14 CFR 158

Application for Authority to Impose a Passenger Facility Charge and to Use Passenger Facility Charge Revenue at Redmond Municipal Airport (RDM)

DRAFT

Prepared by
Morrison-Maierle, Inc. and City of Redmond – Redmond Municipal Airport

Redmond, Oregon

October 5th, 2026

APPLICATION TO IMPOSE AND USE AT

REDMOND MUNICIPAL AIRPORT

DRAFT

Federal Aviation Administration
U. S. Department of Transportation

OMB Approved 2120-0557
Exp. 11/30/2024

PASSENGER FACILITY CHARGE (PFC) APPLICATION

1. Application Type *(Check all that apply)*

- [x] a. Impose PFC Charges
- [x] b. Use PFC Revenue
- [ ] c. Amend PFC No.

FAA USE ONLY

Date Received:

PFC Number:

PART I - General

2. Public Agency Name, Address, and Contact Person

Agency Name: Redmond Municipal Airport

Address: 2522 SE Jesse Butler Circle, #17

City, State, ZIP: Redmond OR 97756

Contact Person: Jason Neff, Interim Airport Director

3. Airport(s) to Use

Redmond Municipal AIprort - RDM

4. Consultation Dates

a. Date of Written Notice to Air Carriers: 10/05/2026

b. Date of Consultation Meeting with Air Carriers: 11/06/2026

c. Date of Public Notice: 10/05/2026

PART II - Charges

5. Charges

a. Airport to Impose:	b. Level	c. Total Estimated PFC Revenue	d. Proposed Effective Date: 01/02/2027	e. Estimated Expiration Date: 01/02/2052
RDM	☐ $1.00 ☐ $2.00 ☐ $3.00 ☐ $4.00 ☒ $4.50	Impose: $ 182,842,028 Use: $ 182,842,028		

PART III - Attachments

6. Attachments *(Check all that Apply)*

a. Airport Capital Improvement Plan	☒ Attached	Submitted with Application Number:
b. Application Project Information	☒ Attached	Submitted with Application Number:
c. Air Carrier Consultation and Public Notice Information	☒ Attached	Submitted with Application Number:
d. Request to Exclude Class(es) of Carriers	☒ Attached	Submitted with Application Number:
e. Alternative Uses/Projects	☐ Attached	Submitted with Application Number:
f. Competition Plan/Update	☐ Attached	Submitted with Application Number:
g. ALP/Airspace/Environmental	☒ Attached	Submitted with Application Number:
h. Notice of Intent Project Information	☒ Attached	Submitted with Application Number:
I. Other:	☐ Attached	Submitted with Application Number:

PART IV - Certification

7. With respect to this PFC application I hereby certify as follows:

- To the best of my knowledge and belief, all data in this application are true and correct;
- This application has been duly authorized by the governing body of the public agency;
- The public agency will comply with the assurances (Appendix A to Part 158) if the application is approved;
- For those projects for which approval to use PFC revenue is requested, all applicable ALP approvals, airspace determinations, and environmental reviews required by the National Environmental Policy Act have been completed.
- If required, the public agency has submitted a competition plan in accordance with 49 U.S.C. 47106(f); and
- If required by 49 U.S.C. 40117(d)(4), adequate provision for financing the airside needs, including runways, taxiways, aprons, and gates, has been made by the public agency.

a. Name of Authorized Representative	b. Title City Manager	c. Telephone Number
	d. E-mail Address	

Please read the following information: By signing this document, you are agreeing that you have reviewed the following disclosure information and consent to transact business using electronic communications, to receive notices and disclosures electronically, and to utilize electronic signatures in lieu of using paper documents. You are not required to receive notices and disclosures or sign documents electronically. If you prefer not to do so, you may request to receive paper copies and withdraw your consent at any time.

e. Signature of Authorized Representative	f. Date Signed

ATTACHMENT A

AIRPORT CAPITAL IMPROVEMENT PLAN

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5 Year Capital Improvement Plan (CIP)

Airport Name (LOC ID), ST: **RDM** **CIP START YEAR: 2027**

2025 Passenger & Cargo (Expires FY27) | 2024 AIG (Expires FY27) | Passenger and Cargo Match 94%
2026 Passenger & Cargo (Expires FY28) | 2025 AIG (Expires FY28) | AIG Match 94%
$3,511,498 Estimated Passenger & Cargo (for planning through 2032) | 2026 AIG (Expires FY29)

Fed FY	Available: Passenger & Cargo	Available: AIG	Funding Source	Data sheet - Project Component/Phase	Estimated Cost	Funding Plan: AIP	Funding Plan: AIG	Funding Plan: Additional AIP	Funding Plan: Other	Funding Plan: Match
2027	$3,511,498		AIP	Terminal Expansion - Construction Phase 1.4	$3,745,598	$3,511,498				$234,100
	Total = $3,511,498		Remaining Funds	**2027 Annual Subtotals:**	**$3,745,598**	**$3,511,498**				**$234,099**
2028	$3,511,498		AIP	Terminal Expansion - Construction Phase 1.5	$3,745,598	$3,511,498				$234,100
			Local	PCI Study	$60,000					$60,000
	Total = $3,511,498		Remaining Funds	**2028 Annual Subtotals:**	**$3,805,598**	**$3,511,498**				**$294,099**
2029	$3,511,498		AIP	Pavement Rehab - Taxiway B South (TB2) PCI-75 (2023)	$3,745,598	$3,511,498				$234,100
			AIP	Electrical Rehab - Taxiway B South	$400,000			$375,000		$25,000
	Total = $3,511,498		Remaining Funds	**2029 Annual Subtotals:**	**$4,145,598**	**$3,511,498**		**$375,000**		**$259,099**
2030	$3,511,498		AIP	Runway 11 Run-UP Area	$1,600,000	$1,500,000				$100,000
			AIP	TW 'C" West Pavement Rehabilitation (TC01 & TC 02) PCI~72	$1,200,000	$1,125,000				$75,000
			AIP	TW 'C" West Electrical Rehabilitation	$350,000	$328,125				$21,875
			AIP	Deice Apron Design	$595,598	$558,373				$37,225
	Total = $3,511,498		Remaining Funds	**2030 Annual Subtotals:**	**$3,745,598**	**$3,511,498**				**$234,099**
2031	$3,511,498		AIP	Master Plan	$1,600,000	$1,500,000				$100,000
			AIP	Acquire ARFF Vehicle (Replace Existing 2011)	$2,000,000	$1,875,000				$125,000
			AIP	Runway 5-23 Blast Pads	$1,745,598	$136,498		$1,500,000		$109,100
			AIP	Runway 11-29 Blast Pads	$1,600,000			$1,500,000		$100,000
	Total = $3,511,498		Remaining Funds	**2031 Annual Subtotals:**	**$6,945,598**	**$3,511,498**		**$3,000,000**		**$434,099**
2032	$3,511,498		AIP	Pavement Rehab - Taxiway B West (TB01) PCI-79 (2023)	$1,300,000	$1,218,750				$81,250
			AIP	Electrical Rehab - Taxiway B West	$400,000	$375,000				$25,000
			AIP	Deice Apron Construction	$15,000,000	$1,917,748		$12,144,752		$937,500
	Total = $3,511,498		Remaining Funds	**2032 Annual Subtotals:**	**$16,700,000**	**$3,511,498**		**$12,144,752**		**$1,043,750**
				6 Year CIP Totals:	**$22,387,990**	**$21,068,988**		**$15,519,752**		**$2,499,245**

SPONSOR SIGNATURE: Charles G. Hansen **DATE:** 27 August 2026

ATTACHMENT B

Project Information

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PFC APPLICATION NUMBER: #8

ATTACHMENT B: PROJECT INFORMATION

1. Project Title: **2025 Terminal Expansion – Bond Principal and Interest**

2. Project Number (if applicable):

3. Use Airport of Project: **RDM**

4. Type of Approval Requested:
[ ] Impose Only:
[X] Concurrent:
[ ] Use Only:
Link to application:

5. Level of Collection:[ ] $1.00
[ ] $2.00
[ ] $3.00

[ ] $4.00
[X] $4.50

6. Financing Plan:

PFC Funds: Pay-as-you-go **$0**
Bond Capital **$94,695,656**
Bond Financing & Interest **$88,146,372**

Subtotal PFC Funds*: **$182,842,028**

Note: The Total Bond Principal is $95,955,000 with $89,318,618 in interest charges. The total bond payback is $185,273,618.

Based on the Analysis of Remaining PFC Eligible costs associated with the project, approximately 98.69% of the debt service associated with the bond is PFC eligible. See Table 'B' below.

If amount is over $10 million, include cost details sufficient to identify eligible and ineligible costs.

SEE EXHIBIT 'C' FOR ELIGIBILITY CALCULATIONS AND DIAGRAMS. BELOW TABLE 'B' FOR A SUMMARY OF PROJECT COSTS.

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

Proration Calculation

Building Components	*Square Footage*			
	Total	*(A) Eligible*	*(B)Non-Eligible*	*(C) Prorated*
Basement - Level 0	-	-	-	-
Main Level - Level 1	**32,693**	25,502	2,887	4,304
Concourse - Level 2	**46,909**	33,444	6,695	6,770
TOTAL	**79,602**	**58,946**	**9,582**	**11,074**

PFC Eligible % =A/(A+B)	***86.0%***

Project Cost Calculation

Construction	Sq. Feet	$/sf	Cost	% Eligible	Eligible	Non-Eligible
Building Construction	79,602	$ 637.74	$ 50,765,711	86.0%	$43,658,511.46	$7,107,199.54
Utility Costs						
Mechanical Systems			$ 17,322,115	86.0%	$14,897,018.90	$2,425,096.10
Electrical Systems			$ 20,481,281	86.0%	$17,613,901.66	$2,867,379.34
Fire Protection			$ 1,269,295	86.0%	$1,091,593.70	$177,701.30
Site			$ 8,124,886	86.0%	$6,987,401.96	$1,137,484.04
Landscaping			$ 287,285	0.0%	$0.00	$287,285.00
Equipment /Furnishings						
Furnishings			$ 1,340,321	100%	$1,340,321.00	$0.00
PBB, Elevators, Escalators			$ 9,919,606	100%	$9,919,606.00	$0.00
Baggage & Secure Exit			$ 4,188,803	100%	$4,188,803.00	$0.00
Dock Leveler			$ 26,652	0%	$0.00	$26,652.00
PBB (Glass)			$ 106,274	0%	$0.00	$106,274.00
Allowances						
Owner Contingency			$ 9,193,555	0%	$0.00	$9,193,555.00
Misc Allowances (Eligible)			$ 808,303	86%	$695,140.58	$113,162.42
Misc Allowances (Non-Eligible)			$ 10,000	0%	$0.00	$10,000.00
Indirect						
Preconstruction Services			$ 631,101	86%	$542,746.86	$88,354.14
Insurance			$ 3,514,624	86%	$3,022,576.64	$492,047.36
GC			$ 10,864,472	86%	$9,343,445.92	$1,521,026.08
Bonds			$ 858,169	86%	$738,025.34	$120,143.66
FEE			$ 3,963,347	86%	$3,408,478.42	$554,868.58
Soft Costs						
Inspection & Construction Mgmt.			$ 8,848,833	86.0%	$7,609,996.38	$1,238,836.62
Permits & Fees			$ 2,645,076	86.0%	$2,274,765.64	$370,310.68
Other Owner Related Costs			$ 9,480,517	0.0%	$0.00	$9,480,517.00
Art Program			$ 1,000,000	0.0%	$0.00	$1,000,000.00
Kid's Play Area			$ 200,000	86.0%	$172,000.00	$28,000.00
Design & Engineering			$ 12,269,967	86.0%	$10,552,171.62	$1,717,795.38
Project Financing						
Capitalized Interest			$ 9,383,956	100.0%	$9,383,956.15	$0.00
		TOTAL	**$ 187,504,149**		**$147,440,461**	**$40,063,688**

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

FUNDING						
Source	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
AIP 52 (ENT)	$2,261,101.00					$2,261,101.00
AIP 53 (IIJA)	$6,354,239.00					$6,354,239.00
AIP 54 (ATP)	$7,000,000.00					$7,000,000.00
AIP 55 (ENT)	$1,291,810.00					$1,291,810.00
AIP 56 (ENT) (FY2025)	$9,881,121.00					$9,881,121.00
AIP 57 (IIJA) (FY2025)	$8,388,743.00					$8,388,743.00
AIP 58 (ENT) (FY2026)	$3,511,498.00					$3,511,498.00
AIP 59 (IIJA) (FY2026)	$3,828,852.00					$3,828,852.00
AIP 60 (ENT) (FY2027)	$3,511,498.00					$3,511,498.00
AIP 61 (ENT) (FY2028)	$3,511,498.00					$3,511,498.00
Match to AIP (Local)					$3,204,445.05	$3,204,445.05
PFC Eligible Work (Pay as You Go)		$0.00				$0.00
CONNECT OREGON GRANT FOR NON-ELIGIBLE CONSTRUCTION				$10,000,000.00		$10,000,000.00
COAR Grants				$281,274.00		$281,274.00
LOCAL FUNDING FOR NON-ELIGIBLE CONSTRUCTION					$22,803,077.00	$22,803,077.00
LOCAL FUNDING TO BALANCE					$5,719,993.00	$5,719,993.00
LOCAL FUNDING (BONDS, NET OF ISSUANCE COSTS)			$95,955,000.00			$95,955,000.00
TOTAL CONSTRUCTION	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**
Debt Service	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Principle		$95,955,000.00				$95,955,000.00
Interest		$89,318,618.00				$89,318,618.00
Total Debt Service		**$185,273,618.00**				**$185,273,618.00**
	AIP	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Total Sources of Funds	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**

Calculate Principal and Interest Eligible for PFC Debt Service	
Total PFC Eligible Costs	**$147,440,461.23**
Eligible Funding Received	
AIP/BIL/IIJA (AIP Grants)	$49,540,360.00
Match to AIP (Local)	$3,204,445.05
PFC Eligible Work (Pay as You Go)	$0.00
Subtotal	**$52,744,805.05**
Remaining Eligible Costs	***$94,695,656.17***
Bonded Amount	***$95,955,000.00***
% Eligible for PFC Debt Service Payment	**98.69%**
Eligible for PFC Debt Service Payment	**$94,695,656**
Bond Interest Eligible for Debt Service	**$88,146,372**
Amount Eligible for PFC Debt Service Payment	**$182,842,028**

Check Other Grants < Ineligible Amount		
Ineligible Amount	$40,063,688	
Other Grant Sources	$10,281,274	**TRUE**

Subtotal Existing Airport Grant Funds: $42,174,602

Existing Airport Grant Funds			
Grant #	**Grant Funds in Project**	**Grant Description**	**Project Description**
AIP 52 (ENT)	$2,261,101.00	Expand Terminal Building (Phase 1 - design); Rehabilitate Terminal Building (Phase I - design)	Schematic Design for the Terminal Expansion
AIP 53 (IIJA)	$6,354,239.00	Expand Terminal Building (phase 2-design); Rehabilitate Hold Room spaces, corridors, and exit lanes (phase 2-design);	Final Design for Terminal Expansion and CMGC Preconstruction Services
AIP 54 (ATP)	$7,000,000.00	Expand Terminal Building (phase 3-construction), including electrical service, boarding bridges, and baggage makeup unit; Improve Terminal Building, including hold room spaces, corridors, and exit lanes (phase 3-construction);	Construction: Passenger Boarding Bridge #8-11, New Out Bound Baggage Carousel. New Electrical Service for Terminal Building
AIP 55 (ENT)	$1,291,810.00	Expand Terminal Building (phase 4-construction), including one passenger boarding bridge;	Construction: Passenger Boarding Bridge #7
AIP 56 (ENT) (FY2025)	$9,869,745.00	Expand Terminal Building (phase 5-construction), including two passenger boarding bridges, HVAC, and electrical	Construction: General Requirements and Logistics (Enabling Work), Passenger Boarding Bridge #5&#6, HVAC and Electrical Preconstruction Services.
AIP 57 (IIJA) (FY2025)	$8,057,357.00	Expand Terminal Building (phase 6-construction), including site improvements (civil) building and site demolition, building foundation	Construction: Portion of the Building Concrete, Site Concrete, Site Earthwork and Utilities (Water, Sewer, Storm), Asphalt Paving, Building Demolition.

Existing Airport Grant Funds			
Grant #	**Grant Funds in Project**	**Grant Description**	**Project Description**
AIP 58 (AIP) (FY2026)	$3,511,498.00	Expand Terminal (phase 7-construction), including building foundations and structural steel	Construction: Portion of the Building Concrete, Portion of Structural Steel and Misc. Metals.
AIP 59 (IIJA) (FY2026)	$3,828,852.00	Expand Terminal (phase 8-construction), including structural steel, metal wall, and roof panel	Construction: Portion of Structural Steel and Metal Wall and Roof Panels
TOTAL	***$42,174,602***		

Anticipated Airport Grant Funds (List Each Year Separately): **$7,022,996**

Source	Entitlement	Grant Description	Project Description
AIP 60 (ENT) (FY2027)	$3,511,498	Expand Terminal (phase 9-construction), including Metal Wall and Roof Panels,	Construction: Portion of Metal Wall and Roof Panels
AIP 61 (ENT) (FY2028)	$3,511,498	Expand Terminal (phase 10-construction), including HVAC and Plumbing	Construction: Portion of HVAC and Plumbing
TOTAL	***$7,022,996***		

Approximately $49,540,360 (26.42%) of the project is funded with AIP, IIJA, and ATP funds.

Other Funds:
State Grants **$10,281,274 (Connect Oregon)**
Local Funds **$31,727,515**
Other (please specify) **BOND $95,955,000**

Subtotal Other Funds: **$ 137,963,789**

Total Project Cost: **$187,504,149**

For FAA Use
a. Does the project include a proposed LOI?
[ ] YES
[ ] NO
If YES, does the Region support?
[ ]YES
[ ] NO.
If YES, list the schedule for implementation:

b. For any proposed AIP discretionary funds, does the Region intend to support?
[ ] YES
[ ] NO

c. For any proposed AIP funds, is the request within the planning levels for the Region's five year CIP?
[ ] YES
[ ] NO

d. What percentage of the total project cost is funded through AIP?
List the source(s) of data used to make this finding.

e. Terminal and surface transportation projects requesting a PFC funding level of $4.00 and $4.50. The public agency has made adequate provision for financing the airside needs of the airport, including runways, taxiways, aprons, and aircraft gates.
[ ] YES
[ ] NO
[ ] N/A
List the source(s) of data used to make this finding.

PFC Share of Total Cost Analysis

7. Back-up Financing Plan: If proposed AIP discretionary funds or a proposed LOI are included in the Financing Plan, provide a Back-up Financing Plan or a project phasing plan in the event the funds are not available for the project.

No discretionary associated with the project.

For FAA Use
If required to use a back-up financing/phasing plan, indicate the need to obtain additional approvals to obtain an alternate source of financing. Indicate the additional PFC duration of collection required if PFC's are to be used to fund the difference. Recap any discussion from previous item regarding likelihood of public agency obtaining the funding it proposes.

8. Estimated Project Implementation Date (Month and Year): **June 2025**
Estimated Project Completion Date (Month and Year): **November 2027**

For FAA Use
For Impose and Use or Use Only projects, will the project begin within 2 years of PFC application Due date (120-day)?
[ ] Yes
[ ] No

For Impose Only project, will the project begin within 5 years of the charge effective date or PFC application Due date, whichever is first?
[ ] Yes
[ ] No

Is this project dependent upon another action to occur before its implementation or completion? Explain.

9. Project Description:

The proposed PFC project is related to the repayment of the bond capital and interest associated with the expansion of the terminal building at RDM. Floor Plans of the expansion can be found in EXHIBIT 'B'. The bond is being used to fund portions of the PFC Eligible construction not covered by AIP, ATP, & IIJA grants.

The overall project consists of the expansion of the passenger departure lounges, restrooms, baggage makeup areas, addition of passenger boarding bridges, ATO space, and associated circulation and support areas.

The project is currently under construction with a first passenger date scheduled for November of 2027. The total anticipated project cost is $187,504,149

The sources of funds for the project are shown below.

Funding Summary	
AIP/ IIJA/ATP GRANTS	$49,540,360
Other Grants (State)	$10,281,274
Bonds	$95,955,000
Airport Funds (Cash)	$31,727,515
TOTAL	**$187,504,149**

Based on the PFC Order 5500.1 the overall eligibility of the terminal building expansion based on square footage was determined to be 86.0%. The passenger boarding bridges, elevators, baggage equipment, and secure exit lane equipment were determined to be 100% eligible. See Exhibit 'C' for diagrams and spreadsheets used to determine the eligibility of the project. An update of the eligibility calculations was sent to the FAA-ADO in November of 2025.

The AIP, IIJA, and ATP grants allocations to the project were coordinated with the FAA prior to the grant offers. Specific scopes of work were allocated to the grants based on the schedule of values and a prorated portion of the indirect costs (General Condition, Insurance, CM fee).

The bond is being used to fund the remaining items of work in the schedule of values and other related eligible project costs that have not been allocated to a specific grant or other funding sources.

There is also a difference in the eligibility of the AIP grants and the IIJA/PFC eligibility for the terminal project. The AIP grants have an eligibility of 54.9% and the IIJA/PFC eligibility is 86.0%. The bond also covers difference between the AIP and PFC eligibility, or 86.0%-54.9%=31.1%.

See Table 'C' Below for the schedule of values allocation to grants and associated with the construction.

TABLE 'C'

Terminal Expansion Schedule of Values

ITEM NO.	DESCRIPTION OF WORK	GMP	PFC Eligibility %	Total PFC Eligibility	Eligibility Allocated to other Grants - AIP 53 through AIP 61	Remaining Eligible Cost
	RDM - Airport Terminal Building					
1	Elevators & Escalators	$1,143,707.00	100%	$ 1,143,707.00	$ -	**$ 1,143,707.00**
2.1	Passenger Boarding Bridges (8-11)	$5,031,546.00	100%	$ 5,031,546.00	$ 5,031,546.00	**$ -**
2.2	Glass Option - Fixed Bridge	$106,274.00	0%	$ -	$ -	**$ -**
2.3	Passenger Boarding Bridges (7)	$1,377,931.00	100%	$ 1,377,931.00	$ 1,377,931.00	**$ -**
2.4	Passenger Boarding Bridges (5&6)	$2,366,422.00	100%	$ 2,366,422.00	$ 2,366,422.00	**$ -**
3A.1	Outbound Baggage Carousel	$639,325.00	100%	$ 639,325.00	$ 639,325.00	**$ -**
3B	Baggage Handling System	$3,017,022.00	100%	$ 3,017,022.00	$ -	**$ 3,017,022.00**
4	Site Electrical Utility	$857,900.00	86%	$ 737,794.00	$ 730,072.90	**$ 7,721.10**
5a	Building Concrete (AIP 57)	$2,178,847.00	86%	$ 1,873,808.42	$ 1,854,198.80	**$ 19,609.62**
5b	Building Concrete (AIP 58)	$2,565,102.00	86%	$ 2,205,987.72	$ 1,408,241.00	**$ 797,746.72**
6	Site Concrete	$462,472.00	86%	$ 397,725.92	$ 393,563.67	**$ 4,162.25**
7	Masonry	$382,792.00	86%	$ 329,201.12	$ -	**$ 329,201.12**
8B.1	Structural Steel and Misc Metals (AIP 58)	$3,387,150.00	86%	$ 2,912,949.00	$ 1,859,545.35	**$ 1,053,403.65**
8B.2	Structural Steel and Misc Metals (AIP 59)	$4,285,054.00	86%	$ 3,685,146.44	$ 3,646,580.95	**$ 38,565.49**
9A	Mass Timber Supply	$1,844,285.00	86%	$ 1,586,085.10	$ -	**$ 1,586,085.10**
9B	Glulaminated Beams Supply	$736,640.00	86%	$ 633,510.40	$ -	**$ 633,510.40**
9C	Mass Timber Install	$619,029.00	86%	$ 532,364.94	$ -	**$ 532,364.94**
10	Foundation Dampproofing & Water Proofing	$261,377.00	86%	$ 224,784.22	$ -	**$ 224,784.22**
11.1	Metal Wall and Roof Panels	$50,000.00	86%	$ 43,000.00	$ 42,550.00	**$ 450.00**
11.2	Metal Wall and Roof Panels (AIP 60)	$6,406,610.00	86%	$ 5,509,684.60	$ 3,517,228.89	**$ 1,992,455.71**
12	TPO Roofing	$974,377.00	86%	$ 837,964.22	$ -	**$ 837,964.22**
13	Glass and Glazing	$5,228,664.00	86%	$ 4,496,651.04	$ -	**$ 4,496,651.04**
14	Metal Framing, Drywall, and Ceilings	$4,464,587.00	86%	$ 3,839,544.82	$ -	**$ 3,839,544.82**
15	Fire Supression	$1,269,295.00	86%	$ 1,091,593.70	$ -	**$ 1,091,593.70**
16A	HVAC & Plumbing - PRECON	$638,866.00	86%	$ 549,424.76	$ 350,737.43	**$ 198,687.33**
16B.1	HVAC & Plumbing (AIP 60)	$0.00	86%	$ -	$ -	**$ -**
16B.2	HVAC & Plumbing (AIP 61)	$5,850,000.00	86%	$ 5,031,000.00	$ 3,211,650.00	**$ 1,819,350.00**
16B.3	HVAC & Plumbing (PFC)	$10,833,249.00	86%	$ 9,316,594.14	$ -	**$ 9,316,594.14**
17A	Electrical- PRECON	$281,488.00	86%	$ 242,079.68	$ 154,536.91	**$ 87,542.77**
17B	Electrical	$20,481,281.00	86%	$ 17,613,901.66	$ -	**$ 17,613,901.66**
18	Earthwork, Utiltities	$4,589,669.00	86%	$ 3,947,115.34	$ 3,905,808.32	**$ 41,307.02**
19	Asphalt Paving	$463,948.00	86%	$ 398,995.28	$ 394,819.75	**$ 4,175.53**
20	Building Demolition	$1,750,897.00	86%	$ 1,505,771.42	$ 1,490,013.35	**$ 15,758.07**
22	Casework-FRP/AWP/Cornerguard	$2,219,583.00	86%	$ 1,908,841.38	$ -	**$ 1,908,841.38**
23a	Door and Frames/Hardware Supply	$518,284.00	86%	$ 445,724.24	$ -	**$ 445,724.24**
23b	Door and Frames/Hardware Install	$129,320.00	86%	$ 111,215.20	$ -	**$ 111,215.20**
24	Secure Exit Lanes	$532,396.00	100%	$ 532,396.00	$ -	**$ 532,396.00**
25a	Flooring -Carpet / Resinous / resilient	$578,142.00	86%	$ 497,202.12	$ -	**$ 497,202.12**
25b	Flooring Tile	$270,867.00	86%	$ 232,945.62	$ -	**$ 232,945.62**
26	Terrazzo	$1,049,934.00	86%	$ 902,943.24	$ -	**$ 902,943.24**
27	Painting	$742,233.00	86%	$ 638,320.38	$ -	**$ 638,320.38**
28	Specialties	$245,637.00	86%	$ 211,247.82	$ -	**$ 211,247.82**
29	Fall Protection	$231,778.00	86%	$ 199,329.08	$ -	**$ 199,329.08**
30	Loading Dock Equipment	$26,652.00	0%	$ -	$ -	**$ -**
31	Signage	$257,770.00	86%	$ 221,682.20	$ -	**$ 221,682.20**
32	Landscaping	$287,275.00	0%	$ -	$ -	**$ -**
33	Cleaning /Final Clean	$101,558.00	86%	$ 87,339.88	$ -	**$ 87,339.88**
34	Overhead Coiling Doors	$370,040.00	86%	$ 318,234.40	$ -	**$ 318,234.40**
	Furnature	$1,340,321.00	100%	$ 1,340,321.00	$ -	**$ 1,340,321.00**
00	General Requirements and Logistics	$6,119,606.00	86%	$ 5,262,861.16	$ 3,359,663.69	**$ 1,903,197.47**
	Underground Utility Locating	$10,000.00	86%	$ 8,600.00	$ 5,490.00	**$ 3,110.00**
00.1'	Enabling Outbound Baggage Carousel	$1,929,322.00	86%	$ 1,659,216.92	$ 1,059,197.78	**$ 600,019.14**
00.2'	Enabling Earthwork / SiteWork	$775,761.00	86%	$ 667,154.46	$ 425,892.79	**$ 241,261.67**
00.3'	Surveying	$50,000.00	86%	$ 43,000.00	$ 27,450.00	**$ 15,550.00**
00.4'	GPR Location	$57,288.00	86%	$ 49,267.68	$ 31,451.11	**$ 17,816.57**
00.5'	Outbound Baggage Temporary Tent	$312,219.00	86%	$ 268,508.34	$ 171,408.23	**$ 97,100.11**
00.6'	Temp Passenger Walkway	$173,879.00	86%	$ 149,535.94	$ 95,459.57	**$ 54,076.37**
00.7'	Outbound Baggage Precast Tunnel	$304,700.00	86%	$ 262,042.00	$ 167,280.30	**$ 94,761.70**
00.8'	Sawcutting	$37,554.00	86%	$ 32,296.44	$ 20,617.15	**$ 11,679.29**
00.9'	Pavement Markings	$109,600.00	86%	$ 94,256.00	$ 60,170.40	**$ 34,085.60**
00.10'	Fencing and Gates	$316,811.00	86%	$ 272,457.46	$ 173,929.24	**$ 98,528.22**
00.11'	Crane and Hoisting	$153,791.00	86%	$ 132,260.26	$ 84,431.26	**$ 47,829.00**
00.12'	Engineering	$17,600.00	86%	$ 15,136.00	$ 9,662.40	**$ 5,473.60**
00.13'	BIM Coordination	$16,502.00	86%	$ 14,191.72	$ 9,059.60	**$ 5,132.12**
	SUBTOTAL - WORK CATEGORY	**$ 113,832,229.00**		**$ 99,697,157.88**	**$ 38,075,934.84**	**$ 61,621,223.04**

	ALLOWANCES / CONTINGENCY					
1	Owner Approved Contingency, (5.0%)	$5,129,176.00	0%	$ -	$ -	$ -
2	Design & Estimating Contingency	$0.00	0%	$ -	$ -	$ -
3	Escalation	$2,530,909.00	0%	$ -	$ -	$ -
	Owner Contingency	$1,506,729.00	0%	$ -	$ -	$ -
	WC 00" Area G Brace Frame	$0.00	86%	$ -	$ -	$ -
4	WC01: Escalator Decorative Cladding	$7,454.00	86%	$ 6,410.44	$ -	$ **6,410.44**
5	WC01: Elevator Standby / Subcontractor Use	$10,000.00	86%	$ 8,600.00	$ -	$ **8,600.00**
6	WC01: Escalator Hoisting and moving in Place	$41,895.00	86%	$ 36,029.70	$ -	$ **36,029.70**
7	WC01:Forklift for Hoisting	$15,000.00	86%	$ 12,900.00	$ -	$ **12,900.00**
8	WC01: Off hour Material Move	$15,000.00	86%	$ 12,900.00	$ -	$ **12,900.00**
9	WC01: Elevator and Escalator Design Coordinatic	$10,000.00	86%	$ 8,600.00	$ -	$ **8,600.00**
10	WC 02: PBB Design Coordination	$150,000.00	86%	$ 129,000.00	$ -	$ **129,000.00**
11	WC 03: BHS Design Coordination	$60,000.00	86%	$ 51,600.00	$ -	$ **51,600.00**
12	WC 04: Material Escalation	$26,741.00	0%	$ -	$ -	$ -
13	WC 04: Existing Utility Relocation	$0.00	86%	$ -	$ -	$ -
14	WC 04: Landscape Maintenance	$10,000.00	0%	$ -	$ -	$ -
$15.00	WC 04: Natural Gas Coordination	$0.00	86%	$ -	$ -	$ -
$16.00	WC 04: Pacific Power Coordination	$0.00	86%	$ -	$ -	$ -
$17.00	WC : 05 Additional Concrete Repair for Demo Are	$0.00	86%	$ -	$ -	$ -
18	WC 05: Snow Blankets / Cold Weather Concrete	$50,000.00	86%	$ 43,000.00	$ -	$ **43,000.00**
19	WC 09: A-DLT / DLT Custom Stain	$0.00	86%	$ -	$ -	$ -
20	WC 09: A-DLT / DLT GluLam Kp 12 Application	$0.00	86%	$ -	$ -	$ -
21	WC 09: Fire Treatment at Mass Timber Exterior C	$14,787.00	86%	$ 12,716.82	$ -	$ **12,716.82**
22	WC 13: Suncontrol Device Coordination	$109,770.00	86%	$ 94,402.20	$ -	$ **94,402.20**
23	WC 21: Furnature - Allowance	$223,699.00	86%	$ 192,381.14	$ -	$ **192,381.14**
24	WC 23: Existing Buildings Control Upgrade	$0.00	86%	$ -	$ -	$ -
25	WC 26 : Terrazzo Custom Color	$100,000.00	86%	$ 86,000.00	$ -	$ **86,000.00**
26	WC 28: Bathroom Separators	$698.00	86%	$ 600.28	$ -	$ **600.28**
27	Design Revisions	$0.00	86%	$ -	$ -	$ -
	SUBTOTAL - ALLOWANCES / CONTINGENCY	**$ 10,011,858.00**		**$ 695,140.58**	**$ -**	**$ 695,140.58**
	INDIRECT COSTS					
1	Subcontractor Default Insurance, (1.25%)	$1,547,845.00	86%	$ 1,331,146.70	$ 472,160.24	$ **858,986.46**
3	General Conditions	$10,864,472.00	86%	$ 9,343,445.92	$ 3,314,137.87	$ **6,029,308.05**
4	P&P Bonding, (0.60%)	$858,169.00	86%	$ 738,025.34	$ 261,778.98	$ **476,246.36**
5	Builders Risk Insurance, (0.60%)	$679,524.00	86%	$ 584,390.64	$ 207,284.46	$ **377,106.18**
6	General Liability, (.90%)	$1,287,255.00	86%	$ 1,107,039.30	$ 392,668.93	$ **714,370.37**
7	Fee, (2.85%)	$3,963,347.00	86%	$ 3,408,478.42	$ 1,208,993.72	$ **2,199,484.70**
	SUBTOTAL - INDERECT COSTS	**$ 19,200,612.00**		**$ 16,512,526.32**	**$ 5,857,024.19**	**$ 10,655,502.13**
	PRECONSTRUCTION					
1	Preconstruction Fee	$ 631,101.00	86%	$ 542,746.86	$ 542,746.86	$ -
	SUBTOTAL - PRECONSTRUCTION	**$ 631,101.00**		**$ 542,746.86**	**$ 542,746.86**	**$ -**
	GRAND TOTALS	**$143,675,800.00**		**$117,447,571.64**	**$44,475,705.89**	**$72,971,865.75**

FOR FAA USE
Comment upon and/or Clarify Project Description. Include source citation if clarification information is not from PFC application.

If project involves the construction of a new runway or modification of an existing runway, have the requirements of Order 5200.8, with regard to runway safety areas been met? If not, is the runway grandfathered or has a modification been approve, or is there a likelihood the requirements will be met, or should the project be disapproved.

If the project involves terminal work, confirm information regarding ticket counters, gates, and baggage facilities for construction and/or rehabilitation above has been completed.

10. Project Objective:

The objective of the terminal expansion project is to enhance capacity by adding additional room space, provide improved access to passengers with new passenger boarding bridges, to improve baggage makeup areas, and expand concession opportunities.

The Redmond Municipal Airport Master Plan was completed in 2018. The master plan identified terminal expansion as one of the proposed projects to start in 2021.

As referenced in the 2018 Master Plan the previous terminal building expansion was designed for smaller commuter aircraft, those operating in the 50- to 70-seat range of seat capacity. It was also designed in a more traditional layout, in which the main departures hall serves as a waiting area, similar to a train station, where passengers await a boarding call and then proceed to their designated platform. In the airport terminal, tickets are lifted prior to entering the boarding corridor, which serves as the platform from which passengers are boarded onto the aircraft. These design elements place more limitations on capacity for passenger departures lounges than on other terminal components. One disadvantage to the current layout is that expansion requires other components moving. Expansion of the upper-level concourse departures lounge is possible, and would have less impact on functional components, but that expansion is limited to either side, as moving into the ramp apron would reduce space required for larger aircraft. While this layout has merit in a smaller terminal, it can be counterintuitive to travelers who prefer to be as close to their transport as possible prior to boarding. Proximity provides a sense of calm, as passengers can see their scheduled departure posted at the gate and be readily aware of any airline operations interruption that would require their response. It is more than information, though, as passengers in close physical proximity to their transport often believe they will have some control over responding to any disruption in their schedules.

The recommendations in the 2018 Master Plan are listed below.

- **Reconfigure second floor concourse and passenger departure lounges**
- **Construct a total of eight ramp gate hardstand positions with passenger boarding bridges**
- **Expansion and reconfiguration of concessions**
- **Expansion of ticket hall and main concourse**
- **Expansion of the outbound baggage make-up area**

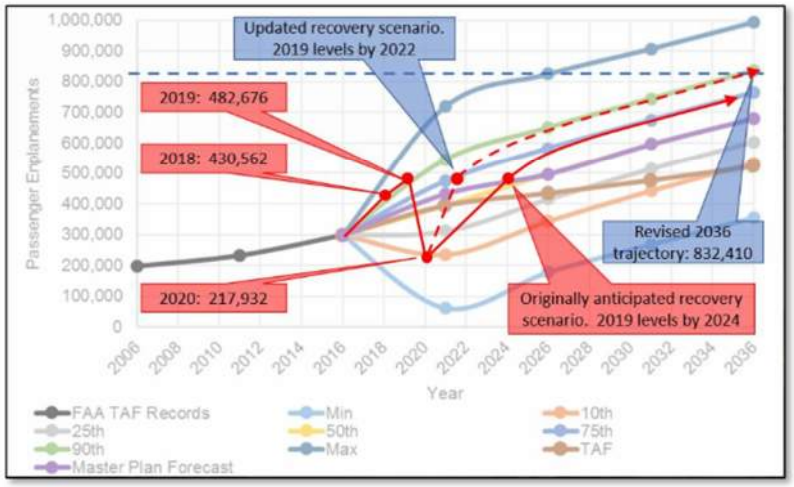
In the master plan, the FAA approved forecast projected 3.7% annual growth in enplanements from 298,322 in 2016 to 680,750 in 2036. Prior to the pandemic the airport passenger growth was outpacing the projections with enplanement in 2019 exceeding those that were anticipated sometime after 2024. After the pandemic the airport recovered to pre-pandemic levels in 2023. Growth since the pandemic has continued on the pre-pandemic trajectory. It is anticipated that RDM will exceed 650,000 enplanements for 2025, nearly surpassing the projections in the master plan for 2036.

Due to the accelerated growth at the Redmond Municipal Airport, the airport developed a Terminal Area Concept Plan (TACP) to take a fresh look at the proposed terminal development to address the deficiencies in the terminal and to the existing and anticipated demand. The TACP consisted of a review of the existing terminal building, validation of enplanement forecasts, provided recommendations, to accommodate the proposed growth. The TACP was completed in November of 2021. A copy of the TACP is included in Exhibit 'A'.

As part of the TACP the enplanement forecasts were validated. Prior to the pandemic the enplanement growth was tracking the 90th percentile as presented in the masterplan. The airport had fully recovered to 2019 levels by 2022 and was projected to continue on that trajectory.

Forecast Validation

The graphic below illustrates the original forecast prepared as part of the Master Plan, the recovery anticipated by industry experts at the start of 2021 (solid red line), and the extrapolation of actual recent enplanement data showing the anticipated trajectory (dashed red line). Again, it appears that the airport could reach over 830,000 by 2036.



The TACP identified the deficiencies below in the terminal based on the forecasts developed in the TACP.

Terminal Facility Requirements

TERMINAL FACILITIES REQUIREMENTS

	Existing	Baseline Forecast				
	2019	PAL 1 2019	PAL 2 2026	PAL 3 2036	PAL 3 rev 2036	CONCEPT DESIGN
COMMERCIAL TRAFFIC						
Annual Enplaned Passengers	430,562	482,676	496,750	680,750	832,410	
Total Peak Hour Enplaned	0	230	258	480	555	
Total Peak Hour Deplaned	0	219	252	472	549	
Total Combined Peak Hour Passengers	0	460	533	949	0	
TOTAL TERMINAL PROGRAM AREA						
Total Terminal Program Area (net)	**128,178 sf**	**91,229 sf**	**99,160 sf**	**141,793 sf**	**162,462 sf**	**232,690**
AIRLINE SPACE						
Ticket Counter Length	*103 lf*	*96 lf*	*113 lf*	*175 lf*	*198 lf*	*195*
Ticket Counter Area	*1,078 sf*	*955 sf*	*1,130 sf*	*1,745 sf*	*1,975 sf*	*2,720*
Ticket Counter Active Area	*1,128 sf*	*955 sf*	*1,130 sf*	*1,745 sf*	*1,975 sf*	*2,240*
Ticket Counter Queuing	*4,703 sf*	*1,972 sf*	*2,147 sf*	*3,570 sf*	*7,006 sf*	*8,820*
Kiosk Area	*0 sf*	*184 sf*	*276 sf*	*368 sf*	*460 sf*	
Ticket Offices and Administration	*4,740 sf*	*3,820 sf*	*4,520 sf*	*6,980 sf*	*7,900 sf*	*9,350*
Ticketing, ATO, and Administration	**11,649 sf**	**7,886 sf**	**9,203 sf**	**14,408 sf**	**19,316 sf**	
TOTAL AIRLINE SPACE (rounded)	**11,649 sf**	**7,886 sf**	**9,203 sf**	**14,408 sf**	**19,316 sf**	**23,130**
AIRPORT SPACE						
Operations	*1,152 sf*	*1,291 sf*	*1,329 sf*	*1,821 sf*	*2,227 sf*	incl in admin
Badging	*521 sf*	*584 sf*	*601 sf*	*824 sf*	*1,007 sf*	1,000
Conference/Offices	*1,093 sf*	*1,225 sf*	*1,261 sf*	*1,728 sf*	*2,113 sf*	2,100
Storage	*2,128 sf*	*2,386 sf*	*2,455 sf*	*3,365 sf*	*4,114 sf*	4,310
Administration	*1,711 sf*	*1,918 sf*	*1,974 sf*	*2,705 sf*	*3,308 sf*	5,410
Airport Offices	**6,605 sf**	**7,404 sf**	**7,620 sf**	**10,443 sf**	**12,770 sf**	
TOTAL AIRPORT SPACE (rounded)	**6,605 sf**	**7,404 sf**	**7,620 sf**	**10,443 sf**	**12,770 sf**	**12,820**
BAGGAGE SERVICE					22	
Baggage Claim Carousel Length	*260 lf*	*114 lf*	*131 lf*	*246 lf*	*321 lf*	*360 lf*
Bag Claim Carousel Area	*4,500 sf*	*4,422 sf*	*5,082 sf*	*9,515 sf*	*12,419 sf*	*13,400*
Inbound Baggage Service Area	*2,560 sf*	*3,080 sf*	*3,540 sf*	*6,620 sf*	*8,640 sf*	*8,880*
Inbound Baggage	**7,060 sf**	**7,502 sf**	**8,622 sf**	**16,135 sf**	**21,059 sf**	**22,280**
Outbound Baggage Area	*8,122 sf*	*8,050 sf*	*8,625 sf*	*12,075 sf*	*12,075 sf*	*14,230*
Outbound Baggage	**8,122 sf**	**8,050 sf**	**8,625 sf**	**12,075 sf**	**12,075 sf**	**14,230**
TOTAL BAGGAGE SPACE (rounded)	**15,182 sf**	**15,552 SF**	**17,247 SF**	**28,210 sf**	**33,134 sf**	**36,510**
BUILDING SYSTEMS						
Mechanical / Plumbing	*10,956 sf*	*1,086 sf*	*1,180 sf*	*1,688 sf*	*1,934 sf*	20,090
Electrical / Telecom	*1,223 sf*	*1,738 sf*	*1,889 sf*	*2,701 sf*	*3,095 sf*	3,000
Support Space	*0 sf*	*1,086 sf*	*1,180 sf*	*1,688 sf*	*1,934 sf*	incl
Janitor	*202 sf*	*434 sf*	*472 sf*	*675 sf*	*774 sf*	450
TOTAL BUILDING SYSTEMS SPACE	**12,381 sf**	**4,344 sf**	**4,722 sf**	**6,752 sf**	**7,736 sf**	**23,540**

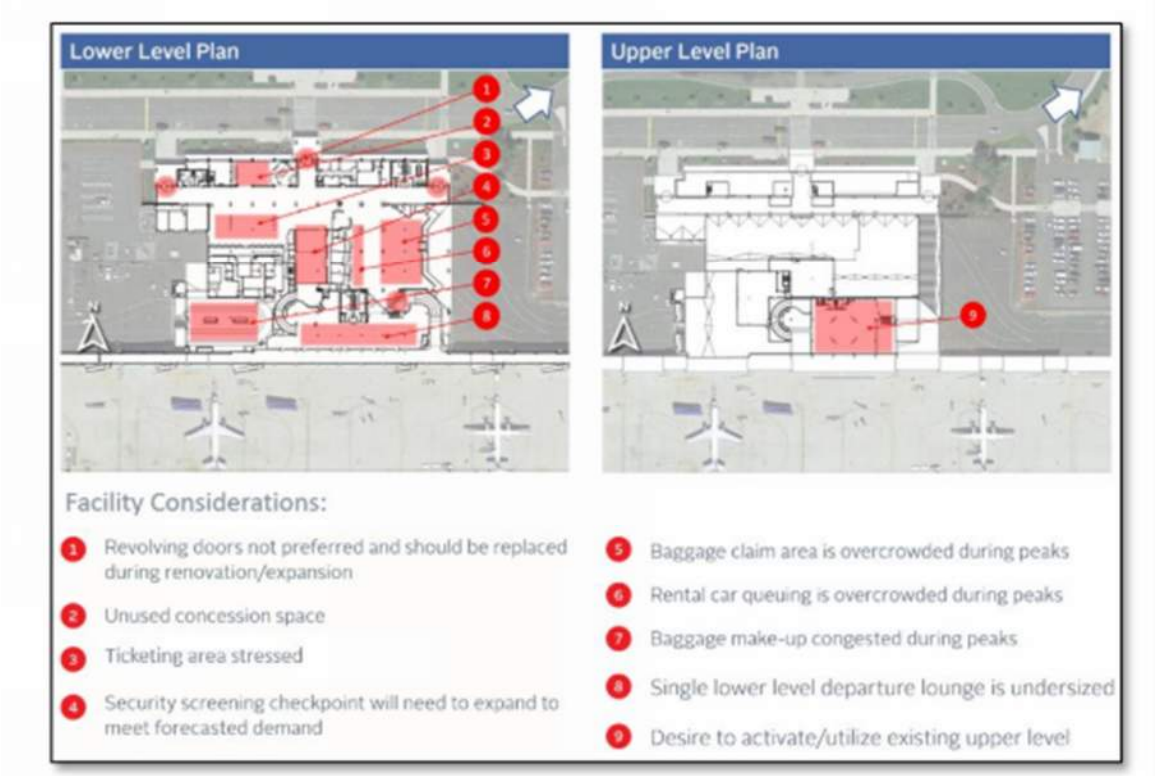
Terminal Facility Requirements (Cont.)

TERMINAL FACILITIES REQUIREMENTS

	Existing	Baseline Forecast				
		PAL 1	PAL 2	PAL 3	PAL 3 rev	CONCEPT
	2019	2019	2026	2036	2036	DESIGN
CONCESSIONS						
Food and Beverage	*4,220 sf*	*1,637 sf*	*1,685 sf*	*2,309 sf*	*2,824 sf*	4,220
Other Retail	*1,077 sf*	*680 sf*	*699 sf*	*958 sf*	*1,172 sf*	1,080
Concessions Storage		*579 sf*	*596 sf*	*817 sf*	*999 sf*	incl
Landside Concessions	**5,297 sf**	**2,896 sf**	**2,981 sf**	**4,085 sf**	**4,994 sf**	**5,300**
Food and Beverage	*1,066 sf*	*3,479 sf*	*3,581 sf*	*4,907 sf*	*6,000 sf*	9,860
Other Retail	*0 sf*	*1,444 sf*	*1,486 sf*	*2,037 sf*	*2,491 sf*	incl
Concessions Storage		*1,231 sf*	*1,267 sf*	*1,736 sf*	*2,123 sf*	6,950
Airside Concessions	**1,066 sf**	**6,154 sf**	**6,334 sf**	**8,680 sf**	**10,613 sf**	**16,810**
TOTAL CONCESSIONS SPACE (rounded)	**6,363 sf**	**9,050 sf**	**9,314 sf**	**12,764 sf**	**15,608 sf**	**22,110**
GROUND TRANSPORTATION						
Rental Car Office and Counter	*1,666 sf*	*2,867 sf*	*2,951 sf*	*4,044 sf*	*4,945 sf*	4,000
Shuttle Office and Counter	*0 sf*	*521 sf*	*536 sf*	*735 sf*	*899 sf*	1,000
Queuing Space	*631 sf*	*956 sf*	*984 sf*	*1,348 sf*	*1,648 sf*	1,700
Ground Transportation	**2,297 sf**	**4,344 sf**	**4,471 sf**	**6,127 sf**	**7,492 sf**	**6,700**
TOTAL GROUND TRANSPORTATION	**2,297 sf**	**4,344 sf**	**4,471 sf**	**6,127 sf**	**7,492 sf**	**6,700**
DEPARTURE LOUNGE						
Passenger Departure Lounges	*17,218 sf*	*20,857 sf*	*24,235 sf*	*33,261 sf*	*33,261 sf*	*44,870*
Departure Lounges	**17,218 sf**	**20,857 sf**	**24,235 sf**	**33,261 sf**	**33,261 sf**	**44,870**
TOTAL DEPARTURE LOUNGE	**17,218 sf**	**20,857 sf**	**24,235 sf**	**33,261 sf**	**33,261 sf**	**44,870**
PUBLIC SPACE *						
Public Circulation / Meeter Greeter	*10,592 sf*	*4,827 sf*	*4,968 sf*	*6,808 sf*	*8,324 sf*	11,620
Restrooms	*2,172 sf*	*1,648 sf*	*1,860 sf*	*2,445 sf*	*2,658 sf*	3,260
Bag Claim Lobby	*10,174 sf*	*1,095 sf*	*1,260 sf*	*2,360 sf*	*2,745 sf*	3,500
Landside	**22,938 sf**	**7,569 sf**	**8,088 sf**	**11,613 sf**	**13,727 sf**	**18,380**
Public Circulation	*13,718 sf*	*5,400 sf*	*5,400 sf*	*6,000 sf*	*6,600 sf*	17,640
Restrooms	*1,645 sf*	*1,860 sf*	*1,860 sf*	*2,445 sf*	*2,700 sf*	3,150
Exit Corridor	*664 sf*	*1,014 sf*	*1,043 sf*	*1,430 sf*	*1,748 sf*	*950*
Airside	**16,027 sf**	**8,274 sf**	**8,303 sf**	**9,875 sf**	**11,048 sf**	**21,740**
TOTAL PUBLIC SPACE (rounded)	**38,965 sf**	**15,843 sf**	**16,391 sf**	**21,487 sf**	**24,775 sf**	**40,120**
TRANSPORTATION SECURITY ADMINISTRATION (TSA)						
Queuing Space	*2,482 sf*	*720 sf*	*720 sf*	*1,080 sf*	*1,080 sf*	*2,480*
Inspection Area	*3,099 sf*	*1,508 sf*	*1,508 sf*	*2,262 sf*	*2,262 sf*	*3,100*
Reconciliation Area	*143 sf*	*260 sf*	*260 sf*	*390 sf*	*390 sf*	*150*
Security Screening Checkpoint	**5,724 sf**	**2,488 sf**	**2,488 sf**	**3,732 sf**	**3,732 sf**	5,720
Baggage Screening Facilities	**10,112 sf**	**2,860 sf**	**2,860 sf**	**3,660 sf**	**3,660 sf**	15,600
Support Space	**114 sf**	**120 sf**	**130 sf**	**230 sf**	**260 sf**	incl
TSA Administration Offices	**1,568 sf**	**480 sf**	**480 sf**	**720 sf**	**720 sf**	1,570
TOTAL TSA SPACE (rounded)	**17,518 sf**	**5,948 sf**	**5,958 sf**	**8,342 sf**	**8,372 sf**	**22,890**

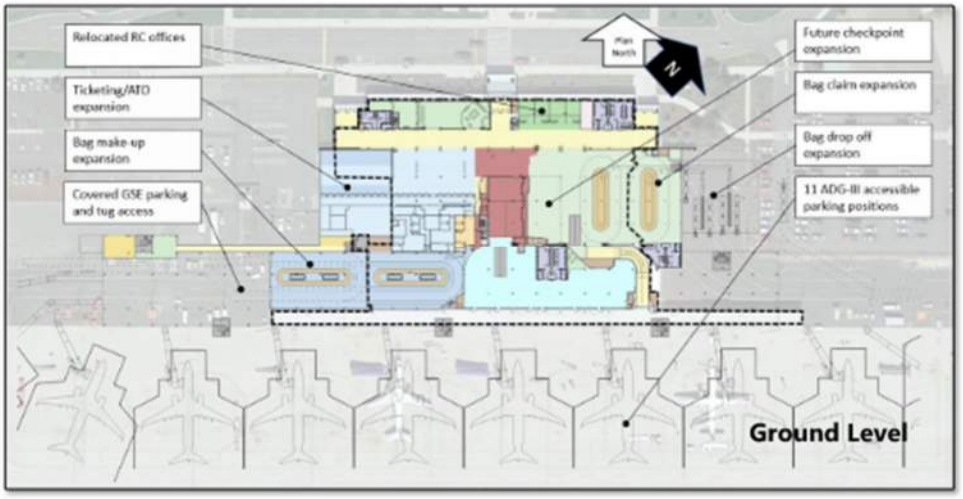
The PAL 3 Rev forecast most closely matched the trajectory of the anticipated passenger enplanements post covid. The terminal facility requirements identified several facility capacity issues as shown in the tables above.

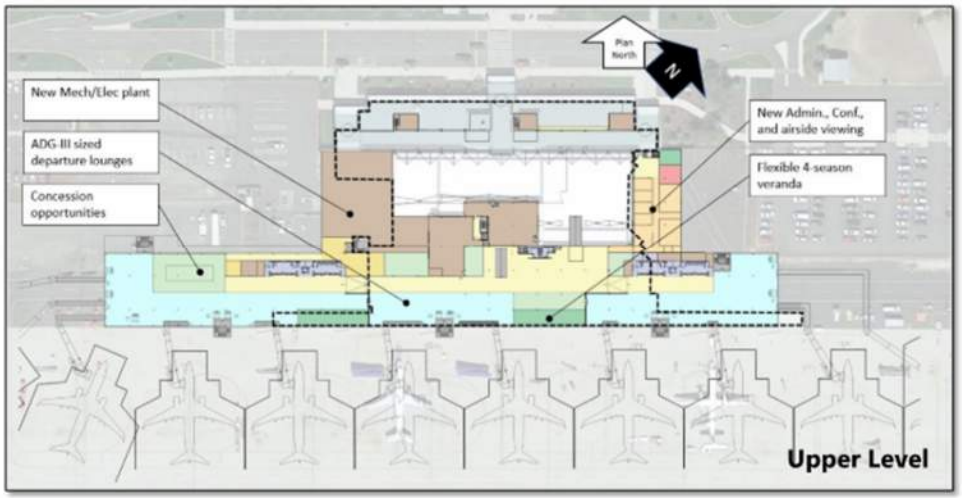
Below is a graphical representation of the areas that are currently under capacity.



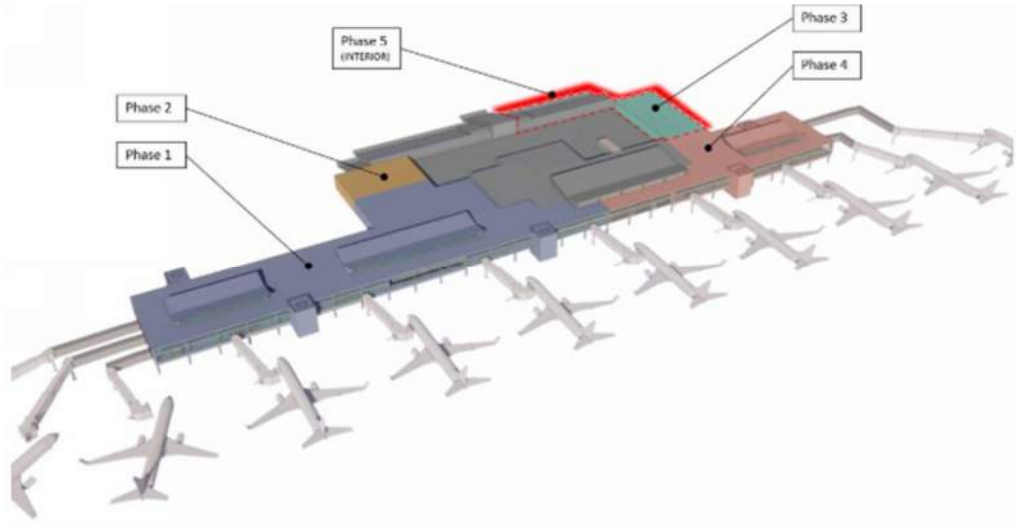
The preferred concept from the TACP is shown below.



