100 CIP planning process:
 - Vision 100 is DEN's strategic plan that will enable DEN to prepare for and reach 100 million annual passengers in the next 8-10 years
 - The first phase of the Vision 100 plan will guide DEN's work over the next 5 years
 - Accordingly, the Vision 100 CIP Program will take place between 2023 through 2027 and correspond with the first phase of Vision 100

- ***Process Overview:***

- In order to ensure stakeholder engagement and transparency in the CIP decision making process, DEN formed a new Capital Projects Review Committee (CPRC), which is made up of DEN Leadership, to evaluate CIP requests using the newly developed CIP Evaluation Criteria.
- The initial ranking and screening of CIP requests were evaluated by the Working Group, which is made up of Subject Matter Experts across different disciplines.
- The Working Group's initial ranking of the projects enables the CPRC to narrow down the list of eligible CIP to fit DEN's affordability model.
- Prior to finalizing the Vision 100 CIP list, each member of DEN Leadership had follow-up meetings with their divisions to seek clarifications on proposed projects' priority, general scope of work, estimate cost and timeline, and considerations of any potential grants.
- Lastly, the final list was compiled and reviewed by DEN's CEO prior to approval to ensure resources are being deployed in the areas that are priorities to DEN and its Vision 100 Strategic Objectives.

CIP PROJECT CRITERIA AND SCORING

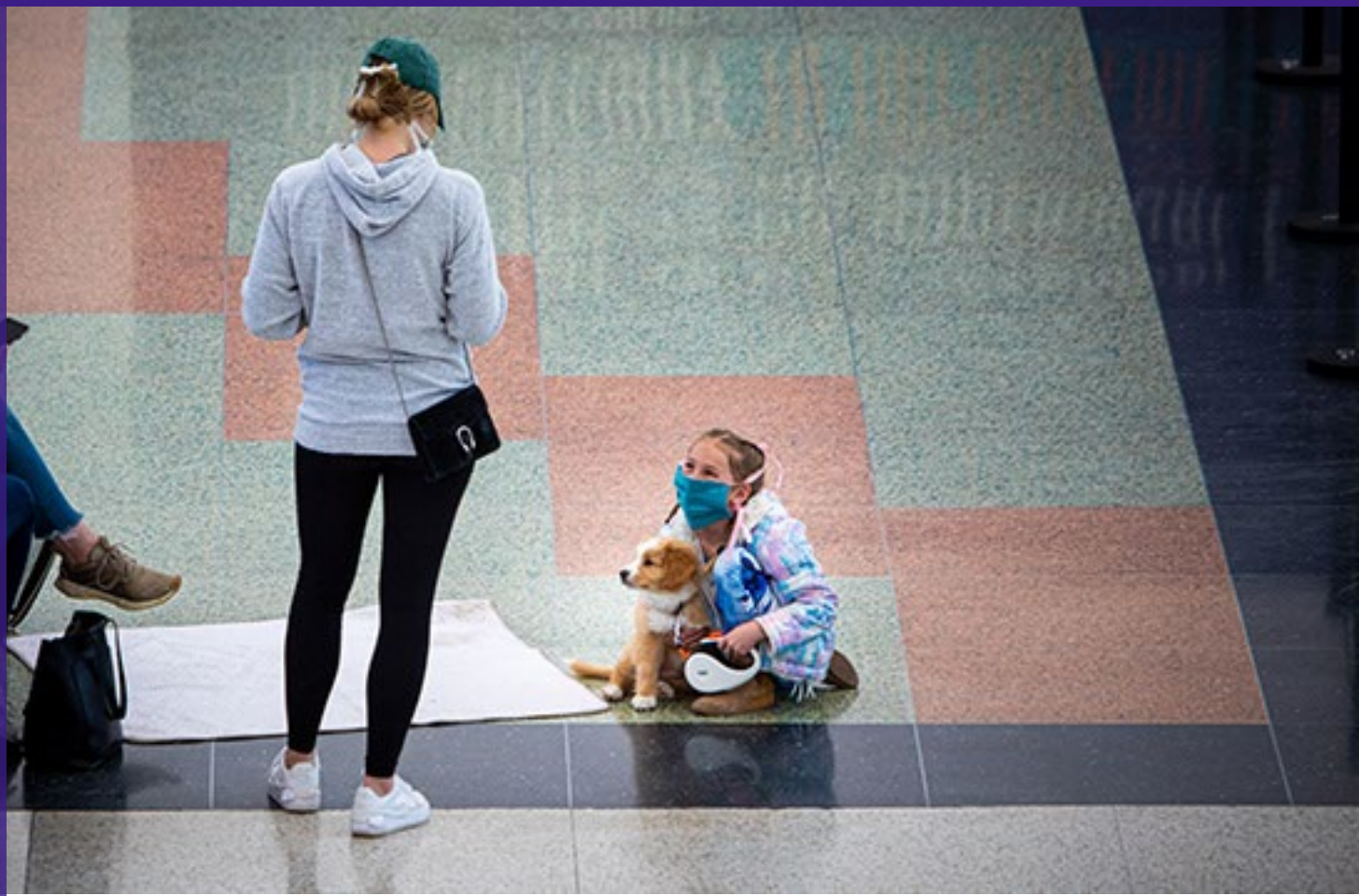
- Each project submitted was evaluated based on the following established criteria:
 - Safety, security and health
 - Risk abatement
 - Financial impacts
 - Sustainability
 - Airport operational impacts
 - Equity, diversity and inclusion
 - Guest and stakeholder experiences
 - Current asset condition

Scoring Level	All Projects	Additional Scoring for Current Asset Condition
5 Points	Very Important	Very Critical
4 Points	Important	Critical
3 Points	Somewhat Important	Somewhat Critical
2 Points	Less Important	Less Critical
1 Points	Little Important	Not Critical
0 Points	Not Applicable	Not Applicable