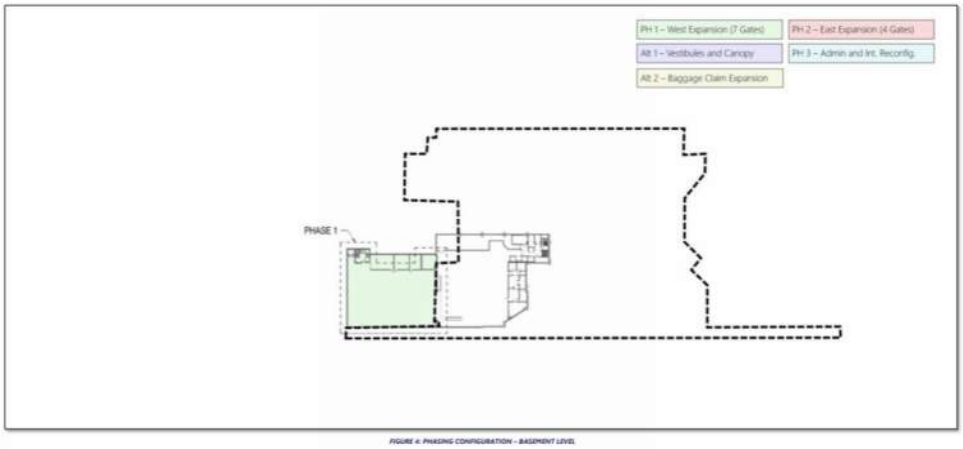


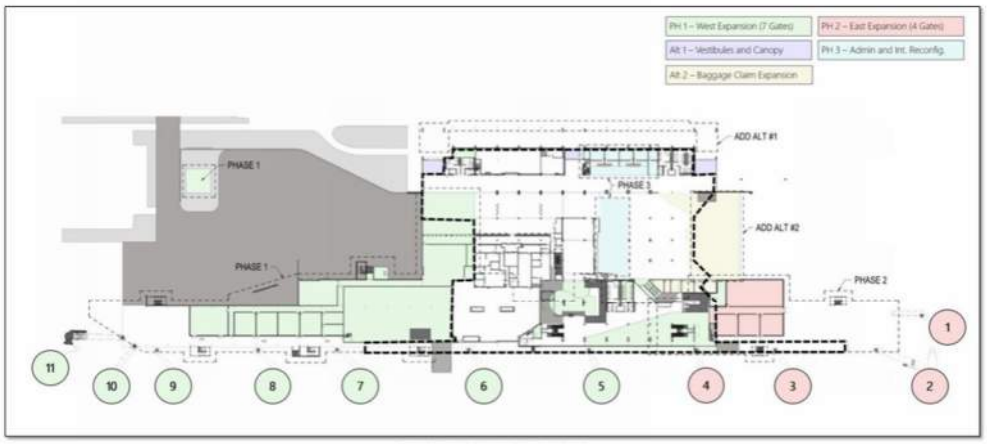


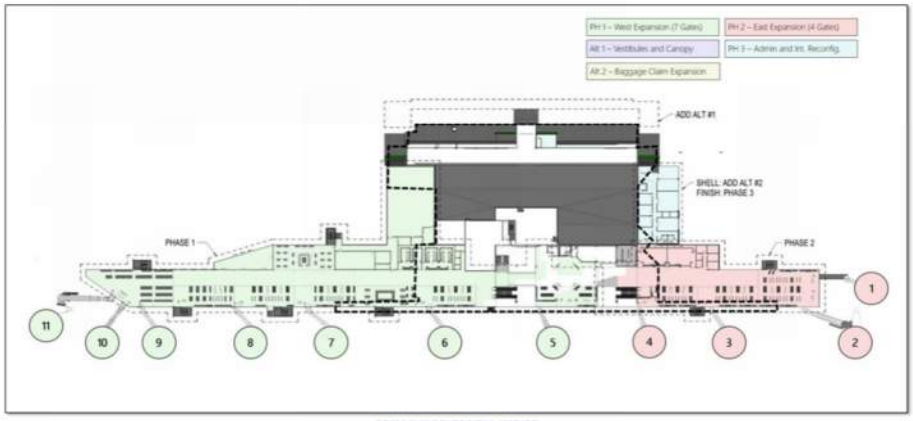
The TACP recommended phasing the project as shown below.



The preferred alternative in the TACP was further advanced to schematic design. The schematic design further refined the project and phases to recommend the improvements below.







Due to budget constraints only the Phase 1 – West Expansion and Add Alt #1 Baggage Claim Improvements as identified in the Schematic Design proceeded to final design.

The West Expansion includes the following improvements to address the deficiencies in the terminal.

- **Expanded Baggage Makeup Area and Equipment**
- **Expanded ATO Office Shell**
- **Second Level West Departure Lounge**
- **Concession Spaces**
- **Circulation Areas**
- **New Restrooms**
- **Associated MEP spaces**
- **7 – 2nd Level Passenger Boarding Bridges.**

The Final Design included improvement to address the following critical operational elements.

TERMINAL FACILITY REQUIREMENTS				
Terminal Element	**Existing (SF)**	**TCAP Forecast Requirement -2036 (SF)**	**2025 Terminal Expansion - Final Design (SF)**	**Final Design Notes**
ATO Offices	4,740	6,980	6,986	Shell Only
Outbound Baggage	8,122	12,075	23,156	Additional Space for future bag screening relocation
Airside Concessions	1,066	10,613	7,168	Second Level Expansion
Departure Lounge	17,218	33,261	32,540	New hold rooms 6-11
Rest Rooms	1,645	2,700	4,698	Includes Pet Relief, Mothers Room, Companion Care Rooms.

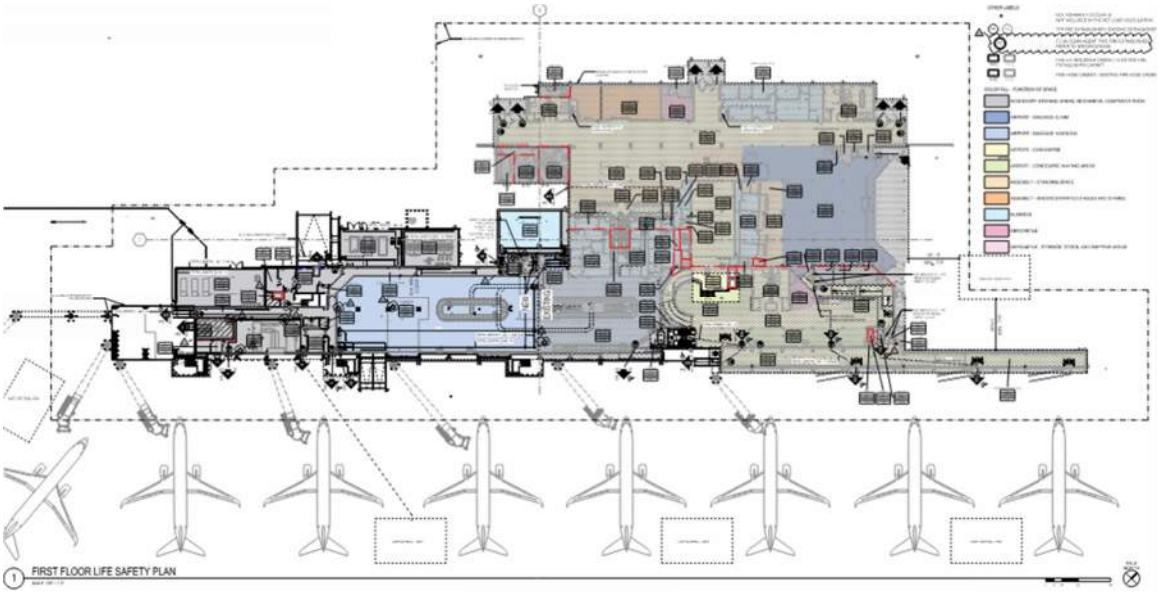
The following improvements included in the project also will increase the operational efficiency of the terminal and improve the passenger experience.

- **Addition of 7 Passenger Boarding Bridges –**
  - **Provides conditioned space from terminal to aircraft and improves passenger safety by reducing passengers on the terminal ramp.**

- **Addition of a second baggage makeup carousel**
  - **The addition of a second baggage make up carousel will double the capacity of the outbound baggage carousel.**

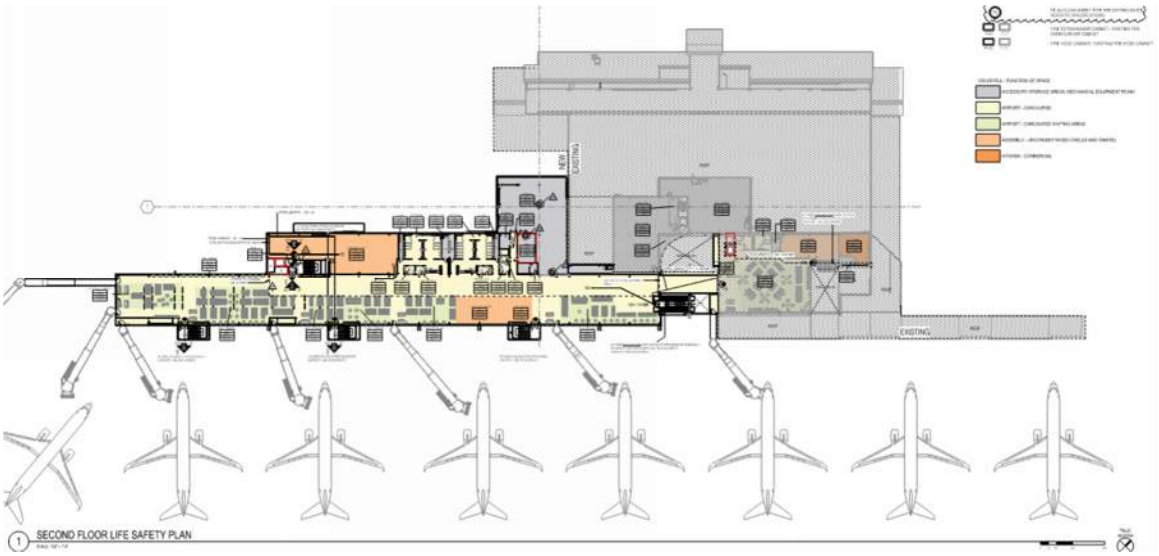
The proposed terminal expansion floor plans are shown below and included in Exhibit 'B'. The main floor improvement include the following:

- **Reconfiguration of the recomposure area after passenger screening.**
- **Installation of a second elevator**
- **Reconfiguration of the exit lane / replacement of secure exit control device.**
- **Installation of escalator to 2nd level.**
- **Expanded ATO shell**
- **Expanded baggage makeup room.**
- **Addition of second baggage makeup carousel**
- **MEP space**
- **Loading dock area for deliveries.**
- **Outdoor areas for cooling towers, emergency generators.**



The Second Level Improvements are shown below.

- **Installation of a second elevator**
- **Installation of escalator to 1st level.**
- **Expansion of 2ND Level Passenger Lobby Area**
- **Circulation space.**
- **Concessions space.**
- **Installation of PBB to existing 2nd floor boarding area (Gate 5)**
- **Installation of 6 PBB's to the West Expansion Area (Gate 7-11)**
- **Restrooms**
- **Pet Relief Area**
- **Mothers room**
- **Companion rest room**
- **Emergency egress stairs.**
- **MEP space**



FOR FAA USE
__ Safety, Preserve [ ] Enhance [ ]
__ Security, Preserve [ ] Enhance [ ]
__ Capacity, Preserve [ ] Enhance [ ]
__ Furnish opportunity for enhanced competition between or among air carriers at the airport
__ Mitigate noise impacts resulting from aircraft operations at the airport
__ Project does not meet any PFC objectives (explain)

Finding
Current deficiency. List the source(s) of data used to make this finding if it is not a part of the PFC application.

Address adequacy of issues.

11. Project Justification:

The Redmond Municipal Airport (RDM) terminal expansion supports Passenger Facility Charge (PFC) objectives by aligning with the FAA's core eligibility goals for PFC-funded projects. Those objectives are defined in 49 USC §40117 and FAA Order 5500.1 and generally fall into four categories:

1. **Enhancing Safety, Security, and Capacity**
   The RDM terminal expansion directly advances capacity and operational efficiency, which is one of the primary PFC objectives.

   Increased passenger processing capacity: Expanding hold rooms, baggage claim, and security screening reduces congestion and queuing.
   Improved airside/landside interface: Better gate layouts and circulation reduce conflicts and enhance aircraft/passenger flow.

2. **Reducing Congestion and Delays**
   RDM has experienced strong passenger growth, leading to:

   Overcrowded waiting areas and insufficient gate space and Inefficient passenger circulation.

   The terminal expansion:

   - Adds gates and hold room space
   - Improves circulation paths
   - Expands baggage handling systems

3. **Enhancing Competition Between Air Carriers**
   Terminal projects often qualify for PFCs when they improve access for multiple airlines. At RDM, the expansion:

   - Provides common-use gates and facilities

- Reduces constraints that limit new entrant carriers
- Improves flexibility for airline scheduling and operations

4. **Supporting Long-Term Airport Development and Demand**
   RDM serves Central Oregon, one of the faster-growing regions in the Pacific Northwest.
   The expansion:

   - Accommodates projected enplanement growth
   - Prevents future operational constraints
   - Supports regional economic development
   -

The proposed project has estimated project cost of $187,504,149. A review of the project budget and associated building cost is reasonable based on the proposed scope of work, existing site conditions, and required construction phasing to complete the project. The proposed cost is consistent with similar projects in the northwest mountain region. The GMP established for the construction is consistent with preliminary estimates and budgets established for the project.

FOR FAA USE
Define how the project accomplishes PFC Objective(s)

Explain how project is cost-effective compared to other reasonable and timely means to accomplish this objective(s)

Based on informed opinion or published FAA guidance, specify how the cost of the project is reasonable compared to the capacity, safety, security, noise and/or competition benefits attributable to the project. Include citation for any documents that are not a part of this PFC application.

If analysis is based on a source other than this PFC application, list the source(s) of data and attach the relevant documentation used to make this finding.

Discuss any non-economical benefits which are not captured above.

Project Eligibility:
Indicate project eligibility by checking the appropriate category below.
[ ] Development eligible under AIP criteria (paragraph ___ of Order 5100.38_ or PGL ____);
[ ] Planning eligible under AIP criteria (paragraph ___ of Order 5100.38_ or PGL ____);
[ ] Noise compatibility planning as described in 49 U.S.C. 47505;

[ ] Noise compatibility measures eligible under 49 U.S.C. 47504.
[ ] Project approved in an approved Part 150 noise compatibility plan;
Title and Date of Part 150:
[ ] Project included in a local study.
Title and Date of local study:
[ ] Terminal development as described in 49 U.S.C. 40117(a)(3)(C);
[ ] Shell of a gate as described in 49 U.S.C 40117(a)(3)(F) (air carrier _____, percentage of annual boardings _____);
[ ] PFC Program Update Letter _____
[ ] Project does not meet PFC eligibility (explain).

If analysis is based on a source other than this PFC application, list the source(s) of data and attach the relevant documentation used to make this finding.

Are any work elements or portions of the overall project ineligible? Provide associated costs.

12. For an Impose Only project, estimated date Use application will be submitted to the FAA (Month and Year): **NA**

For FAA Use
Is the date within 3 years of the estimated charge effective date or approval date, whichever is sooner?
[ ] Yes
[ ] No

Which actions are needed before the use application can be submitted? What is the estimated schedule for each action?

13. List of Carriers Certifying Agreement: **Alaska Airlines, Horizon Airlines, Delta Airlines, American Airlines, United Airlines, SkyWest Airlines, Breeze Airlines, Avelo Airlines, Envoy Airlines**
List of Carriers Certifying Disagreement: **None**
Recap of Disagreements: **NA**
Public Agency Reasons for Proceeding: **No disagreement from the airlines.**

14. List of Comments Received from the Public Notice: **No Public Comments Received.**
List of Parties Certifying Agreement. **No Public Comments Received.**
Recap of Disagreements **No Public Comments Received.**
Public Agency Reasons for Proceeding: **No Public Comments Received.**

For FAA Use

Provide an analysis of each issue/disagreement raised by the air carriers and/or the public. Provide citations for any documents not included in the PFC application that are relied on by the FAA for its analysis.

If a Federal Register notice is published, discuss and analyze any new issues raised. (If the comments from the consultation are repeated, state that.)

ADO/RO ANALYSIS:

Does the ADO/RO find the total costs of this project to be reasonable? Did the ADO/RO use comparable projects to make this finding? If so, list projects.

If the amount requested if over $10 million, was the level of detail sufficient to identify eligible and ineligible costs. Summarize ineligible costs.

Is the duration of collection adequate for the amount requested?

ADO/RO RECOMMENDATION:

[ ] Approve.

[ ] Partially Approve. Summarize findings from earlier in the Attachment B discussing issues that lead to determination.

[ ] Disapprove. Summarize findings from earlier in the Attachment B discussing issues that lead to determination.

Application Reviewed by:

_____ _____ _____

Name Routing Symbol Date

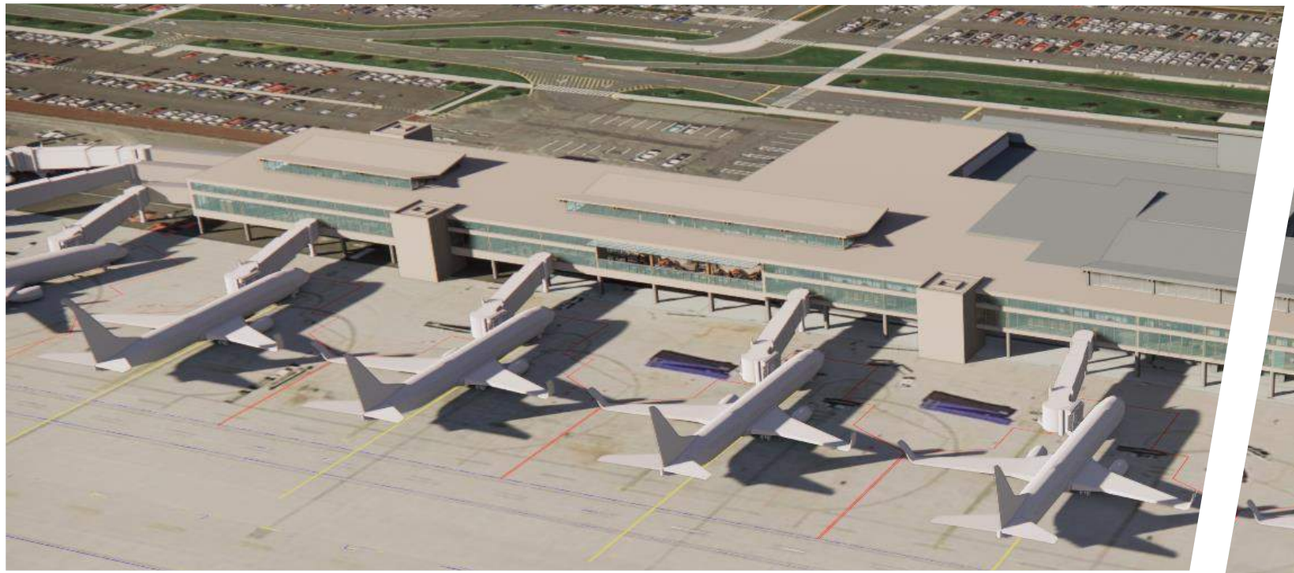
Item(s) reviewed.

_____ _____ _____

Name Routing Symbol Date

Item(s) reviewed

Exhibit ‘A’ Terminal Area Concept Plan





Redmond Municipal Airport
Terminal Area Concept Plan

NOVEMBER 29, 2021

RS&H

»

Prepared by RS&H, Inc. at the direction of Redmond Municipal Airport

FINAL REPORT
Volume No. 1.0
November 29, 2021
Denver, Colorado
RS&H No.: 224-0055-000

Redmond Municipal Airport
Terminal Area Concept Plan

RS&H

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Redmond Municipal Airport (Roberts Field) is a small hub facility, owned and operated by the City of Redmond. It services Central Oregon and currently provides commercial service on Alaska, Allegiant, American, Avelo, Delta and United Airlines. Recent growth in and around the Central Oregon area has resulted in a significant increase in aircraft traffic since the completion of the most recent Master Plan in 2018. Prior to COVID, airport traffic was tracking much higher than the Master Plan forecasted. In 2019, the airport had 482,767 enplanements which was a level not anticipated until 2024. Even in recovery, the airport is exceeding the national average. Extrapolating both master plan and recent enplanement data, it is estimated that the airport could see over 830,000 enplanements by 2036.

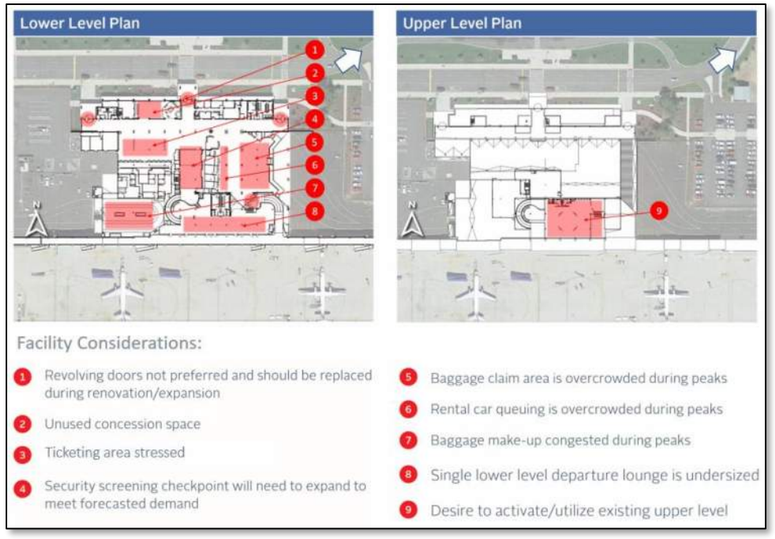
To respond to the increase in demand the Airport recognized the need to consider elements of expansion to allow the facility to evolve and grow accordingly. Of initial importance was the ability to provide passenger boarding bridge access to the aircraft from a new second level departure lounge area. Enlarging this airside element necessitated a review of all other landside and airside processing components to ensure that the facility remains balanced as it develops. **The recommended modifications described herein will result in a facility that can accommodate the capacity demands, improve ADA accessibility, increase energy efficiency, allow for LEED certification, maximize operational efficiency, and enhance the passenger experience.**

The City selected RS&H (Consultant) to perform a Terminal Area Concept Plan to better understand the expansions/modifications required to meet the demand horizon. The team assembled by the Consultant to execute the analysis is comprised of the following professional firms:

- **RS&H** – aviation planning, terminal planning and design, architecture, building engineering, stakeholder engagement, project management
- **Morrison Maierle** – airfield engineering, site analysis
- **Construction Focus** – cost estimating

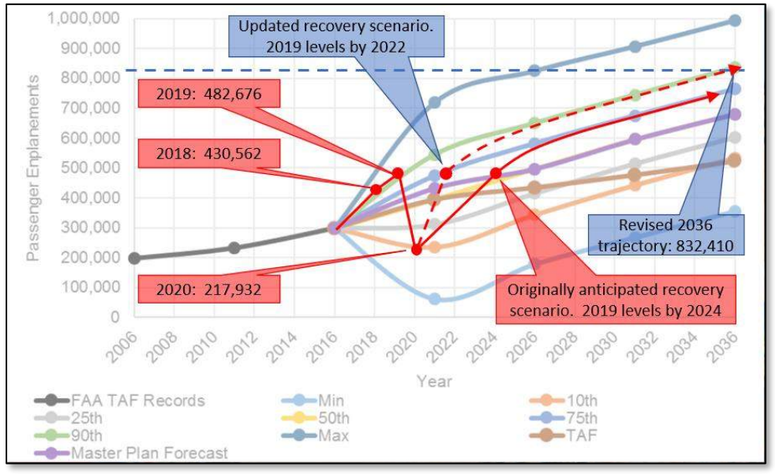
This study was separated into the following primary components:
Forecast Validation – basic comparison of Master Plan data, current enplanement statistics, and estimated flight scheduling to meet the anticipated 2036 statistics
Assessment of Existing Conditions – review of most construction documents from 2008 expansion, and on-site evaluation of visible existing conditions
Stakeholder Engagement – interaction with community leaders, airport tenants (airlines, rental cars, concessions), airport staff, and passengers to identify elements/systems that need improvement
Preliminary Alternatives – quantifying spatial needs, recognizing impediments to expansion, and the development of massing diagrams to meet the programmatic requirements
Preferred Concept – refinements to early concepts towards a single recommendation
Proposed Phasing – considerations of how to sequentially construct to align with possible financing
ROM Cost Estimate – cost assessment based on suggested phasing

Early discussions with the airport resulted in identifying a number of facility consideration "hotspots" that needed to be rectified as part of the study. These initial elements would be the starting point of the analysis.



Forecast Validation

The graphic below illustrates the original forecast prepared as part of the Master Plan, the recovery anticipated by industry experts at the start of 2021 (solid red line), and the extrapolation of actual recent enplanement data showing the anticipated trajectory (dashed red line). Again, it appears that the airport could reach over 830,000 by 2036.



Existing Conditions

The facility existing conditions as documented in the construction drawings from the 2008 expansion were the basis of the assessment. Design Team members had discussions with Redmond airport operations facility staff, where they

imparted their understanding of the systems, current capacities, limitations and impediments for growth. Information garnered from the existing conditions assessment was used as the baseline for development sign of alternatives.

Stakeholder Engagement

To solicit additional perspectives on what elements function well at the airport and where there are opportunities for improvement, a survey was prepared and submitted to a variety of user groups for response:

- Airlines
- Rental Cars
- Concessions
- Airport Staff, Operations and Facility Management
- City IT
- TSA
- Community Groups
    - Central Oregon Travel Advisory Board
    - Airport Committee
    - Community Leaders

The surveys and subsequent interviews with each group, resulted in the following list of elements/aspects/experiences that were deemed important. All aspects under the scope of this study were included and addressed:

1. Focus on mountain views
2. Provide more concession options throughout
3. Maintain small town feel of the airport
4. Provide more ticket area queuing, ATO and airline operations space
5. Provide more Airport Administration space and another large conference room
6. Consider an upper-level area for public to view the airfield
7. Improve curbside and roadway access *(outside the scope of this study)*
8. Provide more baggage make-up area
9. Include more storage space (near baggage claim for unclaimed bags and for dedicated custodial)
10. Provide for GSE winter storage (covered, perhaps under expansion)

Preliminary Alternatives

Using the extrapolated forecast data, initial alternatives recognized that the existing ground-level mechanical/electrical plant, immediately west of the existing ticketing area, limits opportunity for expansion in that direction. That, coupled with the data from the existing condition assessment and the stakeholder input, resulted in the following basic massing studies illustrating those elements that would need to be adjusted/enlarged to meet the current demand and the continued growth over time.

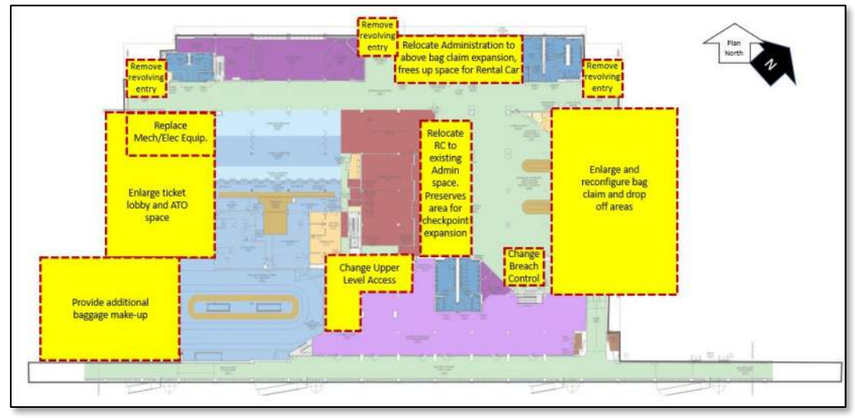
Basement Level:

- Expand baggage screening



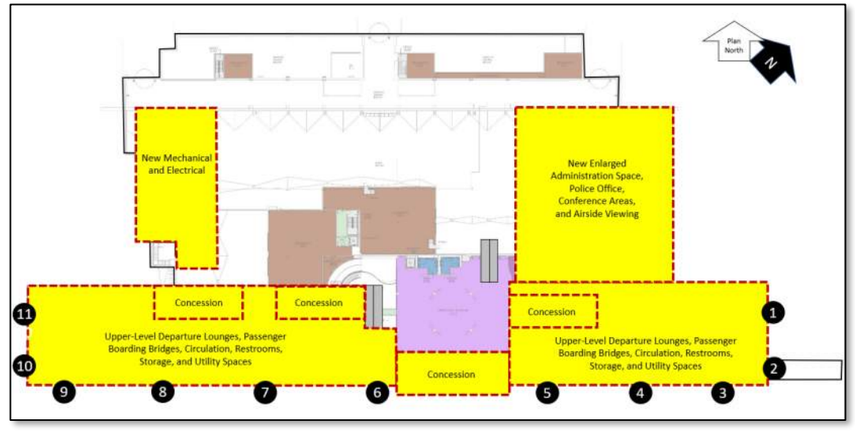
Ground Level:

- Replace Mech/Elec plant
- Enlarge ticket area
- Enlarge bag make-up area
- Enlarge/improve bag claim
- Relocate administration
- Change entry vestibules
- Move rental cars to preserve SSCP expansion space



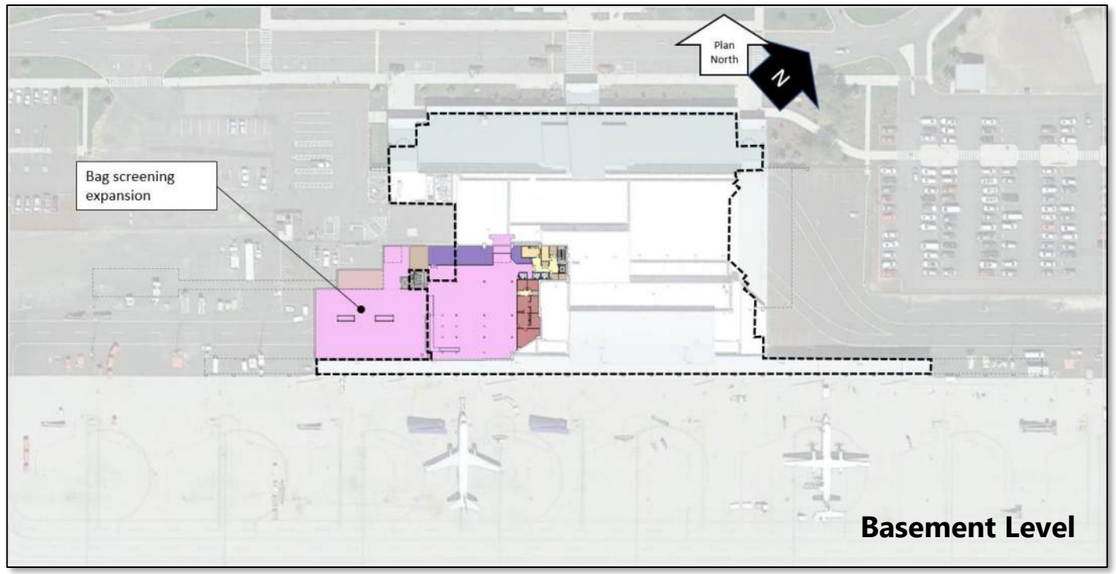
Upper Level:

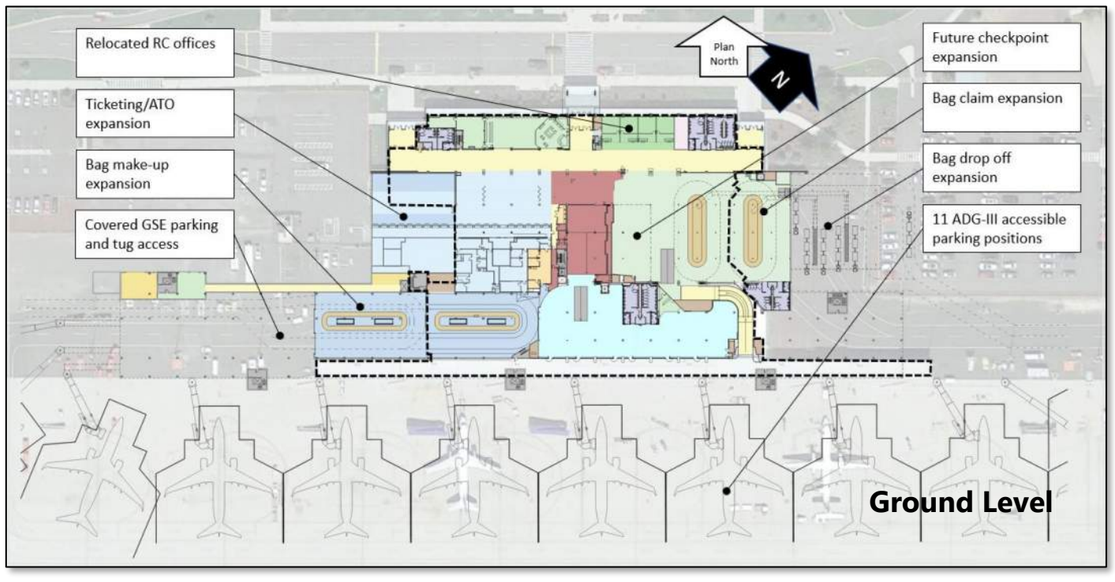
- Enlarged departure lounge space
- Contact positions for all gates
- New mech/elec plan location
- New admin location



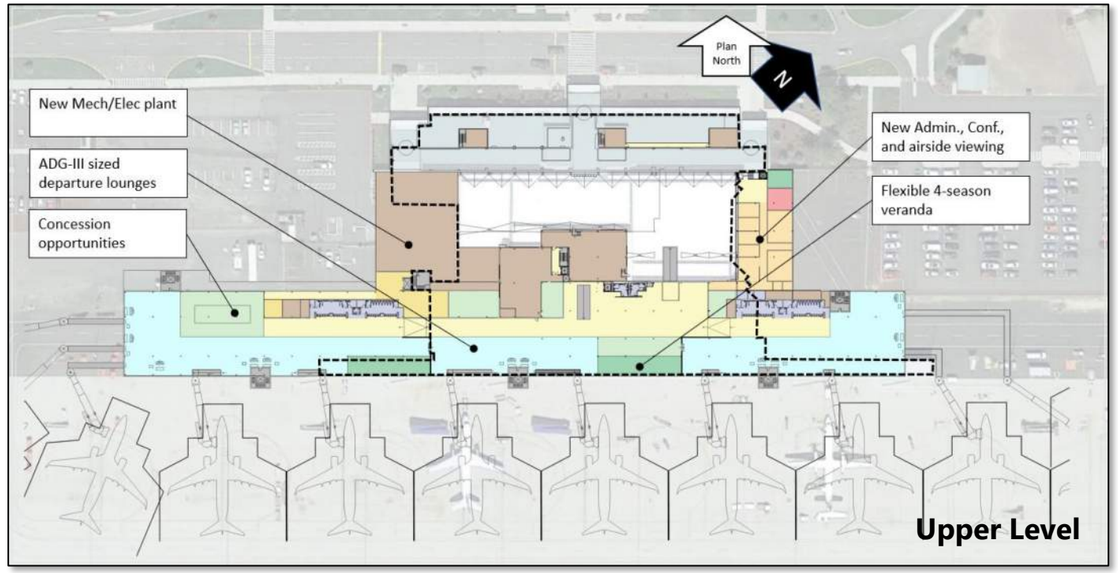
Preferred Concept

Through iteration and coordination with the airport, the recommended layout of the facility is as represented below. The preferred concept, at full build out, accounts for all of the forecasted demand parameters as well as meeting the primary requests from the stakeholder engagement process.





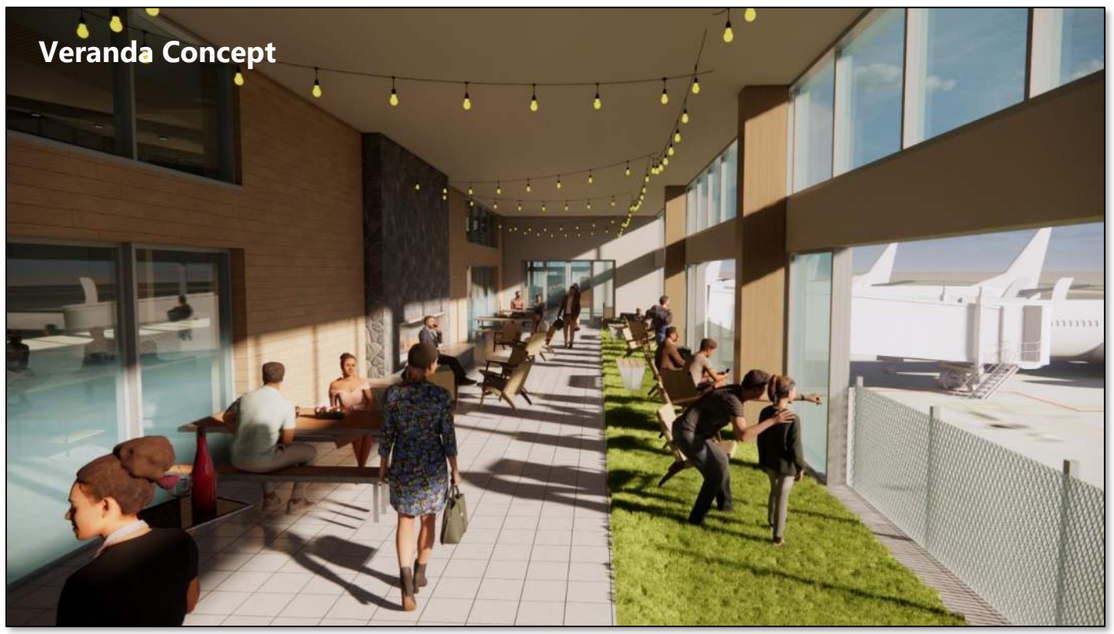
The expansion increases passenger access, allows the capacity of the facility to meet the existing demand based on available apron space, improves ADA accessibility with the addition of multiple contact gate positions, facilitates improved energy efficiency with the relocation and upgrade of the central mechanical and electrical plant components, and provides the opportunity through design to meet sustainability certification criteria.



The aesthetics of the expansion were explored, and three concepts (Flight, Lodge and Airstream) were generated for consideration. Each concept had inspiration rooted in what it means to be in Central Oregon. Of the three, the "Flight" concept was selected to be the basis of moving forward to establish cost and phasing considerations.

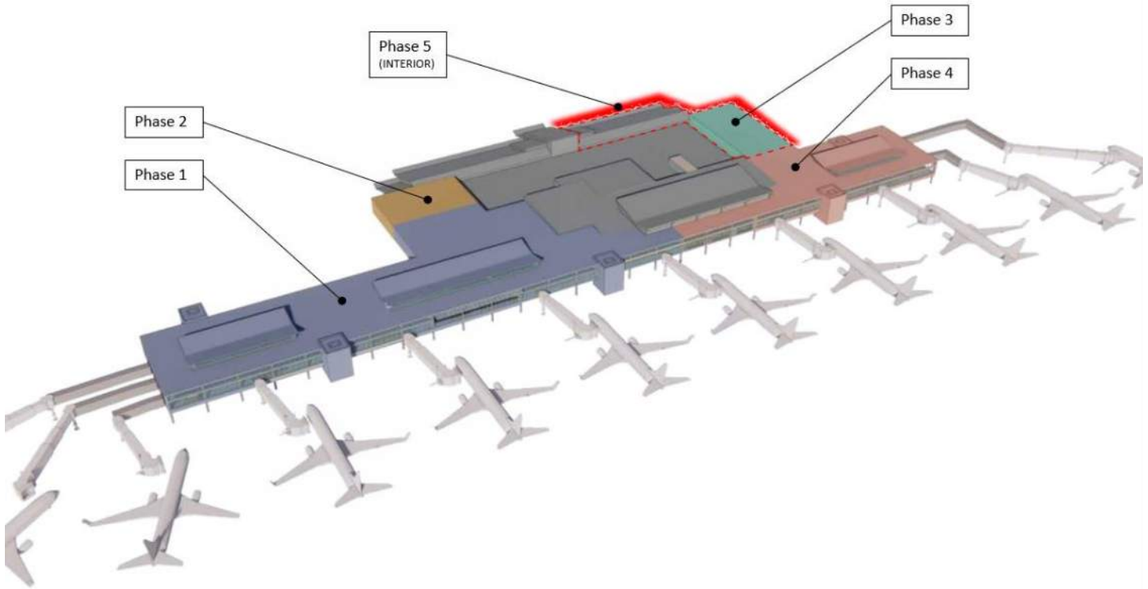






Proposed Phasing and ROM Costs

In order to accommodate the variability of funding, the program was separated into five phases to allow for growth to happen over time. The five phases are indicated below, with the rough order of magnitude (ROM) estimated program cost range for each.



- **Phase 1**: West departure lounge expansion and utility plant relocation
- **Phase 2**: Ticket area/ATO expansion and build-out
- **Phase 3:** Baggage claim expansion and reconfiguration
- **Phase 4**: East departure lounge expansion
- **Phase 5**: Interior reconfiguration and administration build-out

RDM Terminal Expansion Program	ROM Cost (LOW)	ROM Cost (HIGH)	Hard Construction Cost (LOW)	Hard Construction Cost (HIGH)	Soft Costs	Contingency (LOW)	Contingency (HIGH)
Phase 1	$99.6M	$109.8M	$75.1M	$82.6M	$8.2M	$16.3M	$19.1M
Phase 2	$13.7M	$15.5M	$10.4M	$11.9M	$1.1M	$2.2M	$2.6M
Phase 3	$25.7M	$29.9M	$19.7M	$23.2M	$2.0M	$4.0M	$4.7M
Phase 4	$30.9M	$36.7M	$23.8M	$28.9M	$2.4M	$4.7M	$5.5M
Phase 5	$8.8M	$10.7M	$6.8M	$8.5M	$0.7M	$1.3M	$1.5M
Program Total	**$178.7M**	**$202.6M**	**$135.8M**	**$155.0M**	**$14.3M**	**$28.6M**	**$33.4M**

CHAPTER 2

PROJECT OBJECTIVES, TEAM, AND PROCESS

2.1 PROJECT DEFINITION AND OBJECTIVES

The City of Redmond selected RS&H (Consultant) to perform services associated with the preparation of a Terminal Area Concept Plan (TACP). This report will present the process and associated results of the aviation planning (comparing Master Plan forecasts to actual enplanement data) , conceptual architecture and engineering, and rough order of magnitude (ROM) cost estimating performed.

The TACP includes the following basic elements:

- Review of the existing terminal (*Figure 2-1*) facilities resulting in a cursory assessment of the capacity of the existing systems to accommodate future growth. Systems considered are structural, mechanical, electrical and IT/security.

- Validation of enplanement forecasts, review of current demand and capacity, consideration of target growth in the market and an understanding of the impact associated with the COVID pandemic on a viable recovery scenario. Comprehensive forecasting is not part of this study. Forecast data from the recently complete Master Plan (*Figure 2-2*) will be compared with actual enplanement statistics. Coordination with the airport will determine the appropriate design parameters to base the terminal expansion upon.

- Identification of areas of the terminal facility that, based on the proposed recovery scenario, will need to be modified to accommodate growth.

- Solicitation of input from users and stakeholders to inform the characteristics of the expansion and modifications to the facility spaces to improve operational efficiency, mitigate areas of congestion, and improve passenger experience.

- Preparation of alternatives for future expansion. To include an understanding of short, medium and long-term phasing to meet demand.

- Rough Order of Magnitude (ROM) cost estimates for alternatives, understanding how funds would need to be allocated over time to execute construction.

- Recommendation of a preferred alternative that will be the baseline for the procurement of design services to execute the next phase of development.

The recommended modifications described herein will result in a facility that can accommodate the capacity demands, improve ADA accessibility, increase energy efficiency, allow for LEED certification, maximize operational efficiency, and enhance the passenger experience.



FIGURE 2-1 REDMOND MUNICIPAL AIRPORT TERMINAL BUILDING SITE

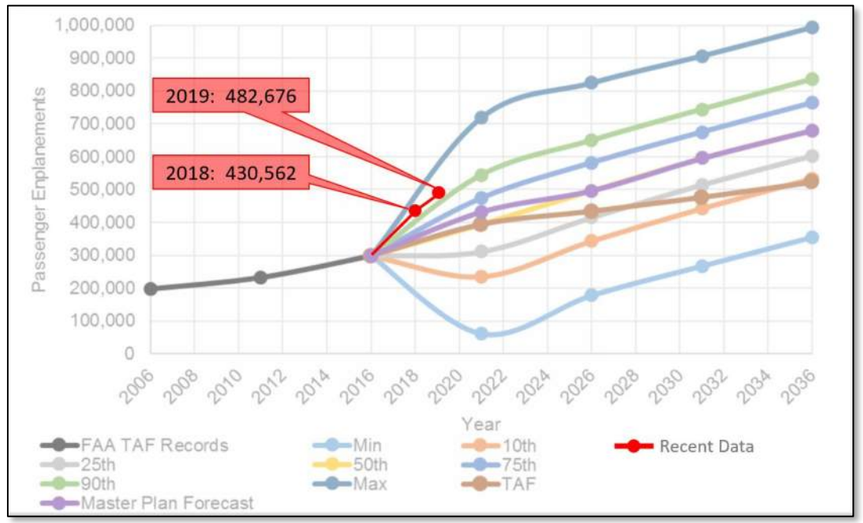


FIGURE 2-2 FORECASTED INFORMATION FROM MASTER PLAN WITH RECENT DATA OVERLAY

2.2 PROJECT TEAM

The Design Team (*Figure 2-3*) was carefully selected to provide the necessary skillsets to effectively execute the assignment and provide the desired results.

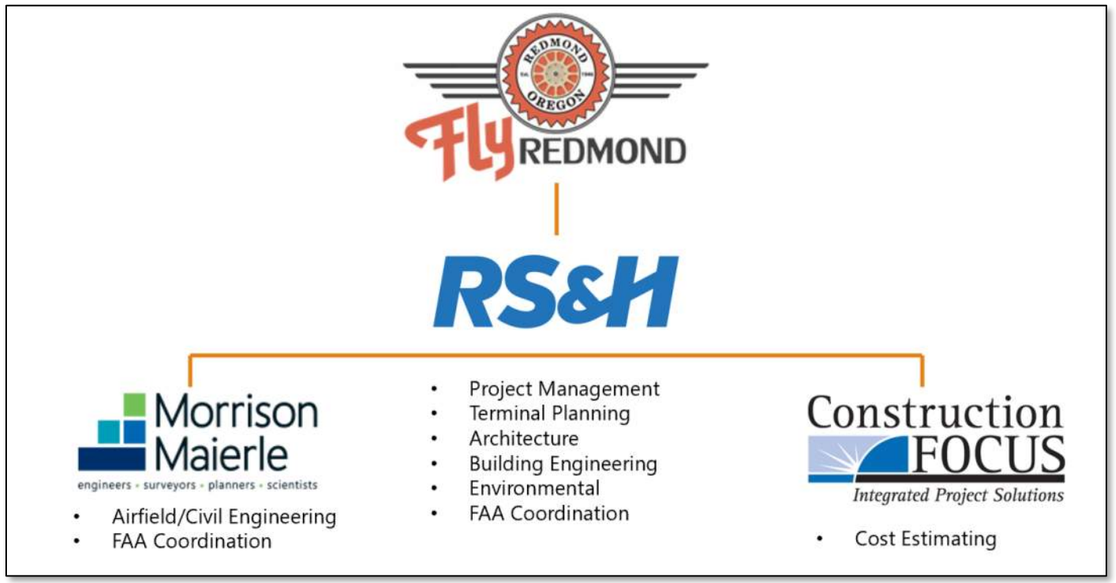


FIGURE 2-3 TEAM ORGANIZATION CHART

RS&H, Inc:

RS&H, Inc. is a national Architecture, Engineering and Consulting firm, with a practice focus on aviation. RS&H has been in business for over 75 years providing, among others, all the necessary services needed by airports: Planning; Environmental; Architecture/Building Engineering; and Airfield Engineering. For this Terminal Area Concept Plan RS&H provided terminal planning, architecture, building engineering, environmental consultation and FAA coordination.

Morrison Maierle, Inc.:

Morrison Maierle, Inc. (MMI) consists of experienced airport engineers, planners, and construction representatives that provide a full range of services. MMI currently serves as an on-call consultant at RDM and has a comprehensive understanding of the airside and landside issues. For this Terminal Area Concept Plan, MMI provided airfield/civil engineering and assisted with FAA coordination.

Construction Focus:

Construction Focus provides construction cost estimates and consulting services to a wide variety of clients, including the federal government, the State of Oregon, Oregon cities, SW Washington State, counties, and airports. For this Terminal Area Concept Plan, Construction Focus will provide cost estimates for various alternatives.

2.3 FEASIBILITY ANALYSIS PROCESS

The process for the Terminal Area Concept Plan (*Figure 2-4*) is composed of three primary steps as follows:

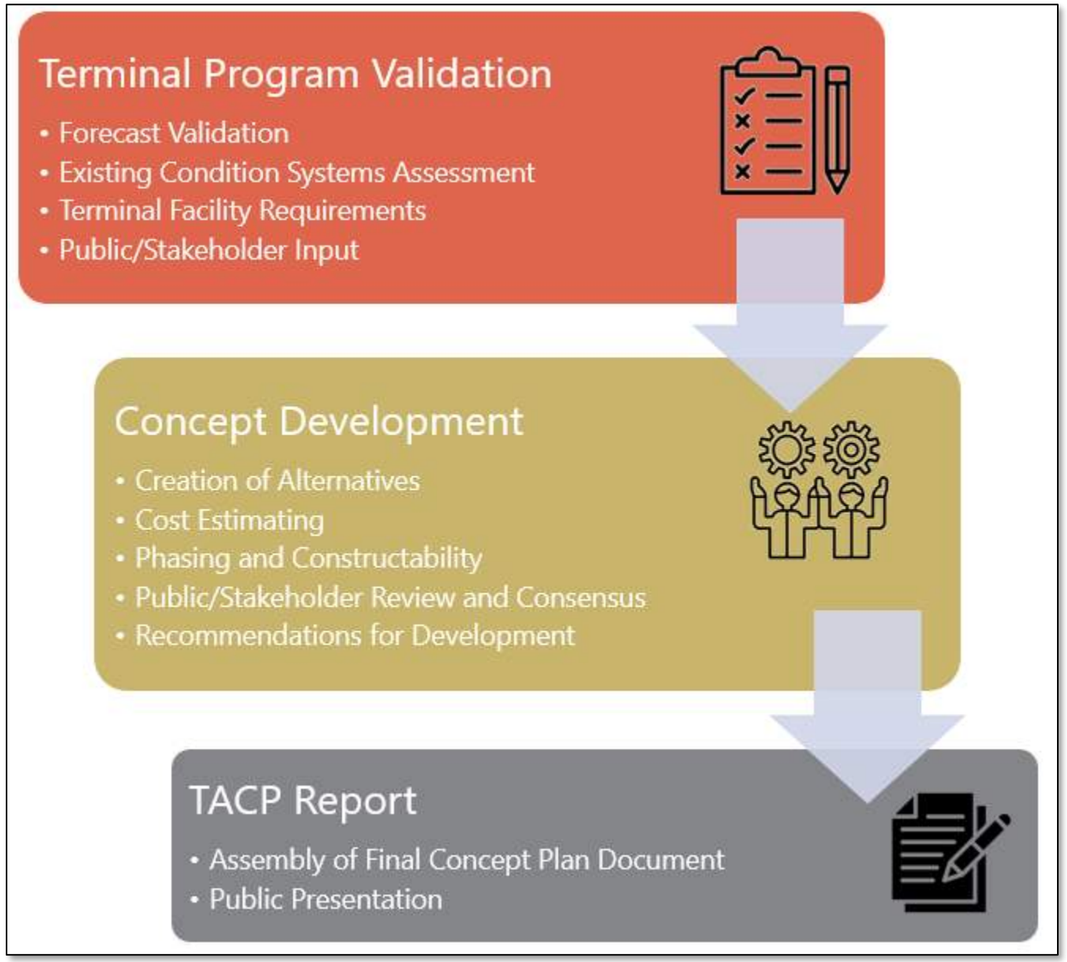


FIGURE 2-4 TACP PROCESS

CHAPTER 3

FORECAST VALIDATION

3.1 FORECASTING METHODOLOGY

The Redmond Municipal Airport (RDM or Airport) Terminal Concept Study incorporated the preferred enplanements forecast from the most recent Master Plan completed in 2018. The forecast projected a 3.7% annual growth rate in enplanements increasing the Airport's annual total from 298,322 in 2016 to 680,750 in 2036. However, when the COVID-19 (Coronavirus or public health emergency) pandemic occurred in 2020, aviation activity forecasts suddenly were focused on the amount of time it would take to return to pre-pandemic (or 2019) levels and how long-term projections would change as a result. In 2018 and 2019 the airport growth was tracking above the 90th percentile line on the Master Plan Enplanement forecast. Originally it is assumed, for the purposes of this report, that once levels recover to those of 2019 that the growth would continue to track on a similar trajectory (solid red line on *Figure 3-2*). The FAA provided limited guidance on the anticipated recovery period for airports to return to 2019 enplanement totals. In a meeting with FAA held January 2021, the FAA estimated a 9-year recovery period that would result in the airport attaining 2019 level again in 2029. Other industry experts (Fitch Ratings) estimated a more rapid recovery, resulting in 2019 levels being reached by 2024.

At the time of this forecast update, most recent data is suggesting an even more aggressive recovery. Per Cirium Diio Mi ™ , a service that collects all Department of Transportation (DOT) information reported by airlines, RDM is showing a recovery that exceeds that being experienced by the aviation industry nationwide (*Figure 3-1*).

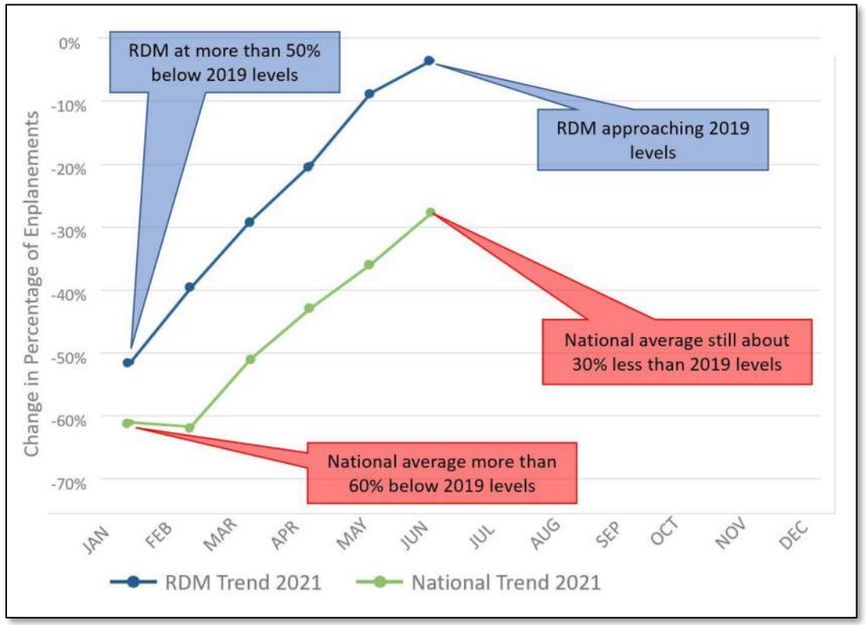


FIGURE 3-1 COVID RECOVERY TREND – PERCENT CHANGE FROM 2019

Prior to the public health emergency, although the Airport traffic was up, the limitations of the facility to meet that demand started to become apparent. Enplanements were, exceeding the Master Plan Forecast's short-term projection for 2019 with 482,676, a number that was not projected to be reached until sometime after 2024.

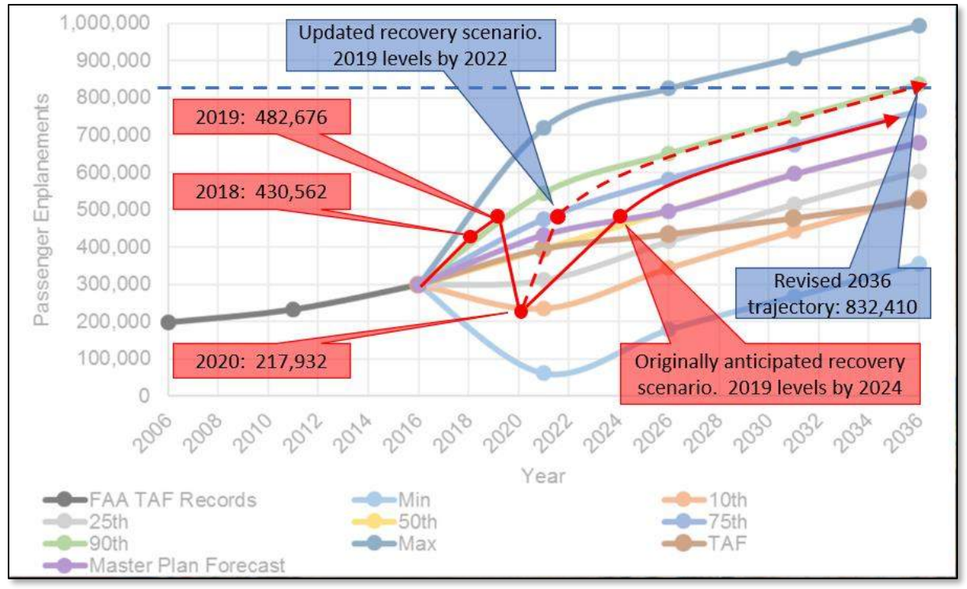


FIGURE 3-2 PROJECTED RECOVERY ATOP MASTER PLAN FORECASTS

As the industry recovers from the pandemic, extrapolating this most recent trend data illustrates that 2019 levels could be reached by late 2021/early 2022 (dashed red line on *Figure 3-2*). Once the airport returns to the 2019 enplanement levels in this revised COVID-19 recovery-based scenario, and assuming that the trajectory it was on pre-COVID continues, it is anticipated that the Airport will regain its alignment with the 90th percentile line, resulting in a 2036 enplanement estimate of approximately 832,000.

Next the Master Plan Forecast Design Day Flight Schedule (DDFS) for 2018 was compared with an RDM DDFS for an average day of August 2019 for accuracy. Ultimately, the two DDFS had the same destinations, but 2019 had an increase of one additional Seattle-Tacoma International Airport (SEA) frequency; one additional Los Angeles International Airport (LAX) frequency; and a new Chicago O'Hare International Airport (ORD) flight. Therefore, the DDFS for 2019 was used as the baseline schedule, using August rather than June (which was used in the Master Plan Forecast) to better represent the current peak month for 2019.

The DDFS added in load factors1 from August 2019 for enplaning and deplaning passengers, as well as the airline's equipment and seat totals to generate a total number of passengers for the 2019 design day model. The daily total

1 Bureau of Transportation Statistics T-100 Market data, 2019.

was increased by the ratio of the day to the month of August to reach the August 2019 enplanements total, and then increased by the ratio of the month of August relative to 2019 to reach the annual enplanements total.
This study required a DDFS for 2026 based on the updated forecast of enplanements. As a result, the DDFS retained the same DDFS from 2019, and met the projected 2026 enplanement total of 578,828, and 2036 enplanement total of 832,410 from the COVID-19 Recovery Based Scenario forecast.

In order to meet the enplanement growth, the DDFS adjusted the RDM load factor to 85.2% in 2026 and 85.6% in 2036, which were projected by the FAA Aerospace Forecast from FY 2020-2040 for those respective years. Next consideration was given to anticipated changes in the fleet, airlines, and markets to be used in 2026 and 2036 at RDM. The following assumptions were made:

- 2026 Assumptions
  - All CRJ200s (50 seats) would be up-gauged to E175 aircraft (76 seats)
  - All DH4 (76 seats) would be replaced by E175 aircraft
  - All Delta Air Lines (DL)2 aircraft were up-gauged from E175 aircraft to A220 aircraft (109 seats)
  - A second frequency of the American Airlines (AA) flight to Phoenix, Arizona (PHX) was added on E175
  - New San Diego, California (SAN) market added on E175 aircraft by Alaska Airlines (AS)
- 2036 Assumptions
  - Five of the United Airlines (UA) flights on E75 aircraft were up-gauged to Boeing 737 MAX 8 aircraft (166 seats)
  - Two CR7 aircraft (70 seats) were up-gauged to E175 aircraft by AA and one by UA
  - A third frequency of the AA flight to Los Angeles, California (LAX) was added on E175
  - A third frequency of the DL flight to Salt Lake City, Utah (SLC) was added on A220
  - A new airline was added with three flights daily on a Boeing 737 MAX 8 aircraft (175 seats) with two flights to Denver, Colorado (DEN) and one flight to Las Vegas, Nevada (LAS)

3.2 PASSENGER FLOW SIMULATION

The CAST simulation model suite was used to determine the peak period passenger flows and aircraft gating demands on the terminal. CAST is a simulation modelling software used to evaluate terminal building operations. The analysis incorporated the design day flight schedules for the 2019, 2026, and 2036 demand levels.

3.2.1 Peak Period Counts

The peak period counts for passenger flows and aircraft operations were completed for 20-minute, 30-minute, and 60-minute rolling peaks.

The peak period passenger count analysis included a departing passenger reporting profile that was assumed to represent the passenger behavior on an average day at RDM. The reporting profile assumed that the first passenger of a particular departing flight would enter the terminal building two hours prior to the scheduled departure time and the last passenger would enter the terminal building 45 minutes prior to the scheduled departure time.

2 DL has shown an increased use out of the A220, with 28 total in their fleet and a commitment to purchase 50 more as of 2019.

For arriving passengers, the analysis assumed the first passenger would disembark the aircraft three minutes after the scheduled block time to represent the delay associated with passenger boarding bridge maneuvering and aircraft door opening. The passenger deplane rate was set at 16 passengers per minute.

The peak period passenger flow analysis results are summarized in *Table 1*. The departing passenger count represents the number of enplaning passengers entering the terminal building from the landside and the arriving passenger count represents the number of deplaning passengers entering the terminal building from arriving aircraft. The total passenger count represents the greatest combined sum of departing and arriving passengers entering the building throughout the day.

TABLE 1
PEAK PERIOD PASSENGER COUNTS

	2019	2026	2036
Peak Departing Passenger Count			
Peak 20-Min	105	119	194
Peak 30-Min	150	170	285
Peak 60-Min	274	292	557
Peak Arriving Passenger Count			
Peak 20-Min	124	195	308
Peak 30-Min	185	226	360
Peak 60-Min	310	374	549
Peak Total Passenger Count			
Peak 20-Min	172	215	322
Peak 30-Min	244	300	421
Peak 60-Min	455	560	722

Source: RS&H, 2021

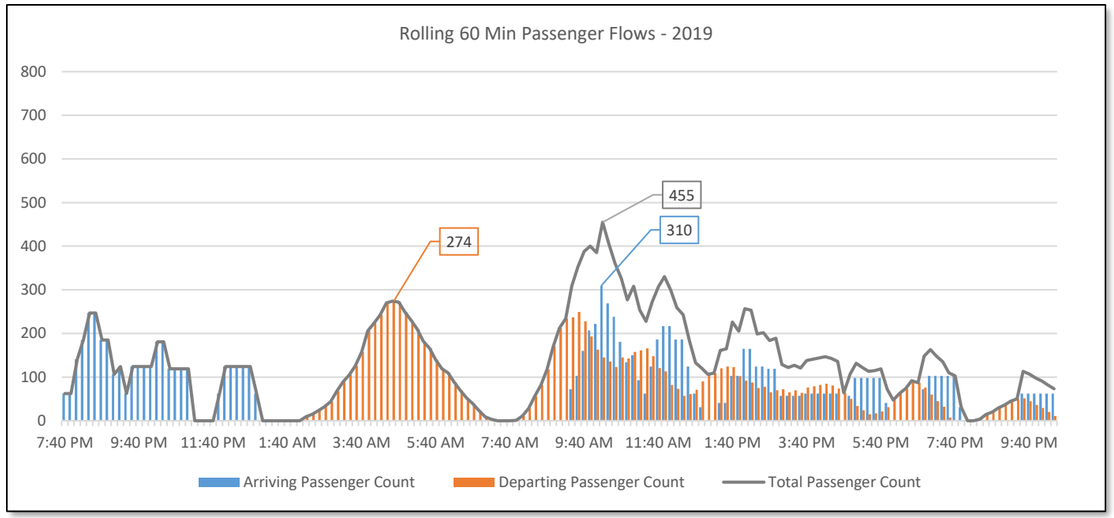


FIGURE 3-3 ROLLING 60 MINUTE PASSENGER FLOW PEAK - 2019

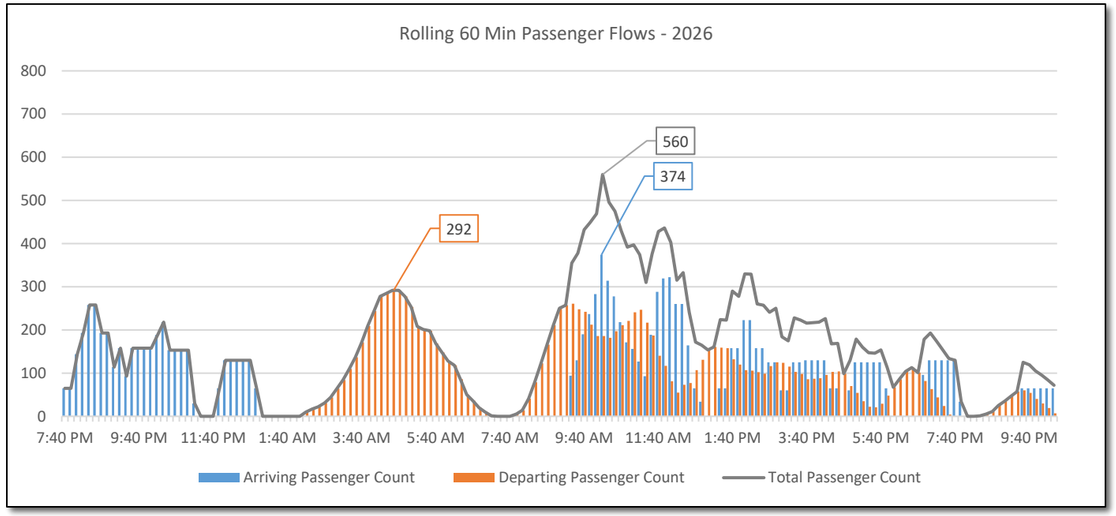


FIGURE 3-4 ROLLING 60 MINUTE PASSENGER FLOW PEAK - 2026

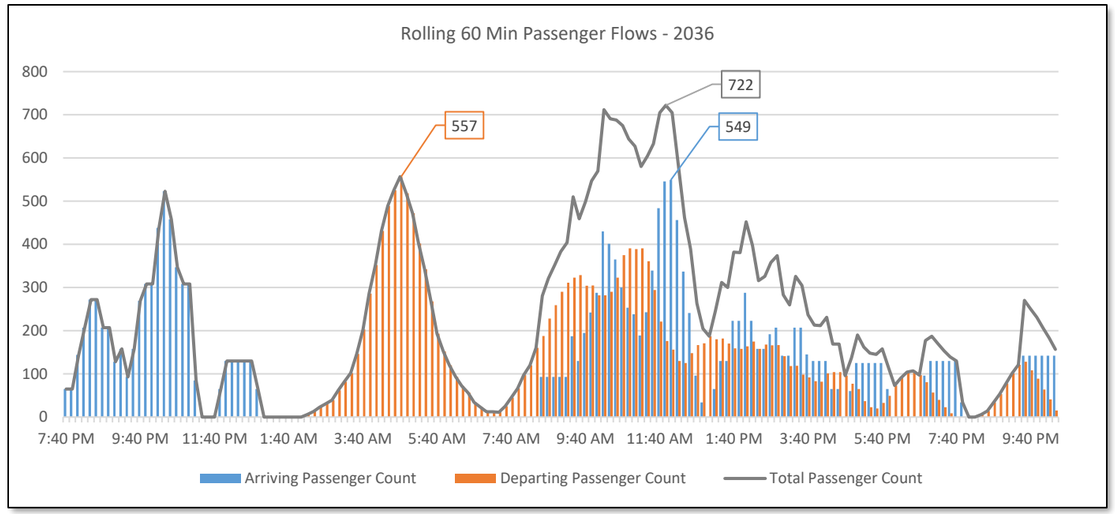


FIGURE 3-5 ROLLING 60 MINUTE PASSENGER FLOW PEAK - 2036

The peak period aircraft operations analysis results are summarized in *Table 2*. The counts represent the number of aircraft departing from and arriving to the terminal building during the peak periods. Note that this does not represent gate demand or the number of aircraft at the terminal building during any given time.

TABLE 2
PEAK PERIOD OPERATIONS COUNTS

	2019	2026	2036
Peak Departing Aircraft Count			
Peak 20-Min	3	3	3
Peak 30-Min	3	3	4
Peak 60-Min	5	5	7
Peak Arriving Aircraft Count			
Peak 20-Min	2	3	3
Peak 30-Min	3	4	4
Peak 60-Min	6	6	6
Peak Total Aircraft Count			
Peak 20-Min	4	4	5
Peak 30-Min	6	6	6
Peak 60-Min	9	9	9

Source: RS&H, 2021

3.2.2 Aircraft Gate Allocation

The aircraft gate allocation analysis evaluated scenarios of how flights can be allocated to the available gates based on the design day flight schedules for 2019, 2026, and 2036. The gating analysis was run considering that 11 gates would be available throughout the planning period. For the 2019 flight schedule, the existing aircraft size gate limitations were considered. For the 2026 and 2036 flight schedules, the analysis assumed that each gate could accommodate ADG-III aircraft. The analysis assumed each airline had designed gates that were preferential to that airline only. The analysis also assumed a 15-minute buffer time between all flights. The analysis assumed that aircraft would remain overnight at the gate, as applicable.

The analysis results show that the greatest demand for terminal gates occur overnight to accommodate remain overnight aircraft for the design day in 2019 (*Figure 3-6*), 2026 (*Figure 3-7*), and 2036 (*Figure 3-8*). Nine gates can accommodate the aircraft gating demands for the 2019 and 2026 design day flight schedules. In these gating scenarios, nine aircraft would remain overnight on-gate. Eleven gates can accommodate the aircraft demands for the 2036 design day. In this gating scenario, 11 aircraft would remain overnight on-gate. The additional overnight gate demand reflects the forecast assumption of a new airline entrant starting operation at RDM with two aircraft remaining overnight.

The schedules used for 2026 and 2036 represent the most realistic growth scenarios with the most appropriate aircraft types in production today. Due to the nature of business versus leisure travel, the growth projections of the city, and airline operations, it is assumed that any further growth beyond the schedules used for this analysis will involve upgauging existing aircraft or adding additional flights in the off-peak times where the airport is underutilized. Since many of the aircraft shown are regional jets, significant growth opportunities exist just by increasing the aircraft size of the already-allocated flights.

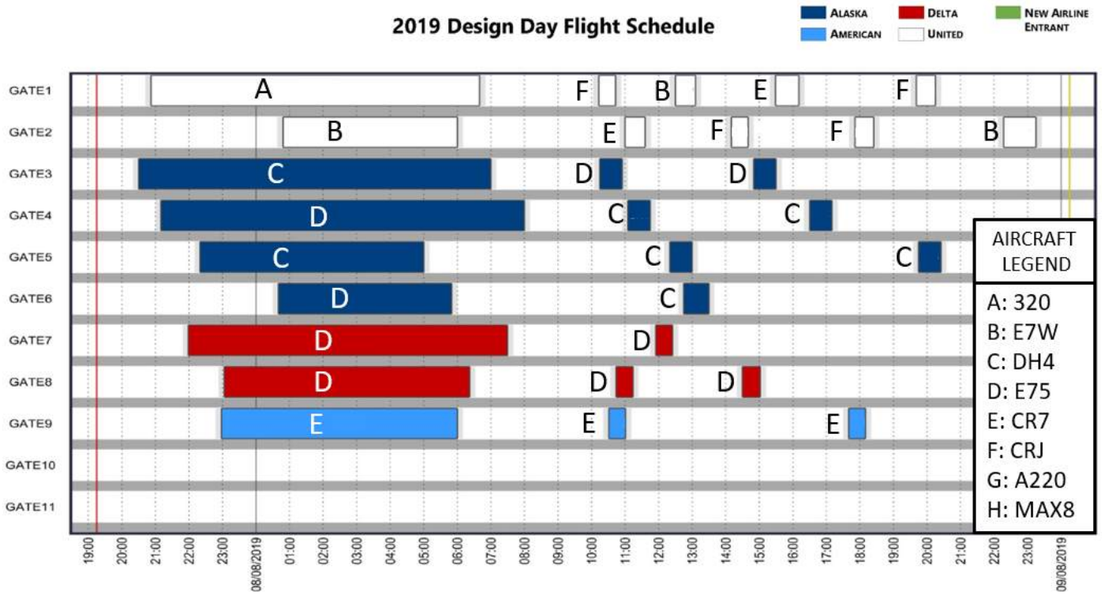


FIGURE 3-6 GATING SCENARIO - 2019

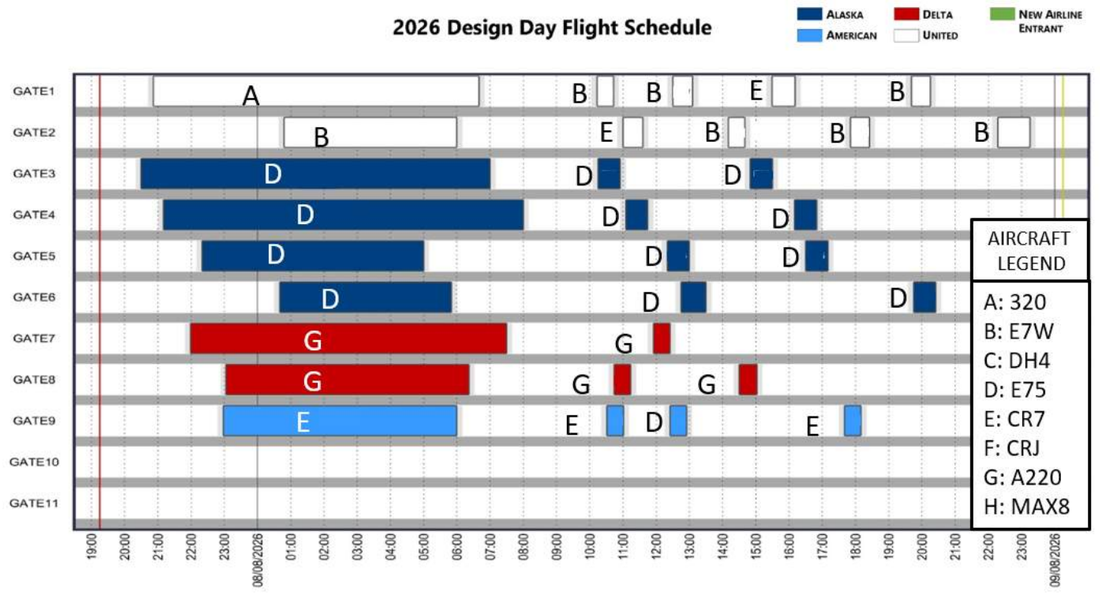


FIGURE 3-7 GATING SCENARIO - 2026

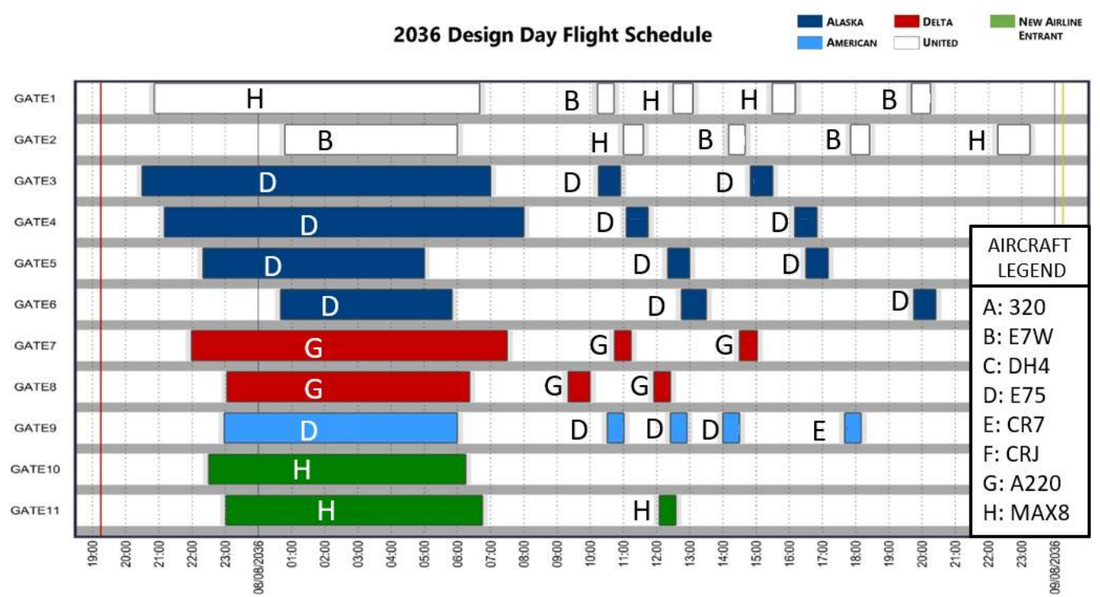


FIGURE 3-8 GATING SCENARIO - 2036

CHAPTER 4

EXISTING CONDITION ASSESSMENTS

4.1 ARCHITECTURAL ASSESSMENT

The current terminal facility, as expanded in 2008, is divided into three separate buildings (as defined by the building code): a North Building; a South Building; and a Mech/Elec Building (*Figure 4-1*). The north and south buildings are both mixed-use in that they accommodate code allowed occupancies that include Assembly (A-2/A-3), Business (B-1), Storage (S-1), and Industrial (F-1). Each building is isolated from the others via 3-hour fire separation walls.

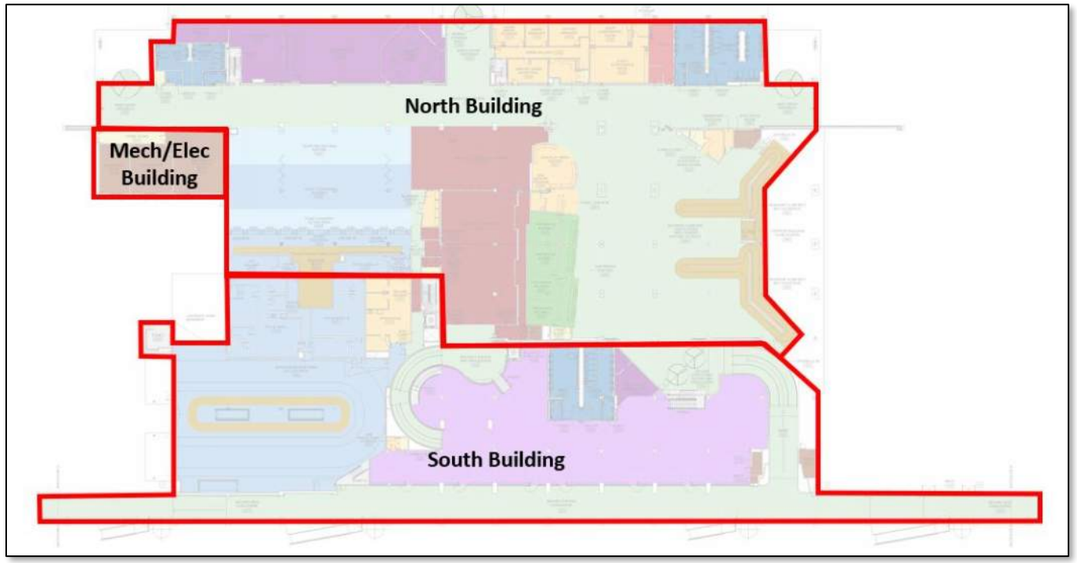


FIGURE 4-1 EXISTING TERMINAL CONFIGURATION

In order to achieve maximum efficiency in the development of any future expansions the intent will be to modify the building appropriately to meet the Oregon Structural Specialty Code (OSSC) code Section 402 requirements for a Covered Mall building. Doing so allows for unlimited enclosed building area and an open plan that enables the facility to operate as an airline terminal building. In addition, this provision largely negates the need to protect structural steel with fire proofing by requiring fire sprinklers throughout which can be a cost savings.

Note: It is understood that there are some configuration considerations that need to be accounted for related to the right sizing of the curbside, roadway and vehicular parking. Those components were not part of this study.

4.1.1 Initial Elements for Consideration

The initial assessment of the facility resulted in the identification of a number of elements to be addressed as part of the TACP as indicated in *Figure 4-2*.



FIGURE 4-2 INITIAL ELEMENTS FOR CONSIDERATION

1. **Revolving Doors** – At each of the primary entry points, and in the transition from airside to landside, revolving doors are currently used. The Airport desires to replace these with more traditional vestibules and a breach control system to reduce injury and malfunction.
2. **Landside Concessions Space** – Currently the concession space on the plan north side of the building is unused. There is not a landside focused concession available to passengers or tenants. The intent will be, with the anticipated growth, to provide opportunities for concessions in this location as well as additional options on the airside.
3. **Ticketing Area** – There are some underutilized portions of the ticketing due to some area impacted by some seating. Also, in peak times, the queuing for the ticket area exceeds the available space and can obstruct circulation paths. In addition, the number of ticket agent positions is limiting to the possibility of future entrant airlines. (*Figure 4-3*)

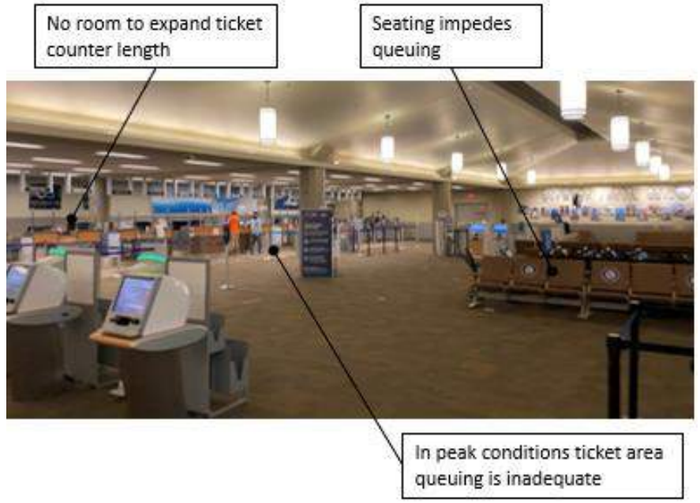


FIGURE 4-3 EXISTING TICKET LOBBY AREA



FIGURE 4-4 EXISTING BAGGAGE CLAIM AREA

4. **Security Screening Checkpoint** – Under the current configuration the security screening checkpoint (SSCP) is trapped between the ticket area on the west and the rental car area on the east. There is no room for this processor to expand if needed.
5. **Bag Claim Area** – In peak conditions the bag claim area becomes overcrowded. There is limited opportunity for the bag claim area to expand in its current configuration to accommodate additional flights. Also, the seating located between the devices and rental car area can impact flow. (*Figure 4-4*)
6. **Rental Car Queuing** – Due to the proximity of rental car to bag claim and location of the interior seating, peak conditions can generate conditions of overcrowding.
7. **Baggage Make-Up** – Additional baggage make-up area is needed as the current configuration often results in bags falling off conveyors and carousels. There is not adequate space for the tugs from each carrier to park along the carousels to retrieve bags. The current oversized baggage process is ineffective and requires significant manual baggage manipulation that severely reduces efficiency.
8. **Departure Lounge** – The current lower-level departure lounge is configured as a single open space with a call to gate protocol. This area was sized to accommodate commuter aircraft and was not intended to include passenger boarding bridges. As airlines begin to employ larger aircraft and the number of flights increases, the departure lounge space becomes undersized very quickly.
9. **Upper-Level Space** – The upper-level space, although available for passengers, is most often underutilized.

4.2 STRUCTURAL SYSTEMS ASSESSMENT

The structural engineering systems assessment was based solely on review of the existing record documentation provided by the airport, and a follow up conference call held with the airport staff on Wednesday, January 13, 2021.

The existing terminal roof structure is comprised of metal roof deck supported by steel beams and steel columns. The second floor consists of a composite concrete slab on metal deck supported by steel beams and girders. The existing foundation system is concrete spread footings on a compacted subgrade. Lateral forces (i.e. wind and seismic) are resisted by steel moment frames. As this is a seismic design category B, the seismic force resisting system is defined as "structural steel systems not specifically detailed for seismic resistance".

Any expansion/addition will be comprised of similar structural systems.

4.3 MECHANICAL SYSTEMS ASSESSMENT

The mechanical engineering systems assessment was based solely on review of the existing record documentation provided by the airport, and a walk through of the airport facility in April 2021.

4.3.1 HVAC System

The existing HVAC system at RDM consists primarily of a chilled water cooling and hot water hydronic heating system, with interior air handling units serving primarily under slab ductwork that is routed to displacement diffusers in the main hold room, ticketing, and bag claim areas. There are some office spaces that utilize overhead duct distribution with Variable Air Volume (VAV) terminal units to serve individual spaces. Additional heating for the building is provided by in-floor radiant heating in certain perimeter areas near building entry vestibules and in the boarding halls that lead out to the aircraft boarding positions. The systems are controlled by a central Building Automation System (BAS). The systems were installed in 2007 and are in good operating condition according to discussions with the airport staff.

Chilled water for cooling is produced by two water-cooled chillers. One chiller is a centrifugal type rated for 250 tons of capacity, the other chiller is a rotary screw type, rated for 150 tons. The chilled water fluid is a 40% propylene glycol mix primarily for freeze protection. The airport confirmed that the sequencing of the chillers operates the smaller chiller during milder temperatures and the larger chiller operates when outdoor temperatures are above 90 degrees. The airport confirmed that rarely do both chillers operate concurrently.

Chilled water is distributed via centrifugal end-suction pumps in primary/secondary pumping configuration. There are two cooling towers for the chilled water system located on the roof above the mechanical room with a remote condenser water sump located in the mechanical room. The cooling towers are sized for approximately 213 tons of heat rejection and are configured for Duty/Stand-by operation. The airport confirmed that one tower provides sufficient heat rejection due to the thermal storage capacity provided by the remote sump. The condenser water pumps are constant volume centrifugal end-suction pumps.

Heating for the terminal is provided by two, approximately 3000 MBH, gas fired hot water boilers. The boilers are configured in a Duty/Stand-by configuration. The interior air handlers have heating coils, and the VAV systems have hot water reheat coils at the terminal units. The hot water is distributed through the building via a primary/secondary pumping arrangement with end-suction centrifugal pumps with variable frequency drives. Additional in-line heating zone pumps are also provided to circulate hot water through the in-floor radiant tube sections throughout the airport. The hot water piping was designed for future expansion and has multiple locations with valved and capped locations for future connection. Therefore, it is believed that the existing hot water boilers have additional capacity available, but the exact amount is not known, and has not yet been calculated.

The mechanical room is currently positioned in the northwest quadrant of the terminal building. It's location impedes possible expansion of the ticketing hall to the west. Due to the nature and location of the proposed concourse expansions, it will be difficult to extend the existing cooling systems to serve the expansions. Given that the proposed expansions will eliminate the existing boarding hallways and likely the in-floor heating systems associated with them, there is a potential to extend the existing heating distribution system to serve at least a portion of the heating requirements for the expansions. Discussions with the airport indicated that the airport was acceptable to providing new, independent systems to serve the expansions.

4.3.2 Plumbing System

The plumbing systems were installed 2007 as part of that terminal expansion project. The plumbing systems in the terminal building consist of touchless, sensor operated flush valve toilets and urinals, and touchless, sensor operated lavatory faucets.

Domestic cold water for the building is provided by a 4" domestic water main that enters the building in the mechanical room. There is a separate 2-1/2" domestic water line stubbed into the building at the northwest corner of the building for a future landside kitchen/restaurant build-out that has not been built to date, and the area is currently used as storage.

Hot water for the terminal plumbing systems is provided by two (2) gas fired water heaters, with a hot water recirculating system. The water heaters are located in a mechanical room near the center of the terminal. There is space provided for two additional future water heaters for the kitchen/restaurant build-out.

Natural gas is provided to the building by a 3" gas main and meter located at the main mechanical room. There is a separate 1-1/2" gas service stubbed into the building at the northwest corner for a future kitchen/restaurant build-out. Sanitary drainage is conveyed through the building to an exit point on the northwest side of the building. The existing gravity main is a 6" line which has adequate capacity for the current building drainage loads.

Storm drainage for the terminal is provided by primary roof drains with secondary overflow drains. The primary drains are piped internally throughout the building and connect to an 18" stormwater site main at the northwest corner of the building. Overflow drains are piped independently to overflow downspout nozzles located on the building exterior above grade.

Additionally, there is a sanitary waste, and storm drainage lift station located in the southwest quadrant/basement area of the terminal that collects sanitary drainage from fixtures located above the basement, and storm water from a 6" foundation drain system. This system discharges through 2" force mains to a site force main located nearby. Provisions were made in the 2007 expansion design for the installation of a grease interceptor to serve the future kitchen, but the interceptor is not currently installed.

4.3.3 Fire Protection System

There are four 6" fire mains that serve the terminal. The mains enter the building in the northwest quadrant of the building. Two 6" lines enter into the main mechanical room, and two other 6" lines enter into the basement. The fire mains serve various zones throughout the terminal building. The interior hold room, ticket lobby, bag claim and office areas are provided with a wet pipe fire sprinkler system. Exterior canopy areas are provided with dry pipe sprinkler systems. The boarding halls are provided with a deluge sprinkler system due their proximity to aircraft fueling points.

4.4 ELECTRICAL SYSTEMS ASSESSMENT

The electrical engineering systems assessment was based solely on review of the existing record documentation provided by the airport, and a walk through of the airport facility in April 2021. The current electrical systems throughout the terminal consist of two switchboards, with associated distribution panelboards, transformers, lighting systems and general power systems. These systems are original to the building construction.

4.4.1 Electrical Distribution System

Currently, there are two switchboards (SSA and FAA) in the building that are original to the building construction. The SSA switchboard is a Square-D QMR fused disconnect type distribution which is currently obsolete. The associated distribution systems consist of distribution panelboards, and transformers of the same period, most are in fair to good condition, and are in the expected condition for their ages. The exterior NEMA 3R disconnects are in poor shape due to corrosion and need to be replaced with new NEMA 4X units.

There are two emergency generators. One generator serves the building, and the other generator is dedicated to the FAA tower and air traffic control facilities. The building generator is in need of a complete replacement. The building generator only feeds life safety loads. It is highly desirable to have additional capacity and a second transfer switch for optional standby loads such as screening and other critical non-life safety loads. The FAA tower generator is owned and operated by the FAA, and is, therefore, outside the scope of this evaluation.

The public areas of the terminal building have limited access to power outlets. The pre-screening waiting lounge and the post-screening hold rooms do not have passenger accessible convenience charging or outlet stations.

4.4.2 Lighting System

Currently the lighting system consists of fluorescent, high pressure sodium, incandescent, and metal halide fixtures. The existing terminal landside lobby including the meet/greet area, ticketing and baggage claim, is illuminated using metal halide fixtures with magnetic ballast that are run 24 hours per day. These rooms also include areas with T12 magnetic ballast fluorescent and incandescent fixtures.

The existing terminal airside, including hold rooms, is illuminated using fluorescent fixtures that are run 24 hours per day. There is substantial glazing in both these areas. Retail spaces have a good amount of inefficient incandescent lighting.

There is no overall building lighting control system for automatically shutting down lights based on time of day or other controls. Photocell controls and occupancy sensors for some rooms and exterior lights are in place on a limited basis.

There are several areas with large windows which provide an opportunity for daylight harvesting. There are several areas under lit due to fixtures with poor or no optics. Many areas do not take advantage of ceiling reflectance to increase the light levels. Also, dull and non-reflective finishes reduce the lighting effectiveness.

The office areas, security checkpoint, baggage handling and equipment spaces are lit using fluorescent fixtures.

The Airport has begun systematically replacing lighting elements in response to the recommendations of an energy audit (2015).

The apron lighting is currently high-pressure sodium and is in fair condition. The parking lot lights are also high-pressure sodium and are in fair condition due to age. The other exterior fixtures are combination of metal halide, and high-pressure sodium. The parking lot lighting poles and fixtures are provided by Georgia Power under a monthly use agreement. Georgia Power has recently upgraded fixtures to modern energy-efficient LED fixtures which provide higher light output and lower energy consumption.

4.5 INFORMATION TECHNOLOGY / LOW VOLTAGE SYSTEMS ASSESSMENT

The information technology/low voltage systems assessment was based the on review of available existing record documentation provided by the airport, a discussion with the City of Redmond IT staff in January 2021, and a walk through of the airport facility in April 2021.

4.5.1 Communication System

The existing communication system consists of fiber optic and copper backbone cables connecting intermediate distribution frames (IDFs) to the main distribution frame (MDF) with a star topology. The MDF serves as the main entry point for communications into the building. The MDF is located on the ground floor adjacent to the ticket lobby. It was noted by the Owner that on occasion there has been water intrusion from the adjacent mechanical space. This room contains terminations for multiple outside plant cables (copper and fiber). The space is not conditioned and is not suitable for active hardware.

There are seven (7) IDF rooms ranging in size from 30 to 80 sq ft. These rooms do not meet the TIA 569 Telecommunications Pathways and Spaces standard requirements. Each IDF has a 6-strand single-mode fiber homerun to the MDF for City managed IT systems (Data, Access Control, Video surveillance, Wi-Fi, and Telephone) with additional fiber belonging to tenants (Airlines/vendors). In general, the IDFs are full and lack necessary space for expansion. Access to the IDFs is restricted; however, equipment owned and maintained by the City and third-party tenants and vendors share rack/wall space. Rack mounted UPS units connected to emergency power are maintained by the City.

Voice over IP (VoIP) telephones in the terminal are connected to network switches managed by the City IT department. Airline and vendors requiring phone service are required to provide their own phone system and acquire service from a third-party service provide.

Wireless Fidelity (Wi-Fi) and Cellular coverage are currently adequate on the main level of the terminal. To expand these systems to the basement level or expanded areas of the Terminal will require additional infrastructure.

Power, cooling and fire suppression the MDF and IDFs should be evaluated further prior to expansion. The existing systems are not adequate to accommodate expansion and will need to be upgraded or replaced.

4.5.2 Access Control System

The existing Access Control System (ACS) is Symmetry manufactured by AMAG Technology. The system was updated approximately one (1) year ago and is running the latest version of Symmetry software. The system has approximately forty-two (42) doors including perimeter vehicle and pedestrian gates. The IP-addressable intelligent door controllers are connected to a dedicated security network. Doors with electrified hardware and card readers with integrated keypads control access to the SIDA, AOA, equipment rooms and other non-public areas.

Locking arrangements for the access-controlled doors will be designed to meet TSA and life safety code requirements. Doors separating the sterile area from public area or the AOA will be equipped with time-delay locking where allowed by code. Where allowed, these doors will be provided with card readers on both sides to allow authorized users to enter or exit the sterile area.

The AMAG ACS software has standard integration to the Ocularis video management system (VMS) available. Currently, the ACS and Ocularis VMS are not integrated. Integration would allow video associated with alarm events to automated queue up on the operator's workstation for alarm assessment. It is recommended that Airport Security review this function and the available features of ACS/VMS integration and include it as part of a future project.

4.5.3 Video Surveillance System

The existing Video Management System (VMS) is Ocularis by Qognify. The existing surveillance cameras are multi-sensor IP addressable cameras manufactured by Axis and installed by Convergint. There are approximately twelve (12) existing cameras that provide coverage throughout the terminal with limited coverage of the exterior. It was noted by the Owner that additional camera coverage is desired including the parking lots, landside terminal, departures lobby, hold rooms, and AOA ramp. A recent lighting project installed additional conduits to the landside parking lots that may be used to extend the security network.

The system has no integration to the access control system (ACS) for monitoring, refer to the previous section for more information.

4.5.4 Public Address System

The existing public address system is an older analog system. The system consists of speakers, noise sensors and dedicated microphones connected to an amplifier located in the MDF. It is recommended that the system be replaced with a computer-based system (IP based or an IP/analog hybrid).

4.5.5 Flight Information Displays

Flight information displays including arrivals/departures and baggage information are located in the landside lobby and baggage claim as well as in airside hold rooms.

4.5.6 Passenger Information Displays

There are several passenger information and advertising displays and kiosk in the landside areas and airside hold rooms. These displays provide advertising messaging and local information for passengers.

4.5.7 Gate Information Systems

There is one ceiling mounted gate information display (GID) per gate counter.

4.5.8 Cable Television

There are a limited number of TVs on the airside connected to satellite service providers.

4.6 CIVIL INFRASTRUCTURE

4.6.1 Domestic Water and Fire Protection

The existing terminal building water is provided by the City of Redmond. The City of Redmond water system is primarily sourced from a combination of wells and storage tanks. The water main serving the terminal building is 12" PVC that transitions to 8" DI in the vicinity of the terminal building. The terminal building domestic and fire sprinkler service is located on the west side of the building in a combined fire/domestic water meter vault. (*Figure 4-5*)

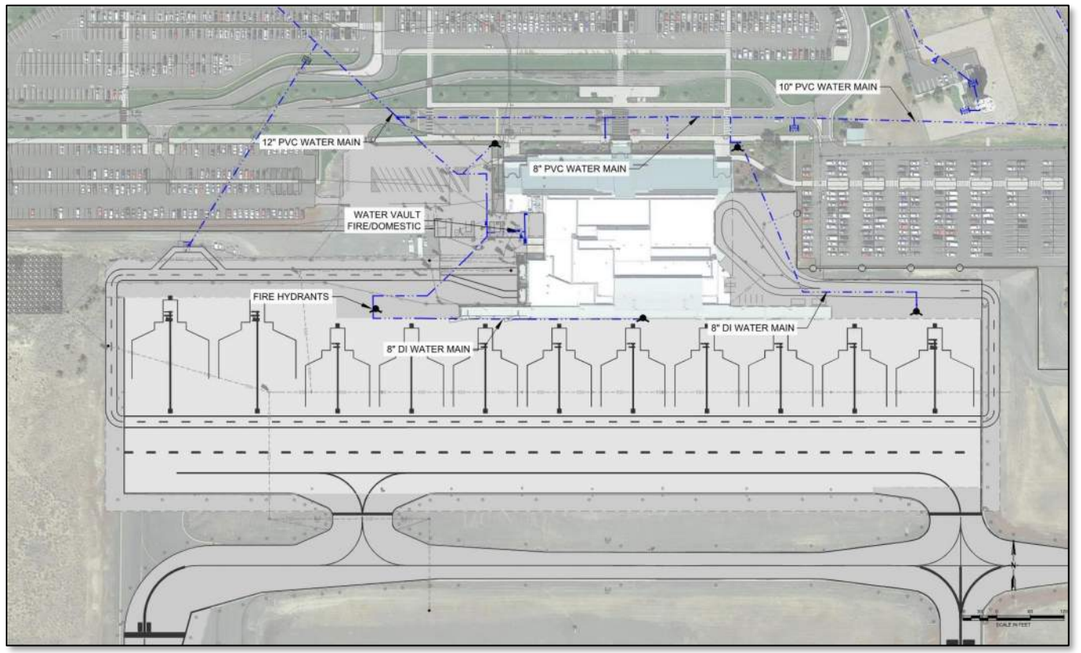


FIGURE 4-5 TERMINAL BUILDING WATER SYSTEM INFRASTRUCTURE

The terminal building has 5 fire hydrants, 2 on the land side, and three on the airside of the terminal building. All 5 fire hydrants are within 250 feet of the terminal building, allowing the max capacity for fire flow evaluation to be 1,500 gpm, if available from the system.

The fire flow information shown on the City of Redmond website indicates that following estimated flow rates (*Table 3*):

TABLE 3 FIRE FLOW INFORMATION

Hydrant #	Location	Flow (gpm)	Residual Pressure (psi)	Year of Test[1]
FH1651	SW Corner - Airside	1,210	64	2012
FH0231	NW Corner Landside	1,210	64	2012
FH0567	NE Corner- Landside	1,622	45	2017
FH1650	SE Corner – Airside	NA	NA	NA
FH1652	Center – Airside	1,190	64	2012
[1] Flows are based on information from City of Redmond and are not valid for design purposes. Actual flows will need to be tested.				

The City of Redmond has a model of the existing water system. Once in design, the design team will need to coordinate with the City to validate the actual fire flow availability to the facility.

The required fire flow for the proposed expansion will need to be evaluated and compared to the available fire flow to determine if there are any deficiencies in the system.

National Fire Protection Association (NFPA) 1 (2021) has special requirements for fire protection for terminal buildings. There are special requirements for glazing, exterior fire sprinklers, or shutter systems.

Expansion of the upper-level hold room to the east may impact the domestic water main to FH 1650. Rerouting of the main to the fire hydrant may be required depending on final footing locations.

Expansion of the upper-level hold room to the west will not have any direct impacts on the domestic water mains, however the foundations for the passenger boarding bridge tunnel to the west jet bridges may potentially have impacts to the domestic water main and FH 1651.

Fire hydrant 1652 and FH 1650 are on long dead-end lines. Installation of approximately 500 linear feet of water main along the airside terminal frontage would loop the main around the building. Installation of this line should be evaluated to determine if there is any significant benefit in increased hydrant flows if the loop was installed.

4.6.2 Sewer

The existing terminal building sewer is provided by the City of Redmond. An 8" concrete sewer main serves the existing facility. The sewer services for the terminal building are located on the west side of the building. There are three sewer service connections from the terminal building to connect to the sanitary sewer system. (*Figure 4-6*)

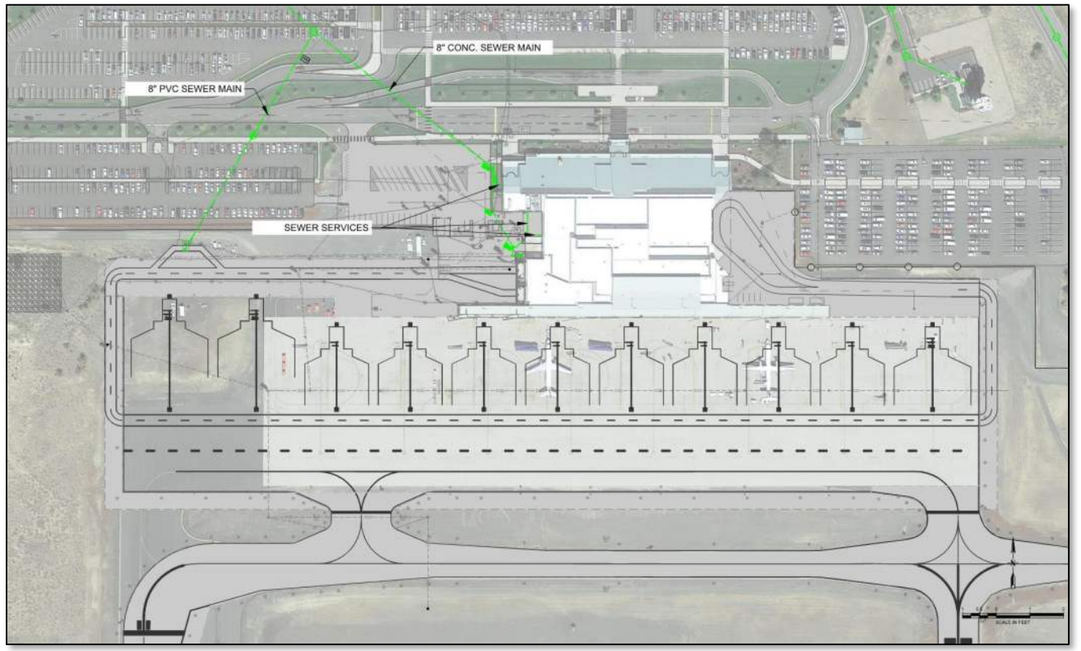


FIGURE 4-6 TERMINAL BUILDING SEWER SYSTEM INFRASTRUCTURE

It is not anticipated that the expansion of the terminal facility would have any impacts on wastewater facilities serving the building. The sizing of the grease interceptor should be evaluated if significant expansions to kitchen facilities are planned for the terminal expansion.

4.6.3 Storm Drainage

The storm drain system in the vicinity of the terminal building is a combination of storm drain piping and drywells. The roof drainage from the building is disposed of through drywells on the west and east side of the building. The terminal apron storm drainage is collected in a series of catch basins. The catch basins are approximately 130' from the building. The stormwater is collected and routed to an infiltration pond west of the terminal apron. There currently is not a system for collecting or treating the glycol that may intermix with the stormwater during the winter months. There is a manhole with a diversion weir on the west side of the apron to allow for the connection of a recycling / treatment system, if required, in the future.

The stormwater from the vendor lot and the airline operations area west of the terminal building also is disposed of in the terminal apron infiltration pond.

Prior to the connection to the storm pond, a sedimentation manhole with storm water hoods is provided to separate out hydrocarbons and prevent floatable trash from entering the stormwater pond.

Storm water on the east side of the building is collected in storm drain inlets and connected to the parking lot storm drainage system. The parking lot storm drain system terminates at the north detention pond near runway 11.
The capacity of the terminal apron retention pond the parking lot detention pond will need to be evaluated prior to adding additional storm drainage to the facility. (*Figure 4-7*)

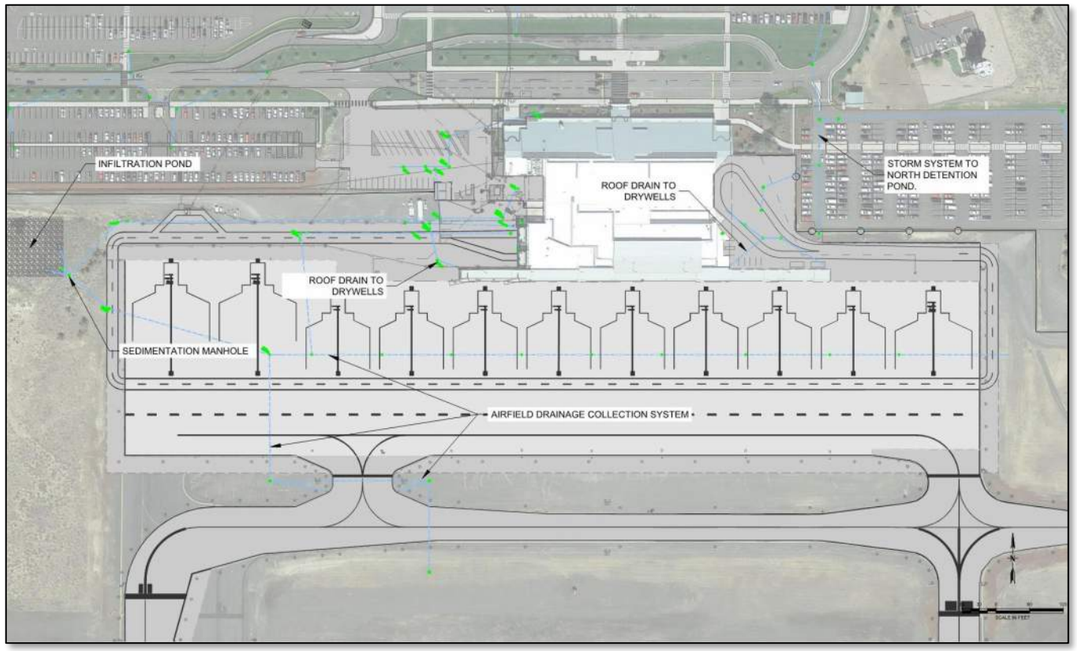


FIGURE 4-7 TERMINAL BUILDING STORM WATER SYSTEM INFRASTRUCTURE

The proposed expansion of the terminal facility may have impacts on storm drainage. Most of the expansion of the building will occur over surfaces that are currently impervious. The disposition of the storm drainage should be evaluated to determine the best method for routing of the storm water.

The existing apron drainage currently does not have a shut off shut off valve on the storm drain line in the event of a major fuel spill. A storm water valve manhole should be installed prior to the retention pond.

4.6.4 Power, Communications, and Natural Gas

The power for the terminal building is provided by pacific power and light (PPL). The electrical service panel is located west of the terminal building adjacent to the trash compactor. Historically the airport has had issue with the power supply to the building due to failures in the direct bury primary serving the building. The airport is currently looking at adding a new primary power run to the terminal building to eliminate the direct bury power. The genset for the terminal building is located north of the rental car lot. The genset is connected to limited circuits in the existing terminal building.

There are several communication service providers that provide service to the area, Century Link, Bend Cable, etc. The terminal building currently does not have a fiber optic connection. However, conduits were installed with the parking lot project in 2019 to provide a pathway for a future fiber optic connection from Airport Way.

The natural gas for the terminal building is provided by Cascade Natural Gas. There is a 4" service connection on the west side of the building. (*Figure 4-8*)

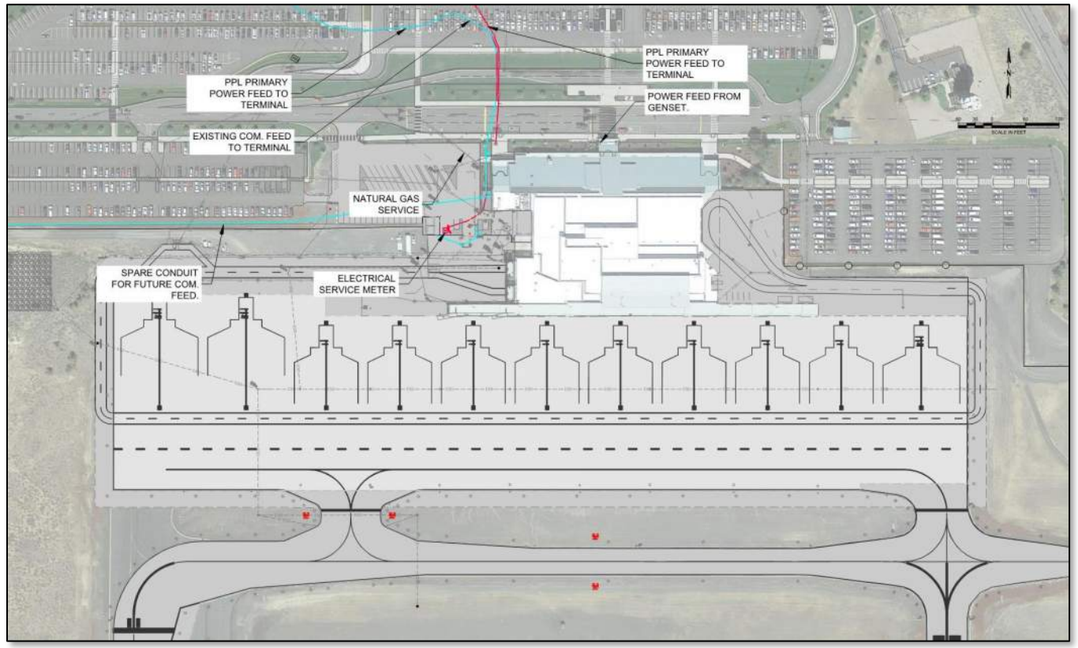


FIGURE 4-8 TERMINAL BUILDING POWER, COMMUNICATIONS AND NATURAL GAS SYSTEMS SERVICES

Expansion of the terminal building and the installation of passenger boarding bridges along the apron will have impacts on existing underground electrical conduits and circuits that serve the existing apron lighting and aircraft ground power receptacles. The conduits will need to be rerouted around the proposed expansions.

4.7 AIRFIELD ELEMENTS

4.7.1 Aircraft Fleet Mix

The current aircraft fleet mix used by the airlines is a mix regional jets, narrow body jet, and turboprop aircraft. The Terminal Flow Management System Counts (TFMSC) from January 2019 to December 2020 showed the following aircraft (*Table 4)* used by the airlines for passenger service to the airport. Aircraft with less than 10 annual operations were removed from the list. It shall also be noted that the data includes 2020 data, which had significantly reduced numbers due to the coronavirus pandemic.

TABLE 4 CURRENT FLEET MIX

Aircraft	Aircraft Design Group	Taxiway Design Group	Average Annual Operations (2019-2020)
A319 - Airbus A319	C-III	3	220
A320 - Airbus A320 All Series	C-III	3	107
B734 - Boeing 737-400	C-III	3	23
B735 - Boeing 737-500	C-III	3	12
B738 - Boeing 737-800	D-III	3	39
CRJ2 - Bombardier CRJ-200	C-II	1B	2,178
CRJ7 - Bombardier CRJ-700	C-II	2	1,905
CRJ9 - Bombardier CRJ-900	C-III	2	34
DH8D - Bombardier Q-400	B-III	5	3,877
E120 - Embraer Brasilia EMB 120	B-II	3	502
E75L - Embraer 175	C-III	3	5,878
E75S - Embraer 175	C-III	3	1,232

RDM currently serves a variety of types of aircraft ranging from A319 with a 118' wingspan to EMB120 with a 65' wingspan. Regardless of the aircraft size, each aircraft that is parked on the apron utilizes one of the available parking positions.

The Q400 is the critical aircraft (TDG 5) for taxiway design requiring 75' wide taxiways. Once the Q400 is retired and no longer in the fleet mix, the design standards will be TDG 3.

The change in the TDG would have effects on the taxiway to taxilane separation requirements for the apron. This change may allow for the aircraft to be parked further from the terminal which will allow for additional length on the passenger boarding bridges.

4.7.2 Aircraft Parking

The terminal apron was expanded in 2018 to provide for additional aircraft parking. Prior to the 2018 expansion the aircraft parking was a power-in power-out operation. In 2017 the terminal apron was restriped to a power-in push back operation. This allowed the airport to decrease the spacing of the parking positions and increase the available positions from 8 to 9 regional aircraft stalls. The terminal apron expansion project provided two more parking positions for a total of 11. Currently there are 3 parking positions for 737 sized aircraft and 8 parking positions for regional jets. (*Figure 4-9*)

With the current size of the apron, 11 parking positions could be provided for 737 sized aircraft. A total of 13 parking positions could be available if they were all sized for regional jets.

A total of 12 parking positions can be accommodated with a combination of five 737 sized stalls and seven regional jets.