- DEN currently prioritizes asset replacements using a variety of tools including the results of the Facility Condition Assessments and reports derived from Maximo reliability data
- DEN is working with a consultant team to update our Strategic Asset Management Plan (SAMP), which includes the following goals:
 - Manage assets to meet customer expectations in a sustainable manner according to defined levels of service
 - Capture and utilize reliable data to develop meaningful and actionable metrics
 - Optimize preventive and predictive maintenance strategies to maximize the life of assets
 - Develop comprehensive life-cycle replacement programs to support risk-based and fiscally responsible decision-making

- The first deliverable is a Strategic Framework that includes the vision, mission, policy, goals, and governance structure to align with Vision 100 (“Maintaining What We Have”)
- This long-term program will support DEN’s transition to more proactive asset management and support more comprehensive and systematic use of reliability reports to inform future CIP decisions

DEN BY THE
NUMBERS



DEN 2021 Passenger Traffic Highlights

TOTAL PASSENGERS



58.8M

DOWN **15%** FROM 2019

DOMESTIC PASSENGERS



56.9M

DOWN **14%** FROM 2019

INTERNATIONAL PASSENGERS



1.9M

DOWN **40%** FROM 2019

10 BUSIEST AIRPORTS WORLDWIDE, 2021

RANK	AIRPORT	2021 TOTAL PASSENGERS
1	ATLANTA (ATL)	75,704,760
2	DALLAS (DFW)	62,465,756
3	DENVER (DEN)	58,828,552
4	CHICAGO (ORD)	54,020,399
5	LOS ANGELES (LAX)	48,007,312
6	CHARLOTTE (CLT)	43,302,230
7	ORLANDO (MCO)	40,351,068
8	GUANGZHOU (CAN)	40,259,401
9	CHENGDU (CTU)	40,117,496
10	LAS VEGAS (LAS)	39,754,366

O&D VS. CONNECTING



59%
O&D



41%
CONNECTING

#1 AIRPORT FOR TOTAL FLIGHTS

FRONTIER

Southwest

UNITED

DEN AIRLINES WITH MORE PASSENGERS IN 2021 THAN 2019



AEROMEXICO



allegiant



volaris

DEN NEW AIRLINES IN 2021

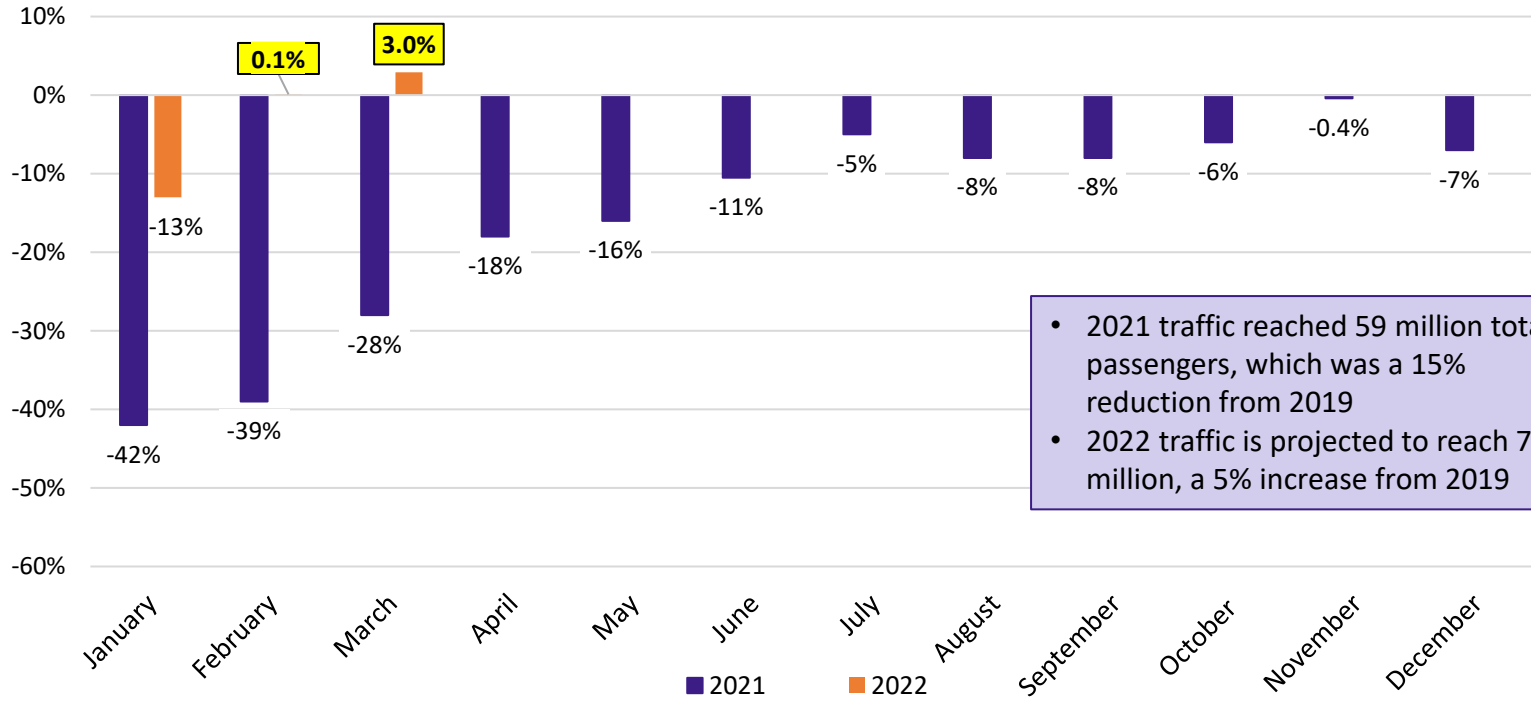
AIRFRANCE



2021 VS 2022 PASSENGER TRAFFIC



Denver International Airport, Change in Total Passenger Traffic
2022 & 2021 vs. 2019, by month