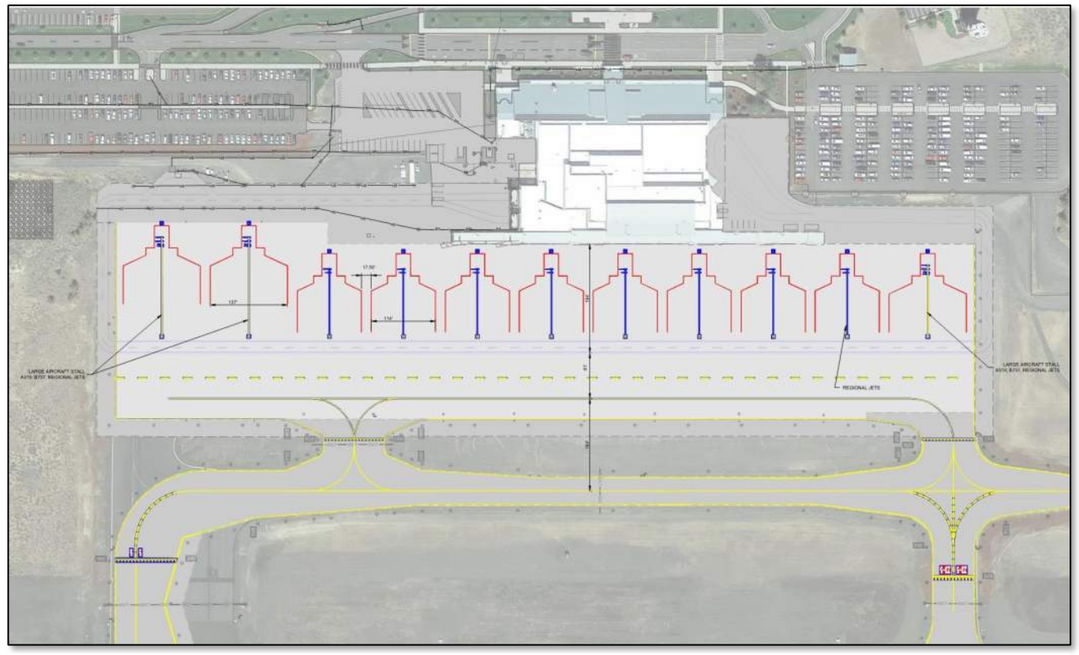


FIGURE 4-9 EXISTING AIRCRAFT PARKING LAYOUT

The depth of the terminal ramp is limited by the taxilane on the bottom (south) side of the apron. Currently there is 192' available between the terminal and the object free area of the taxilane for aircraft parking and the baggage road. In the future when the runway is extended, the runway visibility zone will intersect the most easterly parking position. This will require that the parking position is reconfigured or relocated. However, with the runway extension, there will be additional available space to the west to expand the terminal apron.

The airport would prefer to maintain the number of airline parking position for the terminal while providing passenger boarding bridges at all or a portion of the parking positions. It is planned that this can be accommodated with a combination of second level passenger boarding bridges and ground level passenger boarding bridges.

Three factors control the location of the parking positions with passenger boarding bridges, ramp elevation, aircraft door sill height, and terminal floor elevation. The main floor elevation of the passenger hold room are at 3067.16, and the second-floor elevation is 3081.16. The aircraft parking ramp elevations vary along the front of the building but generally range from 3067.68 at the high point to 3063.67 at the low point. The combination of these three elevations affect the required length of the passenger boarding bridge which has slope limitation due to ADA requirements. The depth of the terminal parking ramp also provides constraints on the location of the aircraft parking positions.

The separation from Runway 5-23 is also a consideration for aircraft parking positions. The tail heights of some larger aircraft penetrate the FAR part 77 transitional surface. The B737 series aircraft have a tail height of approximately 41.42 feet. The three western aircraft parking position provide adequate separation (given differences in ground elevation) for the tail of the aircraft to be clear of part 77 surfaces, however, the eastern parking positions do not and would be an obstruction. The tails obstructing the part 77 surface were evaluated to determine if it is a hazard and if there are any impacts to approach minimums due to the obstruction (see Section 6.1.1.2)

4.7.3 Pavement Sections

The existing pavement sections in the vicinity of the terminal building are a combination of asphalt and Portland cement concrete pavement sections. The original terminal parking apron is PCC pavement with 12" of PCC, 8" P-209 aggregate base, and 12" P-154 aggregate subbase. Changes in the fleet mix and the FAA design methodology indicate that new designs should be 14.5" of PCC, 12" P-209 Aggregate base. The thicker pavement section was used in the 2018 expansion of the terminal apron to the west. The PCN for the original concrete section and the new concrete section are 54/R/B/X/T and 69/R/B/X/T respectively.

The pavement strength of the existing concrete on the terminal apron is adequate to accommodate the proposed aircraft that will likely use the facility on a regular basis in the future.

The asphalt pavement sections in the vicinity of the terminal building are primarily used by aircraft support equipment. The existing asphalt sections are 4" of asphalt on 6-8" of aggregate subbase.

Depending on the final layout of the aircraft parking positions, expansion of the terminal parking apron could be necessary. The proposed expansion will require reconstruction of portions of the aircraft support areas to accommodate reconfiguration of these areas.

4.7.4 Aircraft Ground Equipment

The aircraft are fueled by the FBO. The FBO is located on the opposite side of the airfield, the fuel trucks use a combination of service roads and active taxiway to access the terminal apron. The masterplan recommended the construction of a separate fuel road to remove the vehicular traffic from the movement area.

The baggage road exits the outbound baggage area and travels to the west side of the terminal apron, crosses behind the aircraft to the east side of the apron to the inbound baggage terminal on the east side of the building. The baggage road behind the aircraft is located on the edge of the taxilane OFA. There is the potential additional room, 12 ft could be provided in the future if the taxiway design group changes from TDG 5 to TDG 3 in the future. This would require that the Q400 aircraft no longer being the critical design aircraft for the taxiways.

Expansion of the terminal to the west, outbound baggage expansion, passenger boarding bridge walkways, and the jet bridges may have impacts to aircraft ground equipment circulation and staging. Much of the current equipment that is staged at the aircraft parking positions may not be needed in the future with the installation of the passenger boarding bridges. There will still need to be room for staging baggage carts, lavatory carts, and deicing equipment. Reconstruction of the outbound baggage road from the building will be required to account for the grades out of the outbound baggage doors. This may also have impact on the airfield access gate and trash compactor location.

The easterly expansion of the upper-level hold room may extend over the existing roads for the inbound baggage. The inbound baggage road may need to be relocated which would encroach on the rental car parking lot.

4.7.5 Passenger Boarding

Currently, all aircraft passengers are ground boarded. Passenger boarding ramps are parked adjacent to the parking positions and pushed to the aircraft for use. The PBR's create difficulties for snow removal operations.

Upper-level hold room expansion will provide for passenger boarding bridges on the west and east sides of the terminal. The center section of the terminal will provide for a combination of either direct ground loading out of the existing lower-level departure lounge, or upper-level passenger boarding bridges.

4.7.6 Aircraft Ground Power

Currently receptacles are provided on the face of the terminal building or at electrical risers or lighting poles. This creates locations where power cords are crossing passenger pathways, which can be a tripping hazard.

Passenger boarding bridges included as part of the expansion will provide for separation between passengers and aircraft support equipment. This will provide for a safer operating environment for passengers and airline workers as well as providing an additional level of security. Aircraft ground power can be provided on the passenger boarding bridges, which will also reduce potential for conflicts with passengers.

4.7.7 Apron Lighting

Currently the terminal apron is lighted with a combination of LED and sodium halide fixtures on 60' poles. The airport has expressed interest in converting to all LED fixtures for the ramp lighting.

Expansion of the terminal building and the installation of passenger boarding bridges and walkways may have impacts on the location of the existing apron lighting.

STAKEHOLDER ENGAGEMENT

5.1 STAKEHOLDER SURVEYS AND INTERVIEWS

Community involvement has always been a critical part of this project. The airport recognizes the importance of making sure that the public understands the need for airport expansion, is in favor of the magnitude of the expansion, and has the opportunity to be involved in selecting the aesthetics, feel, and experience of the final product.

The Airport identified the different groups that it was interested in soliciting information from. The design team put together an on-line survey and then invited members of each user group to respond.

User groups were separated into five different factions:

- Airlines
- Rental Cars
- Concessions
- Airport Staff, Operations and Facility Management
    - City IT
    - TSA
- Community and Other
    - Central Oregon Travel Advisory Board
    - Airport Committee
    - Community Leaders

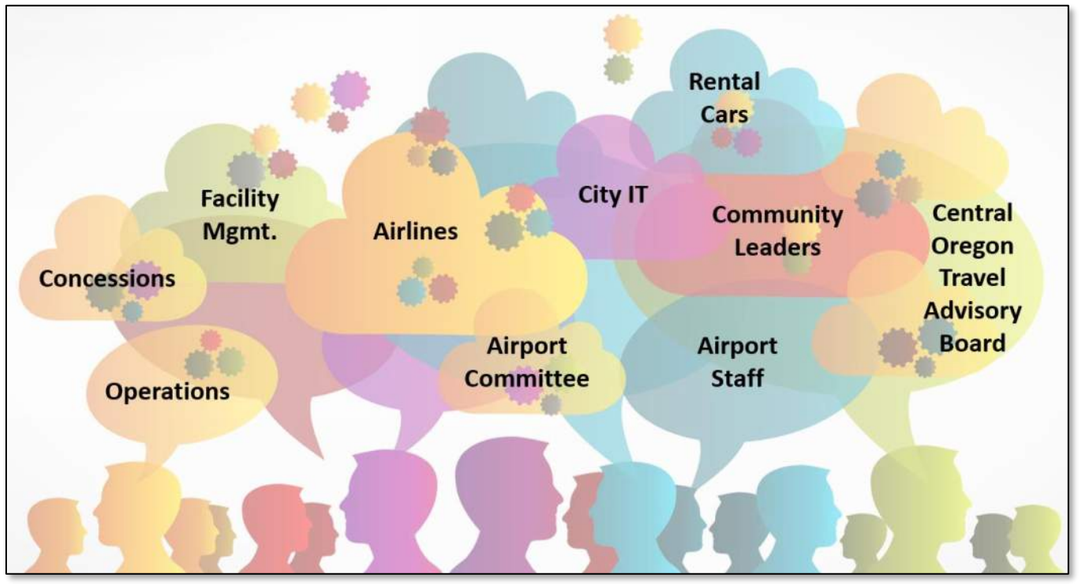


FIGURE 5-1 ENGAGED STAKEHOLDER GROUPS

Questions ranged from specifics such as how many ticket counter positions might the different airlines need in 5 and 10 years based on expected growth?, to more thought provoking like, what is your vision for the future of the airport as it relates to the continued growth in Central Oregon?

Surveys were followed up with interviews of the various user groups to garner clarification on responses and offer the opportunity for additional input.

The responses were tabulated and resulted in the major considerations that may have spatial implications and those that have systems related implications.

5.1.1 Stakeholder Considerations – Spatial Related

Spatial related items are those that with their inclusion might require additional space (i.e. expansion) of the facility.

11. **Mountain Views** – Many wanted to make sure that the configuration of the facility accommodated the spectacular mountain views that are afforded from the upper level of the terminal building. Opportunities to perhaps even experience the outdoors while waiting for one's aircraft was considered a special experience that could establish a uniqueness for RDM among similar sized airports.
12. **More Concession Options** – The current concession options are very limited. Passengers and tenants alike are all in favor of providing a more varied concession experience on both the airside and landside. From a feasibility standpoint, the concessionaire recognizes that consistent traffic and an available workforce will be paramount in provided additional options.
13. **Maintain Small Town Feel** – The community is very proud of the small town feel that the airport has, and its refence to mountain living. It is important to maintain that sense of place even as the facility gets larger and busier.
14. **More Ticket Area Queuing, ATO and Airline Ops Space** – Airlines commented that the available space for queuing, ops space and ATO space is limited and with the addition of new carriers, will make it even more so. Intent will be to increase the amount of available airline space.
15. **More Airport Administration Space and Another Large Conference Room** – Currently the administration area is at full capacity. Airport staff recognizes that any additional hiring that they may need to do to align with the forecasted growth would result in some sort of a split operation. Some staff would have to be located separately from the main landside offices. The request is for more offices to allow for growth and to provide additional conference/meeting space.
16. **Upper-Level Area for Public to View Aircraft** – The airport has the opportunity to provide some landside accessible viewing space of the airfield. This is looked at by the community as an attraction that might generate more interest in the facility.
17. **Improve Curbside (dedicated TNC areas)** – Although the curbside, roadways and parking facilities associated with the airport are not part of this study, it was recognized that the curbside does get congested in peak times and future adjustments should be made to alleviate congestion.

18. **More Baggage Make-Up Area (more tug frontage)** – The area where bags are retrieved after being screened in order to be transported to the aircraft is congested an often does not work well. Airlines would like additional baggage make-up area and frontage for tugs to make the loading process more efficient.
19. **More Storage Space (near baggage claim for unclaimed bags, dedicated custodial)** – There is a lack of available space neat the existing baggage claim to store baggage that hasn't been picked up, etc. Airlines have requested some dedicated space to facilitate this activity
20. **GSE Winter Storage (perhaps under expansion) –** The opportunity to provide covered storage of ground service equipment could be a natural byproduct of creating upper-level departure lounges.

5.1.2 Stakeholder Considerations – Systems Related

Systems related items are those that with their inclusion would improve the experience of the passenger, efficiency of terminal maintenance, or assist in the operations of the facility.

1. **Improve Signage / Monitors** – The desire is to improve signage and the number/location of monitors to provide accurate information to passengers at all stages along their movement through the terminal.
2. **Airline Space (more access to electrical receptacles)** – Within the ATO and Airline Ops spaces there have been complaints of not enough access to electrical outlets. This expansion should in part remedy that.
3. **Improve Oversize Bag Belt** – the current system of transporting and screening the oversized bags in inefficient and often does not work as needed. The existing system can accommodate bags that are longer than usual, however bags that are too wide/tall will not go down the conveyor and have o be manually transported.
4. **Improve Electrical On Ramp –** There are not adequate plug-ins along the ramp for charging of equipment.
5. **Improve CCTV Coverage Throughout** – Both the Airport and the City IT department recognizes the need for more complete CCTV coverage of the facility inside and out.
6. **Stronger Wi-Fi Throughout** – For both passenger experience and tenant usage, a more powerful Wi-Fi system would be beneficial.
7. **Water Source in Make-Up Area for Cleaning** – the baggage make-up area currently does not have a water source for cleaning. As part of the expansion, water will be provided.
8. **Improve Lighting, Temperature, and Sound Absorption in TSA Checkpoint** – TSA officers have requested improvements to the lighting, temperature and sound attenuation in the checkpoint area. As part of a future project focused on the checkpoint, these elements can be addressed.
9. **Upgrade Lighting to LED** – the Airport has a desire to update all lighting to LED. All areas impacted by the expansion(s) will account for LED fixtures.
10. **Plentiful plug-ins with USB Connections in Departure Lounges** – With the new departure lounge configuration, plentiful charging opportunities will be provided.

5.1.3 TSA Considerations

The local Transportation Security Administration (TSA) was one of the stakeholder groups surveyed and a number of operational considerations resulted. These elements will be considered for implementation when adjustments to the baggage and passenger screening areas are addressed.

<u>Security Screening Checkpoint</u>

1. Screening lanes 1 and 2 are too close together in the screening checkpoint making it difficult for Officers to move efficiently through the checkpoint
2. Due to the location of the fire door, screening lane 1 is too short and the area at the end of the takeaway rollers is very congested
3. Need more room to extend rollers and provide a bag check station without cross traffic from stakeholders using the side access door
4. There should be another access point within the SSCP for stakeholders to use so they don't have to walk behind the x-ray machine and through the middle of the operation
5. The TSA supervisor platform is in the way in its current location and should be relocated
6. Provide access to the exit corridor from the sterile boarding gate area away from the checkpoint and the access corridor next to the checkpoint should be eliminated
7. Need a mail back system to return items that can't go through SSCP
8. Adjust configuration to allow for new CT machine - could go in lane 2

<u>Basement-Level Baggage Screening</u>

9. For increased efficiency, the checked baggage handling system should be upgraded to more modern standards to include the addition of secondary viewing stations of alarm bags and changes to the bag removal and insertion points to allow no-lifting transfers of baggage to and from inspection tables.
10. Secondary viewing, alarm image above search table, must be resolved at primary - image on screen must remain until the threat is eliminated
11. Due to power turns, can't have tables near line so requires lifting bags which does not align with current PDGS (Planning Guidelines and Design Standards)

5.2 STAKEHOLDER MEETINGS AND UPDATES

Throughout the terminal planning process the design team and Airport Staff have met with and presented the status of the Terminal Area Concept Plan to interested groups including the City Council, Airport Committee and Federal Aviation Administration (FAA).

CHAPTER 6

DEVELOPMENT OF ALTERNATIVES

6.1 DESIGN CRITERIA

The initial considerations for the RDM terminal facility expansion included:

- Expand upper-level departure lounge space
- Provide boarding bridges to the available gate positions
- Scale design to allow the facility to grow to meet current and continuing travel demands
- Accommodate the anticipated increase in aircraft gauge, number of airline carriers, and quantity of flights
- Account tor infrastructure limitations (available utilities)
- Modify aircraft parking apron to accommodate the proposed passenger boarding bridges and aircraft parking layout
- Relocate apron lighting, water mains, fire hydrants, electrical duct banks
- Adjust apron striping
- Evaluate airfield proximity considerations
    - Surface penetrations
    - Part 77 transitional surfaces
    - Inner transitional Object Free Zone (OFZ)
    - Terminal Instrument Procedures (TERPS) missed approach surface
    - Line of Site (LOS) requirements for the Air Traffic Control Tower (ATCT)

Beyond the scope of this study are limitations associated with the roadway and parking systems associated with the airport.

The standard resources that were used to establish the terminal building-related design criteria for this project include:

- FAA AC 150/5360-13, Planning and Design Guidelines for Airport Terminal Facilities
- ACRP - Passenger LOS and Spatial Planning for Airports
- ACRP – Airport Passenger Terminal Planning and Design Vol 1. Guidebook
- ACRP - Airport Passenger Terminal Planning and Design Col 2. Spreadsheets
- IATA Airport Development Reference Manual (ADRM) 10th Edition
- IATA – New LOS Concept (Summary)

Terminal functional area sizing (*Figure 6-1*) was performed using an RS&H developed methodology based on the standards listed above coupled with significant terminal design experience, and an understanding of the existing facility. In some cases, the functional areas are specific to the Redmond airport and the requirements of the facility staff. For example, there is not a standard calculation to determine the actual needs of the administration space as a function of enplanements or peak hour passengers. Rather, industry experience and coordination with the airport has resulted in estimating elements such as this for inclusion in the cost estimate. A breakdown of the primary processing elements follows:

Ticketing: Ticketing and check-in technologies are constantly changing, and the space provided should be adaptable to those evolutions. With the estimated 72% increase in traffic at the 2036 planning horizon, the length of the ticket counter will grow in a commensurate fashion thus accommodating a traditional ticket processing configuration. There is the opportunity, with the larger footprint, for airlines to potentially reconfigure their layouts to allow for new check in procedures, self-bag tagging, the installation of more self-service kiosks, etc.

Baggage Screening: Baggage screening technologies are also consistently improving and the systems currently in place at RDM could be modernized. For this area, it is important to preserve space for future expansion even though that space may not be needed immediately. As the screening occurs in the basement, it would be extremely difficult and costly to come back after the fact and try and retrofit a basement level expansion after the upper-level construction was completed. As such, the basement is recommended to be expanded to accommodate access of machines into and out of the space, as well as the ability to reconfigure to allow for the modernization as requested by local TSA as part of the survey. In addition, the added space could aid in the reconfiguration of the oversize conveyance so that it reduces the amount of manual baggage movements.

Baggage Make-Up: The baggage make-up component needs to be enlarged to allow all airlines access to make-up device frontage, increase the capacity of bags on the belts, reduce spillage of bags off of the conveyance. This expansion would essentially mirror the size of the bag screening expansion below and provide a similar throughput point for bags from below up to the carousels on the ground level

Security Screening Checkpoint: With the future relocation of the rental car counters, this frees up and preserves space for a future expansion of the checkpoint as needed. In its current configuration, with some minor adjustments, the layout can continue to service the facility through the planning horizon. Due to its centralized location, it is recommended that it not be confirmed by elements that are difficult to relocate. As screening technologies advance, having the available room will make assimilating new technologies more seamless.

Baggage Claim: With substantially more traffic, the flat plate devices as currently installed are limiting in their ability to handle the additional load. Also, there is a security consideration for devices that go back and forth through the wall from airside to landside. To best accommodate growth, standalone carousels should be provided in a north-south orientation so that any continued expansion would allow more parallel devices to be installed with a minimum of building expansion. To deliver baggage to the new carousels, new drop off conveyance will need to be located on the exterior (albeit covered) for easy tug access. With two-sided drop off belts available for each carousel, four tugs can be loading bags concurrently, greatly improving efficiency. Conveyance would elevate up and over the tug roadway, enter into the building high and then drop into the center of the two devices. The bag claim expansion, the drop off area and associated coverage will impede on the rental cart lot to the east

Departure Lounges: The original intent of the project was to provide contact positions for the existing gates. Still, there will remain a long term need for continued ground boarding at Redmond as a number of smaller carriers will remain that will not upgauge aircraft to be available for boarding bridge use. The lower level holdroom space is currently proposed to remain mostly intact aside from modifications needed to convey passengers to and from the newly expanded upper level. With continued growth, and if a reduction is seen in ground loading requirements (and the need for associated departure lounge space) then the lower level holdroom could be repurposed into any number

of alternatives (more administration space, airport operations space, airline operations space, storage, landside concessions, conference space, etc.).

The area sizes generated from the analysis (below) created the starting point for the layout and massing of the building. This table shows the functional area sizing for each of the planning horizons as well as for the modified 2036 (PAL 3 rev 2036) that reflects the anticipated growth based on the rapid recovery described in *Section 3*. Also shown in the orange column is the resultant concept design to be further described in *Section 7*.

TERMINAL FACILITIES REQUIREMENTS

	Existing	Baseline Forecast				
	2019	PAL 1 2019	PAL 2 2026	PAL 3 2036	PAL 3 rev 2036	CONCEPT DESIGN
COMMERCIAL TRAFFIC						
Annual Enplaned Passengers	430,562	482,676	496,750	680,750	832,410	
Total Peak Hour Enplaned	0	230	258	480	555	
Total Peak Hour Deplaned	0	219	252	472	549	
Total Combined Peak Hour Passengers	0	460	533	949	0	
TOTAL TERMINAL PROGRAM AREA						
Total Terminal Program Area (net)	**128,178 sf**	**91,229 sf**	**99,160 sf**	**141,793 sf**	**162,462 sf**	**232,690**
AIRLINE SPACE						
Ticket Counter Length	*103 lf*	*96 lf*	*113 lf*	*175 lf*	*198 lf*	*195*
Ticket Counter Area	*1,078 sf*	*955 sf*	*1,130 sf*	*1,745 sf*	*1,975 sf*	*2,720*
Ticket Counter Active Area	*1,128 sf*	*955 sf*	*1,130 sf*	*1,745 sf*	*1,975 sf*	*2,240*
Ticket Counter Queuing	*4,703 sf*	*1,972 sf*	*2,147 sf*	*3,570 sf*	*7,006 sf*	*8,820*
Kiosk Area	*0 sf*	*184 sf*	*276 sf*	*368 sf*	*460 sf*	
Ticket Offices and Administration	*4,740 sf*	*3,820 sf*	*4,520 sf*	*6,980 sf*	*7,900 sf*	*9,350*
Ticketing, ATO, and Administration	**11,649 sf**	**7,886 sf**	**9,203 sf**	**14,408 sf**	**19,316 sf**	
TOTAL AIRLINE SPACE (rounded)	**11,649 sf**	**7,886 sf**	**9,203 sf**	**14,408 sf**	**19,316 sf**	**23,130**
AIRPORT SPACE						
Operations	*1,152 sf*	*1,291 sf*	*1,329 sf*	*1,821 sf*	*2,227 sf*	incl in admin
Badging	*521 sf*	*584 sf*	*601 sf*	*824 sf*	*1,007 sf*	1,000
Conference/Offices	*1,093 sf*	*1,225 sf*	*1,261 sf*	*1,728 sf*	*2,113 sf*	2,100
Storage	*2,128 sf*	*2,386 sf*	*2,455 sf*	*3,365 sf*	*4,114 sf*	4,310
Administration	*1,711 sf*	*1,918 sf*	*1,974 sf*	*2,705 sf*	*3,308 sf*	5,410
Airport Offices	**6,605 sf**	**7,404 sf**	**7,620 sf**	**10,443 sf**	**12,770 sf**	
TOTAL AIRPORT SPACE (rounded)	**6,605 sf**	**7,404 sf**	**7,620 sf**	**10,443 sf**	**12,770 sf**	**12,820**
BAGGAGE SERVICE					22	
Baggage Claim Carousel Length	*260 lf*	*114 lf*	*131 lf*	*246 lf*	*321 lf*	*360 lf*
Bag Claim Carousel Area	*4,500 sf*	*4,422 sf*	*5,082 sf*	*9,515 sf*	*12,419 sf*	*13,400*
Inbound Baggage Service Area	*2,560 sf*	*3,080 sf*	*3,540 sf*	*6,620 sf*	*8,640 sf*	*8,880*
Inbound Baggage	**7,060 sf**	**7,502 sf**	**8,622 sf**	**16,135 sf**	**21,059 sf**	**22,280**
Outbound Baggage Area	*8,122 sf*	*8,050 sf*	*8,625 sf*	*12,075 sf*	*12,075 sf*	*14,230*
Outbound Baggage	**8,122 sf**	**8,050 sf**	**8,625 sf**	**12,075 sf**	**12,075 sf**	**14,230**
TOTAL BAGGAGE SPACE (rounded)	**15,182 sf**	**15,552 SF**	**17,247 SF**	**28,210 sf**	**33,134 sf**	**36,510**
BUILDING SYSTEMS						
Mechanical / Plumbing	*10,956 sf*	*1,086 sf*	*1,180 sf*	*1,688 sf*	*1,934 sf*	*20,090*
Electrical / Telecom	*1,223 sf*	*1,738 sf*	*1,889 sf*	*2,701 sf*	*3,095 sf*	3,000
Support Space	*0 sf*	*1,086 sf*	*1,180 sf*	*1,688 sf*	*1,934 sf*	incl
Janitor	*202 sf*	*434 sf*	*472 sf*	*675 sf*	*774 sf*	450
TOTAL BUILDING SYSTEMS SPACE	**12,381 sf**	**4,344 sf**	**4,722 sf**	**6,752 sf**	**7,736 sf**	**23,540**

TERMINAL FACILITIES REQUIREMENTS

	Existing	Baseline Forecast				
	2019	PAL 1 2019	PAL 2 2026	PAL 3 2036	PAL 3 rev 2036	CONCEPT DESIGN
CONCESSIONS						
Food and Beverage	*4,220 sf*	*1,637 sf*	*1,685 sf*	*2,309 sf*	*2,824 sf*	4,220
Other Retail	*1,077 sf*	*680 sf*	*699 sf*	*958 sf*	*1,172 sf*	1,080
Concessions Storage		*579 sf*	*596 sf*	*817 sf*	*999 sf*	incl
Landside Concessions	**5,297 sf**	**2,896 sf**	**2,981 sf**	**4,085 sf**	**4,994 sf**	**5,300**
Food and Beverage	*1,066 sf*	*3,479 sf*	*3,581 sf*	*4,907 sf*	*6,000 sf*	9,860
Other Retail	*0 sf*	*1,444 sf*	*1,486 sf*	*2,037 sf*	*2,491 sf*	incl
Concessions Storage		*1,231 sf*	*1,267 sf*	*1,736 sf*	*2,123 sf*	6,950
Airside Concessions	**1,066 sf**	**6,154 sf**	**6,334 sf**	**8,680 sf**	**10,613 sf**	**16,810**
TOTAL CONCESSIONS SPACE (rounded)	**6,363 sf**	**9,050 sf**	**9,314 sf**	**12,764 sf**	**15,608 sf**	**22,110**
GROUND TRANSPORTATION						
Rental Car Office and Counter	*1,666 sf*	*2,867 sf*	*2,951 sf*	*4,044 sf*	*4,945 sf*	4,000
Shuttle Office and Counter	*0 sf*	*521 sf*	*536 sf*	*735 sf*	*899 sf*	1,000
Queuing Space	*631 sf*	*956 sf*	*984 sf*	*1,348 sf*	*1,648 sf*	1,700
Ground Transportation	**2,297 sf**	**4,344 sf**	**4,471 sf**	**6,127 sf**	**7,492 sf**	6,700
TOTAL GROUND TRANSPORTATION	**2,297 sf**	**4,344 sf**	**4,471 sf**	**6,127 sf**	**7,492 sf**	**6,700**
DEPARTURE LOUNGE						
Passenger Departure Lounges	*17,218 sf*	*20,857 sf*	*24,235 sf*	*33,261 sf*	*33,261 sf*	*44,870*
Departure Lounges	**17,218 sf**	**20,857 sf**	**24,235 sf**	**33,261 sf**	**33,261 sf**	**44,870**
TOTAL DEPARTURE LOUNGE	**17,218 sf**	**20,857 sf**	**24,235 sf**	**33,261 sf**	**33,261 sf**	**44,870**
PUBLIC SPACE *						
Public Circulation / Meeter Greeter	*10,592 sf*	*4,827 sf*	*4,968 sf*	*6,808 sf*	*8,324 sf*	11,620
Restrooms	*2,172 sf*	*1,648 sf*	*1,860 sf*	*2,445 sf*	*2,658 sf*	3,260
Bag Claim Lobby	*10,174 sf*	*1,095 sf*	*1,260 sf*	*2,360 sf*	*2,745 sf*	3,500
Landside	**22,938 sf**	**7,569 sf**	**8,088 sf**	**11,613 sf**	**13,727 sf**	**18,380**
Public Circulation	*13,718 sf*	*5,400 sf*	*5,400 sf*	*6,000 sf*	*6,600 sf*	17,640
Restrooms	*1,645 sf*	*1,860 sf*	*1,860 sf*	*2,445 sf*	*2,700 sf*	3,150
Exit Corridor	*664 sf*	*1,014 sf*	*1,043 sf*	*1,430 sf*	*1,748 sf*	*950*
Airside	**16,027 sf**	**8,274 sf**	**8,303 sf**	**9,875 sf**	**11,048 sf**	**21,740**
TOTAL PUBLIC SPACE (rounded)	**38,965 sf**	**15,843 sf**	**16,391 sf**	**21,487 sf**	**24,775 sf**	**40,120**
TRANSPORTATION SECURITY ADMINISTRATION (TSA)						
Queuing Space	*2,482 sf*	*720 sf*	*720 sf*	*1,080 sf*	*1,080 sf*	*2,480*
Inspection Area	*3,099 sf*	*1,508 sf*	*1,508 sf*	*2,262 sf*	*2,262 sf*	*3,100*
Reconciliation Area	*143 sf*	*260 sf*	*260 sf*	*390 sf*	*390 sf*	*150*
Security Screening Checkpoint	**5,724 sf**	**2,488 sf**	**2,488 sf**	**3,732 sf**	**3,732 sf**	5,720
Baggage Screening Facilities	**10,112 sf**	**2,860 sf**	**2,860 sf**	**3,660 sf**	**3,660 sf**	15,600
Support Space	**114 sf**	**120 sf**	**130 sf**	**230 sf**	**260 sf**	incl
TSA Administration Offices	**1,568 sf**	**480 sf**	**480 sf**	**720 sf**	**720 sf**	1,570
TOTAL TSA SPACE (rounded)	**17,518 sf**	**5,948 sf**	**5,958 sf**	**8,342 sf**	**8,372 sf**	**22,890**

FIGURE 6-1 TERMINAL FACILITY REQUIREMENTS

*Public space includes elements such as pet relief areas, mother's rooms, business center, etc.

6.1.1 Airfield Proximity Considerations

The criteria used to develop the proposed airside layout for the expansion of the terminal building include:

- Airport Reference Code
- Aircraft Fleet Mix
- Aircraft Design Group
- Taxiway Design Group
- Pavement Design
- Pavement Markings
- Utilities
- Aircraft Fuel Spill Containment Systems
- Airfield Electrical and Lighting Systems
- Aircraft Support Vehicle Access

The standard manuals used to establish the airfield-related design criteria for this project include:

- FAA AC 150/5300-13, Airport Design
- FAA AC 150/5320-5C, Surface Drainage Design
- FAA AC 150/5320-6E, Airport Pavement Design and Evaluation
- FAA AC 150/5340-1K, Standards for Airport Markings
- Title 14 of the Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace
- NFPA Section 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, Current Edition

The FAA guidance on the dimensional standards for an airport are based on three related design criteria, The airport reference code (ARC), Aircraft Design Group (ADG), and Taxiway Design Group (TDG). All three of these elements are based on the physical and operational characteristics of the critical aircraft using the airport.

The recent Master Plan update determined that the current airport reference code is C-III and is expected to continue to remain C-III for the foreseeable future. This indicates that the critical aircraft will have an approach category 'C' and a wingspan and tail height corresponding to ADG III aircraft. Airport Design elements are to be designed to ARC C-III standards where applicable.

The recent Master Plan also indicated that the current Taxiway Design Group for the airport is TDG 5, but expected to reduce to TDG 3 in the future. The Q400 is the aircraft that is currently the critical aircraft for the TDG 5 designation. In the future, it is expected that the Q400 will be phased out and replaced with a different aircraft, EMB175 with a TDG 3 designation. Considerations for the current TDG 5 and future TDG 3 designations should be considered when developing aircraft and layouts and pavement geometries.

6.1.1.1 Air Traffic Control Tower Line of Sight (LOS)

FAA Order 6480.4, Airport Traffic Control Tower Sitting Process, provides guidance for the line of sight (LOS) analysis and requirements for controllers to see "critical points" on the airfield. The line of sight (LOS) for a controller requires an unobstructed view of all controlled movement areas of an airport, including all runways, taxiways and any other landing areas, and of air traffic in the vicinity of the airport. These surfaces are generally referred to as "critical points".

Specific conditions at the airport, how an apron is used and who uses it, and local controllers and tower manager preferences may further define a "critical point". For instance, a controller may need the ability to see push back operations for commercial service aircraft in order to help sequence departures and IFR (instrument flight rules) delays to arriving airports. Specifically, at RDM, when the ATCT was constructed, the Terminal was in a different configuration and farther back from the airfield. Between 2006 and 2011, the Terminal expanded towards the airfield and the existing building appears to be very close to obscuring the movement area boundary line (*Figure 6-2*). It is assumed that during the design of the first Terminal expansion project, there was an analysis and coordination with local ATCT to determine an acceptable line of sight, leading to the building massing that currently exists.

For this terminal expansion program, any enlargements to the facility will not increase the severity of seeing "critical points" on the airfield. Thus, the same level of service will be provided to ATCT.

To identify the limits of the building massing to stay within the parameters of the LOS requirements, the design team established the sightline origin point within the ATCT (*Figure 6-3*), and then documented the virtual plane that needs to be maintained to ensure the LOS. Corner points on the proposed building were then extrapolated vertically until they intersected the plane to establish the maximum building heights in those locations. That set the envelope for the massing (*Figure 6-4*).

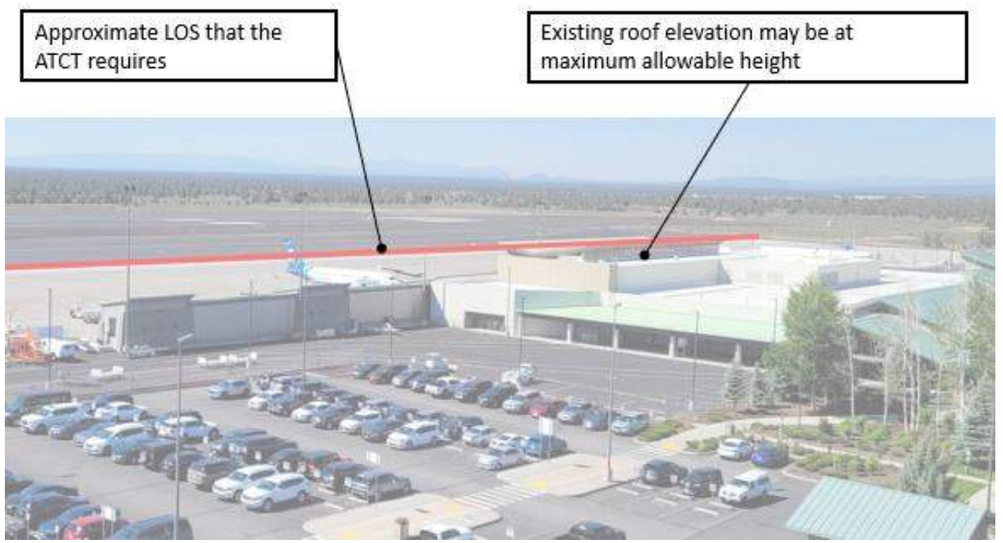


FIGURE 6-2 LINE OF SIGHT (LOS) FROM AIR TRAFFIC CONTROL TOWER

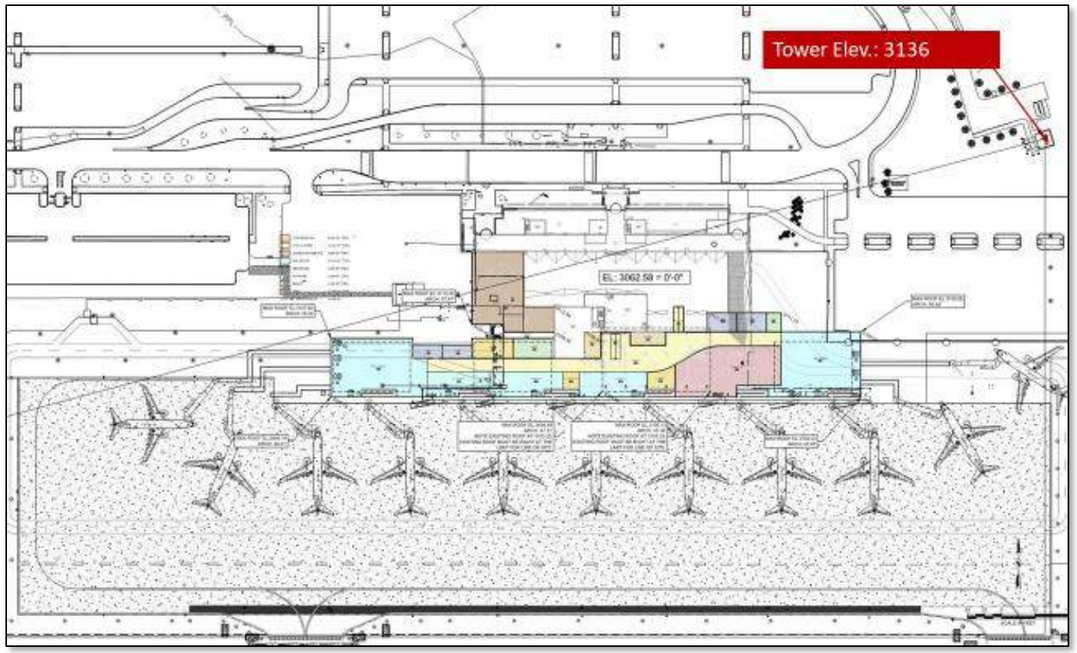


FIGURE 6-3 LOS ORIGIN POINT

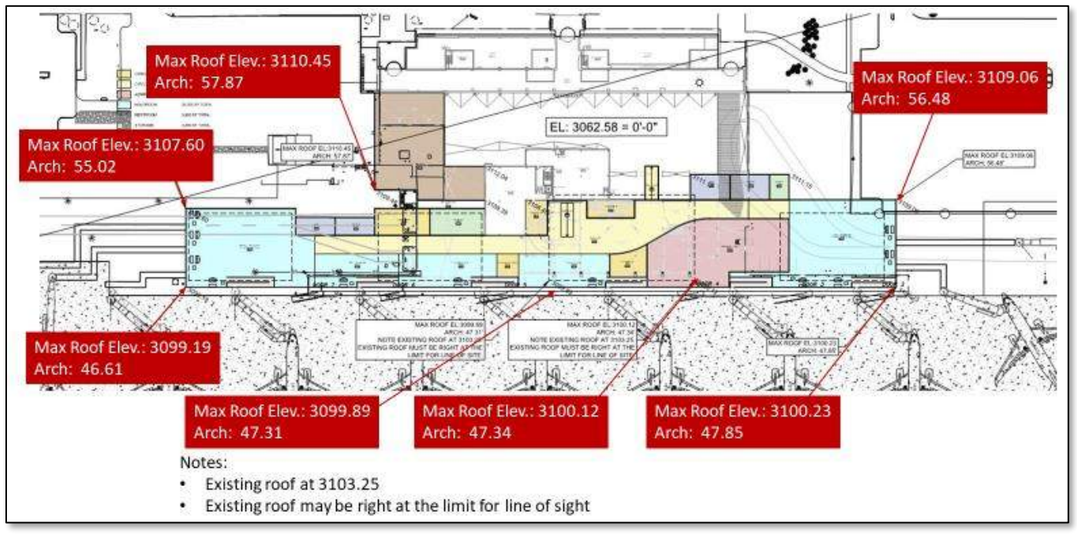


FIGURE 6-4 MAXIMUM BUILDING HEIGHT LIMITATIONS

6.1.1.2 TERPS Analysis

Penetrations into the Inner Transitional OFZ and TERPS missed approach surfaces would impact instrument approach procedures and could influence the location of the terminal boundaries. Thus an analysis was conducated to ensure that there were not obstructions.

A preliminary Terminal Instrument Procedures (TERPS) and obstacle free zone (OFZ) analysis was performed for both existing and future Runway 5-23. In summary, the aircraft tails of the most demanded aircraft the B737-900, are clear of existing and future TERPS and OFZ surfaces. Based on the initial concepts, there is no impact to existing and proposed flight procedures. The only penetration would be to the Part 77 Transitional Surface. The Part 77 imaginary surface, as defined in 14 CFR Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace,* indicates that such penetrations to this surface can be permissible (*Figure 6-5*). An FAA form 7460 Notice of Proposed Construction or Alternation will need to be submitted to the FAA during the design process to verify approval of the penetrations.

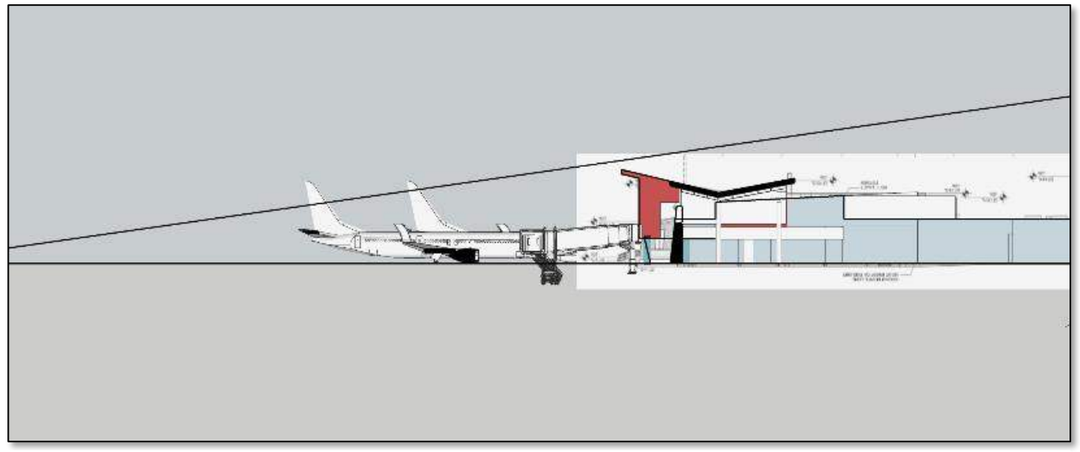
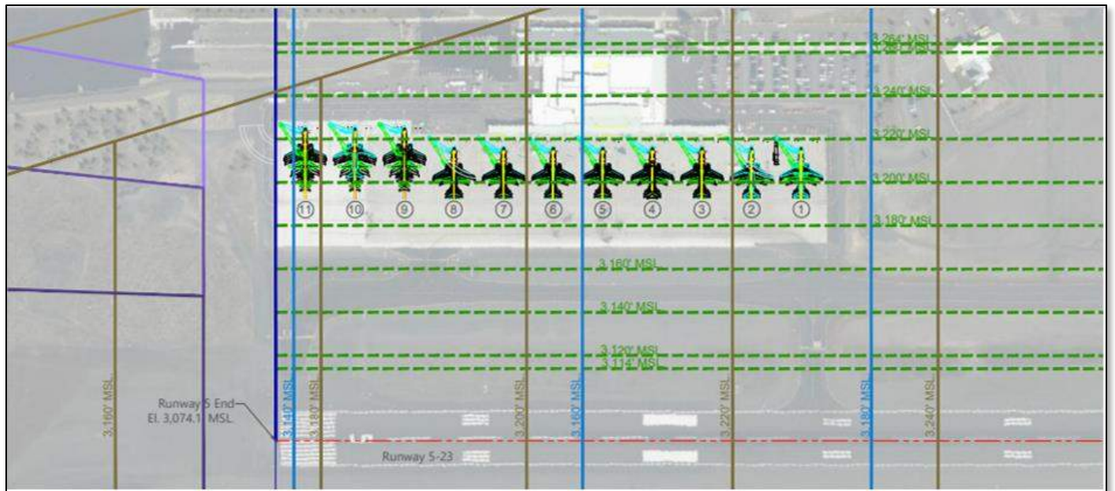


FIGURE 6-5 ALLOWABLE PART 77 SURFACE PENETRATIONS

The TERPS analysis (see *Figure 6-6*) included a review of the existing approach procedures for both Runway 5 and 23. It was determined that area navigation (RNAV) required navigation performance (RNP) approach and missed approach segments are the most restrictive for development. The approach and missed approach segments were identified and evaluated based on standard criteria in FAA Order 8260.58A *United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design*. This type of approach also accounts for atmospheric and local meteorological conditions. The analysis assumed standard mean temperatures and atmospheric pressure. In addition, the existing RNAV (RNP) approach procedure has a height above threshold (HAT) value of 300 feet. A standard RNAV (RNP) approach has a 250-foot HAT. Typically, a higher HAT value means there is a controlling obstacle somewhere in the evaluation area that requires an increase in vertical separation between the aircraft and the runway end. The analysis assumed the Airport may have the capabilities to correct the approach by mitigating obstacle(s) to lower the HAT value. The missed approach segment overlaid the proposed development and had roughly a 30-foot clearance between the evaluation surface and the tail of the aircraft, in the worst case.



Legend

- Existing RNP(.1) Approach Surface/Contour
- Existing RNP(.1) Missed Approach Surface/Contour
- Future ILS Approach "W" OCS/Contour
- Future ILS Approch "X" OCS/Contour
- Future ILS Approach "Y" OCS/Contour
- Future ILS Missed Approach Section "W" OCS/Contour
- Future ILS Missed Appraoch Section "X" OCS/Contour
- Future ILS CAT I Inner Transitional OFZ/Contour

Stall No.	Aircraft Elevation (MSL.)	Existing Surfaces		Future Surfaces		Penetration (+) / Clear (-)
		RNAV (RNP) Approach	RNAV (RNP) Missed	ILS Missed Approach "W" OCS	ILS CAT I Inner Transitional OFZ	
1	3,109'	N/A	3,175'	3,227'	3,191'	-66
2	3,109'	N/A	3,171'	3,221'	3,191'	-62
3	3,108'	N/A	3,168'	3,217'	3,191'	-60
4	3,108'	N/A	3,164'	3,212'	3,191'	-56
5	3,107'	N/A	3,161'	3,207'	3,191'	-54
6	3,107'	N/A	3,157'	3,202'	3,191'	-50
7	3,106'	N/A	3,154'	3,197'	3,191'	-48
8	3,105'	N/A	3,151'	3,192'	3,191'	-46
9	3,105'	N/A	3,147'	3,188'	3,196'	-42
10	3,106'	N/A	3,144'	3,183'	3,196'	-38
11	3,107'	N/A	3,140'	3,179'	3,196'	-33

FIGURE 6-6 TERPS ANALYSIS RESULTS

The future runway analysis assumed the worst-case scenario. The threshold for Runway 5 would remain in place; however, approach capabilities would be enhanced to an ILS CAT I, a precision approach procedure with a ½ sm visibility. In addition, the future runway analysis examined the OFZ surfaces. Applicable airspace surfaces were identified and evaluated as defined in FAA 8260.3E *United States Standard for Terminal Instrument Procedures (TERPS).* These surfaces are the three obstacle clearance surfaces (OCS) for a final segment of an ILS approach, "W", "X" and "Y" as defined in Section 10-2, Final Approach Segment and the three OCS for a CAT I missed approach segment as defined in Section 10-3. Only the missed approach surfaces overlaid the proposed development. The OFZ transitional surface also overlaid the proposed development; however, the existing RNAV (RNP) missed approach procedure is the controlling surface and more restrictive than those identified in the future.

If Runway 5 were to be extended, as illustrated in the Airport Layout Plan, clearance values would increase.

6.1.2 Apron Considerations

The current airfield configuration accommodates parking positions for eleven (11) aircraft (*Figure 6-7*). Positions 1, 10 and 11 have been identified as those that can accommodate larger ADG III aircraft. All positions can handle the smaller regional jets as that is what the current facility was originally intended for.

To maximize the efficiency of the Terminal Area Concept Plan, the intent was to align the potential expansion with the current available apron area. A quick analysis found that in its current configuration the apron can accommodate ADG III aircraft in all 11 positions by aligning the aircraft safety envelopes (*Figure 6-8*). As a response to building configuration alternatives, options were considered to park aircraft at the east and west ends of the apron in a non-perpendicular fashion to address the possible locations of passenger boarding bridge (PBB) rotundas (*Figure 6-9* and *Figure 6-10*). A PBB rotunda closer to the building would reduce passenger walking distances from departure lounge to aircraft.

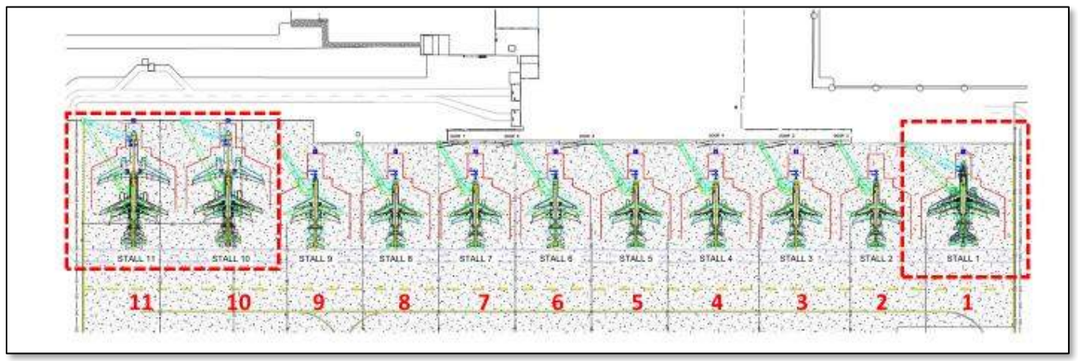


FIGURE 6-7 EXISTING AIRCRAFT LAYOUT

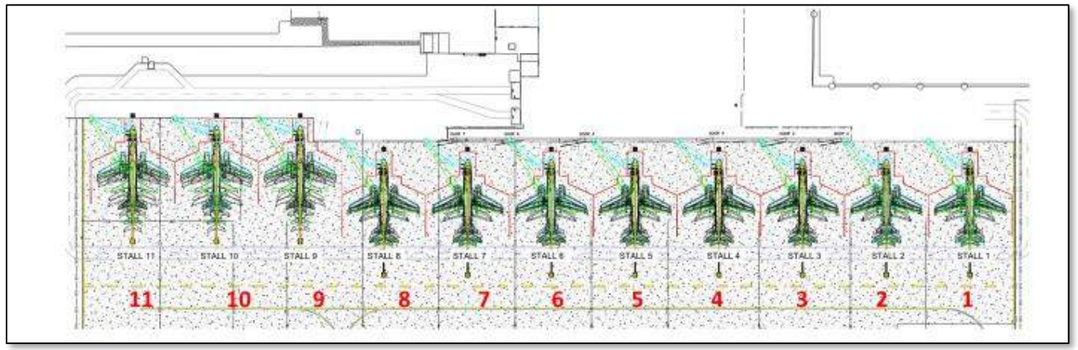


FIGURE 6-8 PROPOSED AIRCRAFT LAYOUT

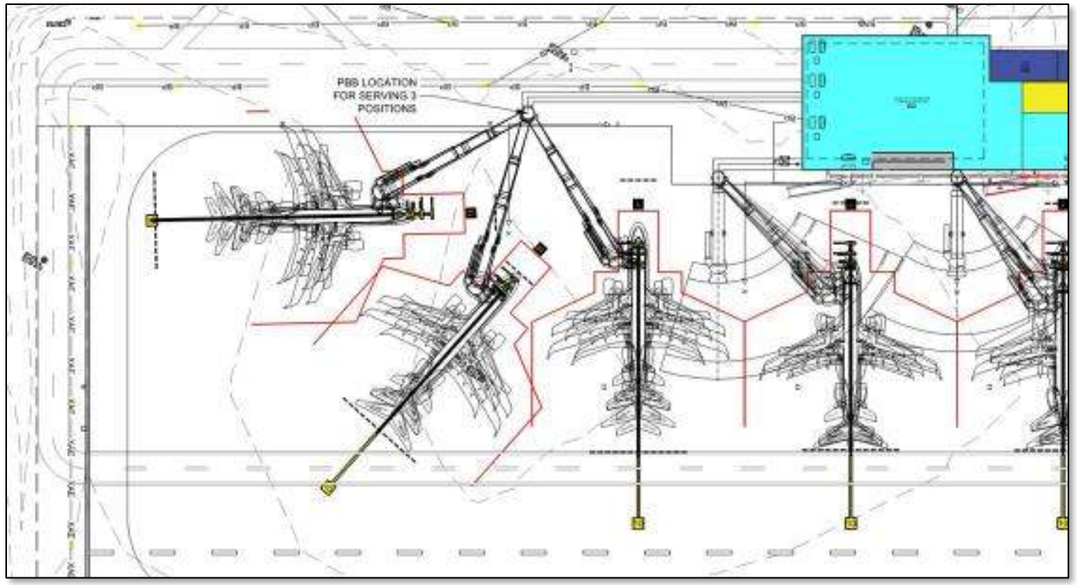


FIGURE 6-9 ALTERNATIVE WEST SIDE AIRCRAFT PARKING

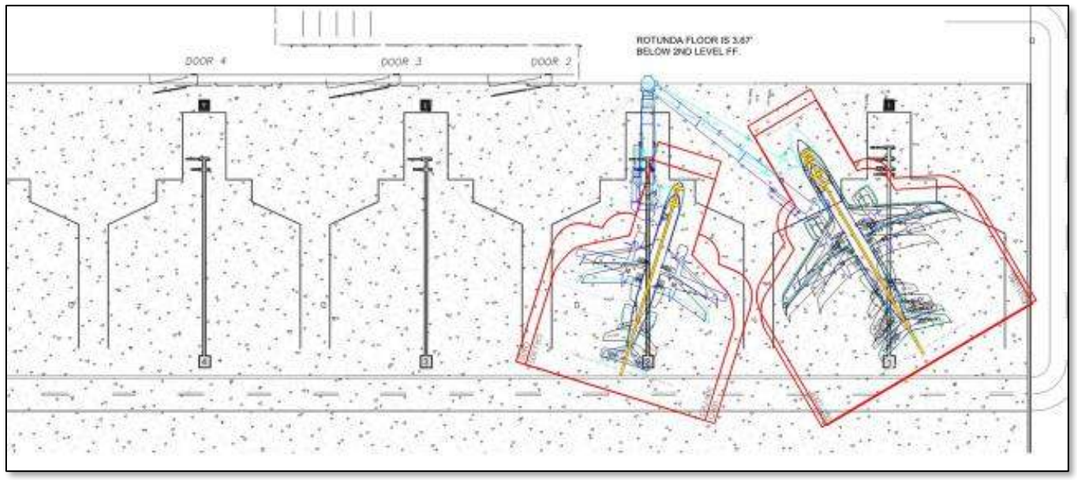


FIGURE 6-10 ALTERNATIVE EAST SIDE AIRCRAFT PARKING

The efficiency of the current apron condition is such that only a minor modification is necessary when the runway is extended as indicated in the Master Plan. With the extension, position 1 would need to be moved north so as to not impede on the new Runway Visibility Zone. Although the cost of the additional apron is not included as part of this analysis, the TACP has preserved the space north of position 1 for that eventuality without operational impediment (*Figure 6-11*).