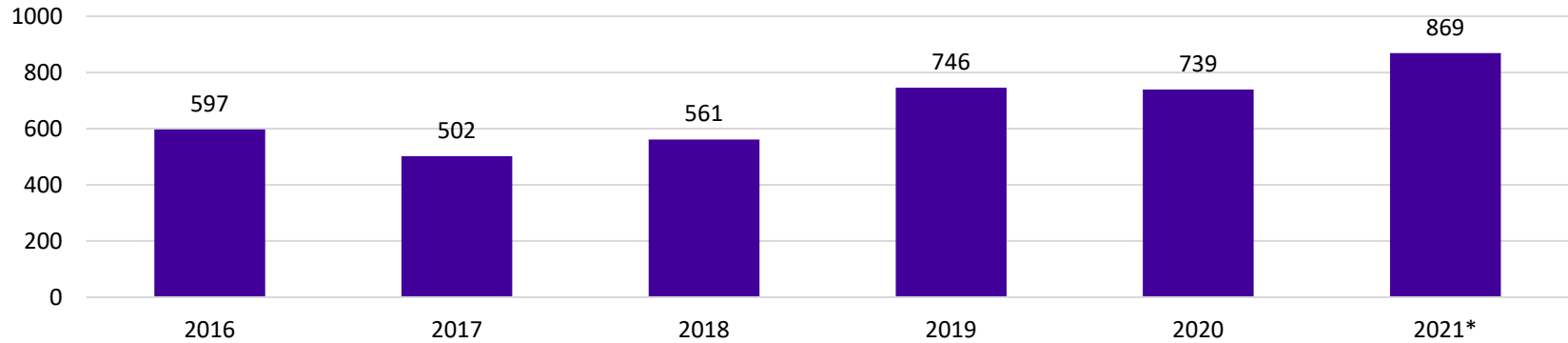


- 2021 traffic reached 59 million total passengers, which was a 15% reduction from 2019
- 2022 traffic is projected to reach 72.8 million, a 5% increase from 2019

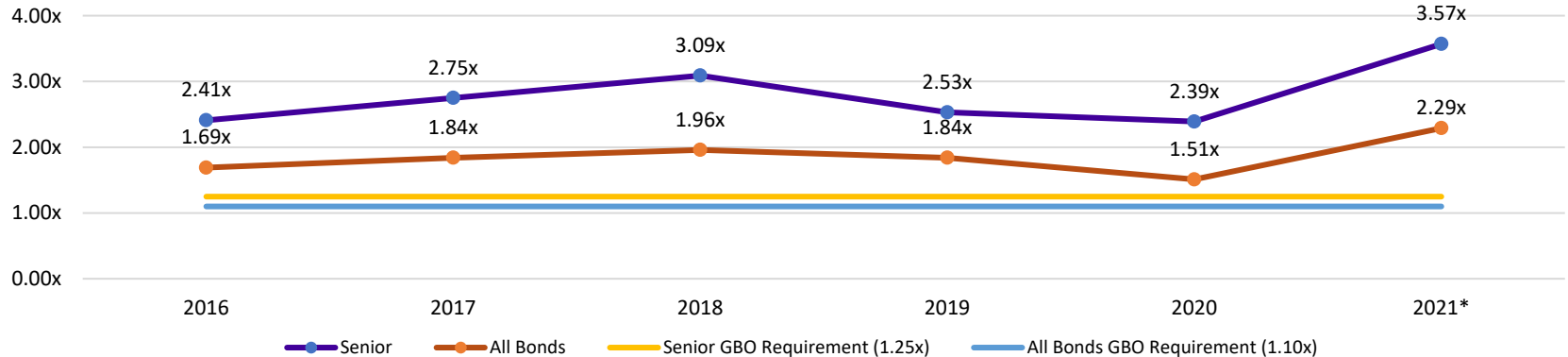
DEN METRICS SUMMARY



Unrestricted Cash Hand



Debt Service Coverage



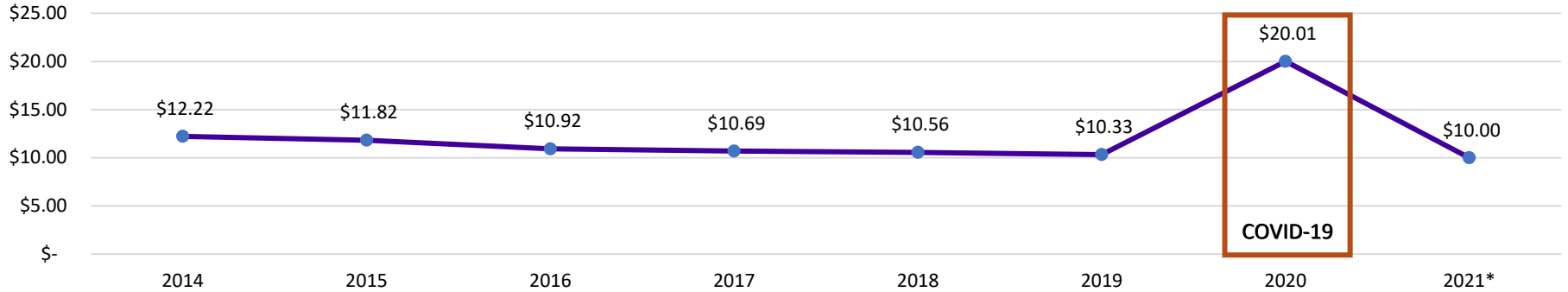
*2021 Preliminary Estimate as of April 2022, subject to change as year-end activities and allocations are finalized

SOURCE: DEN Management Records

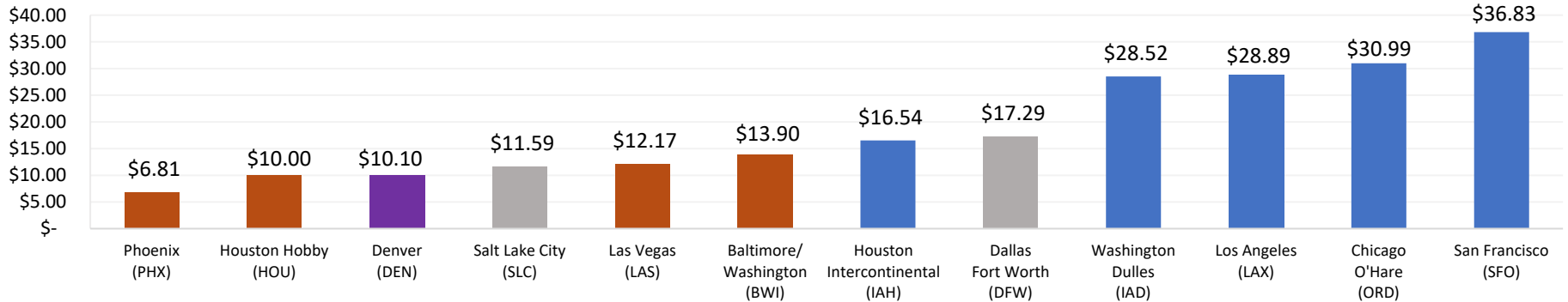
DEN METRICS SUMMARY (CONTINUED)