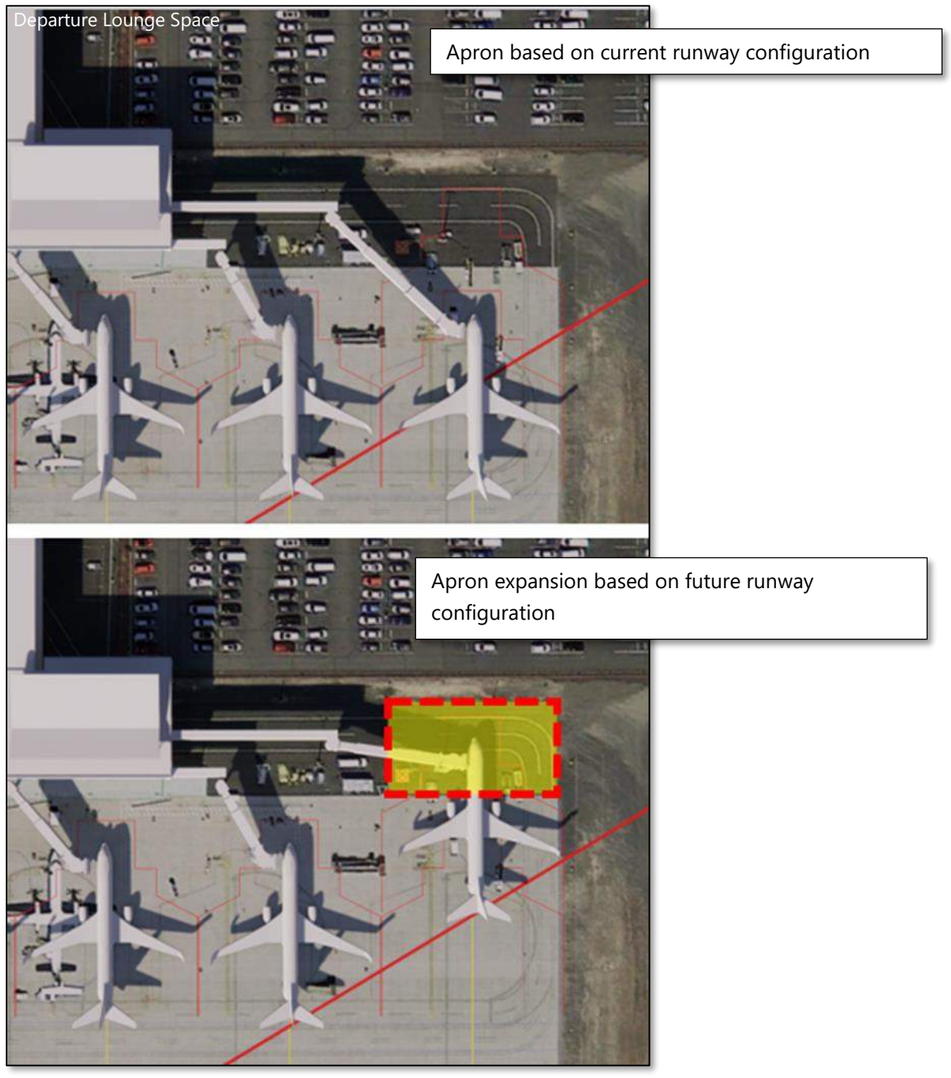


FIGURE 6-11 APRON EXPANSION WITH RUNWAY EXTENSION

6.2 INITIAL BUILDING LAYOUT CONCEPT

The original intent of the TACP was to accommodate new upper-level departure lounges to provide contact positions for the current aircraft positions. The basic premise was to design a facility that aligns with the current upper level, extends that to the east and west, provides for some additional concession opportunities and provides passenger boarding bridges at desired gates (*Figure 6-12*). Not all current carriers will be able to utilize the boarding bridges due to the aircraft they employ. As such, the lower-level departure lounge will remain intact for ground boarding conditions.

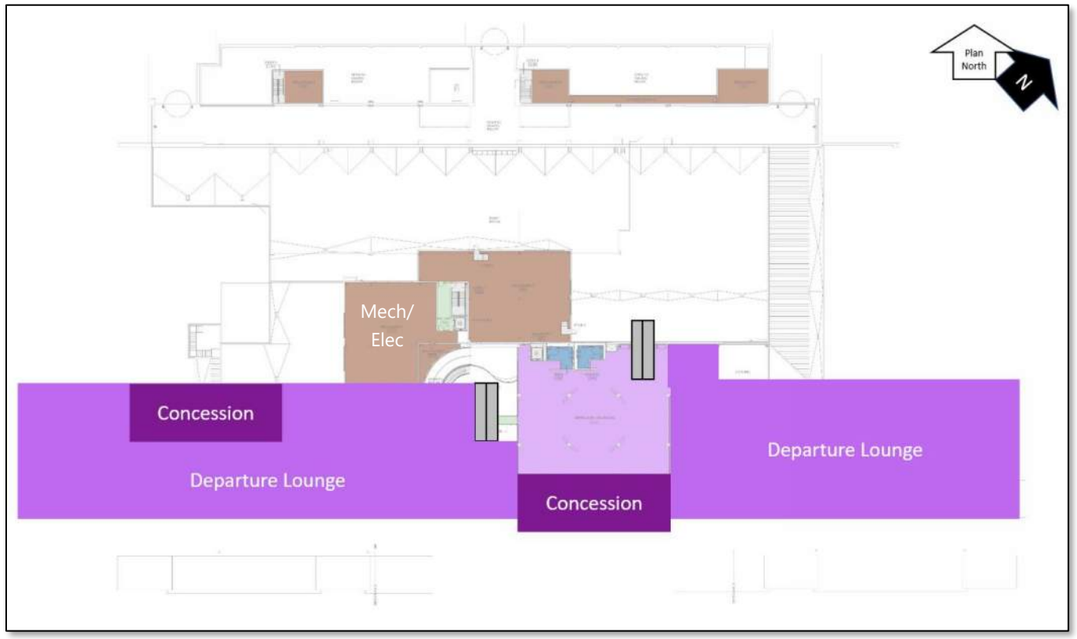


FIGURE 6-12 INITIAL UPPER-LEVEL CONCEPT DIAGRAM

Due to the rapid growth of Central Oregon and the continued anticipated increase in traffic through RDM, it quickly became apparent that only expanding the airside of the facility would not be prudent as it would lead to an unbalanced facility. To provide for a quality passenger experience requires the efficient processing and movement of both passengers and baggage while accommodating increased operations. This necessitates balance on both the airside and landside. The terminal functional area analysis, based on the anticipated peak hour passenger numbers and enplanements, reflected a need to either increase or preserve space to accommodate the needs of all major processors: ticketing, baggage screening, baggage make-up, passenger screening, departure lounges, baggage drop-off and baggage claim.



FIGURE 6-13 ADDITIONAL FACILITY NEEDS AND POTENTIAL IMPEDIMENTS

Assessment of the existing facility and coordination with stakeholders resulted in the identification of additional facility needs as well as potential impediments to their implementation (*Figure 6-13*). These include:

1. **Need More Ticketing and Airline Space** – in peak times the queue for the ticket lobby is very congested and creates conflicts with the northern circulation path. As growth continues there is no room within the existing ticket lobby perimeter to allow for an expanded queue, nor is there space to accommodate additional carriers.
2. **Mechanical/Electrical/Communications Hub Impedes Expansion** – the main boiler room, electrical room, mechanical room and communications hub are all located in a block immediately west of the ticketing lobby. As such, the ticketing lobby cannot be expanded in that direction unless that infrastructure is relocated. It was considered to expand ticketing to the east which would require the repositioning of the security screening checkpoint. In the short term that is a viable alternative but when the time comes to expand again, there would be not more room to move the checkpoint, thus the ticket area would become bookended with no place to go.
3. **Need More Baggage Make-Up Area** – increasing the ticketing area to allow for more passenger flow requires an equitable enlargement of the screening and make-up areas. Expanding this area to the west makes sense so that the tug routes can be maintained there is space available.
4. **Need More Administration Space** – the current configuration of airport administration space is fully occupied and its location within the terminal does not allow for any growth. Any additional staff that the airport hires would have to be located elsewhere.

5. **Need more Baggage Claim** – as the growth continues, baggage claim (like all the other processors) will need to expand. The layout of the terminal allows that to occur to the east relatively easily as there are not significant impediments. Transitioning from a flat plat "T" conveyor configuration to sloped plate carousels would require some additional space for drop off belts and tug thoroughfares.

In alignment with modifications to the components listed above is the focus on improving ADA accessibility, increasing energy efficiency, allowing for LEED certification, maximizing operational efficiency, and enhancing the passenger experience.

6.2.1 Basic Massing Diagrams

Basic massing diagrams were developed for each of the three terminal levels to illustrate the primary considerations in the planning process. These were intended to easily delineate between existing facility, the proposed expansions, and any required internal reconfiguration.

Basement Level (
Figure 6-14)

- Enlargement of the baggage screening to the west
- Additional conveyance input from ticket line
- Potential reconfiguration of the existing to remedy some of the TSA concerns (see *Section 5.1.3*)
- Ability to access basement level for equipment placement and removal
    - Necessary egress based on occupancy

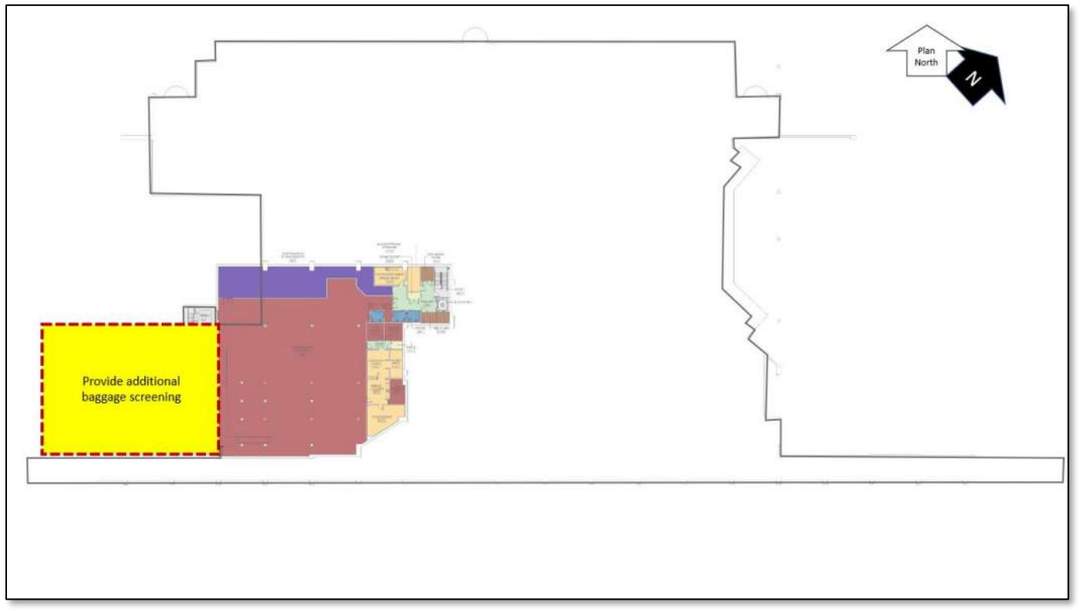


FIGURE 6-14 BASEMENT LEVEL CONCEPT MASSING DIAGRAM

Ground Level (*Figure 6-15*)

- Remove the mechanical/electrical/communications hub from its current location west of the ticket lobby
- Enlarge the ticket area and ATO spaces to the west
- Enlarge the baggage make-up area to the west
- Enlarge and reconfigure the baggage claim area to the east
- Provide new bag drop area to the east
- Remove the administration space from the north side of the terminal (to be relocated to upper level)
- Relocate rental car counters and offices to the location of existing administration space
- Clear out existing rental car space for future expansion of security screening checkpoint
- Replace all existing revolving entry doors with new entry vestibules
- Replace the existing revolving breach control device with multi-gate walk through device(s)
- Modify the access to the upper level (escalators, stairs and elevators)
- Provide for GSE storage, airline storage, and covered parking under departure lounge expansions of the upper level
- Include loading dock area
- Reconfigure breach control systems for both lower and upper level

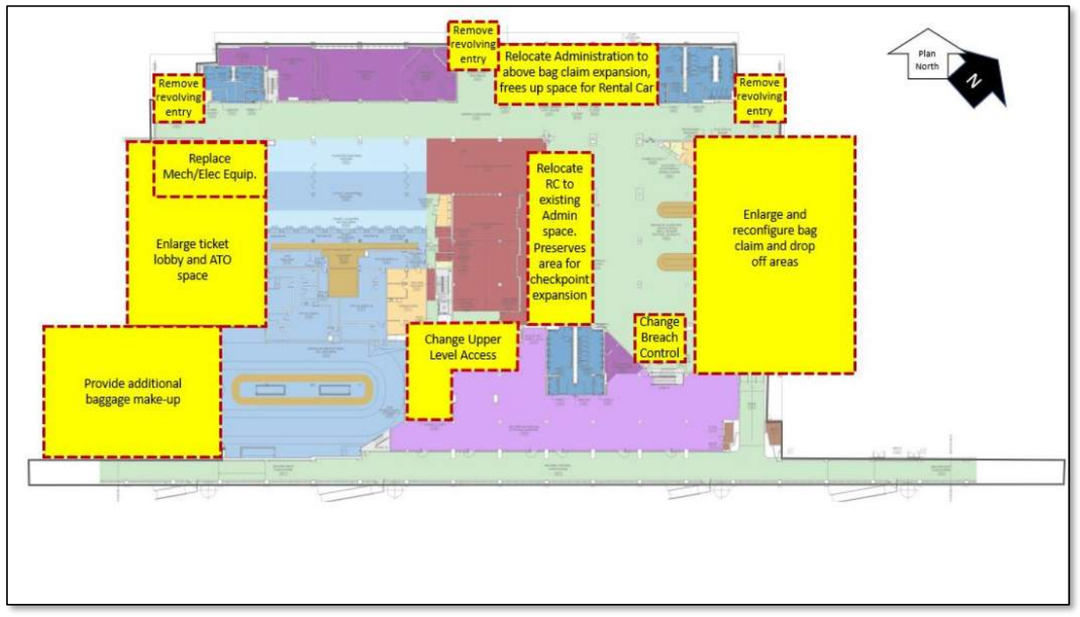


FIGURE 6-15 GROUND LEVEL CONCEPT MASSING DIAGRAM

Upper Level (*Figure 6-16*)

- Provide new mechanical/electrical hub to be placed atop ticketing hall expansion
- Preserve roof level space for future mechanical/electrical equipment as needed
- Locate enlarged administration space to be located atop bag claim expansion
- Relocate police office to upper-level adjacent to administration space
- Provide new enlarged conference aera adjacent to upper-level administration spade
- Provide for landside accessible exterior airfield viewing area
- Departure lounge expansion over top of existing/new make-up areas to the west and pushing further west (approximately 6 gates)
- Departure lounge expansion over top of some lower-level departure lounge to the east, and further east (approximately 5 gates)
- Adequately size circulation, restrooms, concessions, mechanical/electrical spaces and storage
- Pet relief area

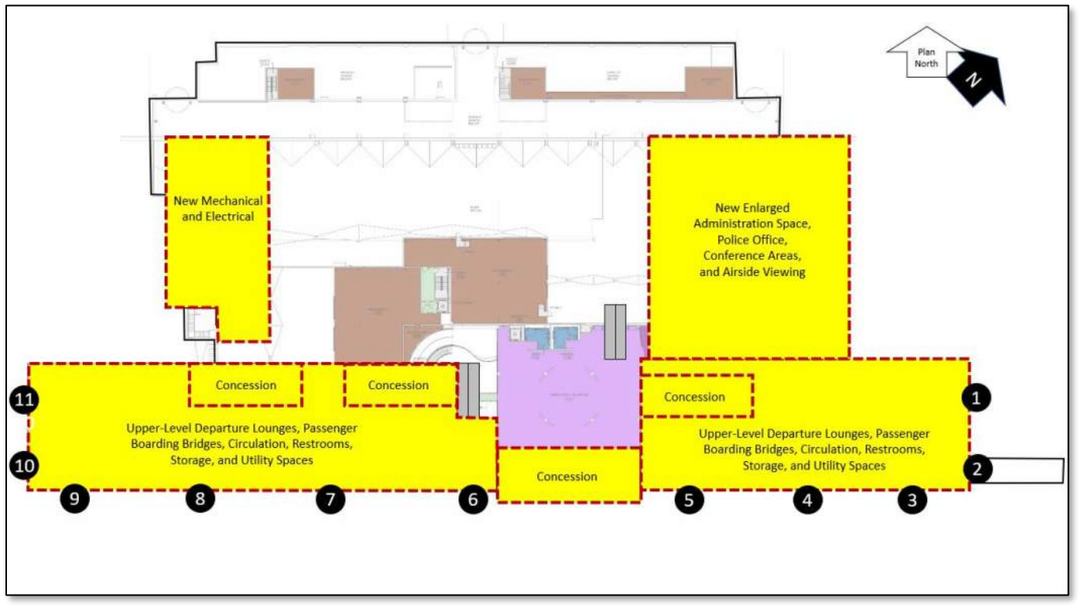


FIGURE 6-16 UPPER-LEVEL CONCEPT MASSING DIAGRAM

6.3 ARCHITECTURAL THEMING CONCEPTS

Through stakeholder engagement, the aesthetics and the feel of the existing airport are well thought of within the community. With the upper-level expansion, there was a desire to capture as much of the mountain views as possible to reinforce the beauty that Central Oregon has to offer. Allowing those views to be the first and last impressions of one's visit to the region reinforce the unique sense of place.

The configuration of the building expansion is linear along the existing apron. As such, relative to aircraft parking the facility is one sided with predominant glazing facing the airfield to the south. With departure lounges logically placed along the southern face for direct access, the functions of concessions, circulation, and restrooms are more inboard and require careful consideration to ensure that natural daylighting is provided. Significant volumes and tall spaces are limited due to the sight lines from the air traffic control tower that need to be maintained. Still, within those parameters, a number of alternative roof forms and overall building massing were strategically considered to create a complementary expansion that reflects the existing facility while allowing it to evolve.

Three initial concepts were developed, each addressing the opportunity to pull light deep into the space in slightly different ways. In each concept the idea of creating exterior spaces (*Figure 6-17* and *Figure 6-18*) that that allow passengers to experience the outdoors one last time before climbing aboard their aircraft was an important factor. The ability to provide accessible and habitable outdoor spaces along the airfield frontage gives passengers a different perspective and a real-world connection to air travel,



FIGURE 6-17 EXTERIOR DECK CONCEPT 1



FIGURE 6-18 EXTERIOR DECK CONCEPT 2

Further studies informed the need for these spaces to be used year-round, such that they could be opened up in nice weather and protected from the elements in inclement conditions.

6.3.1 Flight

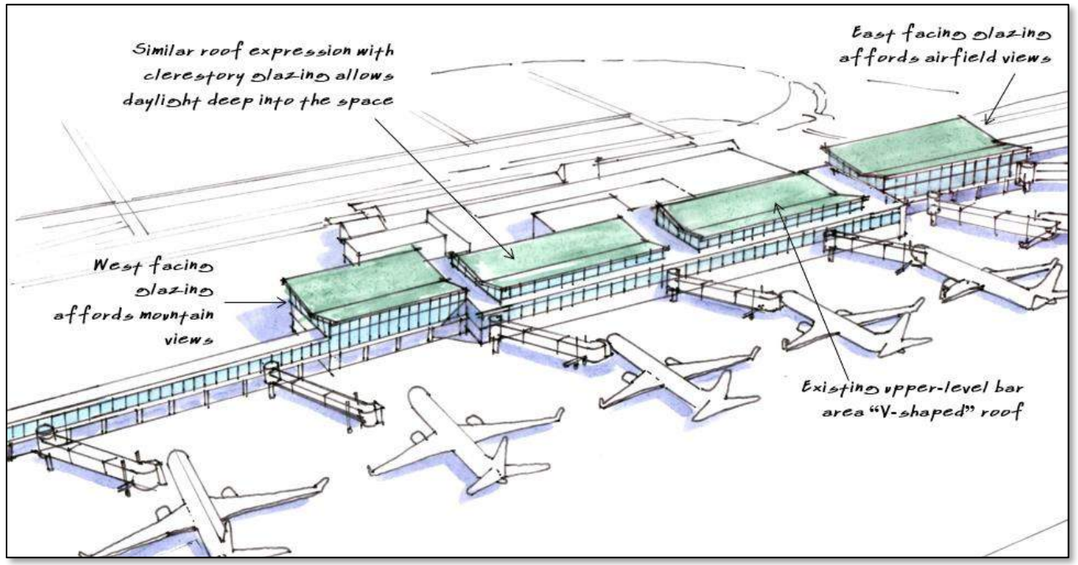
The Flight concept maintained the "V" shaped roof of the existing upper-level bar area and repeated it along the length of the expansion in the form of popped up roof areas to allow for natural lighting to pervade throughout.

These elements create a rhythm along the façade and could align with concession components within the plan layout. A variety of roof forms were explored including a single sloped configuration as shown in *Figure 6-20*.

Inspiration: The design team looked for inspiration and imagery (*Figure 6-19*) that would inform Flight and the design process. Air travel and flight are concepts also reinforced by the wing shaped roofs that reflect journey and movement of aircraft and soaring birds of the region. The natural environment, vast landscapes, and majestic horizons are thoughtfully captured in view opportunities from the concourse expansion.



FIGURE 6-19 FLIGHT CONCEPT - INSPIRATIONAL IMAGERY



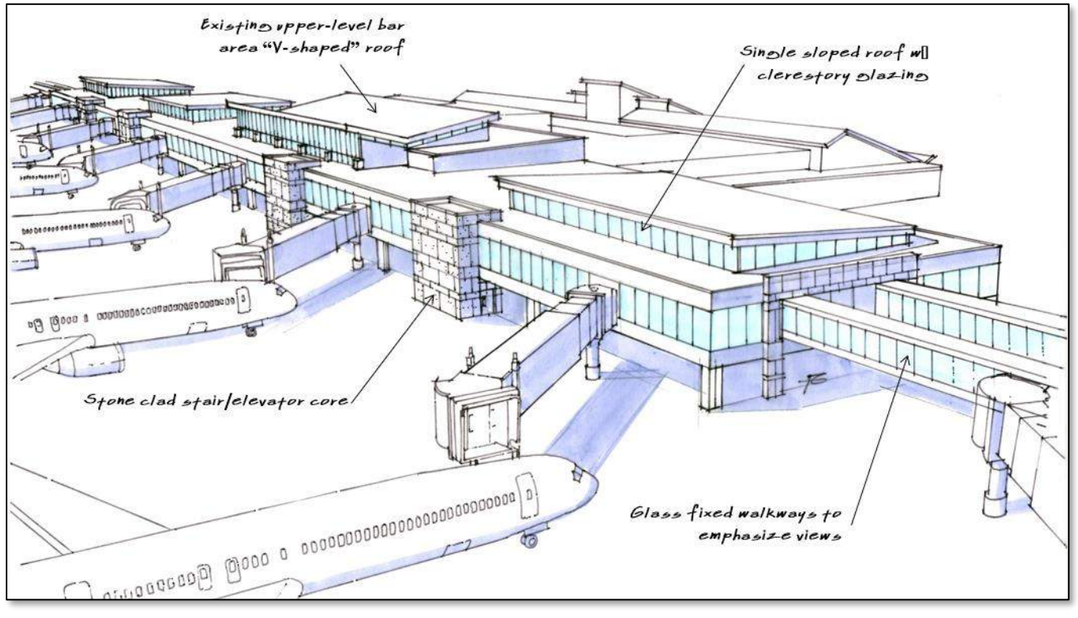


FIGURE 6-20 FLIGHT CONCEPT – EARLY ROOF OPTIONS



FIGURE 6-21 FLIGHT CONCEPT – OVERALL



FIGURE 6-22 FLIGHT CONCEPT – WEST END ELEVATED ROOF FORM



FIGURE 6-23 FLIGHT CONCEPT – WEST END INTERIOR

The flight theme is reinforced by the roof forms both from the exterior and the interior. Outside the replication of the original upper-level roof form (*Figure 6-21* and *Figure 6-22*) pays homage to the original design and gives it prominence as the new elements are subservient in their size. Their placement along the circulation route provides opportunities for placemaking due solely to the architecture and the ability to filter in different types of light based on the 4-sided clerestory glazing at each popped up location (*Figure 6-23*). Departure lounges and concessions areas will be the beneficiaries of this added daylighting.

Flight

6.3.2 Lodge

The lodge aesthetic is exemplified in the existing facility through the use of heavy timber and stone. The proposed design continues the use of warm and natural materials to create an authentic architecture that is rooted in context and connected to its place. This thematic concept expands on that using a familiar gabled roof symbology (*Figure 6-25*) with exposed structure to create destinations at the east and west ends. At each end the exterior wall could be fully glazed extending up into the peak of the gabled roofs offering a maximized viewing position. On the west side, the mountain view truly becomes the destination.

Inspiration: The lodge ideal is ingrained in the outdoor way of life that is Central Oregon. Maintaining the natural feel inside the building is a continuation of the existing and speaks to what it is like to be in the mountains (*Figure 6-24*). Warm materials, such as a wood look on the gabled ceiling elements could be utilized to reflect the inspiration.



FIGURE 6-24 LODGE CONCEPT – INSPIRATIONAL IMAGERY



FIGURE 6-25 LODGE CONCEPT – INTERIOR AESTHETIC IDEA



FIGURE 6-26 LODGE CONCEPT - OVERALL



FIGURE 6-27 LODGE CONCEPT – EAST END ROOF FORM



FIGURE 6-28 LODGE CONCEPT – WEST END INTERIOR

The roof forms considered for this concept are focused on the ends of each terminal expansion (*Figure 6-26* and *Figure 6-27*). These two destination points could provide all of the "feeling" that resides in the main portion of the original terminal with warm wood tones and stone accents. The soft north facing clerestory lighting (*Figure 6-28*) will allow the interior spaces with a nice, filtered effect. The expanse of west facing glazing will both provide spectacular views and need to be treated to minimize glare and heat gain in summer months.

Lodge

6.3.3 Airstream

The Airstream thematic concept combines the sleekness of a modern aesthetic with the excitement that comes from an active lifestyle focused on travel and exploration. These reference the foundation of central Oregon and its continued evolution as a destination. The concept offers a bridge between the rugged history and traditions of the region and the future vision of a modern facility connected to the world. The modern sense is exhibited through the continuous form of the building from east to west interrupted only by the existing two-story element. The sense of activity and delight comes from the interplay of the various light sources, surfaces, and roof forms guiding the way along the primary circulation. The passenger journey and experience throughout the terminal is carefully crafted to feature concessions, fireplaces, outdoor terraces, and offer outstanding view opportunities that reinforce contemporary placemaking.

Inspiration: The aesthetic (and name) of the airstream ideal is obviously pulled from the high-end travel trailer of the same name. The thoughtfulness that has gone into the design of a "home away from home" is a sensibility applied to the RDM terminal. In order to reflect both the small town feel and the adventuresome spirit, this concept may employ a mixture of both rooted "of the earth" materials and modern details. Maintaining the natural feel inside the building is a continuation of the existing and speaks to what it is like to be in the high country of Central Oregon (*Figure 6-29*).



FIGURE 6-29 AIRSTREAM CONCEPT – INSPIRATIONAL IMAGERY



FIGURE 6-30 AIRSTREAM CONCEPT - OVERALL



FIGURE 6-31 AIRSTREAM CONCEPT – WEST END ROOF FORM

The sleekness of this concept simplifies the massing of the concourse along its length (*Figure 6-30* and *Figure 6-31*). The focus becomes the play of light on the interior from the north facing clerestory glazing (*Figure 6-32*). The continuity of the glazing, interrupted only by the original upper-level roof element emphasizes the circulation path. To the west that culminates in the view of the mountains, to the east of the airfield. Either way, as much of the interest lies in the journey as in the final parking place.



FIGURE 6-32 AIRSTREAM CONCEPT – WEST END INTERIOR

Airstream

CHAPTER 7

PREFERRED CONCEPT

7.1 PREFERRED CONCEPT PLANS

The preferred concept, at full build out, accounts for all of the forecasted demand parameters as well as meeting the primary requests from the stakeholder engagement process. Those specific elements are again listed below:

Primary Processor / Component:

- ✓ Properly sized departure lounges
- ✓ Aircraft accessible by passenger boarding bridges
- ✓ Enlarged ticketing area, ATO and Ops space
- ✓ Enlarged baggage screening area
- ✓ Enlarged/improved baggage make-up area
- ✓ Enlarged baggage claim area
- ✓ Improved baggage drop off area

Stakeholder Requests:

- ✓ Mountain views
- ✓ More concession options
- ✓ Maintain small town feel
- ✓ More ticket area queuing, ATO, and Ops space (included as papart of the primary processors)
- ✓ More Airport Administration Space / Another Large Conference Room
- ✓ Upper-Level Area for public airfield viewing
- ✓ More baggage make-up area
- ✓ More storage space near bag claim
- ✓ GSE winter storage
- ✓ Improve signage/monitors
- ✓ More electrical within airline spaces
- ✓ Improve oversize bag belt
- ✓ Improve electrical on ramp
- ✓ Improve CCTV coverage
- ✓ Stronger WiFi
- ✓ Water source in make-up area for cleaning Upgrade lighting to LED
- ✓ Plentiful plug-ins and USB in departure lounges

  Improve lighting, temperature and sound absorption in checkpoint (to be part of a future checkpoint expansion)

  *Improved curbside (to be part of a future landside expansion)**

**Improvements to the curbside, roadway and parking components are beyond the scope of this study.*

The architectural aesthetic that was carried forward for the rough order of magnitude cost estimate was the Flight concept. Following a presentation to the Airport Committee, where all three initial concepts were presented, Flight resonated with the members and is being used as the basis of design



FIGURE 7-1 PREFERRED CONCEPT - EXTERIOR



FIGURE 7-2 PREFERRED CONCEPT – VERANDA

Following are the working plans for the preferred concept. The existing building perimeter is represented with the black dashed line for reference.

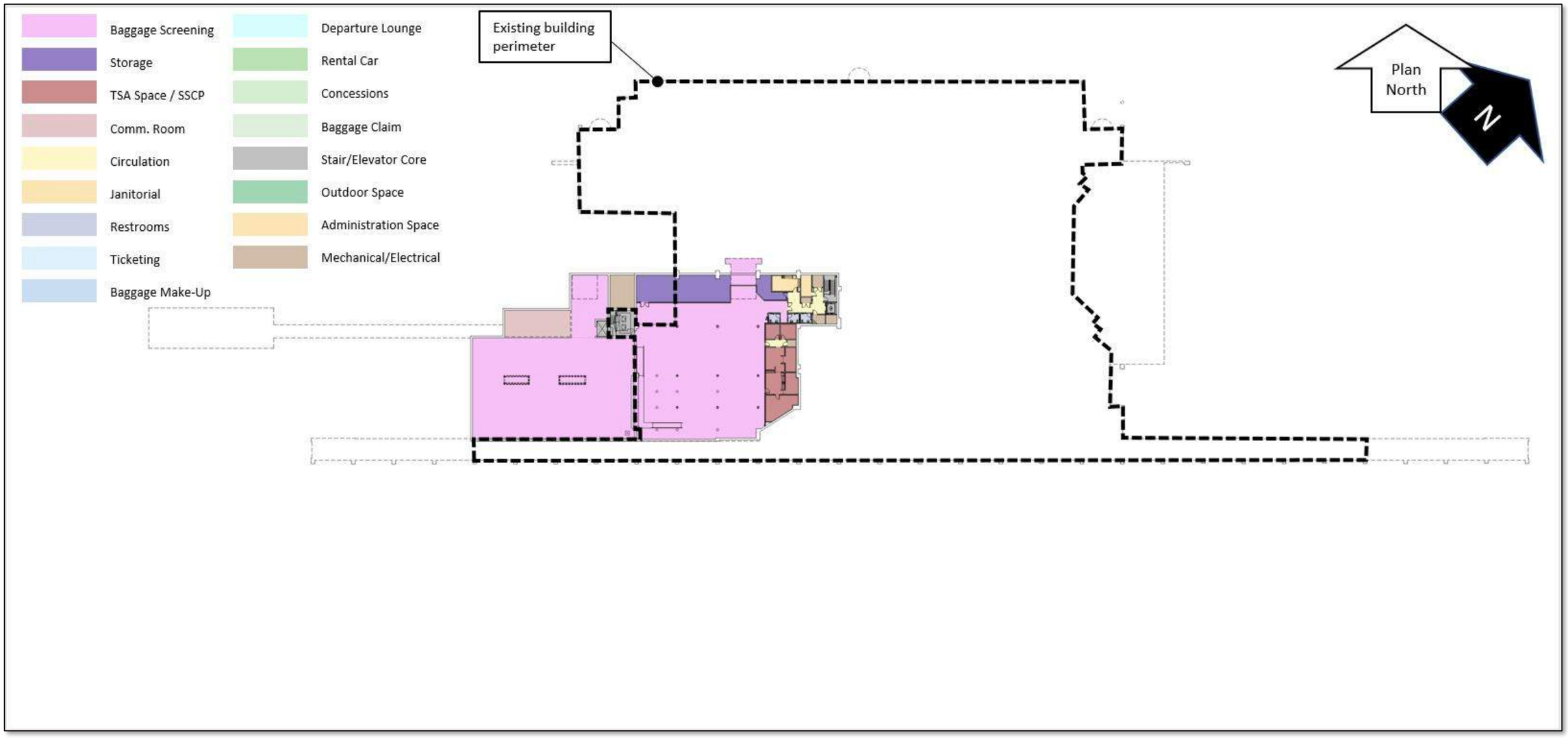


FIGURE 7-3 PREFERRED CONCEPT – BASEMENT LEVEL

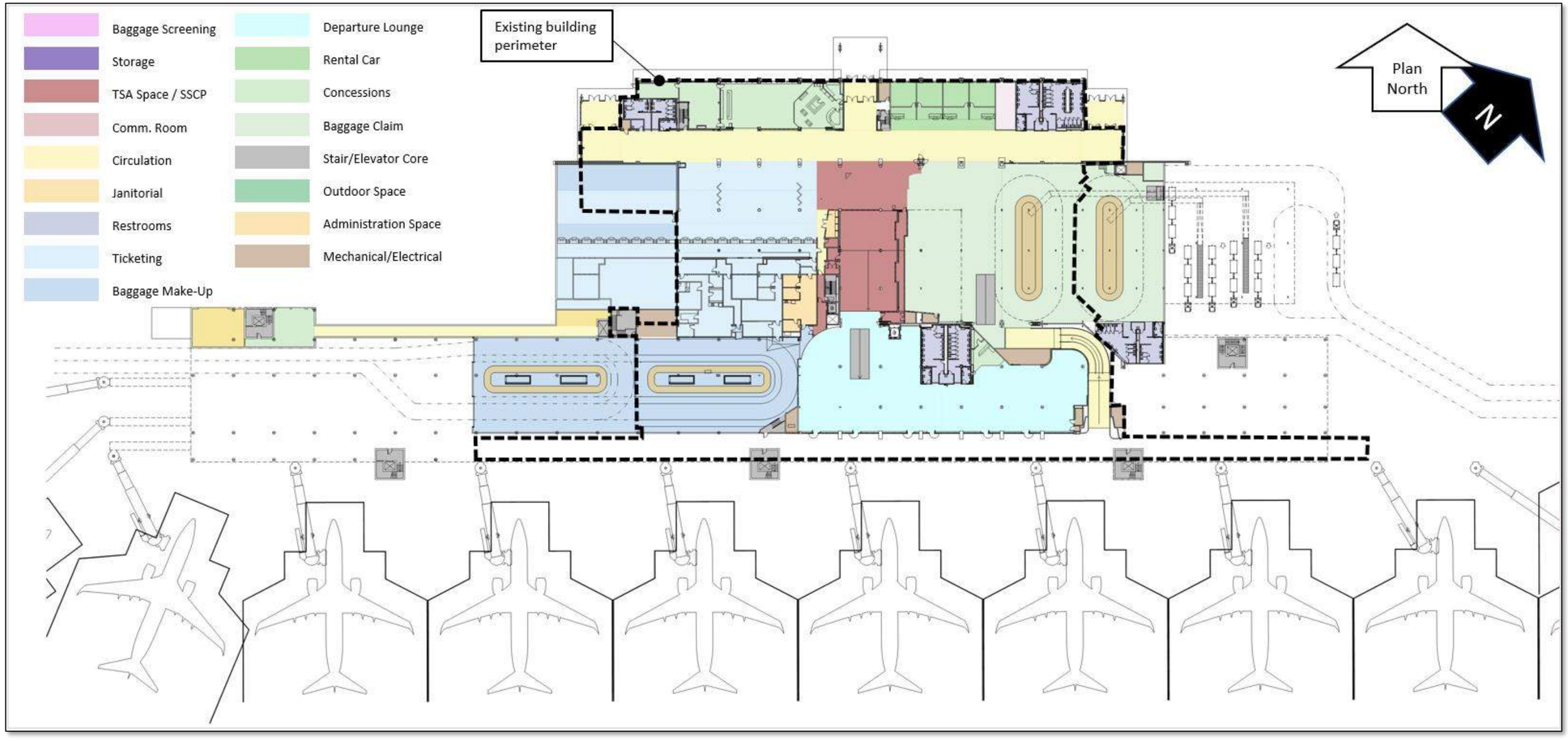


FIGURE 7-4 PREFERRED CONCEPT – GROUND LEVEL

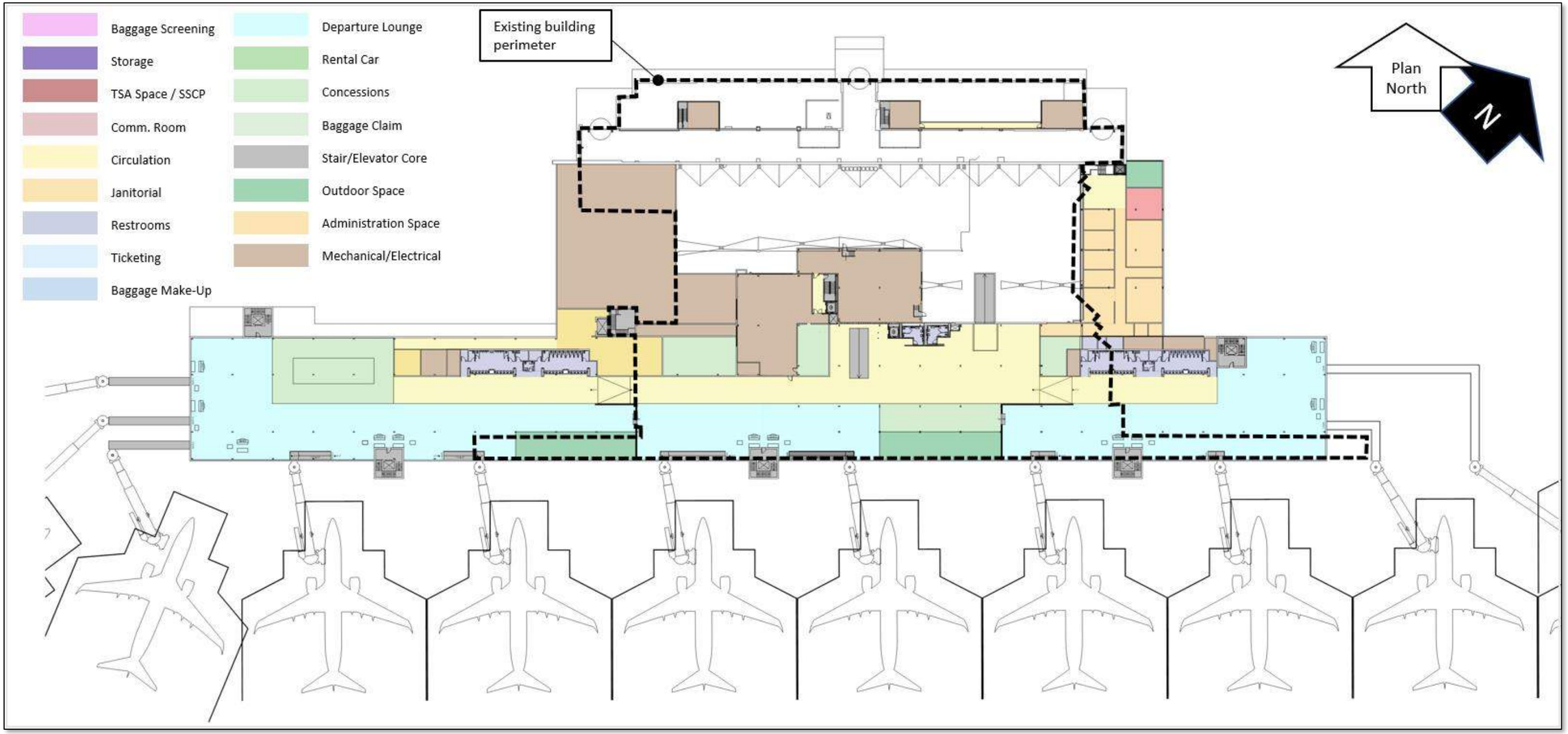


FIGURE 7-5 PREFERRED CONCEPT – UPPER LEVEL

Departure Lounges - Carpet

Circulation – Tile/Terrazzo

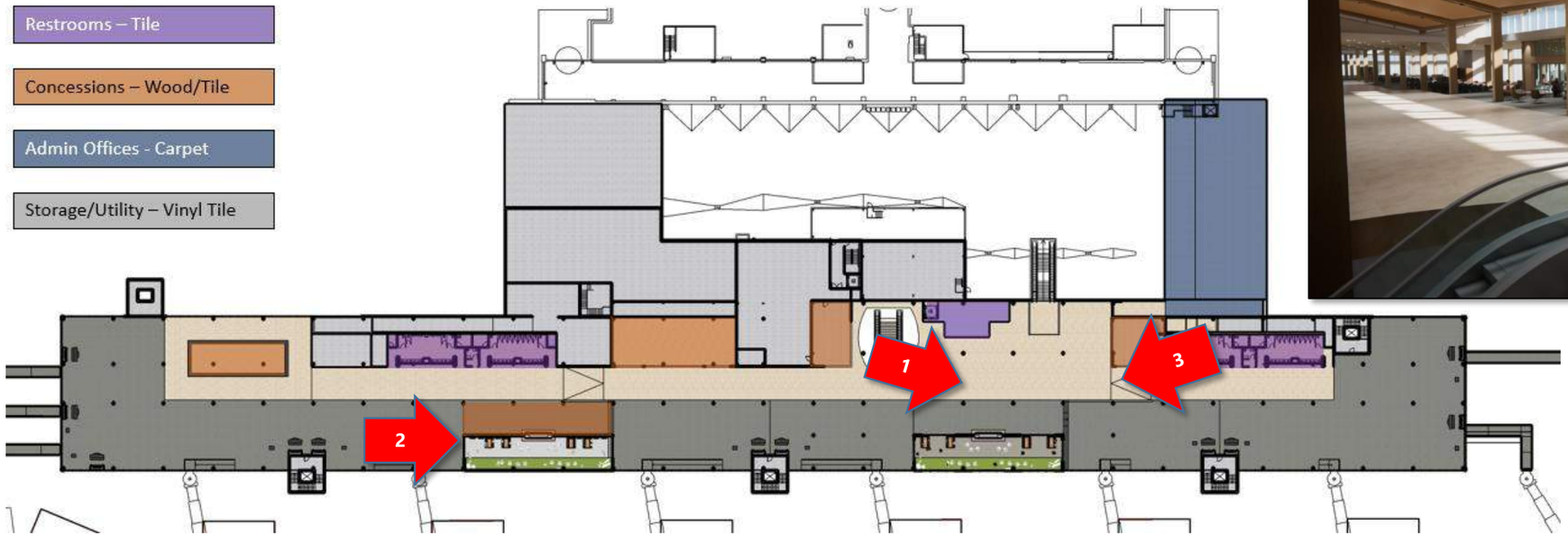
Restrooms – Tile

Concessions – Wood/Tile

Admin Offices - Carpet

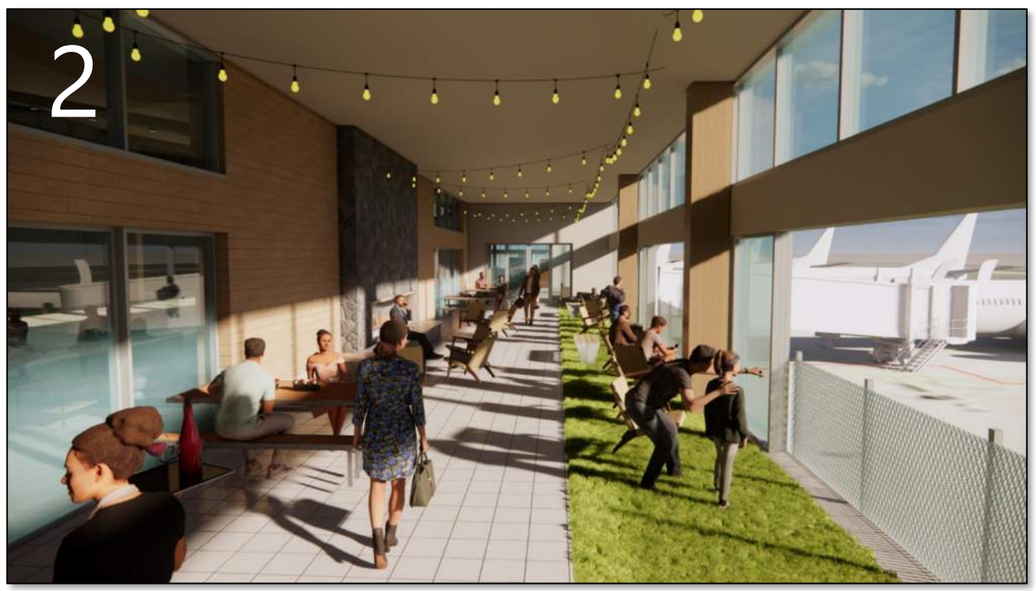
Storage/Utility – Vinyl Tile

Considerations for the interior of the facility were prepared to create a baseline for the pricing exercise. Flooring was estimated based on the finish plan below. The materials assumed were intended to complement the current facility's aesthetic, maintain the smalltown feel, and be representative of Central Oregon.









Upper-Level Finish Plan and Images

FIGURE 7-6 PREFERRED CONCEPT – FLOOR FINISH PLAN AND INTERIOR CONCEPTS

7.2 PREFERRED CONCEPT ROUGH ORDER OF MAGNITUDE (ROM) PROGRAM COSTS

A Rough Order of Magnitude (ROM) cost estimate was performed based how the project is assumed to likely be phased. A detailed description of each phase and the elements included, by discipline, is provided in the next section.

The concept level cost estimate is based on a number of assumptions, including:

- No hazardous material abatement required
- Design to result in the building conforming to the OSSC Chapter 4 requirements based on use and occupancy. "Covered Mall" provisions will apply
- Furniture, fixtures and equipment are not included, an assessment of the build out of concessions is provided for reference
- The state of Oregon normally requires 1.5% of construction cost to be applied to green energy (i.e. solar). Although terminal building is exempt, there is a roll over from the recently completed SRE building. That roll-over requires that $180K be included in the terminal expansion cost estimate to cover those costs that were not applied to the SRE building.
- Construction Manager at Risk is the assumed delivery method for this project. As such, there is fee included in the soft costs for the CMAR's involvement during design.
- Design and construction contingencies included due to the preliminary nature of the concept design
- Construction costs include hard construction, general conditions, insurance, overhead and profit, performance bonds, and state of OR gross receipts tax.
- Range of construction costs includes an assessment of escalation and what the construction environment might be relative to inflation, lead times, material availability, labor shortages, etc. This ranges 3% per year to 7% per year.
- Soft costs are included with placeholders for design fee, art, City testing/inspections, and RDM Airport Staff management
- Passenger boarding bridges are included
- Baggage system conveyance is included, except within he baggage screening area – it is assumed that will be provided by TSA when it becomes necessary
- Airline space/elements (ticketing, ATO space, Ops space, departure lounges, aircraft positions) are not defined by carrier
- Cost impacts due to demolition, work on an operating airfield, sequencing to accommodate continued operations, ensuring the safety and security of passengers and workers are all included

The full ROM cost estimate is included in the Appendix.

RDM Terminal Expansion Program	ROM Cost (LOW)	ROM Cost (HIGH)	Hard Construction Cost (LOW)	Hard Construction Cost (HIGH)	Soft Costs	Contingency (LOW)	Contingency (HIGH)
Phase 1	$99.6M	$109.8M	$75.1M	$82.6M	$8.2M	$16.3M	$19.1M
Phase 2	$13.7M	$15.5M	$10.4M	$11.9M	$1.1M	$2.2M	$2.6M
Phase 3	$25.7M	$29.9M	$19.7M	$23.2M	$2.0M	$4.0M	$4.7M
Phase 4	$30.9M	$36.7M	$23.8M	$28.9M	$2.4M	$4.7M	$5.5M
Phase 5	$8.8M	$10.7M	$6.8M	$8.5M	$0.7M	$1.3M	$1.5M
Program Total	**$178.7M**	**$202.6M**	**$135.8M**	**$155.0M**	**$14.3M**	**$28.6M**	**$33.4M**

FIGURE 7-7 TOTAL ESTIMATED PROGRAM COST

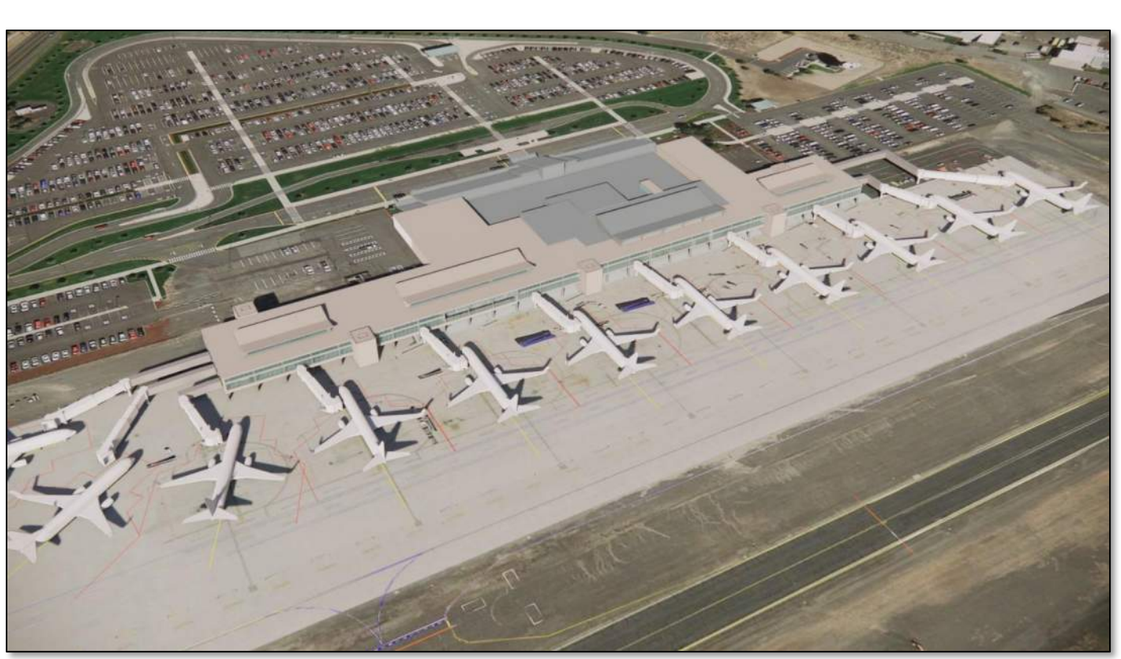


FIGURE 7-8 FULL BUILD-OUT OF RDM PROGRAM

The basic massing per phase is represented in *Figure 7-9*. Combined phase floor plan drawings are represented in *Figure 7-10*, *Figure 7-11*, and *Figure 7-12*. Individual phase descriptions are presented in section 7.3.