DEN Average Airline Cost Per Enplanement (CPE)



2022 CPE Forecast – U.S. Airport Comparison



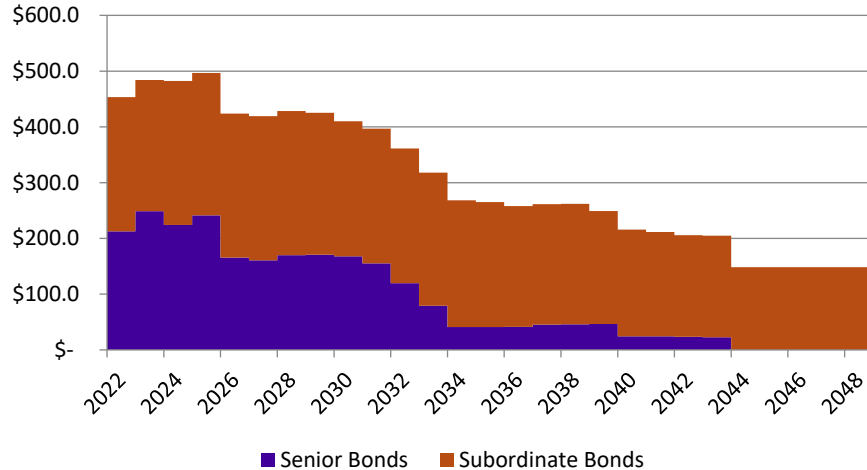
*2021 Preliminary Estimate as of April 2022, subject to change as year-end activities and allocations are finalized
 Sources: DEN Management Records, WJ Advisors, *The CPE Report*, September 2021

Key:
 United Hub ■
 Southwest Focus City ■

DEN CAPITAL STRUCTURE



DEN Debt Service Profile



DEN Ratings

Agency	Senior lien	Subordinate lien
Moody's	A1 (stable outlook)	A2 (stable outlook)
S&P	A+ (positive outlook)	A (positive outlook)
Fitch	AA- (stable outlook)	A+ (stable outlook)

Notes:

- Debt service reflects expected net swap payments and BABs subsidies, and excludes \$700M interim notes due Jun 30, 2022
- Assumes average variable rate of 1.000% for SIFMA, 1.300% for 1M-LIBOR, and 1.300% for 3M-LIBOR

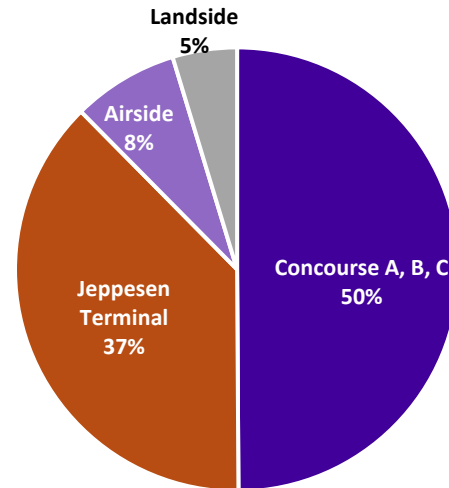
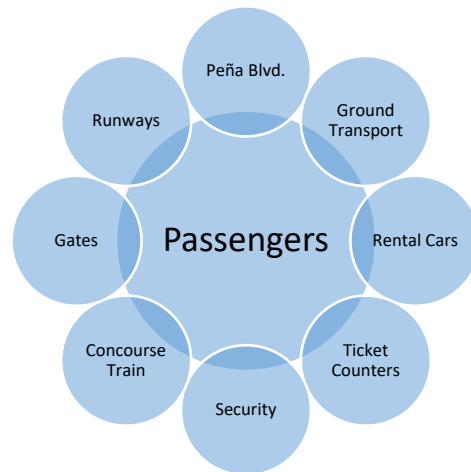
CURRENT CAPITAL IMPROVEMENT PLAN (2018 – 2022)



CAPITAL PROGRAM 2018-2022



- Existing \$4.1B Airport Capital Program through 2022 is nearing completion
- Comprehensive program taking into consideration all aspects of the passenger journey focused on the terminal providing:
 - “Enhance safety, security, improve passenger flow and increase capacity” in the landside terminal
 - Room for growth—39 additional gates and new concession revenue opportunities



MAJOR PROJECT AREAS SUMMARY

Great Hall (Phases 1 and 2)	Concourse Expansion
<ul style="list-style-type: none"> Phases 1 and 2 will be accomplished within the \$770 million Great Hall Project budget 	<ul style="list-style-type: none"> Program adds 39 gates Airline relocation
<div style="display: flex; justify-content: space-around;"> Airside Landside </div>	
<ul style="list-style-type: none"> 7th Runway planning studies Runway rehabilitation and taxiway construction 	<ul style="list-style-type: none"> Pena Boulevard expansion and rehabilitation (Phase 1) Rental car capacity improvements

- Several asset rehabilitation projects are also included in the current CIP (reference Appendix A)