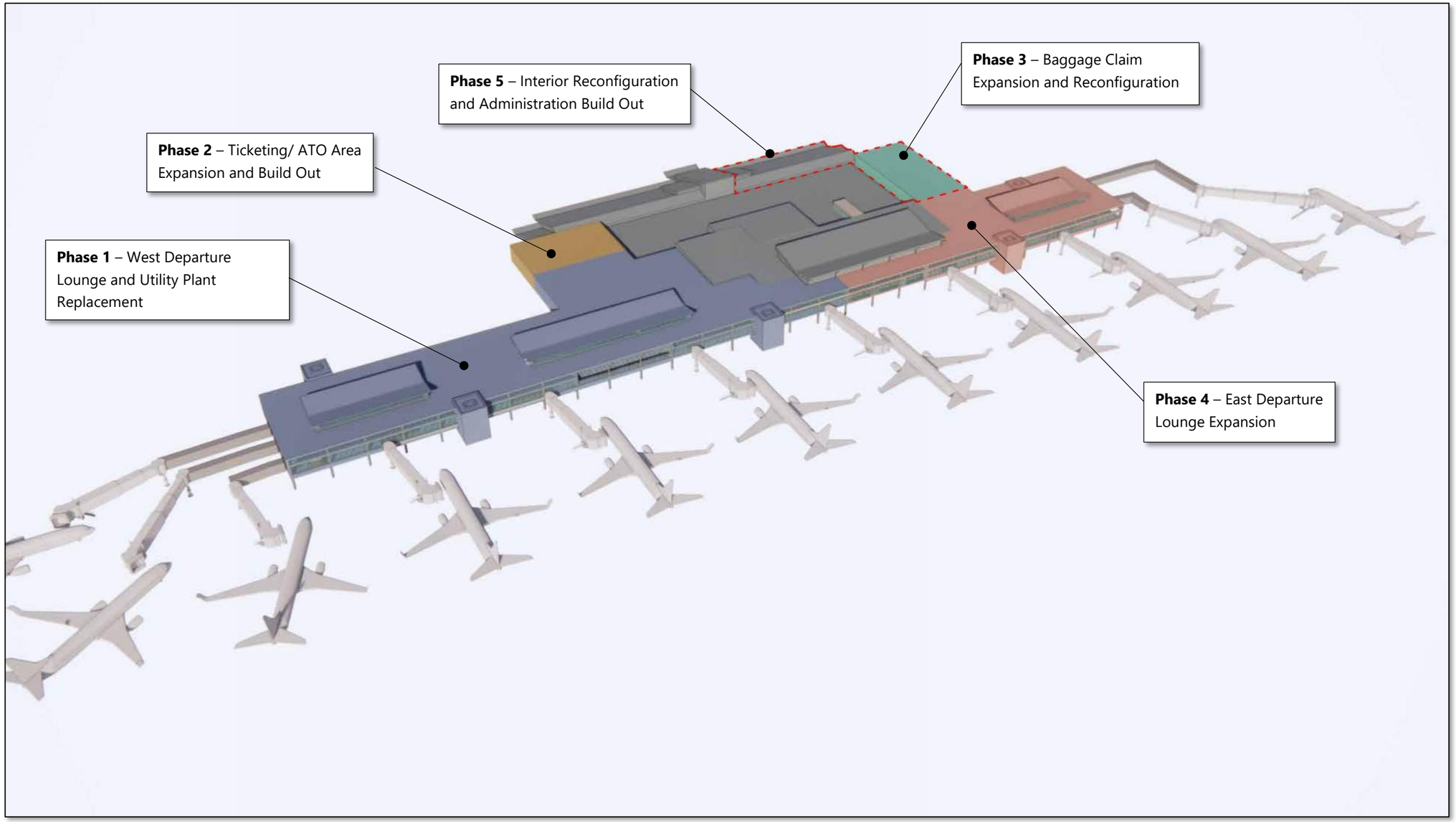


FIGURE 7-9 BASIC MASSING SCHEME PER PHASE

These phasing images represent the 5 primary phases and the primary elements included:

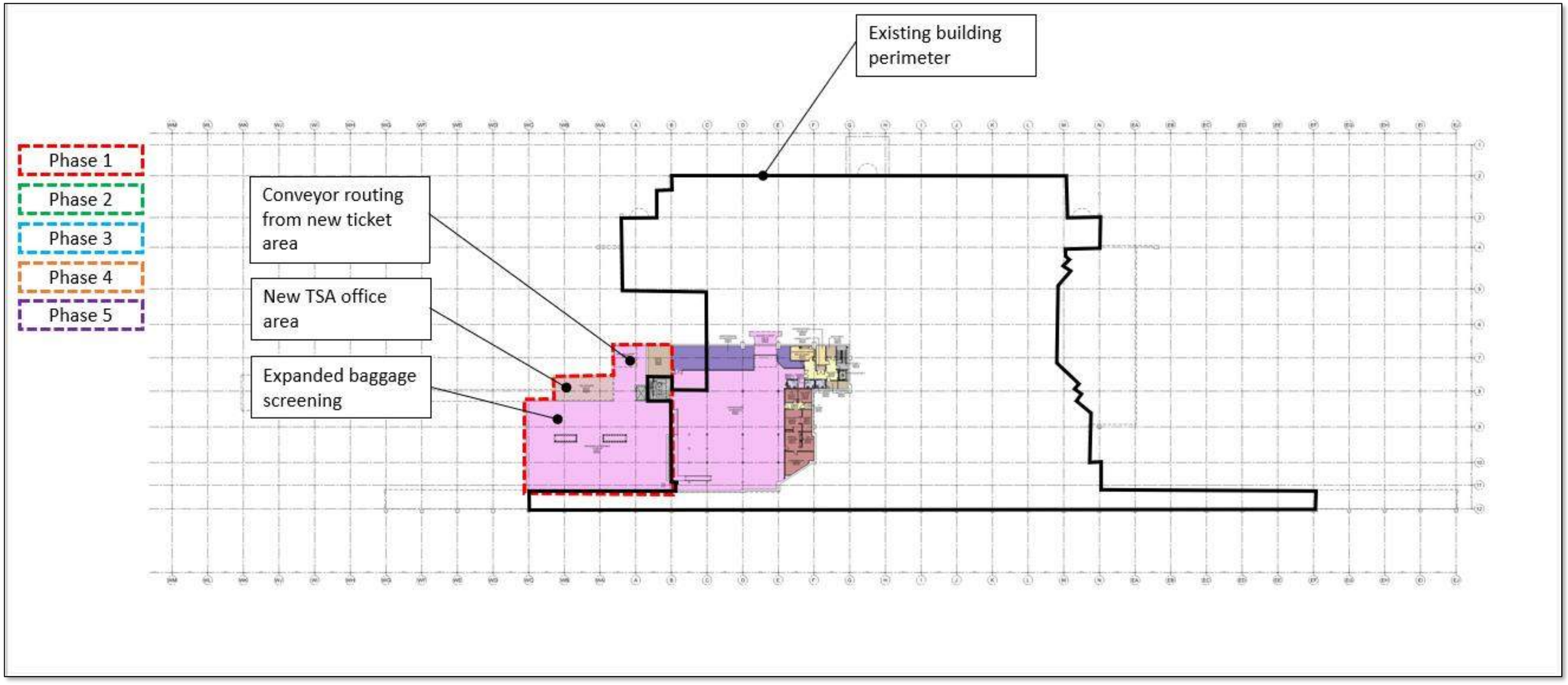


FIGURE 7-10 PREFERRED CONCEPT – BASEMENT LEVEL PHASING DIAGRAM

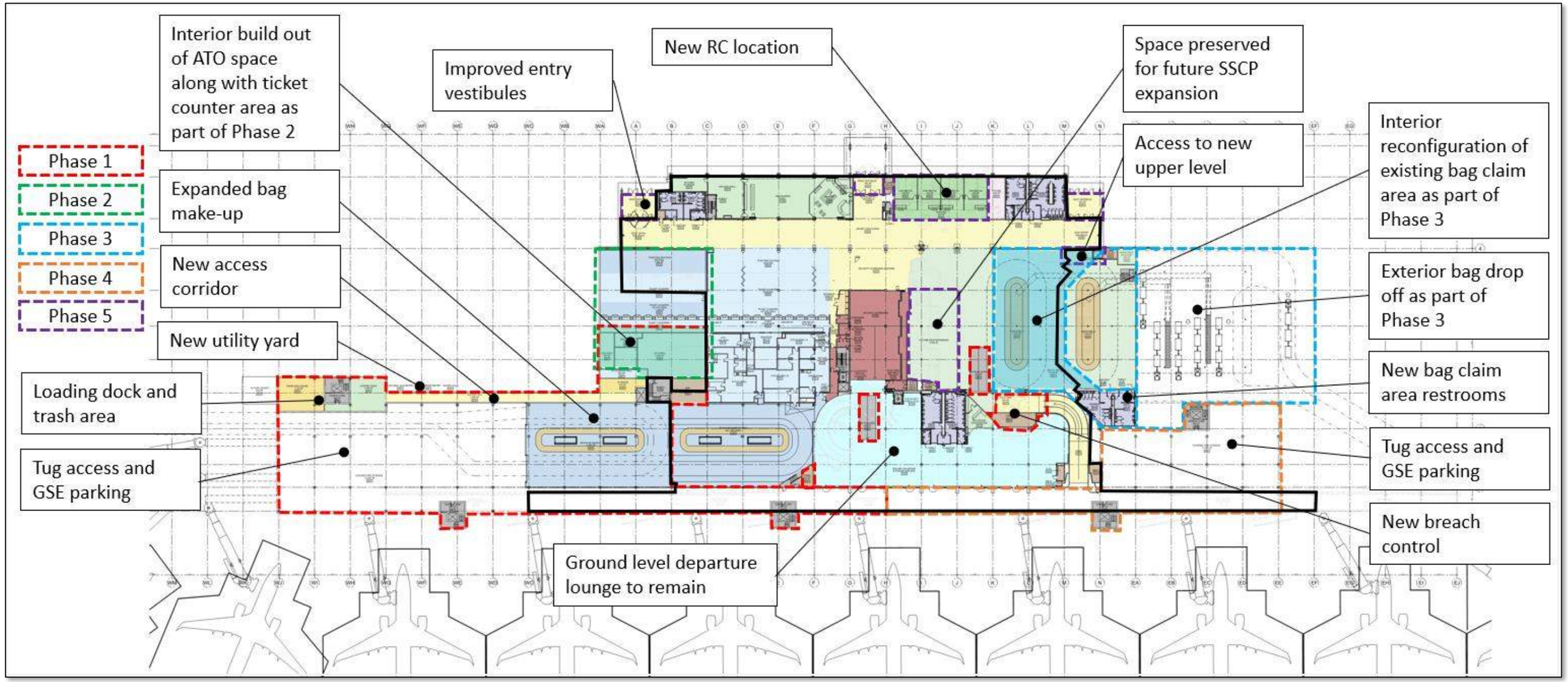


FIGURE 7-11 PREFERRED CONCEPT – GROUND LEVEL PHASING DIAGRAM

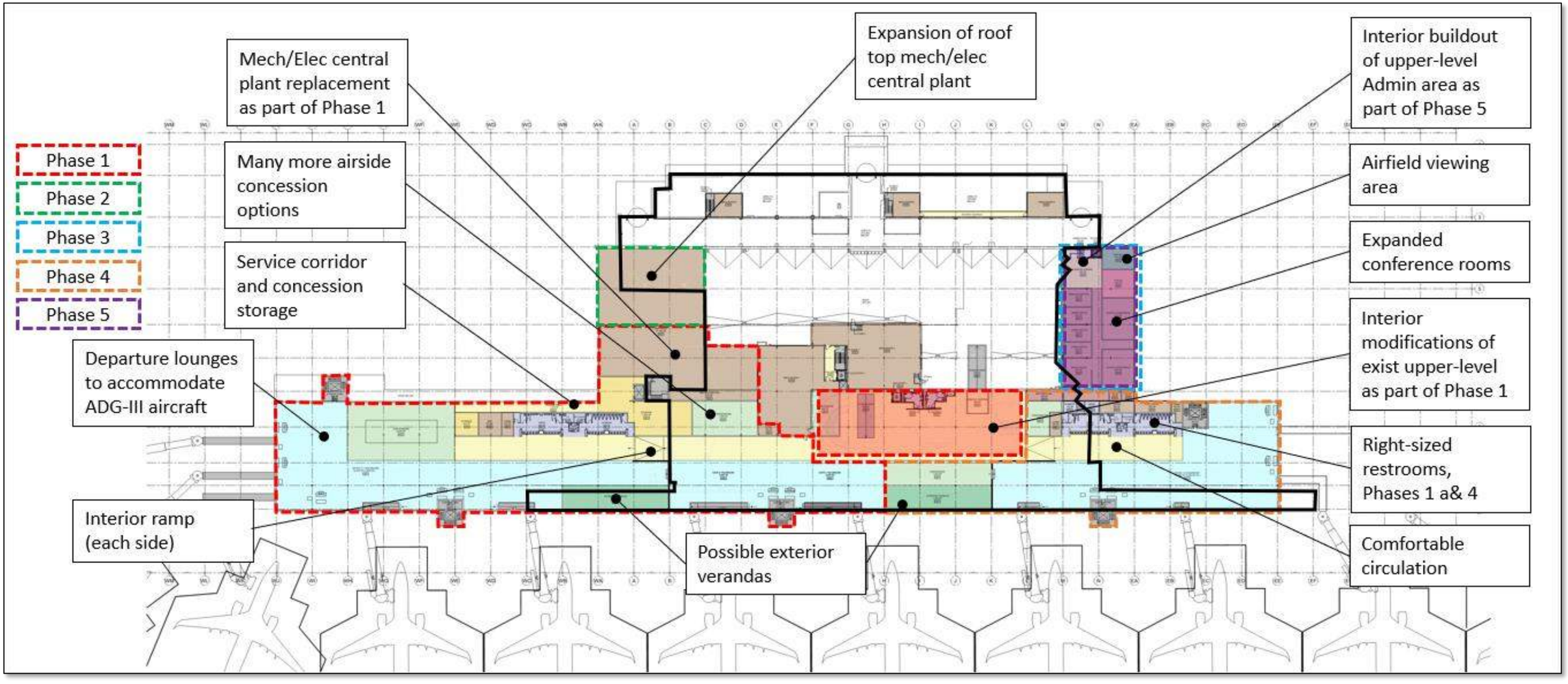


FIGURE 7-12 PREFERRED CONCEPT – UPPER LEVEL PHASING DIAGRAM

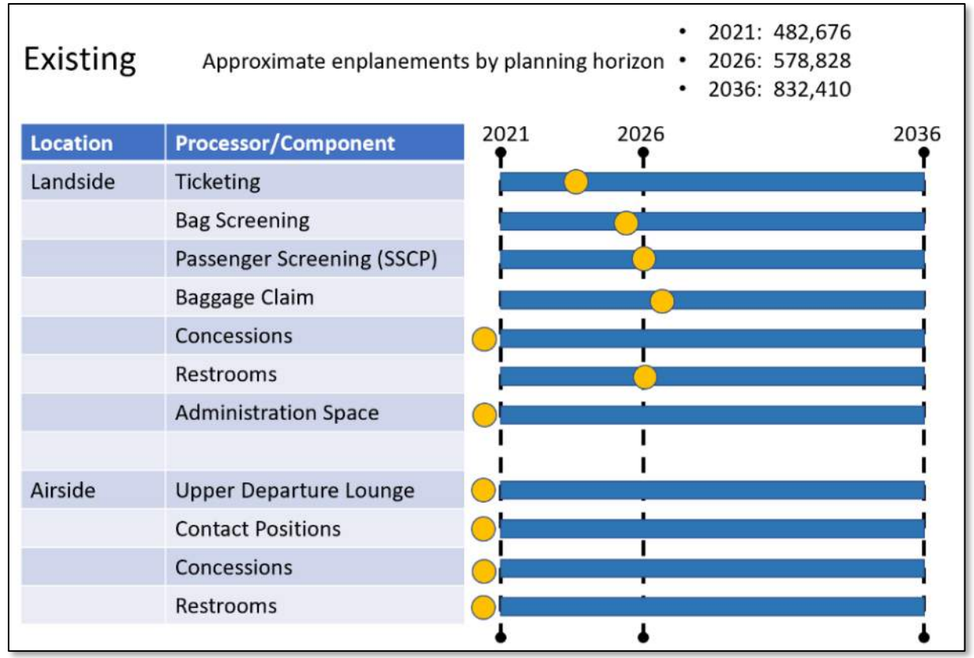
7.3 PREFERRED CONCEPT PHASING

Based on available funding, it is anticipated that the program will be phased. The following represents the five basic phases that were devised to allow the facility to evolve over time to meet the increasing demand.

On the following pages, each phase is described with:

- The approximate area of new construction and renovation on each level
- An assessment by discipline (architecture, structural, mechanical, plumbing/fire protection, electrical, information technology, and site-related) of the process and components that are impacted
- A massing diagram showing the relative growth
- Representative floor plans indicating phase-specific areas
- Processor/Component chart depicting how the primary processors of the terminal will related to the 2026 and 2036 planning horizons at the end of each construction phase
- ROM cost breakdown separating out
    - Range of construction costs
    - Estimated soft costs
    - Proposed contingencies
    - Concept level totals

At full buildout, the terminal will be able to accommodate the peak demand needs anticipated as well as have improved ADA accessibility, increased energy efficiency, the opportunity for LEED certification, maximized operational efficiency, and an enhanced passenger experience.



RDM Program	ROM Cost Range (LOW)	ROM Cost Range (HIGH)
Hard Construction	$135.8M	$155.0M
Soft Costs	$14.3M	$14.3M
Contingencies	$28.6M	$33.4M
Total	**$178.7M**	**$202.6M**



7.3.1 Phase 1 – West Departure Lounge Expansion / Utility Plant Replacement

Architecture

- **Basement Level:** Approximate 12,000 sf expansion of the baggage screening area, tied into the existing. Includes some TSA offices and a new bag belt drop from the ticketing area expansion

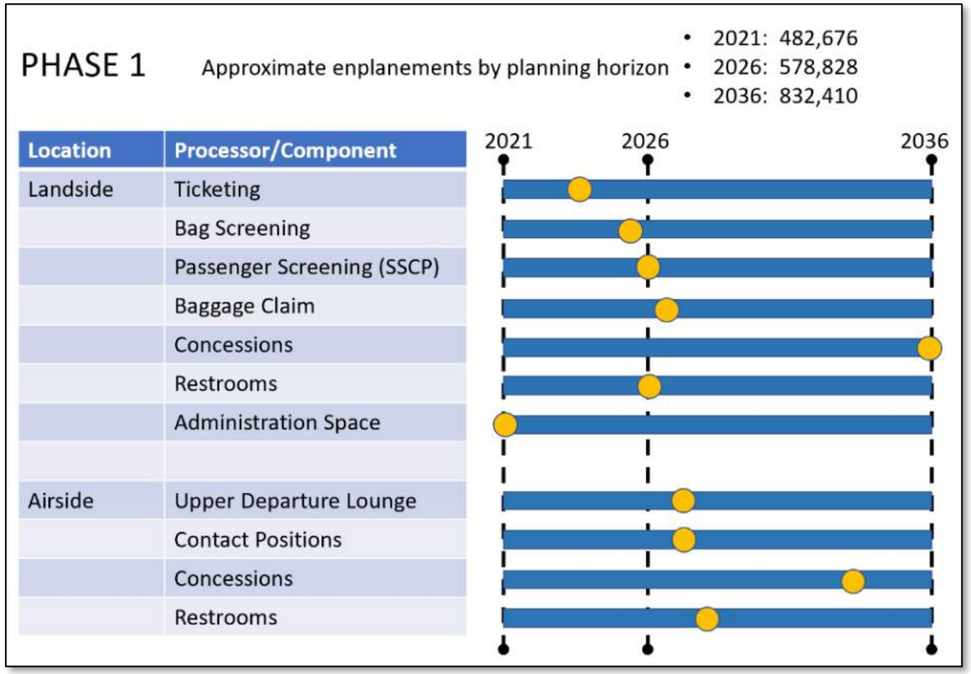
- **Ground Level:** Approximate 17,700 sf expansion that includes an extension of the baggage make-up area, tied in similarly to the basement screening as the existing. Immediately west of grid line A, will be an internal ramp that reduces the elevation of the upper level to approximately 12' above the apron to reduce cost and accommodate ADA compliant access to the aircraft via bridges and fixed walkways. A utility yard is provided to the west, connected to the facility with an access hall that separates airside from landside. At the western end of the yard is a loading dock, service elevator and trash enclosure all situated for easy access form the landside fence. Inside there are new escalators and stairs for improved access to the new upper-level boarding area. The lower-level departure lounge stays operational from continued ground loading needs. Breach control devices will be provided for the access from both upper and lower level airside spaces to the landside / baggage claim area.

- **Upper Level:** Approximate 51,000 sf addition to provide seven (7) contact gate positions with boarding bridges. Departure lounges are sized to accommodate ADG-III size aircraft. Multiple concessions, restrooms, storage and circulation are all part of this expansion. In addition, the upper level of the ticketing/ATO expansion is where the mechanical/electrical plant will be replaced (from its original location on the ground level west of ticketing).

Structural

To expand the baggage screening area, the basement will need to be enlarged. Approximately 14' of excavation and construction of 16" thick reinforced concrete walls with spread foundations is anticipated. The new concrete wall will align with the existing southern wall and extend approximately 120' west, turning North

Phase 1	ROM Cost (LOW)	ROM Cost (HIGH)
Hard Construction	$75.1M	$82.6M
Soft Costs (Design, City Mgmt., Art, etc.)	$8.2M	$8.2M
Contingencies	$16.3M	$19.1M
Overall	$99.6M	$109.8M

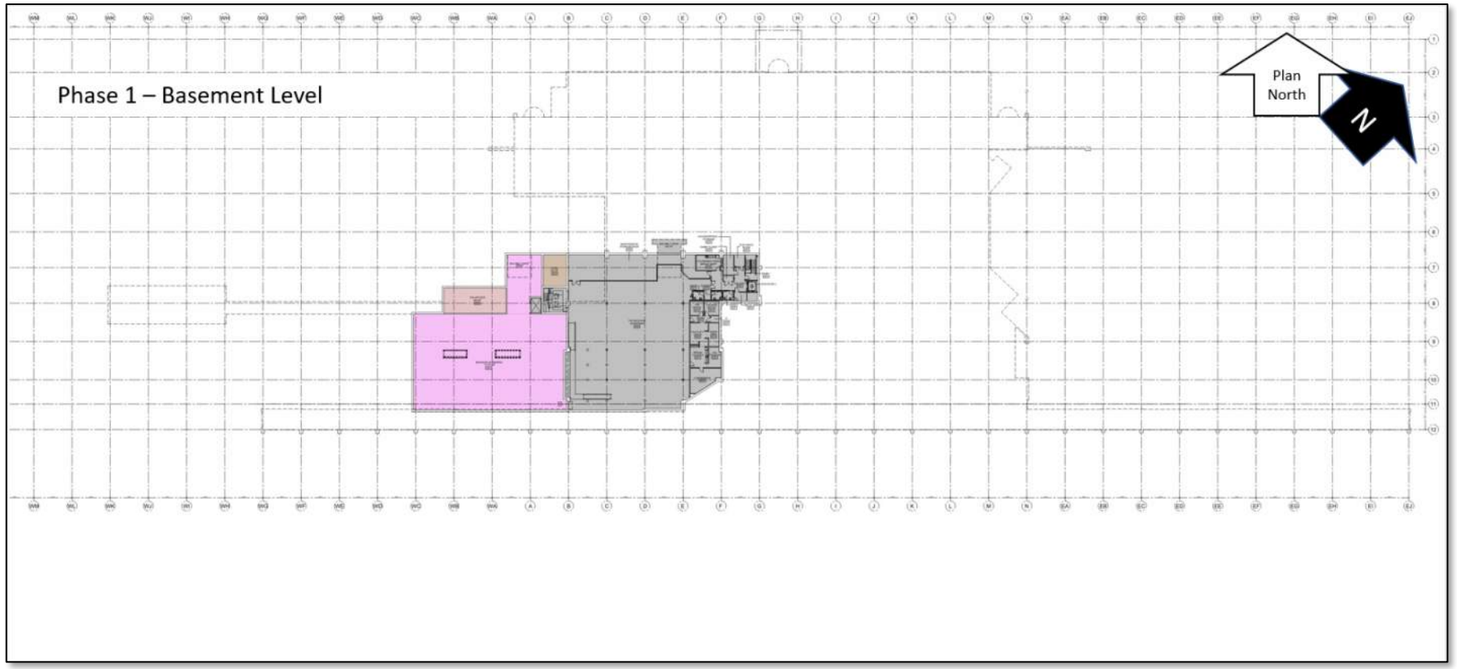




for 75′ and returning 120′ back to the existing basement. Columns with spread foundations along column grid 9.2 will be installed at 30′ o.c to provide support for a new ground floor, ticketing level and roof. The ground floor is anticipated to be constructed similarly to the existing with wide flanged steel beams supporting a 2″ metal deck with 5″ of lightweight concrete above the flutes, waterproofing membrane, 4″ of rigid insulation and a 5″ normal weight topping slab.

At the existing baggage screening area on column grid 9.2 and 10.9, the existing foundations will need to be enlarged and existing columns will need to be reinforced so they can accommodate the additional load due to the new ticketing level floor in this area. The existing roof at the current bag screening area will be demolished to construct a floor structure and a new roof. New columns at grid 9.2 and 10.9 will be spliced with existing ones and extend to the roof level.

The ticketing level structure will be comprised of 3 ¼″ lightweight concrete slab on 3″ composite metal deck (overall thickness = 6 ¼″) supported by 24″ deep wide flange beams spaced at 6′-0″ o.c and 30″deep girders. The roof structure will be comprised 1 ½″ 20 gauge, type "B" metal deck supported by 16″ deep beams spaced at 5′-0″ o.c.. spanning to 30″ deep girders. See Appendix.

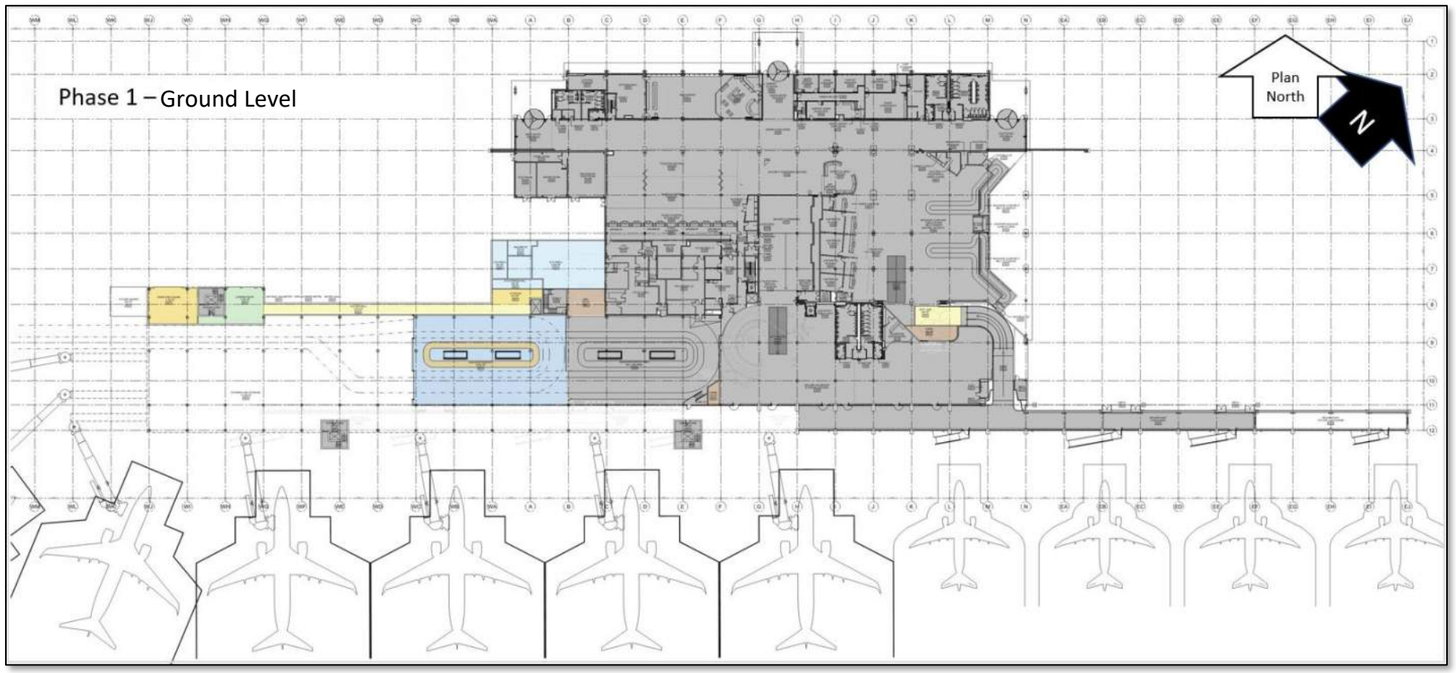


Mechanical

The existing hot water heating and the chilled water-cooling plants were installed back in 2008 and are located on the main first level of the terminal adjacent to the electrical room. These plants will need to be replaced as part of expansion and located on the roof to accommodate the expansion of the ticketing are including the ticketing lobby to the west.

- **Chiller Plant:** Approximately 3,500 square feet space on the roof will be allocated for the new chiller plant and will consist of two 325-ton water cooled centrifugal chillers. The chilled water system will have a total capacity of 650 tons of cooling to accommodate the 400 tons of the existing terminal loads and 250 tons of the new expansion and additional loads. The plant piping system will consist of primary and secondary piping and pumps to provide chilled water around the terminal.

  Two (2) primary pumps with 780 gpm each will be required for each evaporator and they will operate in duty and stand-by arrangement for a total of four (4) pumps. Chilled water will be circulated and provided to the terminal by two (2) secondary pumps with 1560 GPM

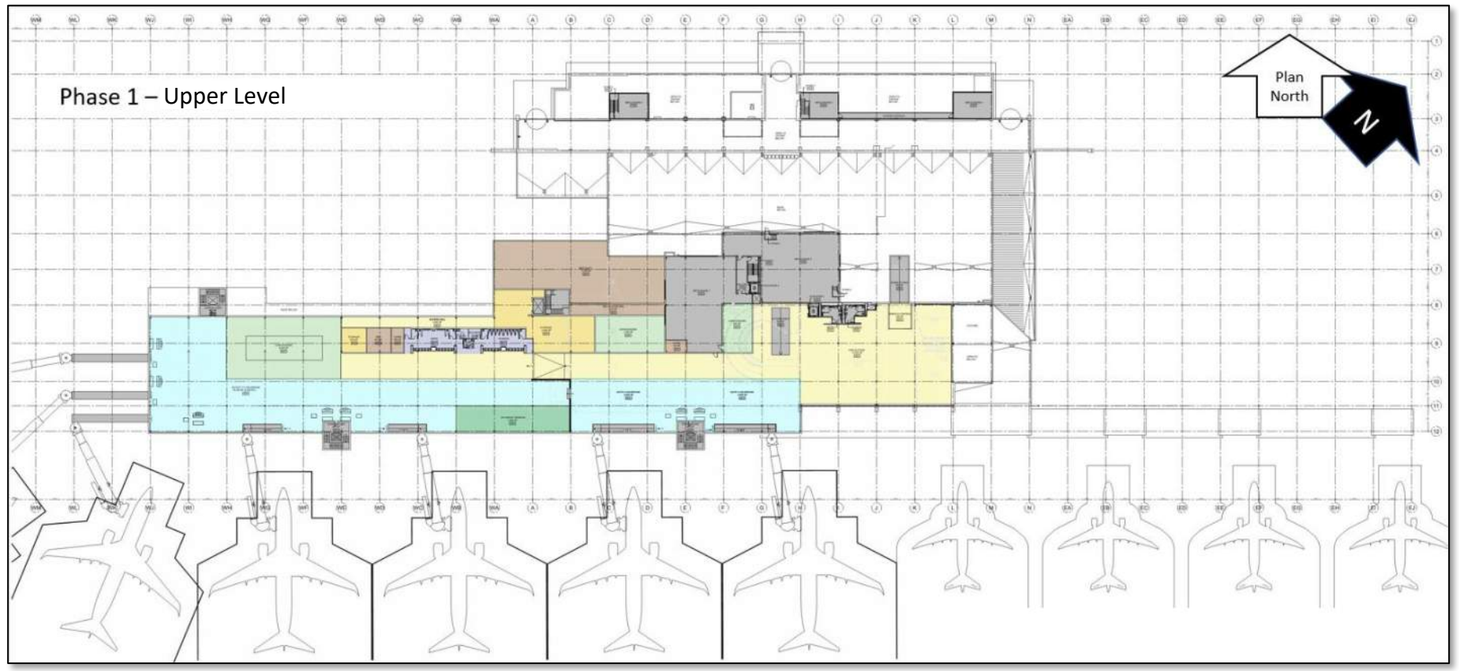


each in a duty and stand-by operation as well and controlled by VFDs.

Similarly, each condenser will require two (2) pumps with 975 gpm each operating in a duty and standby manner for a total of four (4) condenser water pumps to circulate condenser water.

The existing cooling towers will be replaced by two (2) new 400 tons fluid coolers or raised cooling towers to serve the chiller plant. These units will be located on the roof near the chiller plant and will occupy approximately 40'x40' of roof space. Condenser water will be provided from the tower to the chiller plant by two (2) tower pumps with 1,950 gpm each in duty and stand-by operations.

Chilled water distribution will be insulated, Type L copper for piping 2-1/2 inches and smaller and insulated Schedule 40 steel for piping 3 inches and larger. Copper piping will be joined by soldering or with press-fit type fittings. Steel piping will be joined with mechanical couplings.



- **Boiler plant:** The boiler room will be located on the roof near the chiller room and will occupy about 1,500 SF. It will consist of 4 high efficiency condensing boilers with 2500 MBH input capacity each.
The new boiler plant will have a total capacity of 240 BHP an equivalent of 8000 MBH total output. New hot water distribution pumps will be required to accommodate the building and the new expansion heating demands.

  Primary and secondary piping arrangement and pumps schemes will be considered for the boiler plant. It will consist of 4 primary pumps with each pump to serve its associated boiler with 200 gpm flow. Two variable flow secondary pumps with 800 gpm each will provide hot water heating to the terminal and the new expansion and will be controlled by VFD in a duty and stand-by arrangement.

  Heating water distribution will be insulated, Type L copper for piping 2-1/2 inches and smaller and insulated Schedule 40 steel for piping 3 inches and larger. Copper piping will be joined by soldering or with press-fit type fittings. Steel piping will be joined with mechanical couplings.

  The existing boiler flues will be removed, and the new ones will be an AL-429C stainless steel for compatibility with the condensing boilers.

- **Air Handling and Distribution:** Expansion area will be served by 4 roof-mounted single zone variable volume (SZVAV) unitary with 25,000 cfm capacity each. The SZVAV RTUs will consist of chilled and hot water heating coils and will have 100% outside air economizer capability along with high efficiency filters, an electronic air treatment system such as Cosatron and heat recovery sections for energy savings.

  Air distribution will consist of galvanized 2" w.g. pressure class sheet metal ducts with external insulation. Flexible duct runouts to diffusers less than 8 feet in length will be provided.

  Air Handling Alternative: *The Expansion areas will be served by 2 single zone Variable Air Volume (SZVAV) AHUs with 25000 cfm each and fitted with chilled water and hot heating water coils. The SZVAV AHUs will have 100% outside air economizer capability along with high efficiency filters, and heat recovery sections for energy savings. In addition to the pre and final filters, an electronic air treatment system such as Cosatron will be used.*

  The new AHUs will be located on the roof inside new mechanical room(s) or penthouse and will require louvers for outside air intake and exhaust. Supply and return air ducts will be extend down from the unit to the new expansion.
  The new AHUs can also be located on the first level in new mechanical room(s) and will require the construction of mechanical shafts extending up to the roof of the new expansion for outside air intake.

  Air distribution systems will consist of galvanized sheet metal ducts with external insulation. High velocity ducts upstream of the terminal units will be constructed to a 4" w.g. pressure class.

Kitchen grease exhaust air duct and make up air duct will be connected to tenant provided kitchen hoods. Exhaust air duct for dishwasher exhaust systems will be connected to tenant provided dish hoods or direct to dishwashing equipment as required. The final design and sizing of these systems shall be coordinated with the concessionaire as the design progresses.

Any IT or server rooms will have 100% cooling redundancy provided by direct-expansion split systems in addition to the cooling provided by the main HVAC system.

- **Controls**: ***General for all phases*** The controls system components for new HVAC system and lighting equipment shall BACNET over IP certified controllers and shall integrate fully and completely with the existing Building Automation System. The new system components and equipment shall have full interface compatibility with the existing BAS system by graphically displaying all current active monitored and controlled input/output points in the same manner as the monitored and controlled input/output points for the existing system.

Plumbing and Fire Protection

- **Plumbing:** ***Specific for this phase:*** A new 1500-gallon grease interceptor will be provided to capture the grease waste discharge from the new kitchen concession space. This interceptor will be located in the airside apron adjacent to the terminal, but out of aircraft traffic lanes. This interceptor, along with the new sanitary mains from the new expansion and restrooms will discharge into the existing sanitary lift station. The sanitary lift station may need to be relocated out to west near the utility yard if it does interfere with the ticketing lobby expansion. Cold water service will be extended to baggage make-up area for maintenance and cleaning of this area.

General for all phases: Plumbing systems for this phase will include domestic cold water, domestic hot water, domestic hot water recirculation, sanitary sewer, primary and secondary storm drain/sewer, and vent piping. Two (2) Gas hot water heaters will be added near the restroom bank to minimize hot water piping length.

Plumbing fixtures are rated for low water flow. Water closets and Urinals are wall mounted, vitreous china, with exposed flush valves with sensor operation. Flush valves are hardwired for power, and not battery operated. Lavatories are undercounter mount, vitreous china with sensor operated 0.5 GPM faucets. The lavatory faucets are hardwired for power.

Cold water, hot water and hot water recirculating piping shall be type "L" hard drawn copper tubing with wrought copper or cast bronze soldered type fittings. Joints in all copper water lines shall be soldered with lead free type solder.

Storm drainage for the new expansion includes interior roof drains and emergency overflow drains with new interior storm piping. The new storm drain lines will be connected to the new storm main lines and routed to the existing storm lift station. Emergency overflow drains will discharge through downspout nozzles on the exterior walls just above the apron pavement. The existing roof drains adjacent to the new expansion that originally discharged onto the apron will be connected into the new storm drain piping system. New emergency overflow drains will be provided in these existing roof areas to replace the existing overflow scuppers for this area.

Sanitary Drain, waste, Storm drain and vent piping shall be service weight hub-less cast-iron with neoprene gasket and stainless-steel bands. Cast iron pipe, fittings, and couplings shall conform to the cast iron soil pipe institute standard 301.

The natural gas service at the airport will be extended from main service entrance by the existing boiler room to the new location and it will upgraded to accommodate the demands for the expansion and concessions.

- **Fire Protection**: ***General for all phases:*** Automatic sprinkler protection will be provided throughout all areas in accordance with National Fire Protection Association (NFPA) 13 and state and local requirements for office area. Recessed pendent sprinklers will be provided in ceiling tiles and centered in both directions. Concealed sprinklers will be provided in gypsum board ceilings in the public areas. Finishes will match existing finishes. Piping will be Schedule 40 steel pipe for use with threaded, welded and grooved fittings. Schedule 10 steel pipe will be permitted for rolled-groove and welded fittings.

Electrical

The expansion will require the relocation of the existing building service. This will require brand new service switchboards that match the existing ratings on the second level. See the marked up single line diagram for reference. This phase will require a temporary roll-up generator to be used to stage the cutovers to limit airport downtime.

The departures level expansion and installation of PBBs will require a significant electrical service. Given the long-term growth for the terminal, the existing electrical room should not be used to provide power to the expansion. A new electrical service from the utility shall be installed to serve the expansion. The estimated electrical service will be 3000A. The main distribution board will serve the secondary distribution points throughout the building. Distribution boards, transformers, lighting panels, and power panels will be required. Additionally, all of the PBBs will require outdoor rated service disconnect switches, 3 per PBB. These will serve the bridges, GPUs, and PC Airs. All new LED lighting will be centrally controlled with an addressable relay panel that ties into the BMS. A new fire alarm node shall be required to support all of the new devices.

Emergency power will be provided by a new 2000kW generator. The generator will be installed in an outdoor, sound attenuated enclosure. The enclosure will need to be sized large enough to hold the generator with belly tank, along with all support panels, battery chargers, etc.

All new LED lighting with additional relay panels to tie into the addressable system installed in this phase.

Information Technology

A new MDF and a series of new IDFs (five (5) or six (6)) will be constructed to provide telecommunications service to the renovated and expanded airside terminal including the basement (expanded baggage screening

area, and TSA offices), Level 1 (expanded ticketing area), and Level 2 (seven (7) new boarding gate positions with an expanded departure lounge).

New IDFs built to support the expansion will be connected to the new MDF via home runs of OM3 50/125-micron multimode fiber and 25-pair copper cables. Note that the OM3 fiber will allow link speeds of 10 GB at distances up to 400 meters. The new MDF will replace the existing MDF during a later phase of work following the cutover and relocation of the existing systems. The new MDF will be constructed and fully commissioned during this phase of work except for the connection to the outside plant cables. Connectivity will be provided via a multi-pair copper tie cable (sized as required) and OM3 fiber routed to the existing MDF. New conduits for connection to the outside cable plant will be installed during this phase. Cables from service providers (AT&T and WOW for fiber and coax broadband and new AT&T analog phone service) will be installed at the beginning of the next phase of work.

The design shall provide telecommunications infrastructure to support the renovated and expanded airside of the terminal. The new infrastructure will include premise distribution, conduit, cable tray, fiber optic, and copper cabling, work area outlets for voice/data, and Wi-Fi systems. The new MDF and IDF rooms shall have controlled access and be furnished with lockable equipment cabinets for Owner and Airline equipment, 3/4" flame retardant plywood backboards mounted to the walls, and a complete telecommunications grounding and bonding system will be provided.

Work area outlets will consist of faceplates and jacks connected to horizontal copper cables to support both voice and data connectivity to the new IDF rooms. Data outlets mounted above the suspending ceiling for Wi-Fi wireless access points shall be provided throughout the expanded terminal. Data outlets for gate counters, FIDS, GIDS, information displays, improved Wi-Fi coverage, advertising, and televisions shall be provided at all new locations in the terminal. The Airport's existing security systems (access control and video surveillance) shall be expanded.

The design shall provide new access control and video surveillance hardware to monitor and control access to the Security Identification Display Area (SIDA), Aircraft Operations Area (AOA), and other secure areas throughout the Terminal. The security systems will be an expansion of the existing airport access control and video surveillance systems. For ease of maintenance, the system components specified will be the same manufacturer and model as the existing systems currently maintained by the Airport (RDM). These components include control panels, card readers, electronic locks, video surveillance cameras, and network recording. The security systems will be managed, monitored, and controlled by Airport Security.

A new public address system shall be designed and installed in the renovated and expanded airside terminal. This system shall be expanded into other areas of the Terminal during later phases of work. A tie-in between the new and existing paging systems shall be provided for terminal-wide announcements.

Site Impacts

- **Site Paving:** This phase will require modifications and expansion to existing asphalt paved areas to the north of the expansion to provide room for ground service equipment, access to the airfield, and access to the loading dock/ trash enclosure. Additional room may be needed for airline GSE storage and deicing materials. This addition room could come from a portion of the credit card lot. Modifications to utilities and grade transitions due to the construction will require repaving a large portion of the existing asphalt in the vicinity. • Concrete (8”-10”) paving will be needed to provide a connection from the existing concrete ramp to the building and to provide operating area for the passenger boarding bridge. • Existing concrete will need to be removed to facilitate relocation of a water line and general excavation requirements for installing foundations. • The area under the expansion hold room for gates 8-11 can be utilized for storage of ground service vehicles and other airline support equipment. This area could be asphalt or concrete.
- **Water:** This phase will require the relocation of the water main that is serving a hydrant adjacent to the apron and the watermain along the airside of the terminal. The existing water main along the airside of the terminal would also need to be relocated due to the passenger boarding bridge foundations and egress pods that protrude into the airside of the apron. New fire hydrants along the airside of the terminal will be required to meet the spacing requirements on the airside of the terminal. • A new water service for domestic and fire protection will be required for this phase. Initially this new service will serve the building expansion in Phase 1. However, it will be sized to accommodate the entire terminal building since the Phase 2 expansion will have impacts on the existing services.
- **Sewer:** This phase will require the reconfiguration of portions of the existing sewer services from the existing building in the vicinity of the sewer and storm drain pit adjacent to the new proposed elevator shaft. New sewer service from the westerly expansion will also be required to facilitate the installation of a new grease interceptor for the sewage associated with the concession expansion in the section floor hold rooms. As an option in this phase, all the sewer services may be reconfigured to prepare for the phase 2 expansion.
- **Storm:** This phase will impact storm drain facilities that currently collect runoff from the roof and area drains between the existing concrete ramp and the vendor parking lot. Revisions to the grade in this area will require reconfiguration of the storm drain system. The storm drain in this area can be routed to the retention basin to the west of the aircraft parking apron. Roof drainage from the existing building and the proposed expansion can be disposed of either through dry wells or incorporated in the existing storm drain and retention pond system.
- **Site Lighting:** This phase will impact the eight 60’ overhead flood lights for the aircraft parking area. Some of the poles and fixtures (four) may be salvaged and reused as they were recently installed in 2018. The existing 30’ poles and lights (nine) for the GSE road and vendor lot will need to be relocated to accommodate the new traffic patterns in the areas. It is possible that portions of the area for the GSE could be lighted by building mounted wall packs, this would eliminate the need for some of the area lights and reduce potential obstructions in the area. New feeder circuits would be required for the apron lighting and any new GSE fixtures.
- **Site Electrical:** This phase will require a new electrical service to serve the phase 1 expansion. A new primary feeder will be required for this service from the existing sectionalizing enclosure on the north side of the terminal road. An area has been identified on the north side of the hold room expansion to accommodate the new utility transformer and meter. • The existing utility transformer and meter may be in conflict with areas of operation depending on the final layout of the pavement and parking north of the hold room expansion. An electrical service circuit from the new electrical meter may be required to the existing electrical room. • The existing feeder circuits for the parking lot lighting and

parking lot access gates are also in the vicinity of this construction. It is possible that relocation of these circuits could be deferred to phase 2, however, they could be incorporated into this phase of the construction if other site electrical is being installed the vicinity. • The expansion of the hold room to the west will impact site electrical circuits for the GPU pedestals and overhead lighting that are located in the expansion area. The GPU pedestals may not need to be replaced, as the PBB may have power connections for aircraft. Location for ground service equipment to charging may need to be provided to accommodate the airline equipment. • A location on the west end of the hold room expansion has been reserved as a potential area for new genset for the terminal expansion.

- **Site Communications:** The hold room expansion should not require relocation or installation of communication services. Currently, there is not a fiber optic service to the terminal building. The airport installed a spare conduit with the parking lot construction project to provide a pathway for a potential fiber optic service to the terminal. To date the fiber optic service has not been installed. • The expansion of ticketing area in phase 2 will require the relocation of communication lines for the access control to the new electrical and communications room on the second floor. Depending on the phasing of relocation of the main Telco room, the main telco service would need to be extended through the building to the new telco room or a new telco service provided.
- **Natural Gas:** The expansion of the hold room to the west does not have any direct impacts on the existing natural gas service. However, depending on the final building loads for natural gas, a new service for the expansion may need to be provided. If a new natural gas service is required, it will be sized to accommodate the full build out of the terminal since the existing natural gas service is impacted by the phase 2 construction. A location for the new natural gas meter has been identified on the north side of the hold room expansion.
- **Fencing and Security:** The expansion to the west will require relocation of the security fence to provide for operational area on the north side of the hold room expansion. The fence will need to be reconfigured to provide landside access to the trash/recycling area and the loading doc. A new security gate will be required to provide for emergency and airport access.

7.3.2 Phase 2 – Ticket Area/ATO Expansion and Build Out

Architectural

- **Basement Level:** Installation of the baggage screening system (not included in cost estimate) and conveyance for baggage into and out of the screening, from the ticket lobby and to the baggage make-up area.

- **Ground Level:** Approximate 6,500 sf expansion of the ticket lobby. Roof structure to be tied into that of Phase 1 to extend the usable upper level for mechanical and electrical plant expansion. Inside, the entirety of the new ticket lobby and ATO space (approximately 10,000 sf) will be built out to increase the entire usable ticket lobby.

- **Upper Level:** Build out of the additional 6,500 sf for use as preserved space for further mechanical/electrical equipment expansion.

Structural

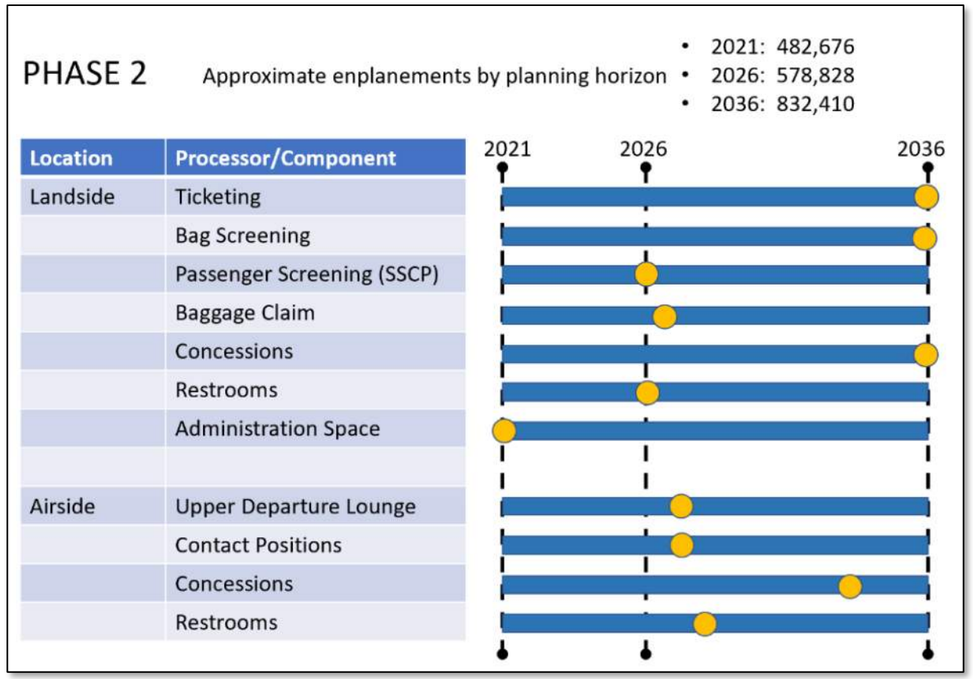
New columns with spread foundations will be constructed along column grids 8.4, 9.2, 11 and 12 at 30' o.c to provide support for a ticketing level and roof.

The ticketing level structure will be comprised of 3 ¼" lightweight concrete slab on 3" composite metal deck (overall thickness = 6 ¼") supported by 24" deep wide flange beams spaced at 6'-0" o.c and 30"deep girders. The roof structural system will be comprised 1 ½" 20 gauge, type "B" metal deck supported by 16" deep beams spaced at 5'-0" o.c. spanning to 30" deep girders.

Mechanical

New ticket lobby and ATO spaces will be served by 1 roof-mounted single zone variable volume (SZVAV) units with 25,000 cfm capacity each. The SZVAV RTUs will consist of chilled and hot water heating coils and will have 100% outside air economizer capability along with high efficiency filters, an electronic air treatment system such as Cosatron, and heat recovery sections for energy savings.

Phase 2	ROM Cost (LOW)	ROM Cost (HIGH)
Hard Construction	$10.4M	$11.9M
Soft Costs (Design, City Mgmt., Art, etc.)	$1.1M	$1.1M
Contingencies	$2.2M	$2.6M
Overall	$13.7M	$15.5M





Air distribution will consist of galvanized 2" w.g. pressure class sheet metal ducts with external insulation. Flexible duct runouts to diffusers less than 8 feet in length will be provided

Plumbing and Fire Protection

- **Plumbing:** Similar Phase 1.
- **Fire Protection:** Similar to Phase 1.

Electrical

This phase will require new panel boards and LED lighting to support the expanded spaces.

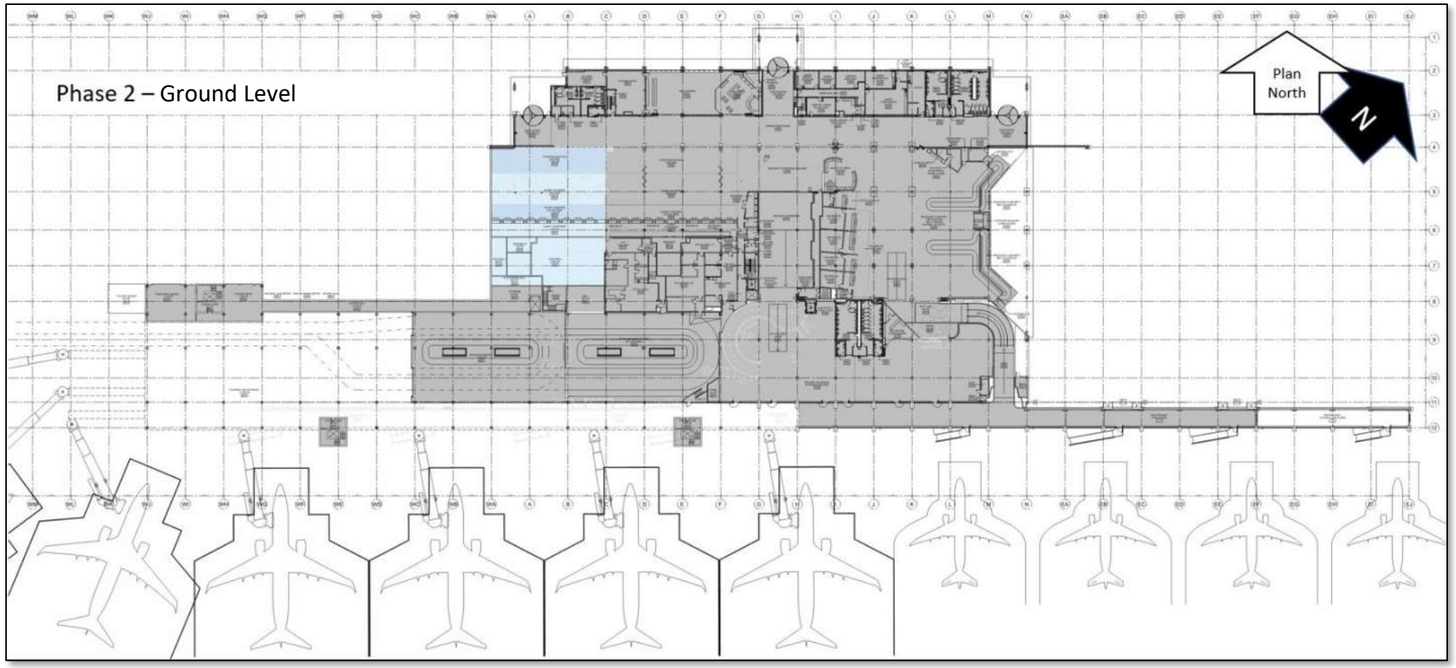
Information Technology

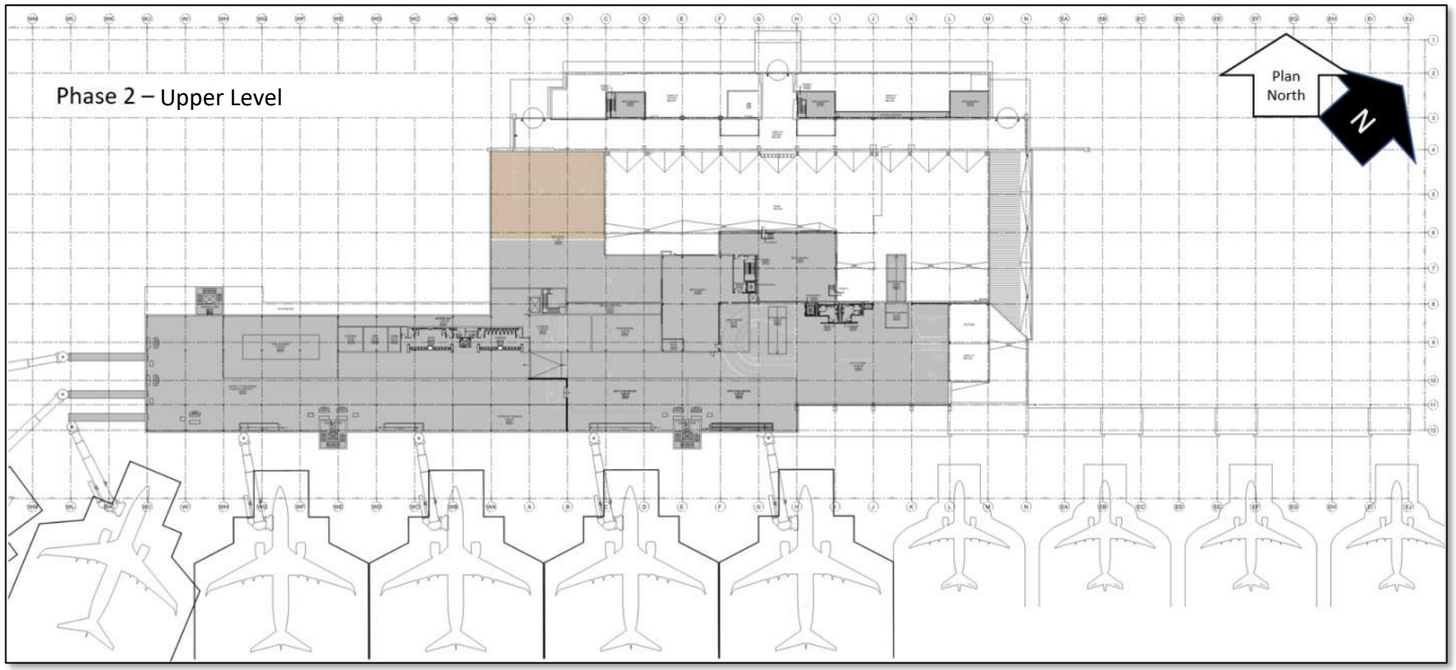
Prior to demolition of the existing MDF, new outside plant cables from service providers shall be installed to the new MDF and circuits established. Existing IDFs will be connected to the new MDF via new home runs of OM3 50/125 micron multimode fiber and 25-pair copper cables. A phased cutover of existing systems to the new MDF shall move all active services and equipment from the existing MDF and the space cleared for demolition.

New data cables for the new and existing ticket counters and ATO shall be installed to the new MDF. The new paging system shall be expanded into the landside of the terminal building. Note that the existing paging system shall be relocated to the new MDF. The tie-in between the new and existing paging systems will also be maintained until the new system provides complete coverage throughout the terminal.

Site Impacts

- **Site Paving:** There will be minimal impacts to the site paving during this phase. Impacts would primarily be limited restoration of trenches and repair due to excavation activities.
- **Water:** The main domestic and fire water service to the existing terminal building will be impacted by the expansion in Phase 2. This expansion will require removal of the meter and backflow prevention vault and fire department connection. As mentioned previously the new service entrance installed in phase 1 will be utilized moving forward for the entire terminal.
- **Sewer:** The expansion of the phase 2 area for the airline ticket counter and ATO space will require the relocation of existing sewer services that currently pass through the proposed expansion.
- **Storm:** Removal of existing storm drain that serves the existing paved area will be required and the roof drainage will need to be re-routed for disposal.





- **Site Lighting:** The expansion of phase 2 will require removal of an existing 30' light pole. The main feeder circuits for all the site lighting on the west side of the building will be impacted. A new feeder with the associated lighting circuits will be required for this expansion, unless it has been relocated in phase 1.
- **Site Electrical:** The phase 2 expansion will require any remaining electrical equipment in the existing electrical room to the new electrical room on the second floor. The existing electrical gear will be relocated to the second floor of the proposed expansion. The second-floor electrical room will be served from the new transformer and service installed in phase 1, and the existing electrical service abandoned. • Depending on the scope of the relocations of site electrical in phase 1, rerouting of circuits to the parking lot will be required to tie in the circuits to the new second floor electrical room.
- **Site Communications:** Site communication lines for access control and security cameras may need to be relocated during this phase if the existing Telco room is still operational after phase 1. During phase 2 the existing telco room will be relocated to the second floor. All access control and security camera circuits would need to be rerouted to the second floor.
- **Natural Gas:** The existing natural gas service will be impacted by the phase 2 construction. Depending on the scope of the natural gas service work in phase 1, the existing natural gas service would need to be relocated during this phase on or tied into the new service (if provided) in phase 1.
- **Fencing and Security:** No Impacts

7.3.3 Phase 3 – Baggage Claim Expansion and Reconfiguration

Architectural

- **Ground Level:** Approximate 7,700 sf expansion of the baggage claim. Exterior, there will be an approximate 9,900 sf covered baggage drop off area and associated roadway. This area will encroach on the rental car lot to the east. Interior, the combined existing and new baggage claim area will be reconfigured to accommodate two standalone baggage carousels fed from overhead conveyance from the new drop off area. Additional elements include a new oversize bag drop location, new abandoned bag / bag service office area, stair and elevator access to the future upper level administration space, and additional landside restrooms.

- **Upper Level:** Atop the expanded area of the main floor, the shell space for the future administration space, police office, conference rooms and outdoor viewing areas will be constructed. This area will be fit out in Phase 5.

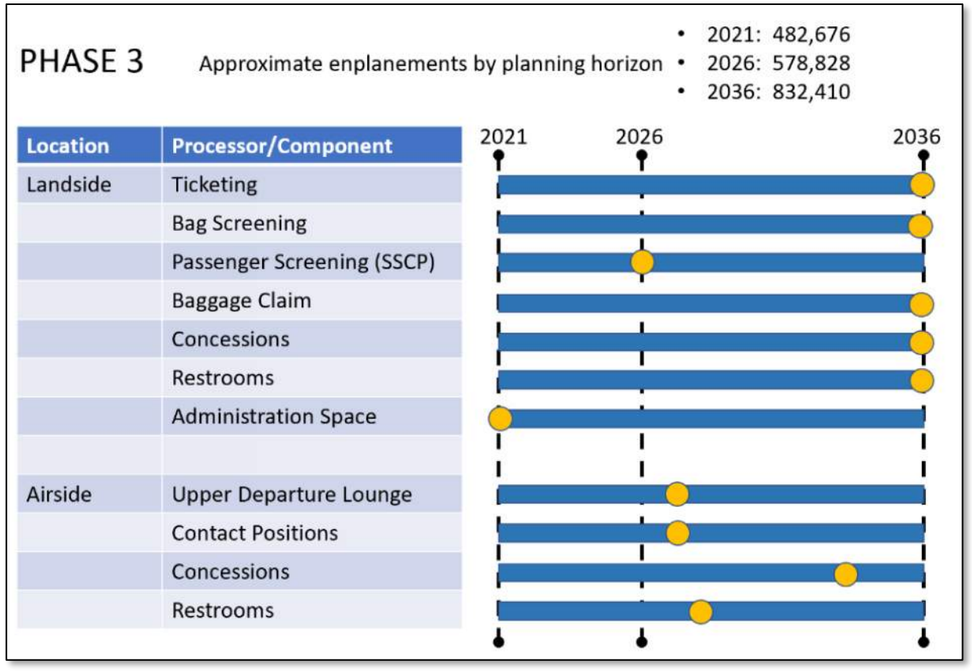
Structural

For the baggage claim expansion, new wide flange steel columns with spread foundations will be constructed on approximately 30' grid spacing. The ticketing level structure will be comprised of 3 ¼" lightweight concrete slab on 3" composite metal deck (overall thickness = 6 ¼") supported by 21" deep wide flange beams spaced at 10'-0" o.c and 30"deep girders. The roof structure will be comprised 1 ½" 20 gauge, type "B" metal deck supported by 16" deep beams spaced at 5'-0" o.c. spanning to 30" deep girders.

Mechanical

The HVAC needs for the administration area will be primarily served by one multi-zone variable air volume (MZVAV) roof-mounted unit with 15,000 cfm and it will consist of chilled and hot water heating coils along with 100% outside air economizer capability, high efficiency filters, an electronic air treatment system such as Cosatron and heat recovery sections for energy savings. The unit will serve the Admin area and operate as conventional VAV units with multiple single duct VAV terminal units and Fan powered VAV terminal units in the duct distribution.

Phase 3	ROM Cost (LOW)	ROM Cost (HIGH)
Hard Construction	$19.7M	$23.2M
Soft Costs (Design, City Mgmt., Art, etc.)	$2.0M	$2.0M
Contingencies	$4.0M	$4.7M
Overall	$25.7M	$29.9M

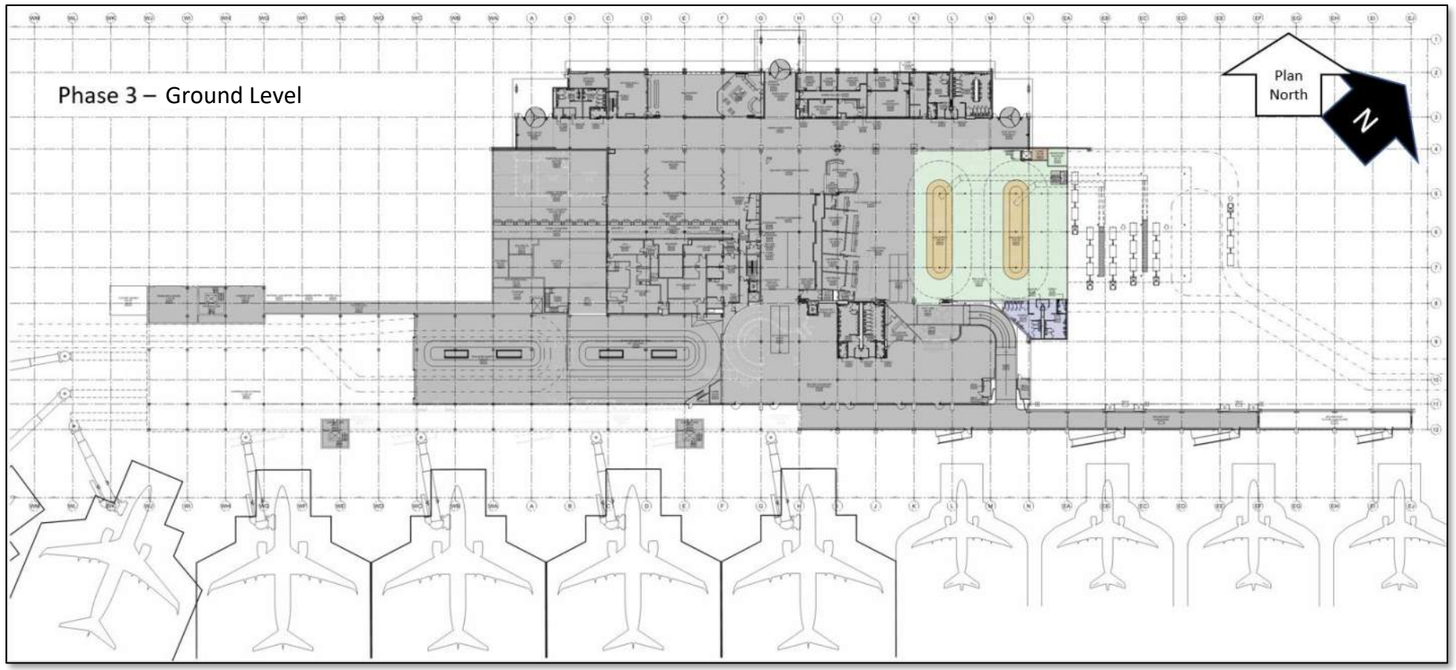


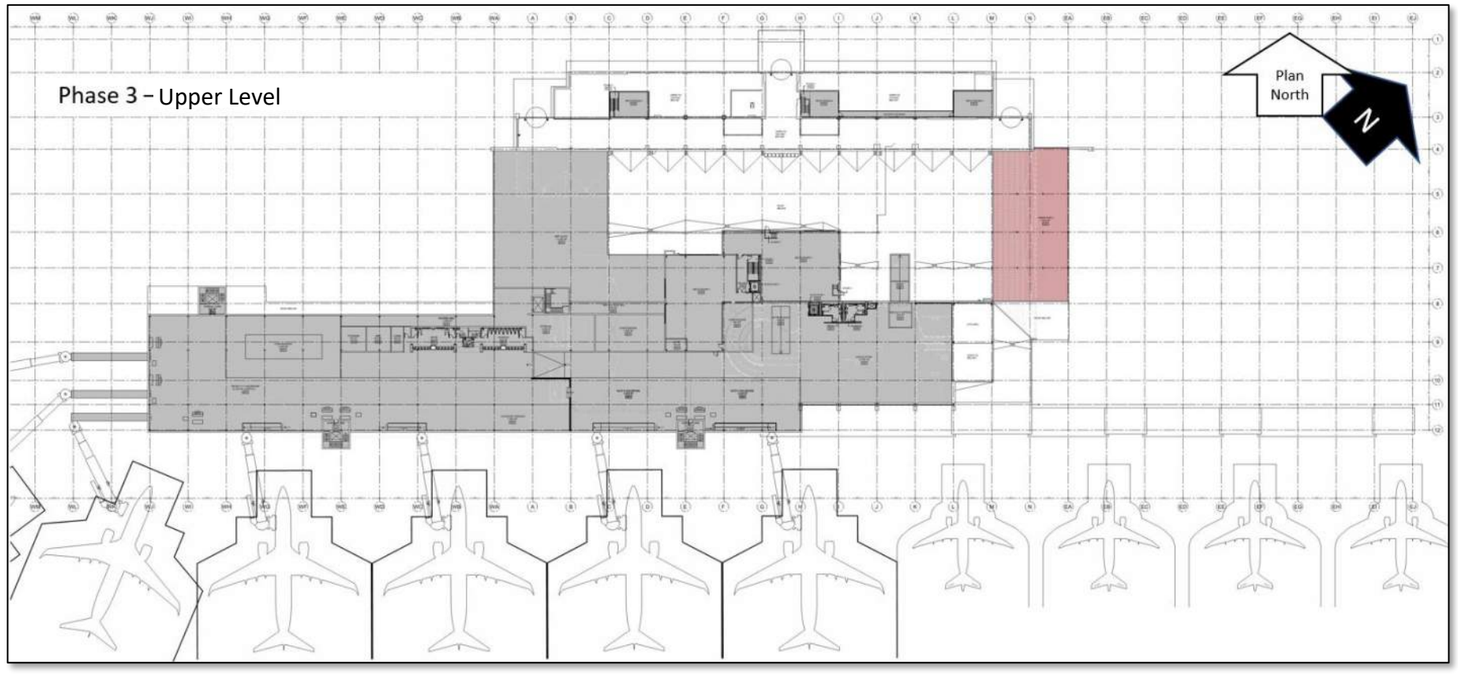


Air distribution systems will consist of galvanized sheet metal ducts with external insulation. High velocity ducts upstream of the terminal units will be constructed to a 4" w.g. pressure class. Terminal units will consist of fan-powered boxes with hydronic reheat coils. Ductwork downstream of terminal units will consist of galvanized sheet metal ducts construction a 2" w.g. pressure class with external insulation. Flexible duct runouts to diffusers less than 8 feet in length will be provided.

Air Handling Alternative: *The new MZVAV AHU for the administration area will be located on the roof inside new mechanical room or penthouse and will require louvers for outside air intake and exhaust. Supply and return air ducts will be extend down from the unit to the new expansion. The new AHUs can also be located on the first level in new mechanical room(s) and will require the construction of mechanical shafts extending up to the roof of the new expansion for outside air intake.*

Air distribution will consist of sheet metal ductwork and variable-air-volume (VAV) terminal units/fan-powered-box terminal units with hot water reheat as required. The roof top units will feature Cosatron air purification and will include self-contained Energy Recovery wheels as required by the Energy Code.





Plumbing and Fire Protection

- **Plumbing**: Similar Phase 1.
- **Fire Protection**: Similar to Phase 1.

Electrical

This phase will require new panel boards and LED lighting to support the expanded spaces.

Information Technology

A new IDF for the new Admin Offices on the 2nd level shall be built and connected to the MDF via fiber optic and copper cables. New data cables for the Admin Office area shall be installed to the new IDF. New data cables for the renovated bag claim area shall be installed to IDFs as required. The new paging system shall be expanded into the bag claim area.

Site Impacts

- **Site Paving:** Additional site paving would be required to provide for the required maneuvering space for the baggage carts. This will require additional space to taken from the rental car lot and converted to airside pavement.

- **Water:** A short portion of the existing water main would be impacted by this phase. A small relocation of the water main is required in this phase, however, the required relocation for phase 4 could also occur during this phase.
- **Storm:** The expansion of the inbound baggage area will require minor modifications to the storm drain to accommodate the change in grades. The storm drain will be connected to the existing parking lot drainage.
- **Site Lighting:** The inbound baggage expansion will require the removal of four 30' light poles to accommodate the expansion of the inbound baggage area and reinstallation of four lights for the GSE roads to the inbound baggage area. New feeder circuits would also be required for the relocation of the lights.
- **Site Electrical:** The expansion of the inbound baggage area has very little impact on site electrical. There are circuits for some outdoor receptacles that would be removed and need to be replaced. Additional circuits may be required for any charging stations that may be required for GSE.
- **Site Communications:** This phase will not result in any known impacts on site communications. The airport may want to install security cameras in the vicinity that may require communication cabling.
- **Natural Gas:** No impact.
- **Fencing and Security:** Relocation of the security fence would be required, and the option to add a vehicle access gate may be desired.

7.3.4 Phase 4 – East Departure Lounge Expansion

Architectural

- **Ground Level:** Two new stair/elevator core elements (approximately 400 sf each) will be provided. Area under the upper level will be paved for storage of GSE vehicles and tug movements.

- **Upper Level:** Approximate 25,800 sf expansion to the east to include concessions space, circulation, restrooms and departure lounge space for four (4) ADG-III aircraft. This will tie in directly to the work from Phase 1. Immediately east of grid line L will be an internal ramp that reduces the elevation of the upper level to approximately 12' above the apron to reduce cost and accommodate ADA compliant access to the aircraft via bridges and fixed walkways.

Structural

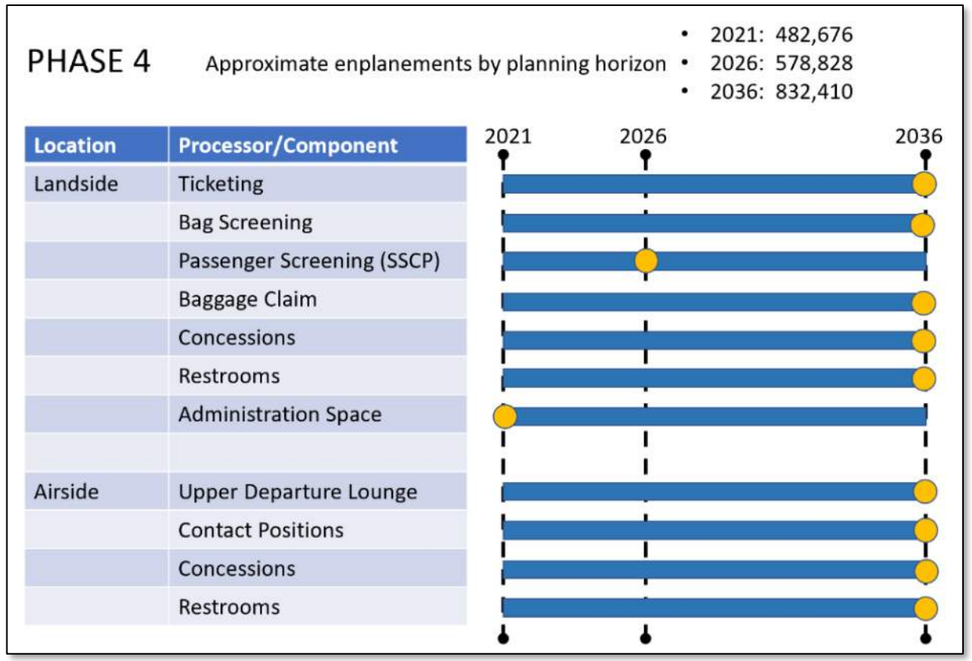
At the existing east departure lounge the existing foundations at grid 12 will need to be enlarged and existing columns will need to be reinforced so they can accommodate the additional load due to the new ticketing level floor in this area. The existing roof will be demolished to construct a floor structure and a new roof. New columns and foundations at grids 8.4, 9.2, 11 and 12 at 30' o.c to provide support for a ticketing level and roof.

The ticketing level structure will be comprised of 3 ¼" lightweight concrete slab on 3" composite metal deck (overall thickness = 6 ¼") supported by 24" deep wide flange beams spaced at 6'-0" o.c and 30"deep girders. The roof structure will be comprised 1 ½" 20 gauge, type "B" metal deck supported by 16" deep beams spaced at 5'-0" o.c. spanning to 30" deep girders See Appendix.

Mechanical

Expansion area will be served by 1 roof-mounted single zone variable volume (SZVAV) unit with 25,000 cfm capacity each. The SZVAV RTU will consist of chilled and hot water heating coils and will have 100% outside

Phase 4	ROM Cost (LOW)	ROM Cost (HIGH)
Hard Construction	$23.8M	$28.9M
Soft Costs (Design, City Mgmt., Art, etc.)	$2.4M	$2.4M
Contingencies	$4.7M	$5.5M
Overall	$30.9M	$36.7M





air economizer capability along with high efficiency filters, an electronic air treatment system such as Cosatron, and heat recovery sections for energy savings.

Air Handling Alternative: *The Expansion areas will be served by 1 single zone Variable Air Volume (SZVAV) AHU with 25000 cfm each and fitted with chilled water and hot heating water coils. The SZVAV AHU will have 100% outside air economizer capability along with high efficiency filters, and heat recovery sections for energy savings. In addition to the pre and final filters, an electronic air treatment system such as Cosatron will be used.*

The new AHU will be located on the roof inside new mechanical room or penthouse and will require louvers for outside air intake and exhaust. Supply and return air ducts will be extend down from the unit to the new expansion. The new AHU can also be located on the first level in new mechanical room and will require the construction of mechanical shafts extending up to the roof of the new expansion for outside air intake.

Air distribution systems will consist of galvanized sheet metal ducts with external insulation. High velocity ducts upstream of the terminal units will be constructed to a 4" w.g. pressure class.

Kitchen grease exhaust air duct and make up air duct will be connected to tenant provided kitchen hoods. Exhaust air duct for dishwasher exhaust systems will be connected to tenant provided dish hoods or direct to dishwashing equipment as required. The final design and sizing of these systems shall be coordinated with the concessionaire as the design progresses.

Plumbing and Fire Protection

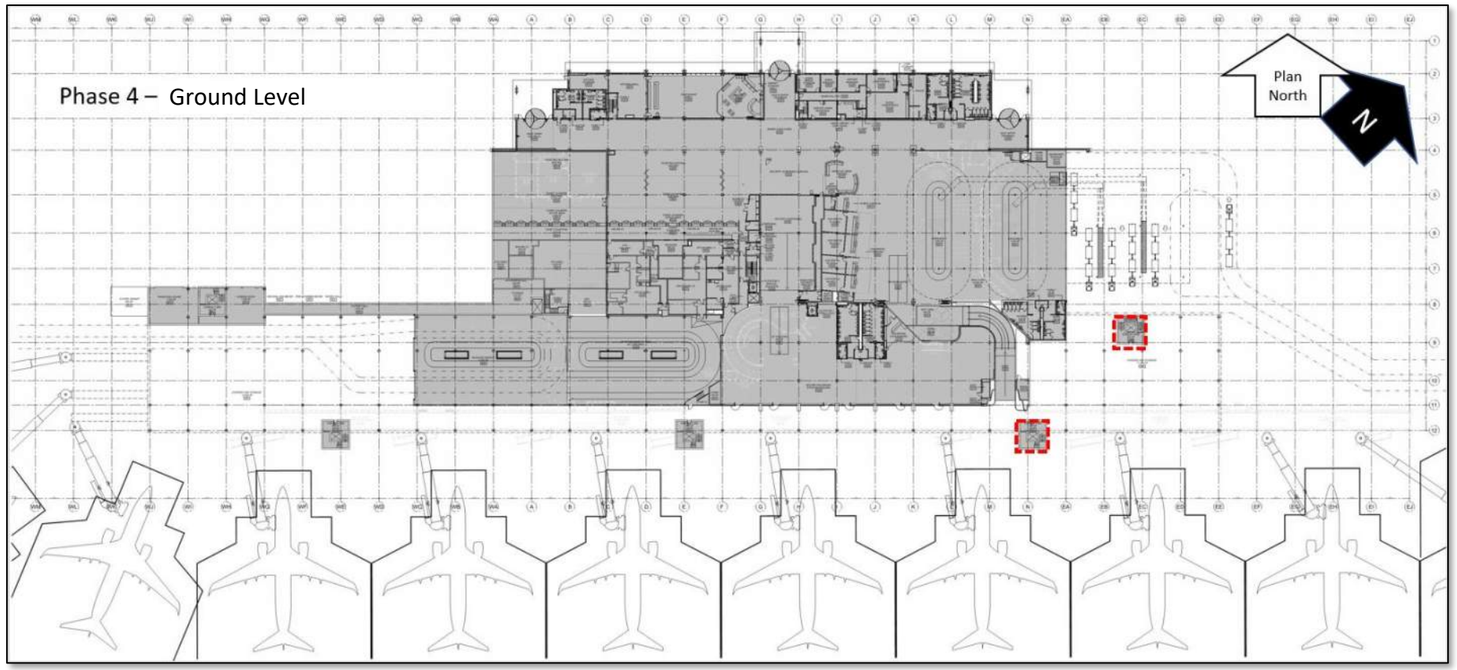
- **Plumbing:** Similar Phase 1.
- **Fire Protection:** Similar to Phase 1.

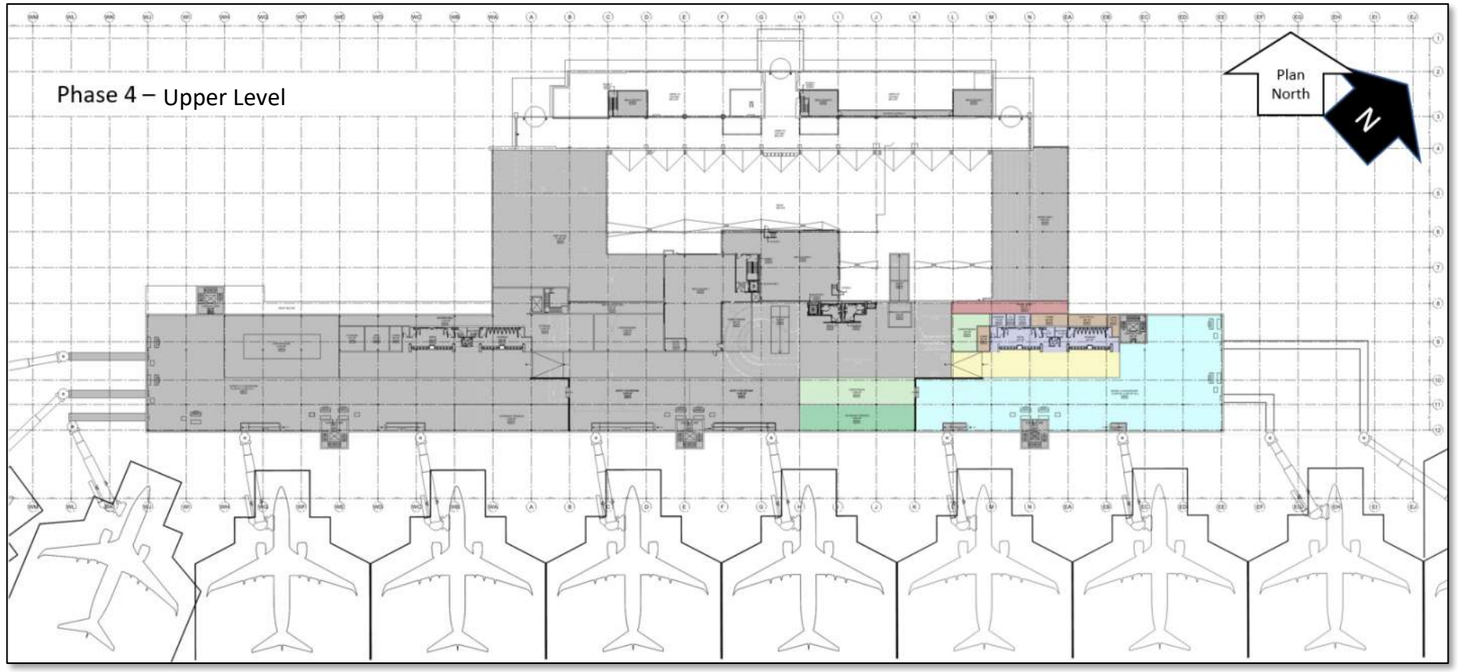
Electrical

This phase will require new panel boards and LED lighting to support the expanded spaces.

Information Technology

New horizontal cables will be installed to the IDFs to support telecommunications equipment as required. The new paging system shall be expanded into the renovated area.





Site Impacts

- **Site Paving:** The proposed hold room expansion to the east will required modifications and expansion to existing asphalt paved areas to the north of the expansion to provide room for ground service equipment, access to the airfield. • Concrete paving will be needed to provide a connection from the existing concrete ramp to the building due to excavation operations. • The area under the expansion hold room for gates 1-3 can be utilized for storage of ground service vehicles and other airline support equipment. This area could be asphalt or concrete.
- **Water:** The expansion of the hold room to the east will require the relocation of the water main that is serving a hydrant adjacent to the apron.
- **Sewer:** No impacts.
- **Storm:** The expansion of the hold room to the east will require removal of storm drain and drywells associated with the existing buildings. A new drywell system or connection to the parking lot storm drain will be required.
- **Site Lighting:** This phase of the expansion will impact the five 60' overhead flood lights for the aircraft parking area. The existing 30' poles and lights (2) for the GSE road will need to be relocated to accommodate the new traffic patterns in the areas. It is possible that portions of the area for the GSE could be lighted by building mounted wall packs, this would eliminate the need for some of the area lights and reduce potential obstructions in the area. New feeder circuits would be required for the apron lighting and any new GSE fixtures.
- **Site Electrical:** The expansion of the hold room to the east will impact site electrical circuits for the GPU pedestals that are located in the expansion area. The GPU pedestals may not need to be replaced, as the PBB may have power connections for aircraft. A location for ground service equipment to charge may need to be identified.
- **Site Communications:** No impacts.
- **Natural Gas:** No impacts.
- **Fencing and Security:** The expansion to the east will require the relocation of a portion of the security fence to allow for additional room for ground service equipment.

7.3.5 Phase 5 – Interior Reconfiguration / Administration Build Out

Architectural

- **Ground Level:** New entry vestibules at each of the three current entry locations. Removal of the revolving doors and installation of vestibules: two at 600 sf each; the central one at 400 sf. Two sets of sliding doors to be provided for each vestibule. Car rental offices and counters could be moved to the existing administration area as desired. If the demand for rental car space exceeds that available from the relocation of administration, then some could remain in current location. As applicable, the area east of the security screening checkpoint can be repurposed into baggage claim lobby space until such time that the area is need for checkpoint expansion. In total, this accounts for approximately 14,000 sf of impacted area.

- **Upper Level:** Approximately 8,100 sf of shell space built out into admin office, conference areas, police office and a possible landside aircraft viewing area. This significantly increases the available are for the expansion of administration staff and provided a second large conference area as desired. This are will tie into the airside via a small corridor for direct access to the new upper level departure lounge space.

Structural

No significant structural impacts for these predominantly interior fit out elements.

Mechanical

Modifications of ductwork and controls to accommodate the reconfiguration of interior spaces.

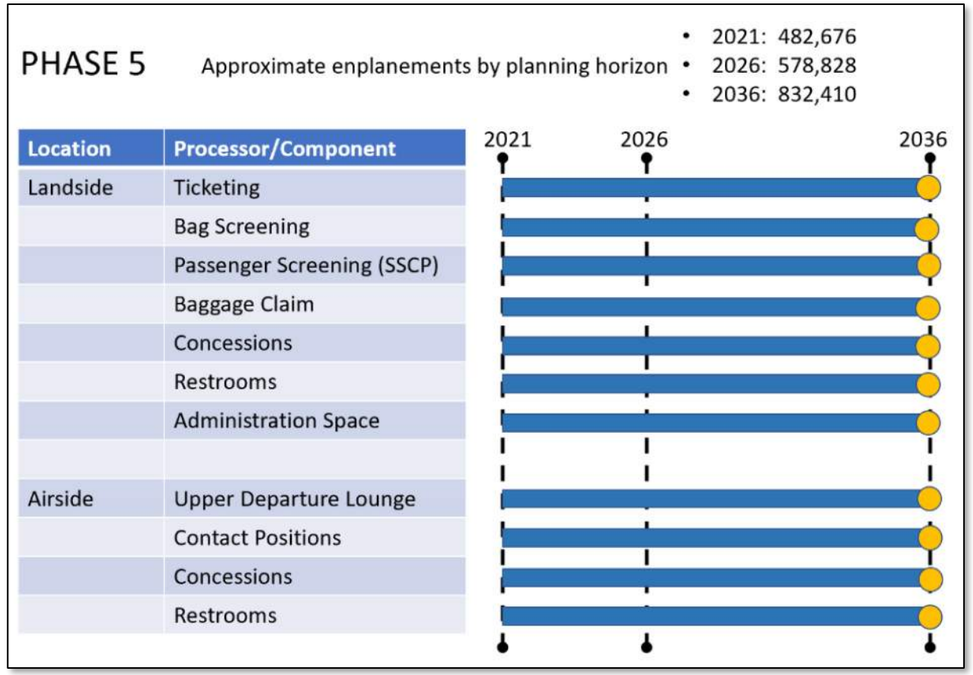
Plumbing and Fire Protection

- **Plumbing:** Similar Phase 1.
- **Fire Protection:** Similar to Phase 1.

Electrical

This phase will require new panel boards and LED lighting to support the expanded spaces.

Phase 5	ROM Cost (LOW)	ROM Cost (HIGH)
Hard Construction	$6.8M	$8.5M
Soft Costs (Design, City Mgmt., Art, etc.)	$0.7M	$0.7M
Contingencies	$1.3M	$1.5M
Overall	$8.84M	$10.7M



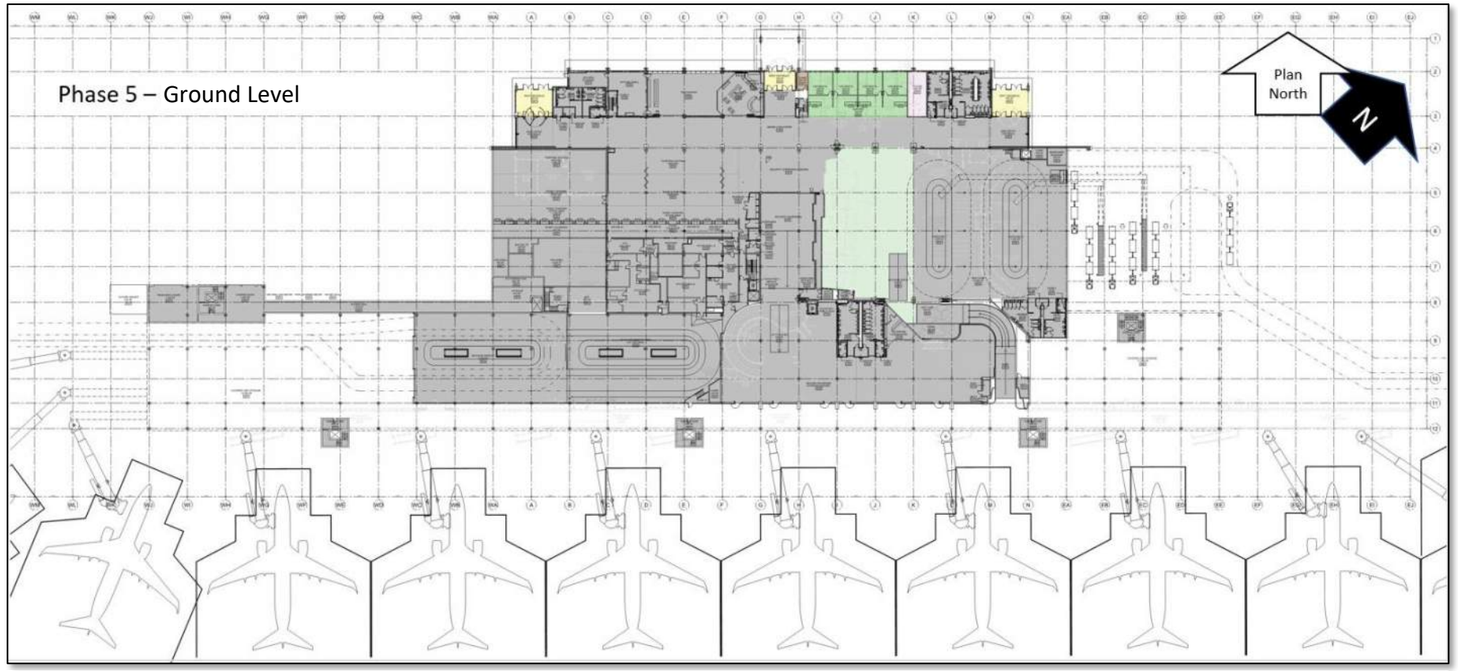


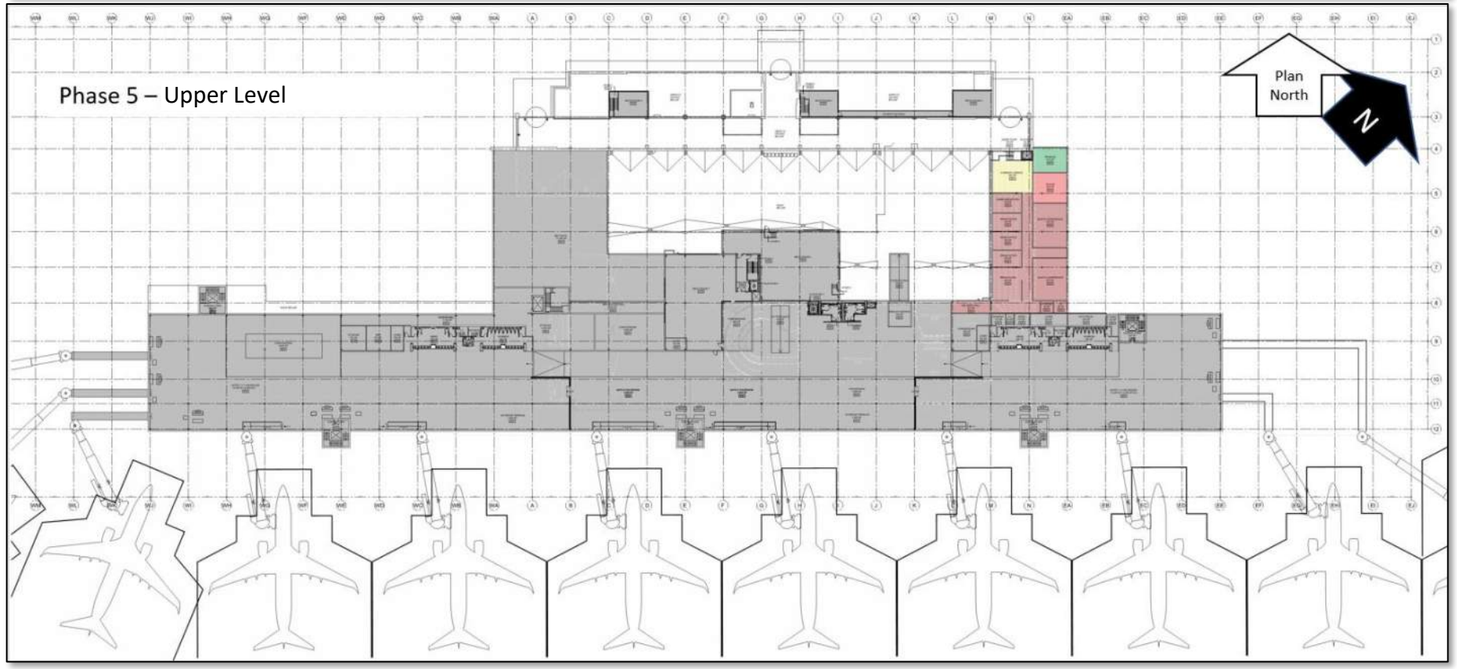
Information Technology

New data cables for the relocated rental car counters shall be installed to IDFs as required. The new paging system shall be expanded into the renovated area. The paging system shall also be expanded into any remaining areas of the terminal prior to demolition of the existing headend equipment

Site Impacts

No site impacts as al work associated with this phase is interior to the building.





CHAPTER 8

BEYOND PLAN

The expansion of the facility as described in this Terminal Area Concept Plan report allows the building to meet the spatial requirements necessary for contact gates for the currently available aircraft parking positions along the existing apron (*Figure 8-1*). These improvements will take the airport well past the 2036 planning horizon. There is significant flexibility in the design:

- All gate positions can accommodate ADG III aircraft – carriers could upgauge aircraft without concern for having available parking positions
- Airport could employ common use ticketing and gate systems to improve efficiency and utilization
- Flight schedules could be expanded to infill times of less activity



FIGURE 8-1 PROPOSED EXPANSION WITH CURRENT APRON AND RUNWAY CONFIGURATIONS

Beyond the scope of this study, space has been preserved to accommodate continued growth. From an airfield perspective, existing and/or additional carriers may require more Remain Overnight (RON) aircraft parking positions. Additional apron could be provided further to the west to accommodate such a request. With the current runway configuration, the shape of the additional RON apron would be trapezoidal due to the edge of the existing departure surface (*Figure 8-2*).



FIGURE 8-2 APRON EXPANSION TO ACCOMMODATE RON PARKING WITH CURRENT RUNWAY CONFIGURATION

When the time comes that the runway is extended and there is the need for the terminal to grow to meet even a further out demand horizon, both the building and the apron have been conceptualized to allow for sequential and scalable expansion (*Figure 8-3*). Again, the flexibility of the design allows for:

- Expansion of primary processing elements (ticketing, bag claim, screening, and aircraft boarding) as space has been preserved both internally and externally
- A more rectilinear RON parking configuration due to the new runway departure surface requirements

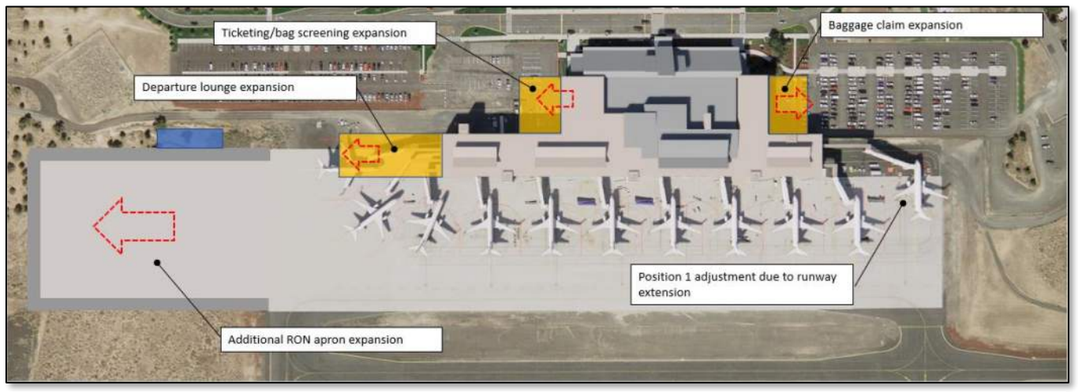


FIGURE 8-3 CONTINUED APRON EXPANSION AND BUILDING EXPANSION, WITH NEW RUNWAY CONFIGURATION

9.1 STAKEHOLDER INPUT – SURVEY INFORMATION

Following is a sampling of the questions from the survey prepared for the various stakeholder groups:



RDM Airport Terminal Area Concept Plan Survey

The Redmond Municipal Airport (RDM) is in the process of preparing a Terminal Area Concept Plan which is the first step towards making some modifications to the terminal building to account for increasing passenger traffic. To be comprehensive in our assessment we are reaching out and soliciting input from stakeholders (users, airport staff, airlines, rental car, concessionaires, TSA, security, community groups, etc.) relative to how the facility currently operates, impacts of increased enplanements, possible changes/modifications to improve efficiency, future technological advancements, passenger experience, social distancing requirements, etc.

The starting point of our study is looking at "hot sports" that have been identified, as seen in the image below. Our goal is to expand on this list, if needed, to make sure we are addressing all items to the extent possible as part of this study.

"Hot Spot" Issues to be Addressed as Part of the TACP

Lower Level Plan

Upper Level Plan

Important elements to be considered as part of the TACP include:

1. Revolving doors not preferred and should be replaced during renovation/expansion
2. Unused concession space
3. Ticketing area not fully utilized
4. Security screening checkpoint will need to expand to meet forecasted demand
5. Baggage claim area is overcrowded during peaks
6. Rental car queuing is overcrowded during peaks
7. Baggage make-up congested during peaks
8. Single lower level departure lounge is undersized
9. Desire to activate/utilize existing upper level

A result of this study may include some interior reconfiguration as well as the development of departure lounges on the 2nd floor. An idea of how that might be manifest is illustrated below, however much work has yet to be done to more completely define the appropriate size and configuration of the outcome.

EXISTING TERMINAL

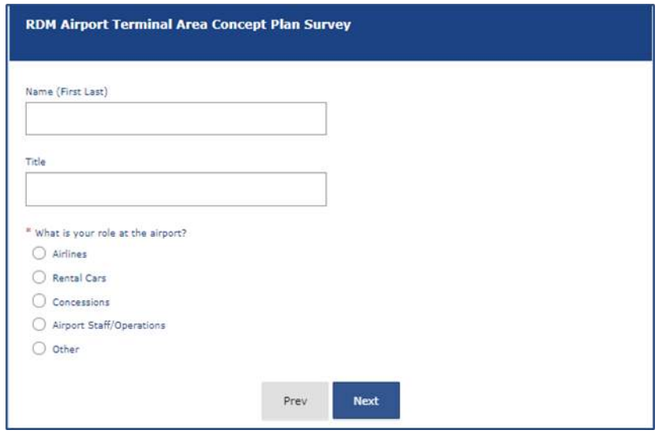
TERMINAL AFTER

That is where you come in. You have been asked to participate in this survey because you are directly involved with the operations at the airport. Your input is valuable. We intend to compile all the information obtained through this survey to help inform the proposed modifications/expansions/reconfigurations that result from this study.

Please complete survey by Friday, April 16, 2021.

Thank you in advance for your input.

Next



RDM Airport Terminal Area Concept Plan Survey

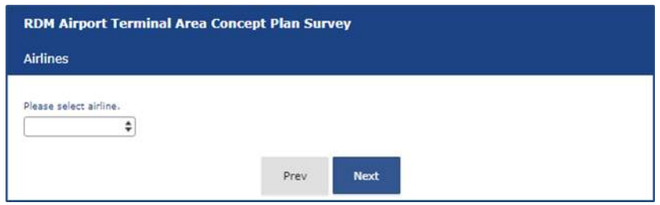
Name (First Last)

Title

* What is your role at the airport?

- Airlines
- Rental Cars
- Concessions
- Airport Staff/Operations
- Other

Prev Next

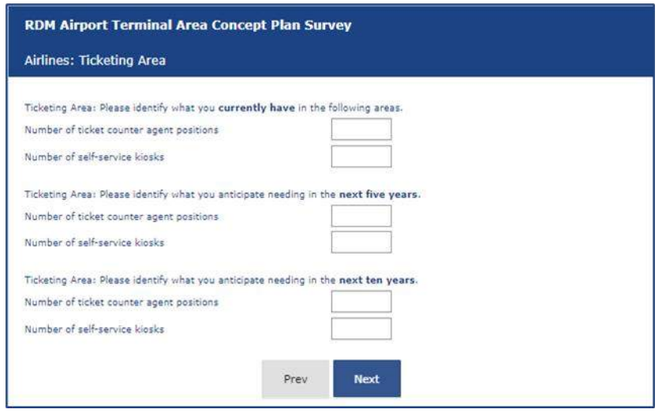


RDM Airport Terminal Area Concept Plan Survey

Airlines

Please select airline.

Prev Next



RDM Airport Terminal Area Concept Plan Survey

Airlines: Ticketing Area

Ticketing Area: Please identify what you **currently have** in the following areas.

Number of ticket counter agent positions

Number of self-service kiosks

Ticketing Area: Please identify what you anticipate needing in the **next five years**.

Number of ticket counter agent positions

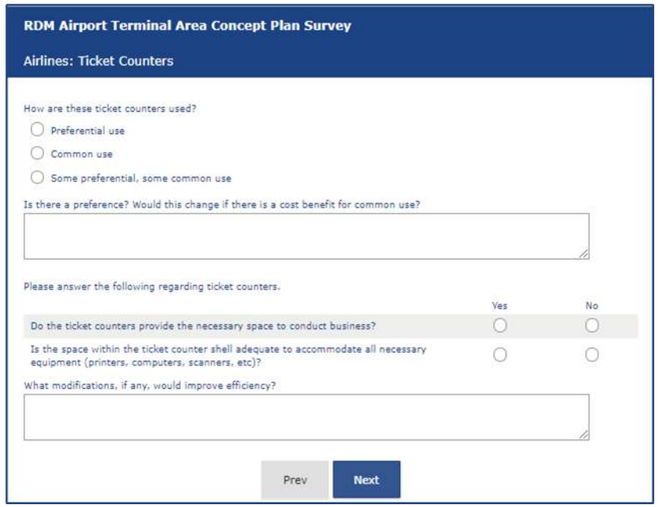
Number of self-service kiosks

Ticketing Area: Please identify what you anticipate needing in the **next ten years**.

Number of ticket counter agent positions

Number of self-service kiosks

Prev Next



RDM Airport Terminal Area Concept Plan Survey

Airlines: Ticket Counters

How are these ticket counters used?

- Preferential use
- Common use
- Some preferential, some common use

Is there a preference? Would this change if there is a cost benefit for common use?

Please answer the following regarding ticket counters.

	Yes	No
Do the ticket counters provide the necessary space to conduct business?		
Is the space within the ticket counter shell adequate to accommodate all necessary equipment (printers, computers, scanners, etc)?		

What modifications, if any, would improve efficiency?

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Ticketing Queue

How much depth do you allocate to the ticketing queue?

Do you separate passengers by status (standard, premier, etc.)?

- Yes
- No

If yes, how much of the available space is allocated to each level?

If such a separation does not exist, would adding one add value to the passenger?

- Definitely would
- Probably would
- Probably would not
- Definitely would not

Please explain

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Technologies

Ticketing/baggage technologies: Please identify what you have currently and what you anticipate in five and ten years.

	Present	In 5 years	In 10 years
Self bag tagging			
Self bag drop			
Separate oversize bag drop			
Curbside check-in/bag check			
Other			

Other (please specify)

How do/will these systems/technologies impact the process or the way the ticketing area is configured?

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Operations Area

Airline Operations Area: Please identify what you have **currently**.

Number of airline operations offices

Size of airline operations office areas

If there is there a baggage service office, how big is it?

Airline Operations Area: Please identify what you anticipate in **five years**.

Number of airline operations offices

Size of airline operations office areas

If there is there a baggage service office, how big is it?

Airline Operations Area: Please identify what you anticipate in **ten years**.

Number of airline operations offices

Size of airline operations office areas

If there is there a baggage service office, how big is it?

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Ticket Office Area

Please answer the following regarding office and storage space:

	Yes	No
Do you efficiently utilize all the space included in your lease agreement relative to office and storage?		
Will there be more office/storage needs in the **next five years**?		
Will there be more office/storage needs in the **next ten years**?		

If no, please explain

Airline Ticket Office Area: Please identify what you have **currently**.

Number of airline ticket offices

Size of airline ticket office area

Airline Ticket Office Area: Please identify what you anticipate in **five years**.

Number of airline ticket offices

Size of airline ticket office area

Airline Ticket Office Area: Please identify what you anticipate in **ten years**.

Number of airline ticket offices

Size of airline ticket office area

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Personnel

Airline Personnel: Please identify what you have **currently**.

Number of ticketing agents

Number of ramp personnel

Number of employee parking spaces

Airline Personnel: Please identify what you anticipate in **five years**.

Number of ticketing agents

Number of ramp personnel

Number of employee parking spaces

Airline Personnel: Please identify what you anticipate in **ten years**.

Number of ticketing agents

Number of ramp personnel

Number of employee parking spaces

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Airlines: Final Thoughts

Are there any issues with the following?

	Yes	No
Takeaway belt system and baggage screening		
Baggage make-up area		
Departure lounge space		
Bag claim area		

If yes, please explain

Are there any issues associated with ADA/accessibility that need to be addressed (wheelchair storage, accessibility assistance services, etc.)?

Yes No

If yes, please explain

* Other needs/wants/concerns (layout, lighting, IT, etc.)?

Yes No

If yes, please explain

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Other Valued Stakeholder

What group are you associated with?

What is your involvement with the airport?

What is the perception in the community of the airport?

Do you feel the passenger experience at the airport is positive?

Yes No

How could the passenger experience be improved?

Are the amenities at the airport adequate?

	Yes	No
Airlines		
Rental Cars		
Pre-Security Concessions		
Post-Security Concessions		

If no, please explain

The airport is the first place that new visitors experience when they arrive and last place they remember when they leave. What is the essence of Redmond/Central Oregon that the airport experience should convey?

What is your vision for the future of the airport as it relates to the continued growth of Central Oregon?

Are there any issues associated with ADA/accessibility that need to be addressed (wheelchair storage, accessibility assistance services, etc.)?

Yes No

If yes, please explain

* Other needs/wants/concerns (layout, lighting, IT, etc.)?

Yes No

If yes, please explain

Prev Done

RDM Airport Terminal Area Concept Plan Survey

Airport Staff/Operations: Operations Concerns

Discuss, in detail, any issues with the following operations:

Curbside access/amenities

Ticketing area

Baggage screening

Baggage make-up

Baggage drop-off

Landside concessions

Airside concessions

Departure lounge space

Passenger boarding process

Passenger experience

Signage/wayfinding

Ground transportation

Airport entry doors

Other

Prev Next

RDM Airport Terminal Area Concept Plan Survey

Copy of page: Airport Staff/Operations: Systems

Discuss, in detail, any issues with the following systems:

Electrical power

Lighting

Emergency power

Mechanical (HVAC)

Plumbing

Drainage

Public address

Fire alarm

Security/access control

WiFi

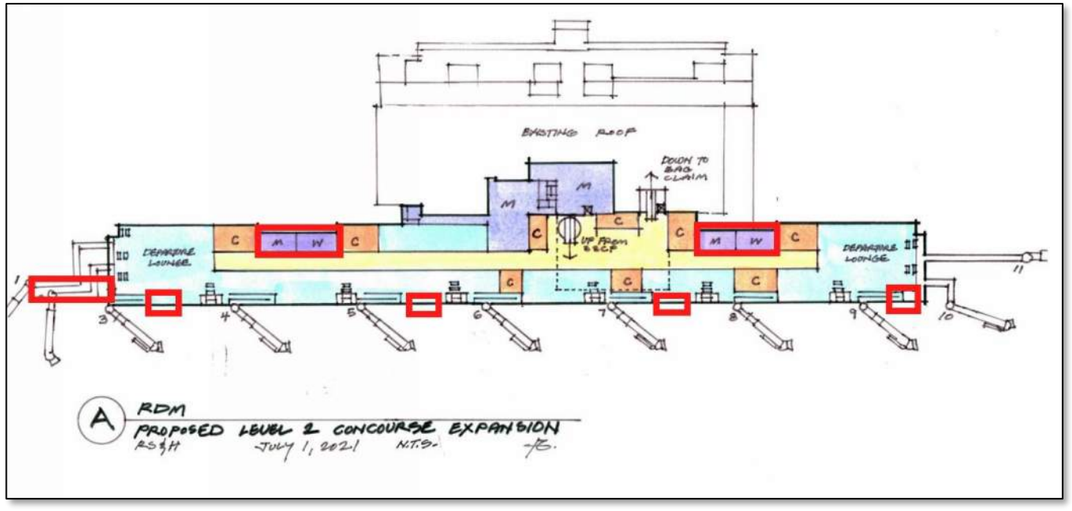
Low voltage systems

Other

Prev Next

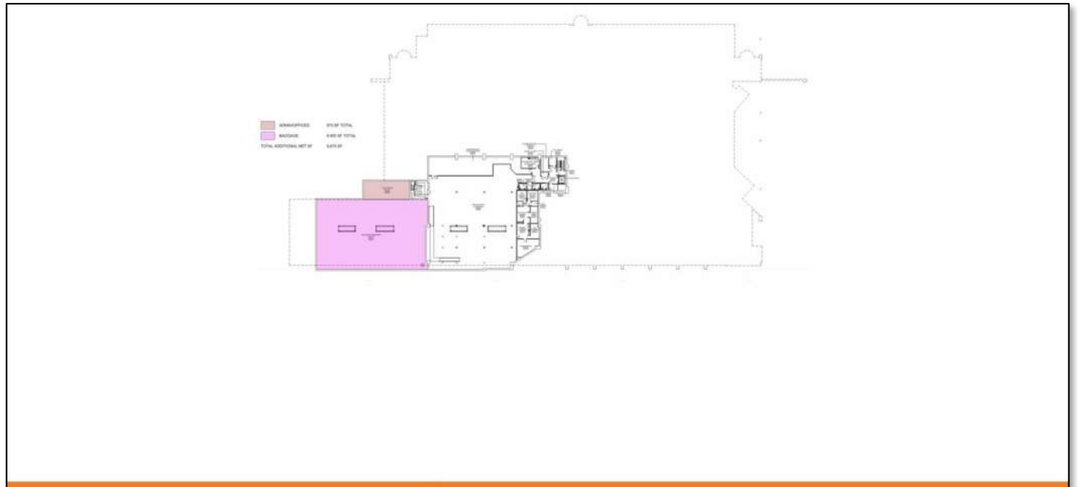
9.2 INTERIM PLANNING CONCEPTS

Following are interim planning concepts that were considered and refined.

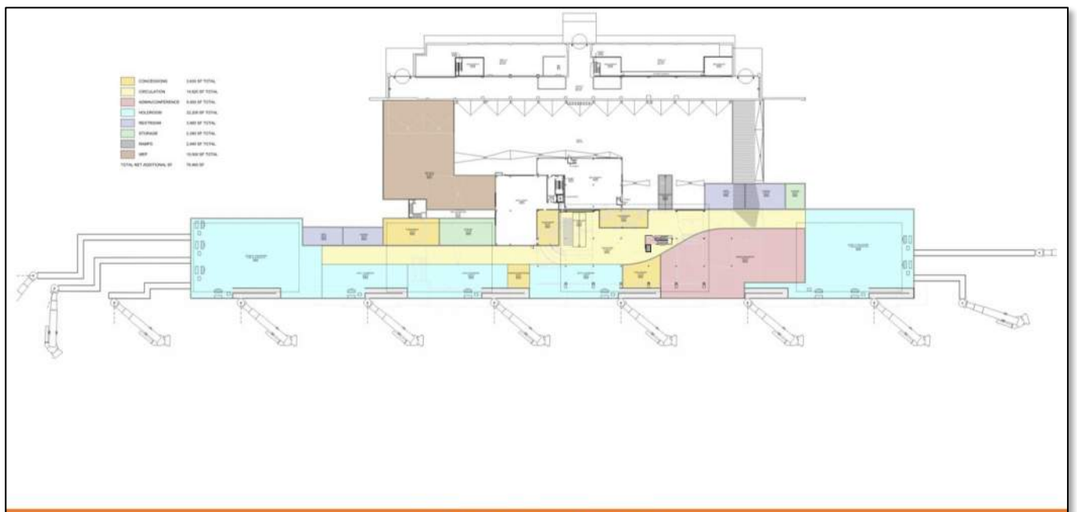




Preliminary Concept – Level 1



Preliminary Concept – Basement



Preliminary Concept – Level 2






SE Salmon Ave
unicipal Airport



9.3 INTERIM PHASING DIAGRAMS

This initial iteration of phasing assumed that the movement of the mechanical and electrical plant would happen as part of the second phase in order to keep the initial costs lower. These images represent that initial approach

Separate into 4 sections for pricing:

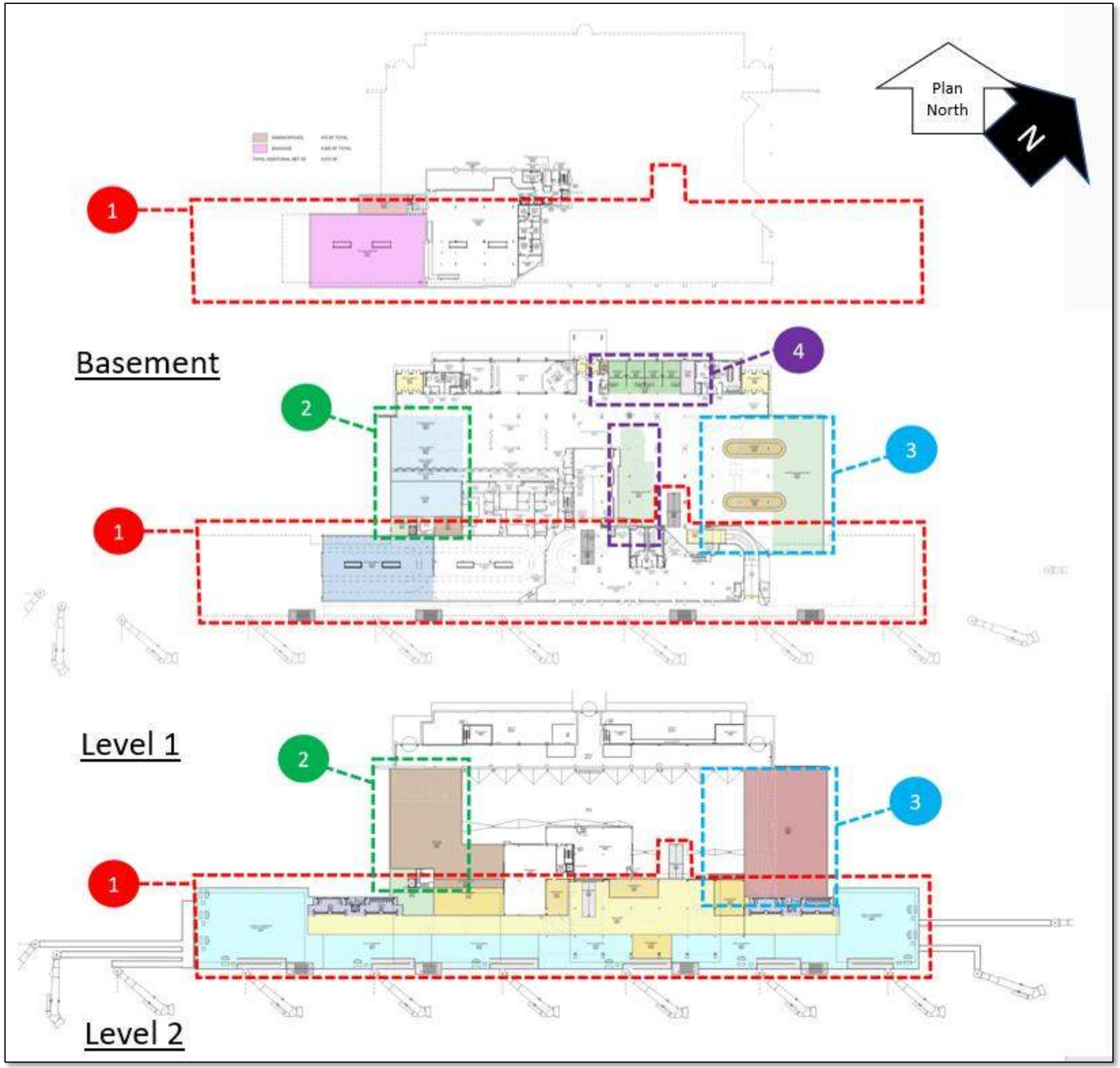
1 Departure lounge expansion
1. Bag screening
2. Bag make-up

2 Ticketing expansion
1. ATO space
2. Move MEP to roof
3. Ticketing area expansion

3 Baggage claim expansion
1. Admin on upper level

4 Internal reconfiguration
1. Rental Car relocation to current admin
2. Free up space for SSCP enlargement or more bag claim elbow room

Following the presentation of this approach the Airport directed the design team to include the relocation of the mechanical/electrical plant in the first phase to ensure that it gets executed early in the program so as to not limit future expansion opportunities. From this the final 5-phase approach was developed.