2018 – 2022 CIP FUNDING SOURCES

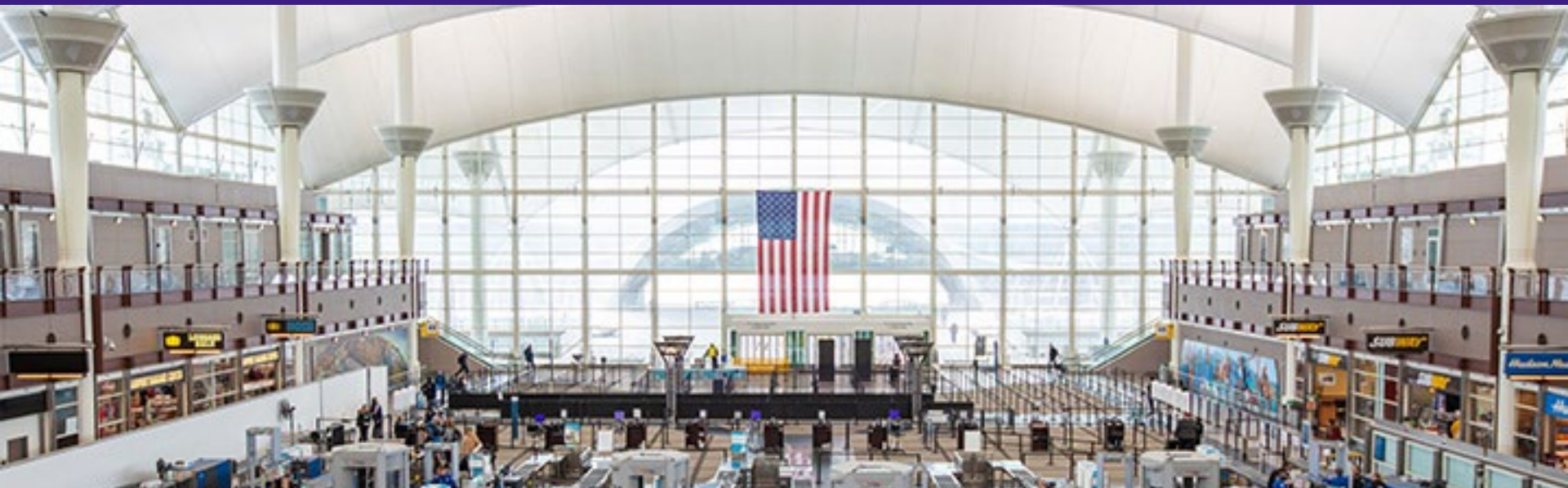


Description	\$ in millions	Notes
TOTAL Current CIP	\$ 4,174	
Grants <i>Does not include stimulus dollars used for debt service payments, i.e., from CARES, CRSSAA, and ARPA</i>	(\$ 108) ¹	
2018 Bonds	<u>(\$ 2,381)</u>	Approved by City Council on August 6, 2018, and closed on August 28, 2018 ²
Remaining funding need	\$ 1,686	
2021 Interim Notes	<u>(\$ 700)</u>	Approved by City Council on December 6, 2021, and closed on December 17, 2021 ³
Remaining Bond funding need in 2022	\$ 986	

¹Grant amount is net of anticipated grant funding for Taxiway EE project as only the airport's portion of funding was included in the CIP

²REF Series 2018 A/B Official Statement dated August 14, 2018; City Ordinance No. 18-0775

³REF Series 2021 Interim Notes Closing Memo dated December 17, 2021; City Ordinance No. 21-1388

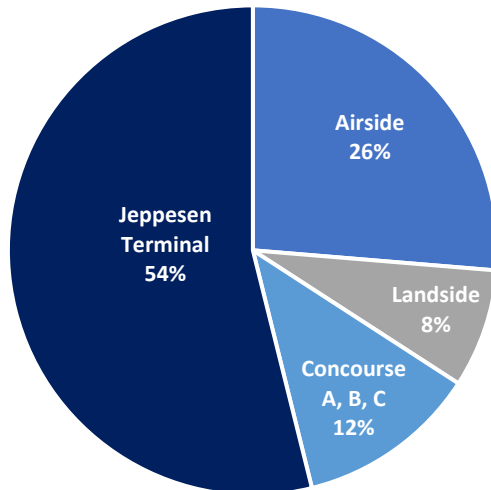


DEN CAPITAL IMPROVEMENT PLAN (2023 – 2027)

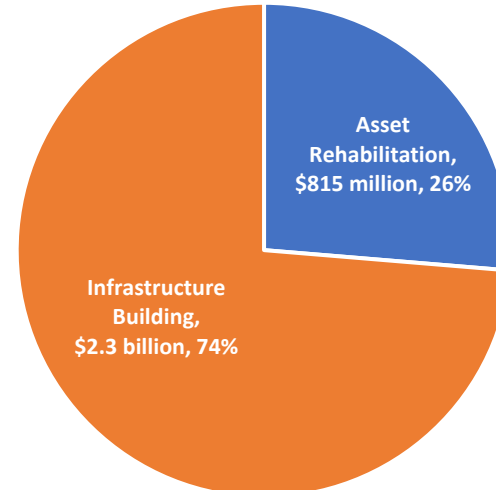
PRELIMINARY CAPITAL PROGRAM 2023-2027

- DEN has drafted the next five-year (2023-2027) CIP with a total estimated value of \$3.1B
 - The future program aims to complete projects that were started in the current 2018-2022 CIP, while addressing Vision 100's four pillars as DEN continues to grow towards 100 million annual passengers
 - A new Consolidated Rental Car Center (ConRAC) is under consideration, however if implemented, would be funded with Customer Facility Charges and is not part of the estimated CIP value of \$3.1B

CIP Breakdown by Airport Area



CIP Breakdown by Asset Rehabilitation / Infrastructure Building



MAJOR PROJECT AREAS SUMMARY

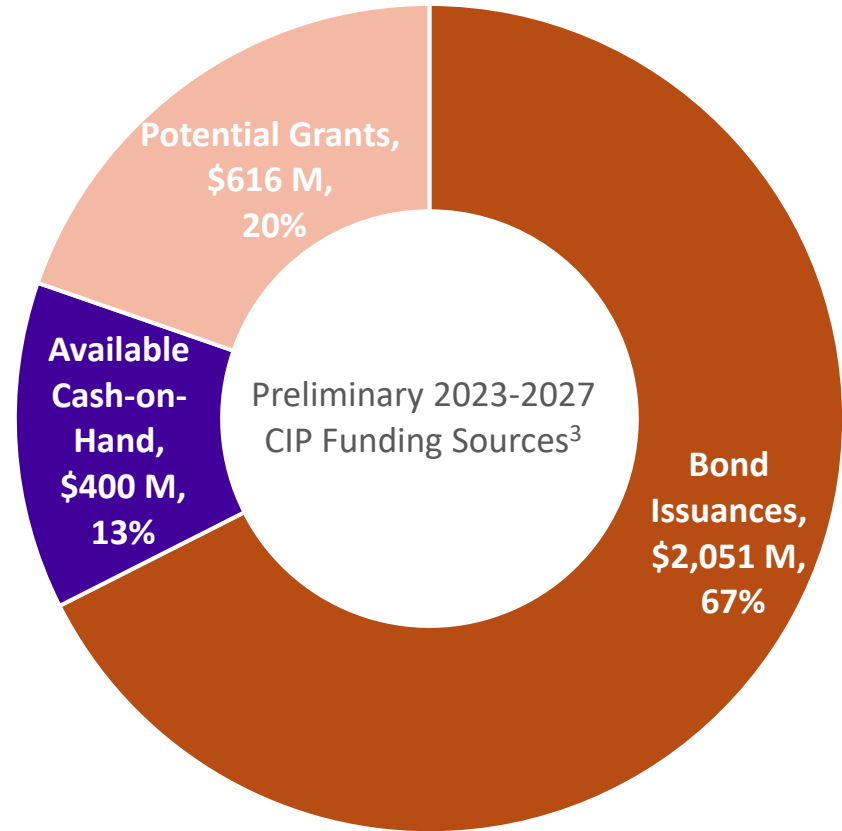
Great Hall (Completion) / Terminal	Concourses / Ground load Facility
<ul style="list-style-type: none"> • \$1.3 billion Completion Phase • Baggage modernization • Tent roof repairs and study • Technology infrastructure 	<ul style="list-style-type: none"> • Airline relocations scheduled to follow gate expansions and complete in 2023 • Ground load facility adds 5 new gates • AGTS cars 17-31 • HVAC systems • Restrooms remodel • Energy performance
Airside	Landside
<ul style="list-style-type: none"> • 7th Runway planning studies • Runway rehabilitation and taxiway construction • Gate Apron rehabilitation • DS-West Phase 1 De-ice pad • Glycol ponds 	<ul style="list-style-type: none"> • Pena Boulevard expansion and rehabilitation (Phase 2-4 studies) • Repaving roads • DEN Real Estate development areas • Remote parking areas • Capping Oil Wells

- Several other asset rehabilitation projects are also included in the future CIP (reference Appendix B)

2023-2027 PRELIMINARY CIP FUNDING SOURCES



Description	\$ in millions
TOTAL Preliminary CIP	\$ 3,067
Potential Grants:¹	
Formula based awards	(\$ 393)
Airport Terminal Program (BIL)	(\$ 209)
Other discretionary awards	(\$ 14)
Available Cash-on-Hand	<u>(\$ 400)²</u>
Remaining Bond funding need (2023-2027)	\$ 2,051



Notes:

¹Grant amount reflects combination of Airport Infrastructure Program, Bipartisan Infrastructure Law, and other grants. Anticipated Grants does not include stimulus dollars used for debt service payments from ARPA.

²Available Cash-on-Hand reflects available cash usage while maintaining target of 500 Days Cash-on-Hand

³Funding sources may be adjusted over the life of the 2023-2027 CIP

- Over the past three years (2019-2021) all Federal Airport Improvement Program (AIP) grants applied for were awarded for the entire requested amounts:
 - DEN has applied for over \$60 million in discretionary grants
 - DEN has applied for over \$587 million in non-discretionary grants
 - DEN has applied for over \$46 million in supplemental grants

FINANCIAL METRICS OUTLOOK

- DEN can deliver the proposed 2023-2027 CIP while staying within the range of financial metrics analyzed previously

November 2021 estimate:

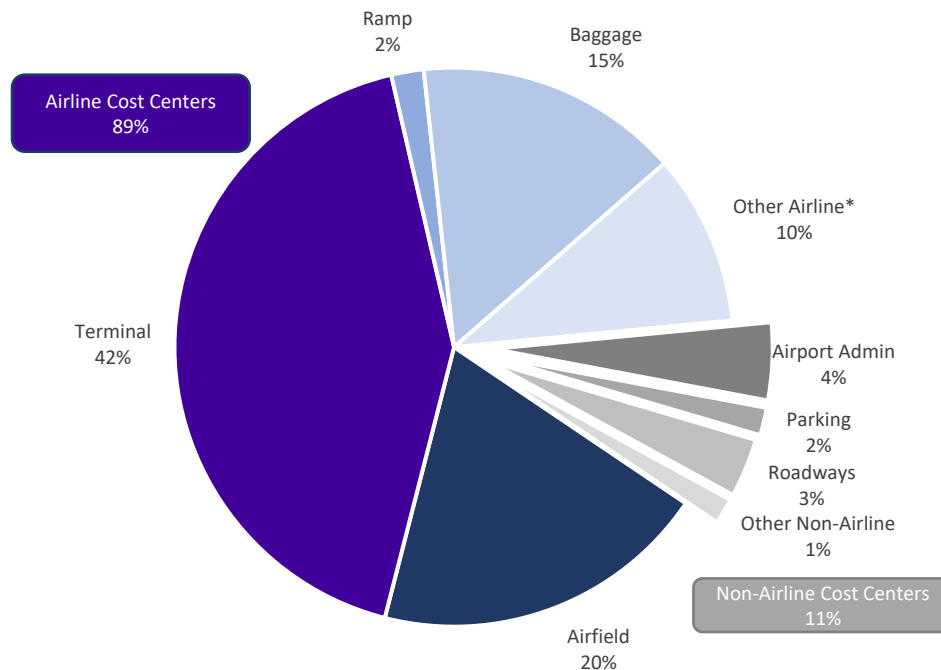
Resulting Key Metrics	2026	2030
All-bonds debt service coverage ¹	1.46	1.43
Airline Cost Per Enplaned passenger (CPE)	\$13.60	\$15.09

April 2022 update:

Resulting Key Metrics	2026	2030
All-bonds debt service coverage ¹	1.44	1.43
Airline Cost Per Enplaned passenger (CPE)	\$14.97	\$16.49

¹Per DEN's Bond Ordinance, a 1.10 All-bonds debt service coverage is required.

2023-2027 CIP Breakdown by Cost Center

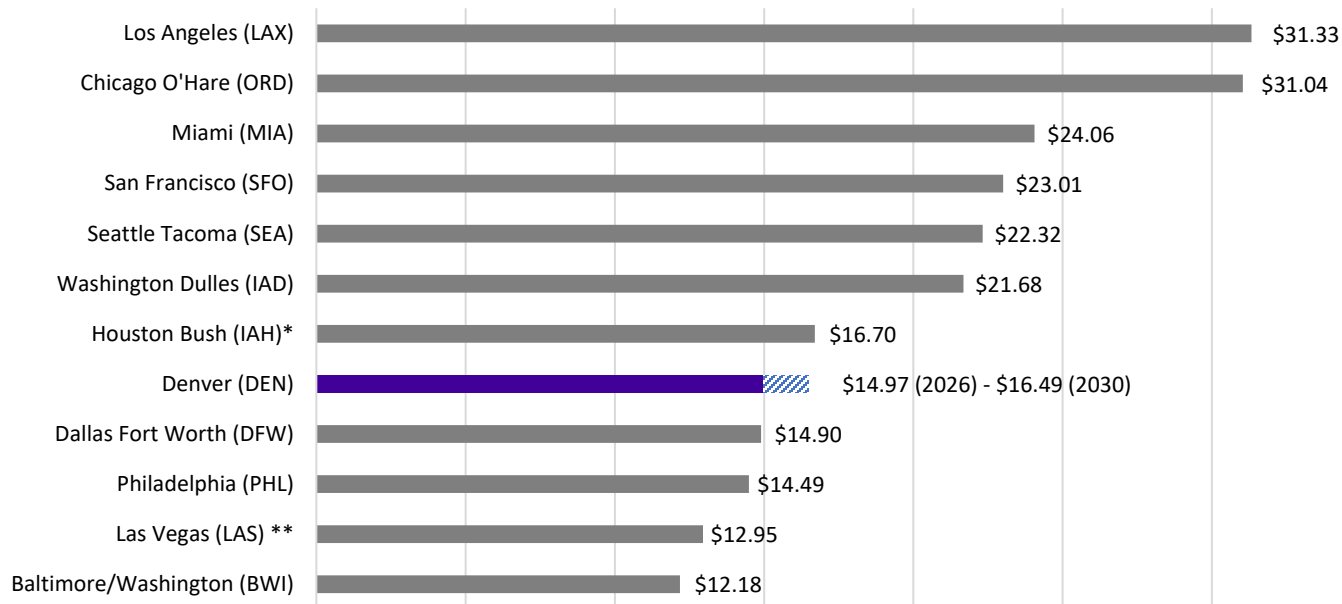


*Includes AGTS and Ground Load Facility

AIRPORT CPE COMPARISON

- DEN's Cost Per Enplaned passenger (CPE) projection remains below most U.S. large hub airports, and comparable to next highest ranked airport by passengers, Dallas Ft. Worth (DFW)

2025 CPE Forecast

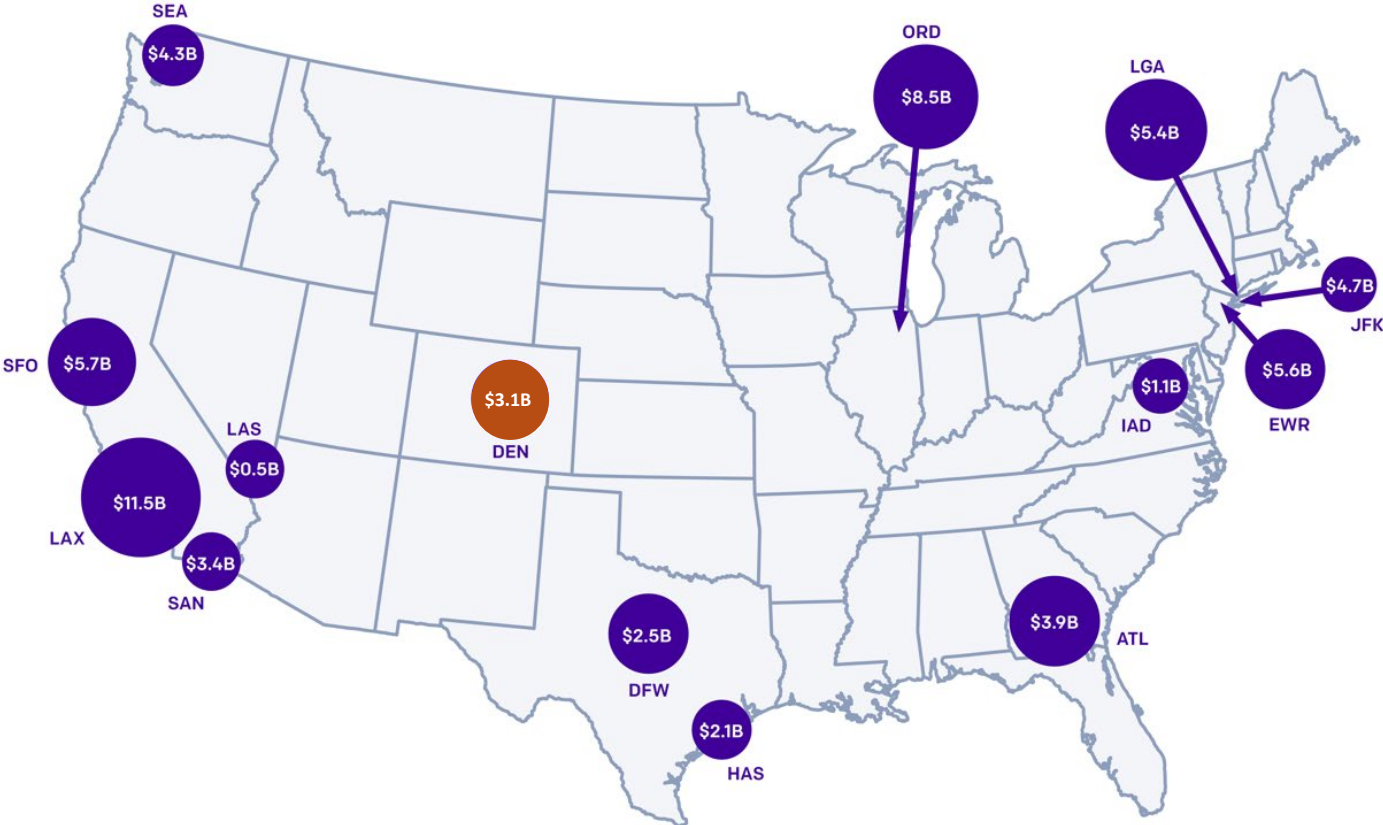


Sources: DEN Management Records, WJ Advisors, *The CPE Report*, September 2021

* IAH 2022 forecast shown in absence of 2025 estimate

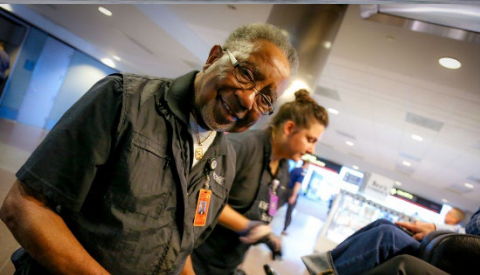
** LAS 2023 forecast shown in absence of 2025 estimate

COMPARATIVE CONTEXT FOR DEN'S 2023-2027 CIP



Source: Based on respective airports' ongoing Capital Plans as published in recent Official Statements, CIP documents, or press releases.
Note: DEN's number represents a preliminary estimate for the 2023-2027 5-year CIP portion that may be bond funded.

Q&A



Concourse Renewal
Great Hall (Phases 1 and 2)
Checked Baggage Resolution Area (Phase 2)
Other Terminal Projects*
Baggage Level 5.5 (Phase 2)
AGTS Original Car Replacement Program
Physical Access Control System
Refresh for Tech Infrastructure
Gate Apron Repair & Drainage Improvements
Conveyance Replacement Program
Roadway Program for Remote Parking Area
Passenger Loading Bridge Replacement Program
Pena Blvd Terminal Reconfiguration (Phase 1)
Concourse A Center Core Escalator Redesign
Glycol Facility Improvements
Revenue Control Replacement & New Parking Canopies
Baggage Recap
Repair Flat Roofs
CUP Boiler Expansion Program
Concourse Sewer Repair
DS Taxiway
7th Runway (Design)
Automated Service Lanes
Runway Complexes Pavement & Lighting Rehab
Parking Garage Repairs
Annual Airfield Pavement Rehabilitation
Roadway Erosion Control
Jet Bridge Walkway Environmental Control Systems and Fire Protection Upgrades

*E.g., Signage and
Wayfinding, Utilities
Infrastructure Update

Project Name

Annual Runway Complexes Pavement & Lighting Rehabilitation
Baggage Handling System Modernization
West Gates Deicing Fluid Pond Expansion (Pond 002)
Baggage Recapitalization
7th Runway (Design & Study only)
Baggage Claims and Feed Conveyors Replacement
Baggage Handling System Lifts Replacement
Baggage Curbside Conveyors and Controls Replacement
Taxiway EE
DS East Expansion
Annual Airfield Pavement Rehabilitation
Deicing Fluid Pond 001 and Pond 009 Discharge Upgrades
DS Island Fill
Pena Blvd Improvements Program (Phases 2-4)
Annual Airfield Joint Rehabilitation
Air Cargo Expansion (Modernization/Upgrades/Repair)
Wildlife Drainage Mitigation
Carpet and Aesthetics

Project Name

Great Hall Completion (Center of Excellence and Equity in Aviation Included)
A East Groundload Expansion
AGTS Cars Replacement 17-31
Energy Performance Contract
Physical Access Control System Replacement
Gate Apron Rehabilitation & Drainage Improvements (Concourse A)
Passenger Conveyance Modernization
Completion of Concourse Renewal
West Approach Development District
Refresh for Tech Infrastructure
Roadway Program for Remote Parking Area
Annual Landside Pavement Rehabilitation
Annual Roads Pavement Rehabilitation
R-22 Replacement Project
Restrooms Remodel
Flat Roof Replacement Program
DS West Phase 1 (Deice Pad)



Project Name

Passenger Loading Bridge Replacements
Annual Parking Garage Repairs
Central Utility Plant Boiler
Oil Well Capping
Refresh for Cybersecurity and Compliance
Airport Office Building Restack
Tunnel Waterproofing and Structural Repairs
Aircraft Deicing System Modernization
Refresh for Tech Business Applications
Concourse B Transformer Vault Rehabilitation
Distributed Antenna System Survivability
Airlines moves and build outs
Alternative Passenger Flow (Feasibility Study only)
Terminal Tent Replacement (Design only)
Fluorine-Free Foam Transition
Annual Terminal Tent Roof Inspection and Repairs

GENERAL ASSUMPTIONS



- The number of enplaned passengers at DEN recover to +2019 numbers in 2022; thereafter traffic is assumed to grow at 3% per year
- Operating and Maintenance budgeted expenses for 2023 are projected to be at +8%, increasing at 4% per year thereafter
- Airline revenue forecast pursuant to existing airline use and lease agreements (2022/2023)
- Non-airline revenues are forecast to recover back to 2019 levels, increasing with passenger traffic and assumed inflation rates
- Federal stimulus grants (e.g., CARES, CRRSAA and ARPA) are used to reimburse debt service payments
- Airport cash above ~500 days used to fund project costs
- Financing assumptions
 - Approximately 50/50 split between Senior and Subordinate Bonds
 - Interest rate assumptions starting at ~4.5% and increasing up to ~6.0% during the forecast period
 - Includes reserve funding and capitalized interest costs during construction