9.4 SITE CONSIDERATIONS AT FULL BUILD OUT

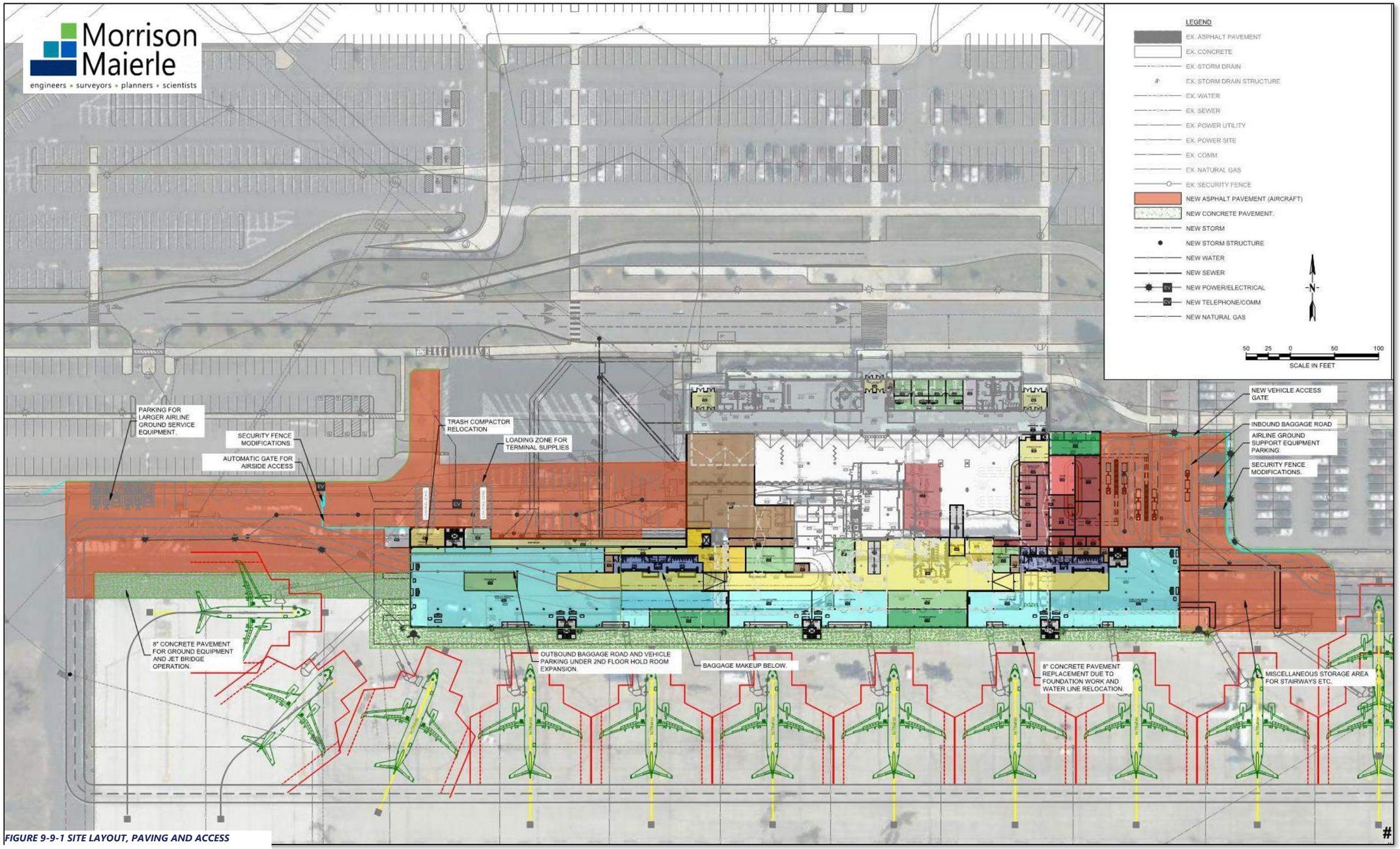


FIGURE 9-9-1 SITE LAYOUT, PAVING AND ACCESS

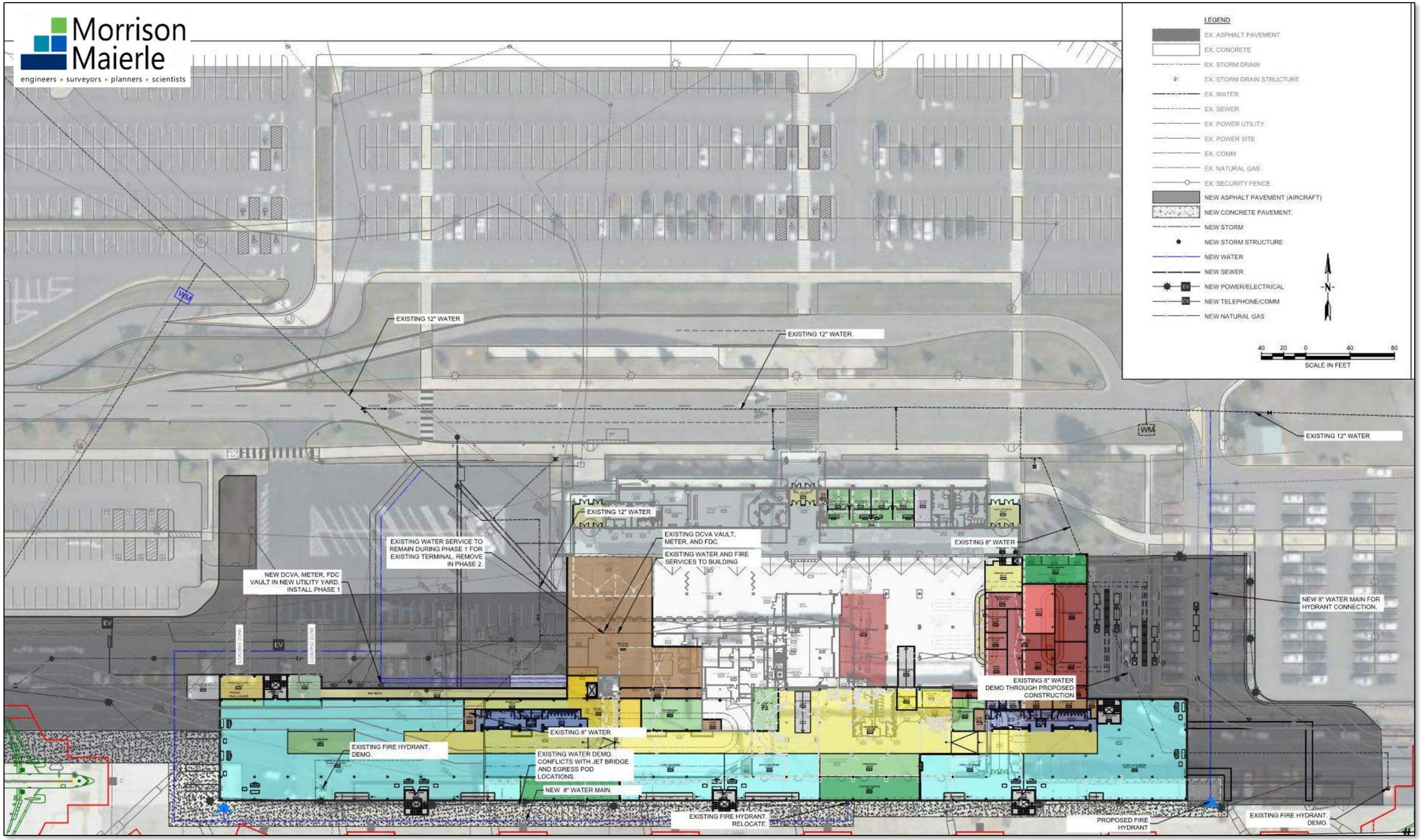


FIGURE 9-9-2 SITE WATER

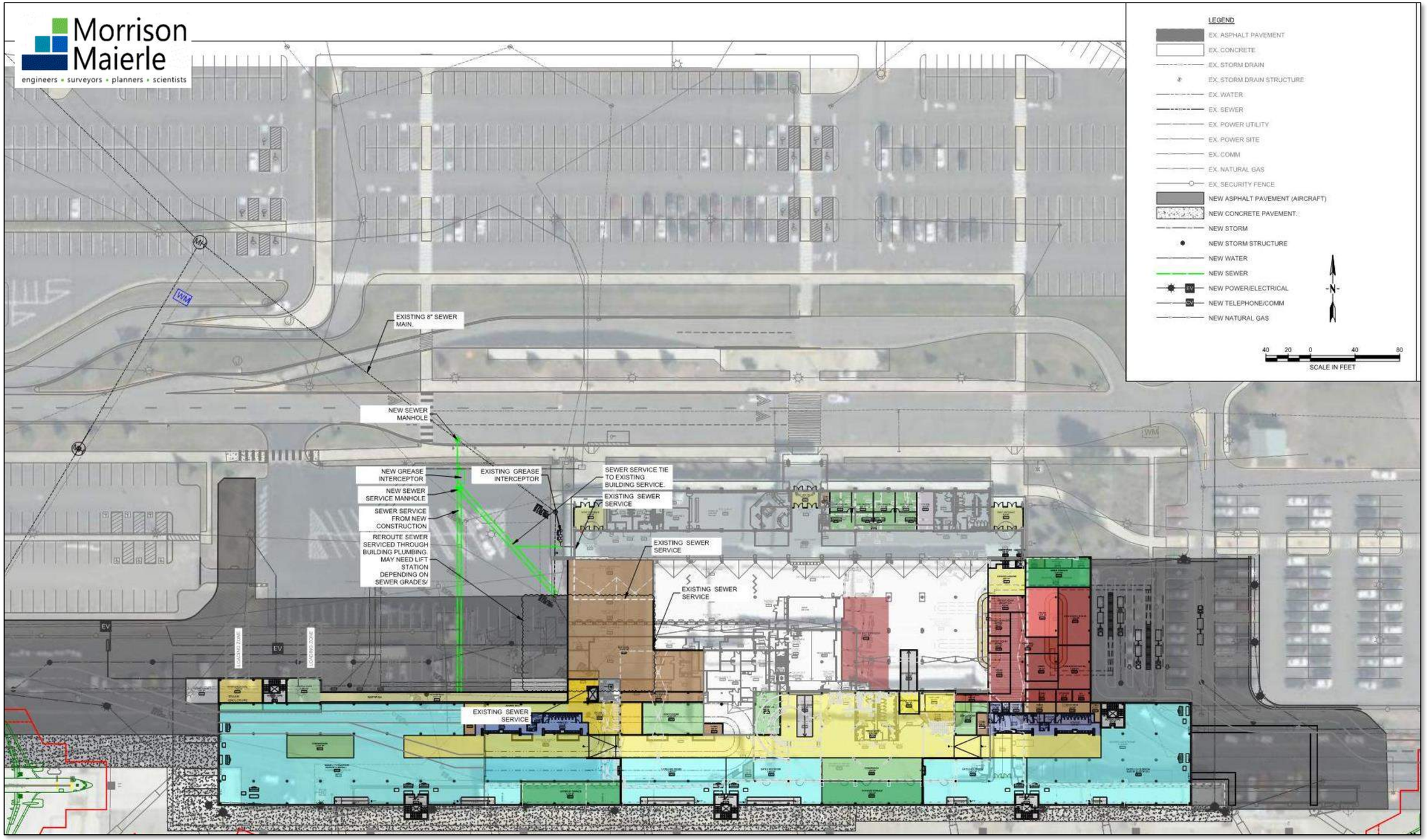


FIGURE 9-9-3 SITE SEWER

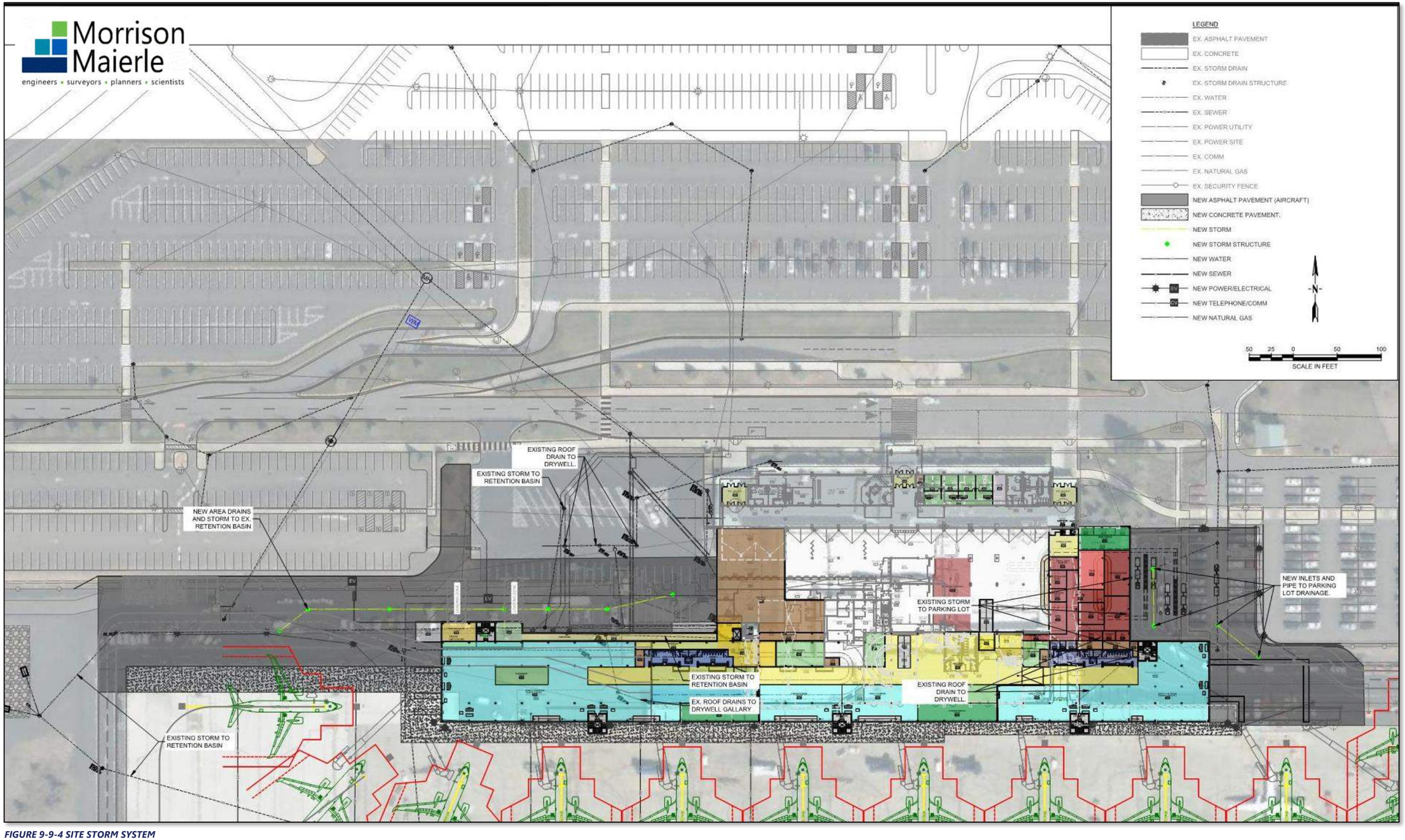


FIGURE 9-9-4 SITE STORM SYSTEM

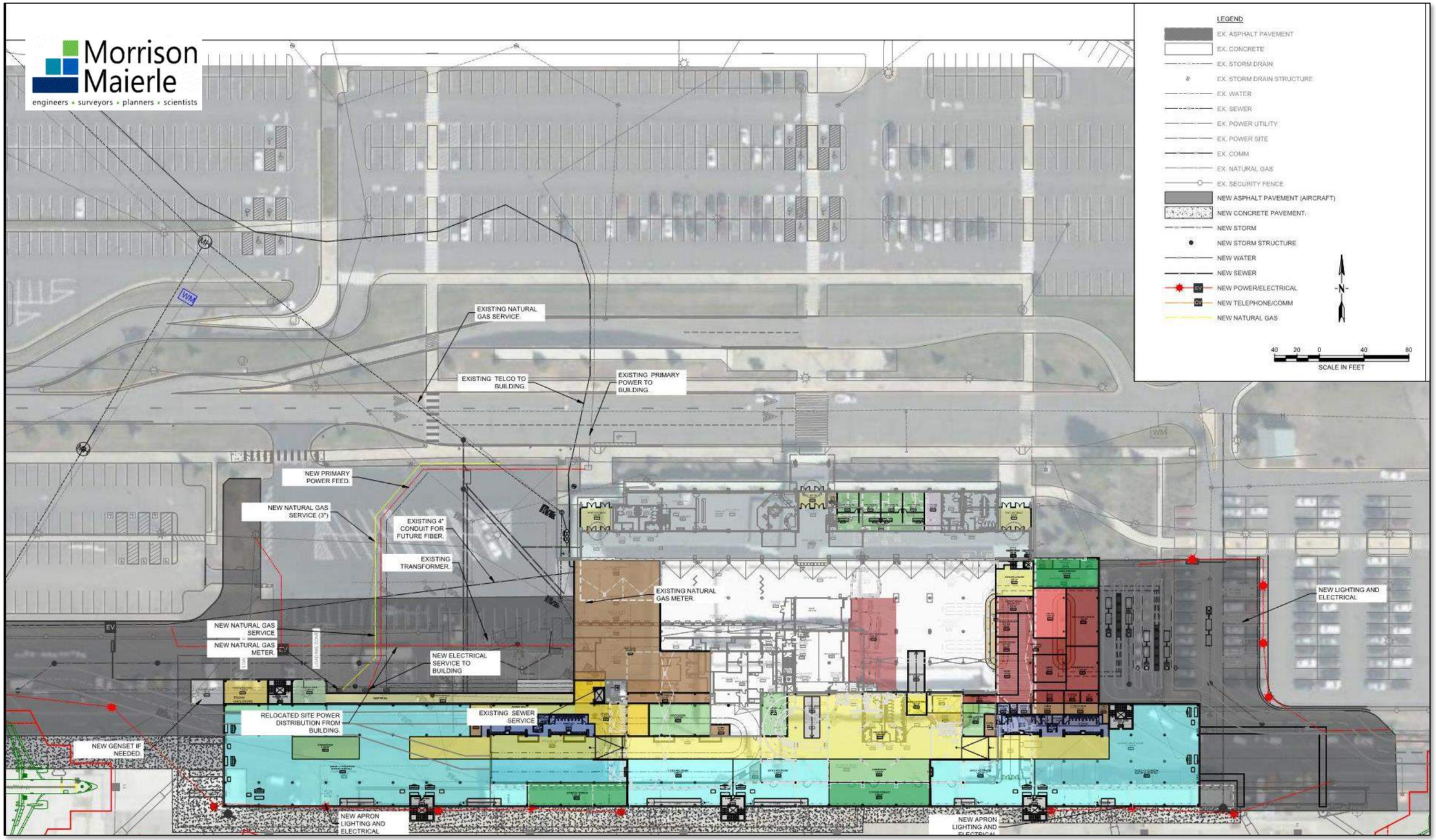


FIGURE 9-9-5 SITE POWER, COMMUNICATIONS, NATURAL GAS

WEST EXPANSION UTILITY CONSIDERATIONS

WATER

1. MAIN WATER SERVICE VAULT WOULD NEED TO BE RELOCATED. THIS IS THE MAIN DOMESTIC AND FIRE PROTECTION WATER SERVICE. NEED TO FIND LOCATION THAT IS NOT IN THE WAY OF FUTURE EXPANSION.
2. 8" WATER MAIN THAT WRAPS AROUND TERMINAL AIRSIDE MAY NEED TO BE RELOCATED AROUND FUTURE EXPANSION.

SEWER

1. SEWER SERVICES EXTENDED THROUGH EXPANSION.
2. POTENTIAL SEWER MAIN RELOCATION OUTSIDE FUTURE FOOTPRINT, MAY HAVE SOME PIPE GRADE CHALLENGES.
3. SEWER LIFT STATION RELOCATION.

STORM

1. MISC STORM DRAIN FOR SURFACE AND ROOF DRAINS. ROOF DRAINS RUN TO DRY WELL. STORM TO WEST POND. SHOULD CONSOLIDATE STORM.
2. RELOCATE STORM LIFT STATION FOR FOUNDATION DRAINS.

UTILITY POWER

1. UTILITY TRANSFORMER/METER LOCATION MAY BE IMPACTED DEPENDING ON EXTENTS OF EXPANSION.

SITE POWER

1. SITE POWER FROM THE ELECTRICAL ROOM FOR THE AIRLINE POWER RECEPTACLE, LAV DUMP, APRON LIGHTING AND GSE ROAD LIGHTING MAY BE IMPACTED.

SITE COMM

1. EXISTING SITE COMM SHOULD NOT BE IMPACTED UNLESS EXISTING MECH/ELEC ROOM AREA IS EXPANDED WEST.

NATURAL GAS

1. NATURAL GAS METER AND SERVICE ENTRANCE WILL NEED TO BE RELOCATED.
2. EXISTING NATURAL GAS SERVICE NOT IMPACTED UNLESS EXISTING MECH/ELEC ROOM AREA IS EXPANDED WEST.

MISCELLANEOUS

1. TRASH COMPACTOR LIKELY RELOCATED FOR GROUND CIRCULATION
2. VEHICLE ACCESS GATE RELOCATION FOR ACCESS TO AIRFIELD.
3. CARGO ACCESS WILL BE IMPACTED

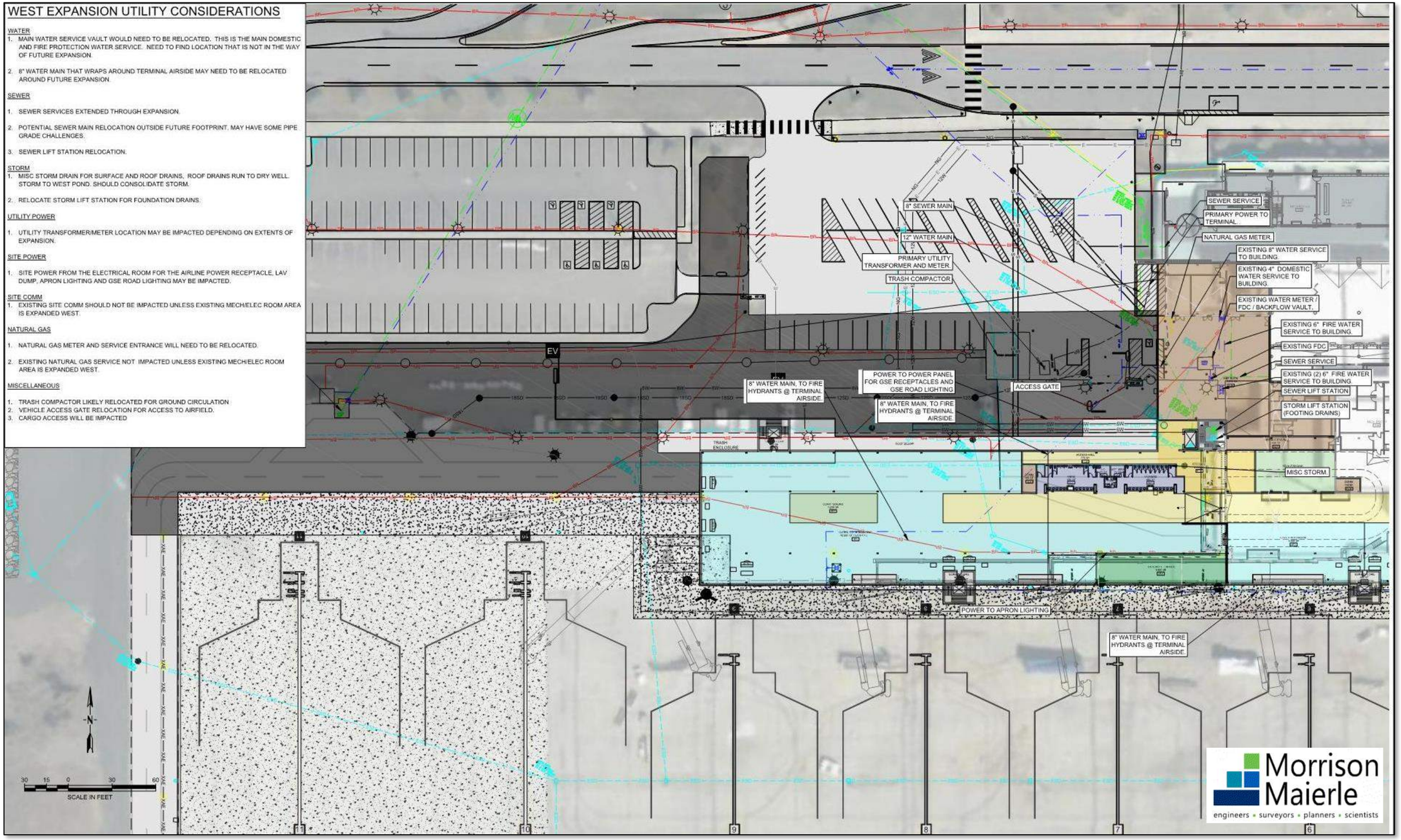
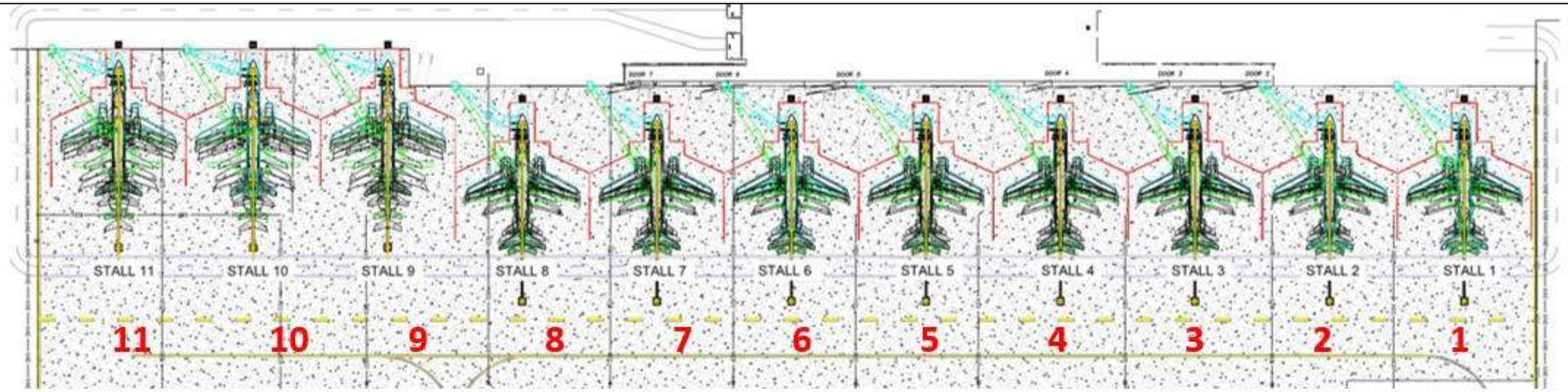


FIGURE 9-9-6 WEST SIDE EXPANSION UTILITY CONSIDERATIONS

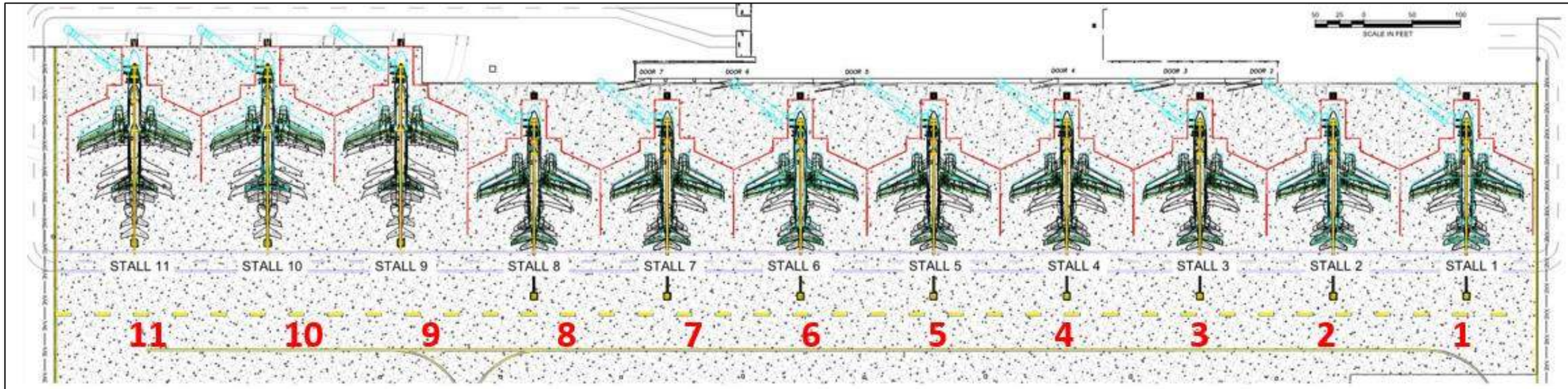
9.5 PASSENGER BOARDING BRIDGE ANALYSIS



Parking Stall	Bridge manufacturer	Bridge model	Tunnel variant	Fleet Mix	Apron Elevation	Maximum Rotunda Elevation	Height from 1st Level FF (ft)	Height from 2nd Level FF (ft)
1	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3067.58	3079.93	12.77	-1.23
2	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3067.03	3079.38	12.22	-1.78
3	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3066.47	3078.82	11.66	-2.34
4	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3065.92	3078.27	11.11	-2.89
5	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3065.36	3077.71	10.55	-3.45
6	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3065.08	3077.43	10.27	-3.73
7	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3064.16	3076.51	9.35	-4.65
8	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3063.67	3076.12	8.96	-5.04
9	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3063.25	3075.75	8.59	-5.41
10	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3063.90	3075.70	8.54	-5.46
11	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	1	3065.09	3076.79	9.63	-4.37
Level 0 FF Elevation =	3062.58	(Architectural 0' 0": Lobby)						
Level 1 FF Elevation =	3067.16	(Architectural 4' 7": Hold Room, Main Floor)						
Level 2 FF Elevation =	3081.16	(Architectural 18' 7": 2nd Floor)						
Note: On average, maximum rotunda elevation can increase 0.75 ft without the Q400.								

Fleet Mix 1	Fleet Mix 2
A319-100	CRJ-200
A320-200	CRJ-700
A321-200	CRJ-900
737-800W	E175
737-900W	Q400
CRJ-200	
CRJ-700	
CRJ-900	
E175	
Q400	

All Fleet 1



Parking Stall	Bridge manufacturer	Bridge model	Tunnel variant	Fleet Mix	Apron Elevation	Maximum Rotunda Elevation	Height from 1st Level FF (ft)	Height from 2nd Level FF (ft)
1	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3067.58	3080.63	13.47	-0.53
2	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3067.03	3080.08	12.92	-1.08
3	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3066.47	3079.52	12.36	-1.64
4	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3065.92	3079.02	11.86	-2.14
5	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3065.36	3078.41	11.25	-2.75
6	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3065.08	3078.18	11.02	-2.98
7	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3064.16	3077.26	10.10	-3.90
8	JBT AeroTech-Jetway	A3 Series 125R	A3 58/116	2	3063.67	3076.87	9.71	-4.29
9	JBT AeroTech-Jetway	A3 Series 125R	A3 68/141	2	3063.25	3078.40	11.24	-2.76
10	JBT AeroTech-Jetway	A3 Series 125R	A3 68/141	2	3063.90	3078.35	11.19	-2.81
11	JBT AeroTech-Jetway	A3 Series 125R	A3 68/141	2	3065.09	3079.59	12.43	-1.57

Fleet Mix 1	Fleet Mix 2
A319-100	A319-100
A320-200	A320-200
A321-200	A321-200
737-800W	737-800W
737-900W	737-900W
CRJ-200	CRJ-200
CRJ-700	CRJ-700
CRJ-900	CRJ-900
E175	E175
Q400	

w/o Q400

9.6 STRUCTURAL DESIGN PARAMETERS

Code Information:

2019 Oregon Structural Specialty Code

- ASCE 7-16 - Minimum Design Loads for Buildings and Other Structures
- ACI 318-14 - Building Code Requirements for Structural Concrete
- AISC 360-16 - Specification for Structural Steel Buildings

Structural Design Criteria

- Building Risk Category_____III
- Live Loads Roof_____20 psf
  Public Areas_____100 psf
  Corridors and Stairs_____100 psf
  Mechanical Equip. Areas_____150 psf
- Snow Load
  Ground Snow Load_____25 psf
- Wind Load
  Ultimate Design Wind Speed _____115 mph
  Exposure Category_____C

- Seismic Load (Preliminary, to be verified with geotechnical report)
  Mapped Acceleration Parameters
  S_s:_____0.39 g
  S_1:_____0.16 g
  Design Spectral Acceleration Parameters
  S_{DS}:_____0.26 g
  S_{D1}:_____0.11 g
  Site Class:_____B
  Seismic Importance Factor:_____1.25
  Seismic Design Category:_____B
  Seismic Force Resisting System:
  Steel Systems not Specifically Detailed for Seismic Resistance
  Seismic Response Coefficient:____2

Typical Bay Size: 30'x30'

Roof Construction

The roof structural system will be comprised 1 ½" 20 gauge, type "B" metal deck supported by W16 beams spaced at 5'-0" o.c.. spanning to W30 girders.

Second Floor Construction

The second floor structural system will be comprised of 3 ¼" lightweight concrete slab on 3" composite metal deck (overall thickness = 6 ¼") supported by W21 beams spaced at 6'-0" o.c and W30 girders.

Columns & Foundations

The columns to support the new floor and roof framing are assumed to be W12x106 to match the existing construction. Foundations will be concrete spread footings approximately sized at 14'-0"x14'0"x2'-6".

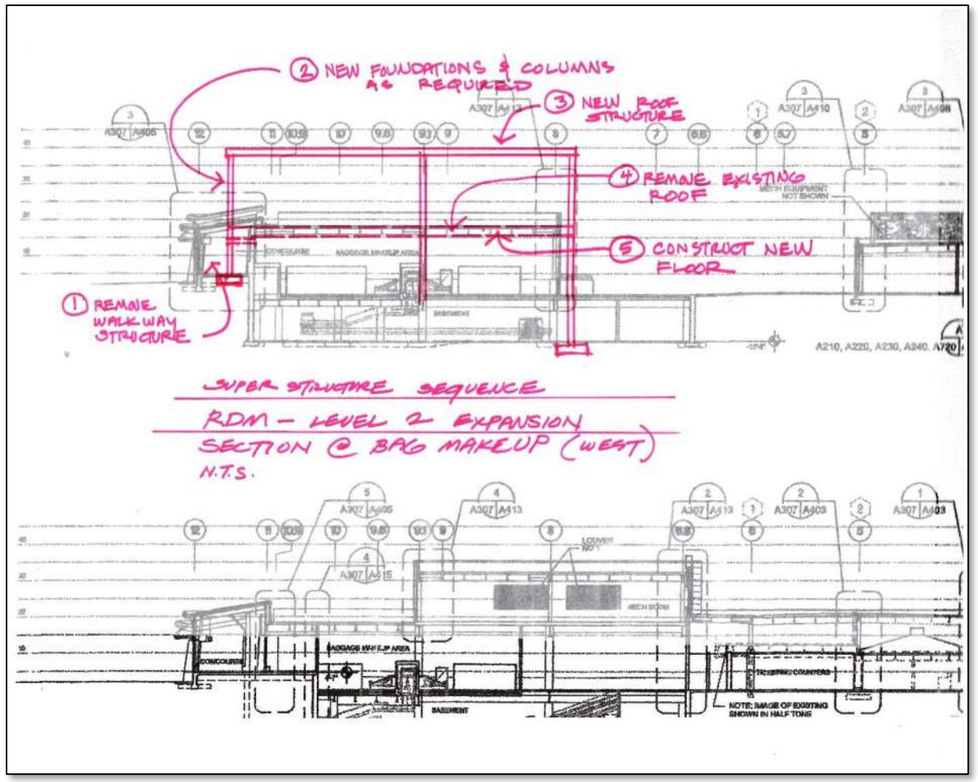
Lateral Force Resisting System

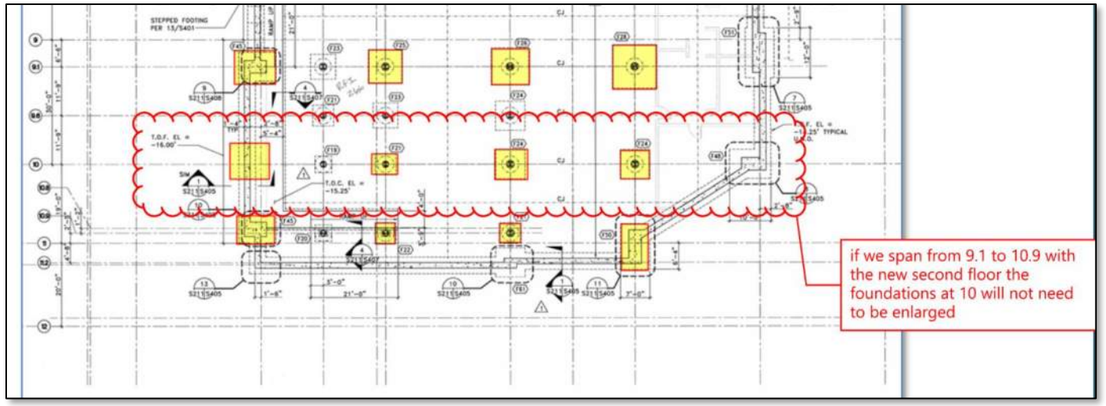
The lateral force resisting system for the addition will be comprised of Steel moment frames.

Existing Structure Reinforcement

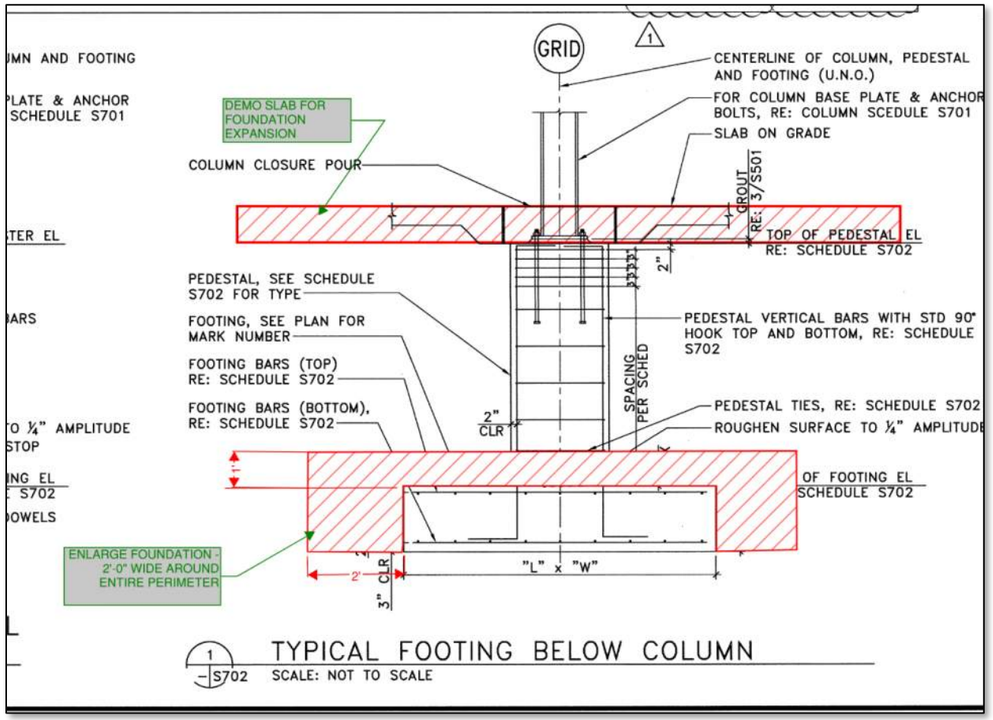
At locations where existing columns are intended to support a new floor and new roof, reinforcement of the columns may be required. Reinforcement of existing columns should be assumed to be new steel plates welded to the existing column to increase load capacity.

Foundations at these columns will likely need to be expanded. Typical construction consists of increasing the bearing area by doweling reinforcement into the existing footing and enlarging the foundation with new concrete.

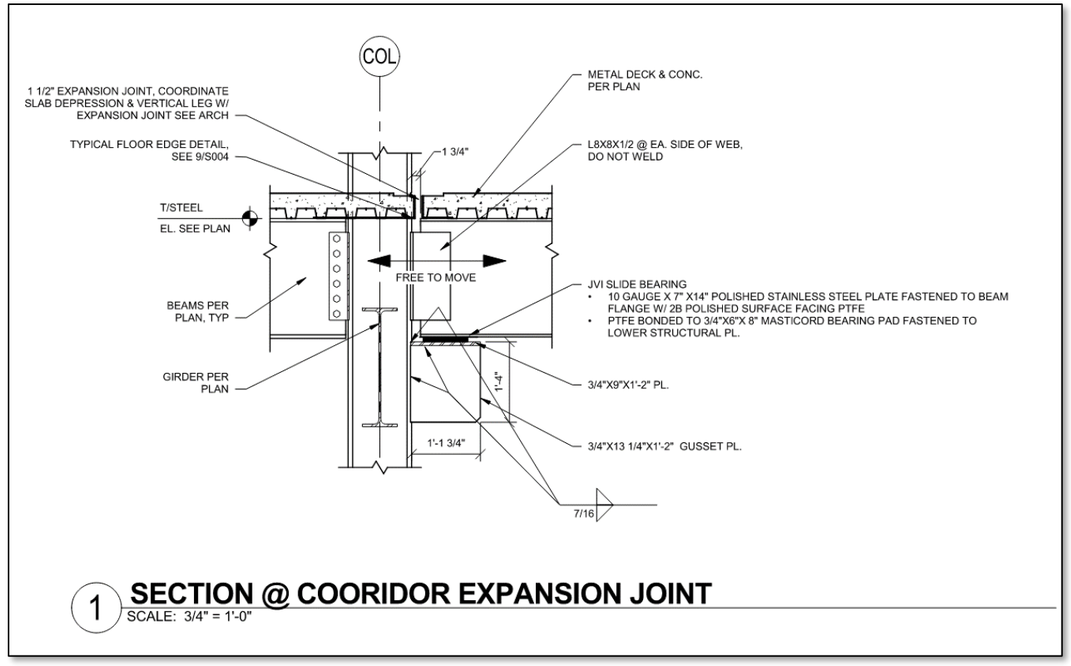




In the existing baggage screening area some of the footings would need to be enlarged to accommodate the new loading. Those footings indicated above.



Footings to be enlarged as illustrated above.



Where constructing new building up against existing it is estimated that a slide bearing connection (similar to that illustrated above) that allows movement to accommodate the necessary expansion joint(s) will be used.

Column strengthening when utilizing existing members would require (2)1/2" x 12" plates welded to existing columns extending from the foundation to the 2nd floor.

9.7 ROM COST ESTIMATE

Construction FOCUS
Integrated Project Solutions

October 8, 2021
Revision #1

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN



STATEMENT OF PROBABLE COST

Prepared for:
RS&H Architecture
Denver, CO

Prepared by:
Steve Gunn

President
Construction Focus, Inc.

V: 541-686-2031

CONSTRUCTION FOCUS, INC.
EUGENE, OREGON

sgunn@constructionfocus.com

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
Summary of Probable Cost

1/1

PHASE SUMMARY		LOW SIDE	HARDCOST TOTAL $	HIGH SIDE
PHASE 1	DEPARTURE LOUNGE EXPANSION (WEST) (2023)			
			57,043,000	
	Markups (Low & High):	30,182,782		40,844,506
	RANGE TOTALS	87,225,782		97,887,505
PHASE 2	TICKETING EXPANSION/MEP (2024)			
			7,325,410	
	Markups (Low & High):	4,196,764		6,021,377
	RANGE TOTALS	11,522,175		13,346,787
PHASE 3	BAGGAGE CLAIM EXPANSION (2025)			
			12,891,647	
	Markups (Low & High):	7,943,781		11,955,572
	RANGE TOTALS	20,835,428		24,847,219
PHASE 4	DEPARTURE LOUNGE EXPANSION (EAST) (2026)			
			15,742,846	
	Markups (Low & High):	10,382,201		16,259,102
	RANGE TOTALS	26,125,048		32,001,949
PHASE 5	INTERNAL RECONFIGURATION (2027)			
			4,998,201	
	Markups (Low & High):	3,512,625		5,688,938
	RANGE TOTALS	8,510,825		10,687,138
	CONSTRUCTION RANGE TOTAL:	154,219,257		178,770,598

NOTES
Wage rates: BOLI

GENERAL EXCLUSIONS
Design fees, permit fees, system development fees, utility hookup charges, testing, BOLI fee.
Hazardous materials abatement, moving expenses, anti-graffiti coating, fireproofing.
Overexcavation, rock excavation, wet weather sitework. Commissioning. FFE

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2023

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 1 - DEPARTURE LOUNGE EXPANSION (WEST)
Statement of Probable Cost

	QTY	UNIT	$/UNIT	TOTAL $
Facility Construction & Services	**89,322**	SF		
SHELL				
Basement	11,410	SF	*120.00*	**1,369,200**
1-Story Shell	3,210	SF	*306.00*	**982,260**
2-Story Shell	31,350	SF	*190.00*	**5,956,500**
2-Story (Replace Existing Roof with Floor)	10,552	SF	*295.00*	**3,112,840**
2nd Level (Breezway at 1st Level)	25,026	SF	*206.00*	**5,155,356**
INTERIORS				
Basement				
Baggage Screening	10,000	SF	*24.23*	**242,300**
TSA Offices	960	SF	*83.43*	**80,093**
Communications	450	SF	*82.98*	**37,341**
Level 1				
Bag Makeup	8,500	SF	*22.23*	**188,955**
Storage	410	SF	*78.98*	**32,382**
Circulation	2,275	SF	*114.83*	**261,238**
MEP	1,140	SF	*83.98*	**95,737**
Loading Dock	1,000	SF	*24.23*	**24,230**
Trash Enclosure	1,100	SF	*26.23*	**28,853**
Egress Core Circulation	1,200	SF	*520.11*	**624,132**
Ramp Circulation	1,040	SF	*73.57*	**76,513**
Future Genset	650	SF	*19.23*	**12,500**
ATO Shell	3,412	SF	*10.95*	**37,361**
Level 2				
Restrooms	1,490	SF	*142.20*	**211,878**
Concessions	6,880	SF	*10.95*	**75,336**
Holdroom	21,400	SF	*83.18*	**1,780,052**
Storage	2,775	SF	*78.98*	**219,170**
Ramps (to tarmack)	1,750	SF	*62.08*	**108,640**
Circulation	14,350	SF	*113.83*	**1,633,461**
MEP	6,640	SF	*83.98*	**557,627**
Exterior Terrace	1,900	SF	*36.00*	**68,400**
OTHER SERVICES				
Solar	89,322	SF	*1.40*	**125,051**
Demolition	89,322	SF	*13.50*	**1,205,847**
Baggage Handling Equipment	89,322	SF	*65.23*	**5,826,650**
Jet Bridges (7 ea)	89,322	SF	*90.12*	**8,050,000**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2023

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 1 - DEPARTURE LOUNGE EXPANSION (WEST)
Statement of Probable Cost

CIVIL & MEP				
Mechanical	89,322	SF	*36.43*	**3,253,700**
Power Plant	89,322	SF	*30.60*	**2,732,907**
Electrical & Low Voltage	89,322	SF	*77.96*	**6,963,543**
Plumbing	89,322	SF	*5.97*	**532,911**
Fire Sprinklers	89,322	SF	*4.17*	**372,202**
Civil	89,322	SF	*56.06*	**5,007,835**
Phase 1 Hardcost Total:				**57,043,000**

Low-High Range for the markups is included on page 2. This range is presented because the design has not been completed and market conditions might change at the time of bidding.

Markups to the Hardcost

	Low Side	Total	High Side	Total
Estimating Contingency	15.00%	8,556,450	20.00%	11,408,600
General Conditions	8.00%	5,247,956	8.00%	5,476,128
Insurance	1.60%	1,133,558	1.60%	1,182,844
Profit & Overhead	6.00%	4,318,858	6.00%	4,506,634
Performance Bond	1.20%	915,598	1.20%	955,406
Escalation	6.00%	4,632,925	14.00%	11,280,166
CMGC Participation	6.00%	4,910,901	6.00%	5,511,167
OR Gross Receipts Tax	0.57%	466,536	0.57%	523,561
Markups Total:		**30,182,782**		**40,844,506**
PHASE 1 TOTAL:		**87,225,782**		**97,887,505**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2023

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 2 - TICKETING EXPANSION/MEP
Statement of Probable Cost

	QTY	UNIT	$/UNIT	TOTAL $
Facility Construction & Services	**16,192**	SF		
SHELL				
2-Story	12,780	SF	*190.00*	**2,428,200**
INTERIORS				
Level 1				
ATO/Ticketing	9,802	SF	*147.53*	**1,446,089**
Level 2				
MEP Suite	6,390	SF	*46.97*	**300,138**
OTHER SERVICES				
Solar	16,192	SF	*1.00*	**16,192**
Demolition	16,192	SF	*17.50*	**283,360**
CIVIL & MEP				
Mechanical	16,192	SF	*80.38*	**1,301,570**
Electrical & Low Voltage	16,192	SF	*76.69*	**1,241,764**
Plumbing	16,192	SF	*3.95*	**63,900**
Fire Sprinklers	16,192	SF	*4.17*	**67,472**
Civil	16,192	SF	*10.91*	**176,725**
Phase 2 Hardcost Total:				**7,325,410**

Low-High Range for the markups is included on page 2. This range is presented because the design has not been completed and market conditions might change at the time of bidding.

Markups to the Hardcost

	Low Side Total		High Side Total	
Estimating Contingency	15.00%	1,098,812	20.00%	1,465,082
General Conditions	8.00%	673,938	8.00%	703,239
Insurance	1.60%	145,571	1.60%	151,900
Profit & Overhead	6.00%	554,624	6.00%	578,738
Performance Bond	1.20%	117,580	1.20%	122,692
Escalation	9.00%	892,434	21.00%	2,172,883
CMGC Participation	6.00%	648,502	6.00%	751,197
OR Gross Receipts Tax	0.57%	65,304	0.57%	75,646
Markups Total:		**4,196,764**		**6,021,377**
PHASE 2 TOTAL:		**11,522,175**		**13,346,787**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2024

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 3 - BAGGAGE CLAIM EXPANSION
Statement of Probable Cost

	QTY	UNIT	$/UNIT	TOTAL $
Facility Construction & Services	**23,892**	SF		
SHELL				
1-Story Shell (Restrooms)	1,383	SF	*280.00*	**387,240**
2-Story Shell	12,790	SF	*190.00*	**2,430,100**
2-Story (Replace Existing Roof with Floor)	758	SF	*220.00*	**166,760**
Covered Baggage Handling	8,750	SF	*90.00*	**787,500**
INTERIORS				
Level 1				
Baggage Claim Addition	5,776	SF	*159.47*	**921,099**
Bag Carousels	3,000	SF	*30.42*	**91,260**
Baggage Claim Remodel	6,633	SF	*159.47*	**1,057,765**
Comm	100	SF	*176.50*	**17,650**
Restroom Addition	1,383	SF	*183.60*	**253,919**
Level 2				
Admin Shell	7,000	SF	*14.95*	**104,650**
OTHER SERVICES				
Solar	23,892	SF	*1.00*	**23,892**
Demolition	23,892	SF	*31.13*	**743,758**
Baggage Handling Equipment	23,892	SF	*102.34*	**2,445,000**
CIVIL & MEP				
Mechanical	23,892	SF	*24.24*	**579,060**
Power Plant	23,892	SF	*7.62*	**182,065**
Electrical & Low Voltage	23,892	SF	*76.69*	**1,832,277**
Plumbing	23,892	SF	*7.60*	**181,504**
Fire Sprinklers	23,681	SF	*3.63*	**85,974**
Civil	23,892	SF	*25.12*	**600,175**
Phase 3 Hardcost Total:				**12,891,647**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2025

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 3 - BAGGAGE CLAIM EXPANSION
Statement of Probable Cost

Low-High Range for the markups is included on page 2. This range is presented because the design has not been completed and market conditions might change at the time of bidding.

Markups to the Hardcost

	Low Side Total		High Side Total	
Estimating Contingency	15.00%	1,933,747	20.00%	2,578,329
General Conditions	8.00%	1,186,032	8.00%	1,237,598
Insurance	1.60%	256,183	1.60%	267,321
Profit & Overhead	6.00%	976,057	6.00%	1,018,494
Performance Bond	1.20%	206,924	1.20%	215,921
Escalation	12.00%	2,094,071	28.00%	5,098,607
CMGC Participation	6.00%	1,172,680	6.00%	1,398,475
OR Gross Receipts Tax	0.57%	118,089	0.57%	140,826
Markups Total:		**7,943,781**		**11,955,572**
PHASE 3 TOTAL:		**20,835,428**		**24,847,219**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2025

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 4 - DEPARTURE LOUNGE EXPANSION (EAST)
Statement of Probable Cost

	QTY	UNIT	$/UNIT	TOTAL $
Facility Construction & Services	**24,635**	SF		
SHELL				
2-Story (Egress Core)	2,050	SF	*220.00*	**451,000**
2nd Level (Previous Shell at 1st Level)	1,383	SF	*270.00*	**373,410**
2nd Level (Breezway at 1st Level)	15,282	SF	*180.00*	**2,750,760**
2-Story (Replace Existing Roof with Floor)	5,900	SF	*220.00*	**1,298,000**
INTERIORS				
Level 2				
Restrooms	1,760	SF	*142.20*	**250,272**
Concessions	2,580	SF	*10.95*	**28,251**
Holdrooms	13,000	SF	*83.18*	**1,081,340**
Admin Shell	800	SF	*10.95*	**8,760**
Ramps (To tarmack)	190	SF	*62.08*	**11,795**
Circulation	2,770	SF	*113.83*	**315,309**
MEP/Comm/MDF	835	SF	*83.98*	**70,123**
Exterior Terrace	1,900	SF	*36.00*	**68,400**
Egress Core	800	SF	*520.11*	**416,088**
OTHER SERVICES				
Solar	24,635	SF	*1.00*	**24,635**
Demolition	24,635	SF	*13.50*	**332,573**
Jet Bridges (4 ea)	24,635	SF	*186.73*	**4,600,000**
CIVIL & MEP				
Mechanical	24,635	SF	*30.15*	**742,775**
Electrical & Low Voltage	24,635	SF	*63.69*	**1,569,003**
Plumbing	24,635	SF	*15.29*	**376,610**
Fire Sprinklers	24,635	SF	*4.62*	**113,742**
Civil	24,635	SF	*34.91*	**860,000**
Phase 4 Hardcost Total:				**15,742,846**

Low-High Range for the markups is included on page 2. This range is presented because the design has not been completed and market conditions might change at the time of bidding.

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2026

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 4 - DEPARTURE LOUNGE EXPANSION (EAST)
Statement of Probable Cost

Markups to the Hardcost

	Low Side Total		High Side Total	
Estimating Contingency	15.00%	2,361,427	20.00%	3,148,569
General Conditions	8.00%	1,448,342	8.00%	1,511,313
Insurance	1.60%	312,842	1.60%	326,444
Profit & Overhead	6.00%	1,191,927	6.00%	1,243,750
Performance Bond	1.20%	252,689	1.20%	263,675
Escalation	15.00%	3,196,511	35.00%	7,782,809
CMGC Participation	6.00%	1,470,395	6.00%	1,801,164
OR Gross Receipts Tax	0.57%	148,069	0.57%	181,377
Markups Total:		**10,382,201**		**16,259,102**
PHASE 4 TOTAL:		**26,125,048**		**32,001,949**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2026

REDMOND MUNICIPAL AIRPORT
TERMINAL AREA CONCEPT PLAN
PHASE 5 - INTERNAL RECONFIGURATION
Statement of Probable Cost

	QTY	UNIT	$/UNIT	TOTAL $
Facility Construction & Services	**18,540**	SF		
INTERIORS				
Level 1				
Car Rental Demo/Remodel	5,250	SF	*77.97*	**409,343**
Circulation	1,550	SF	*128.64*	**199,392**
Car Rental	2,700	SF	*144.58*	**390,366**
Comm	380	SF	*176.50*	**67,070**
Future Space Shell	520	SF	*14.95*	**7,774**
Restroom Addition	1,140	SF	*183.60*	**209,304**
Level 2				
Admin	7,000	SF	*183.45*	**1,284,150**
OTHER SERVICES				
Solar	18,540	SF	*1.00*	**18,540**
Demolition	18,540	SF	*12.00*	**222,480**
CIVIL & MEP				
Mechanical	18,540	SF	*31.43*	**582,800**
Electrical & Low Voltage	18,540	SF	*67.45*	**1,250,523**
Plumbing	18,540	SF	*7.11*	**131,745**
Fire Sprinklers	18,540	SF	*1.60*	**29,664**
Civil	18,540	SF	*10.52*	**195,050**
Phase 5 Hardcost Total:				**4,998,201**

Low-High Range for the markups is included below. This range is presented because the design has not been completed and market conditions might change at the time of bidding.

Markups to the Hardcost

	Low Side Total		High Side Total	
Estimating Contingency	15.00%	749,730	20.00%	999,640
General Conditions	8.00%	459,834	8.00%	479,827
Insurance	1.60%	99,324	1.60%	103,643
Profit & Overhead	6.00%	378,425	6.00%	394,879
Performance Bond	1.20%	80,226	1.20%	83,714
Escalation	18.00%	1,217,833	42.00%	2,965,159
CMGC Participation	6.00%	479,014	6.00%	601,504
OR Gross Receipts Tax	0.57%	48,237	0.57%	60,571
Markups Total:		**3,512,625**		**5,688,938**
PHASE 5 TOTAL:		**8,510,825**		**10,687,138**

ARCH: RS&H
DWG DATE: 2021/10/01
DESIGN LEVEL: Concept

CONSTRUCTION FOCUS, INC.
541-686-2031
EUGENE, OREGON

ESTIMATE DATE: October 8, 2021
REVISION #: 1
CONST. START: 2 QTR_2027

SHELL AREAS - BASEMENT

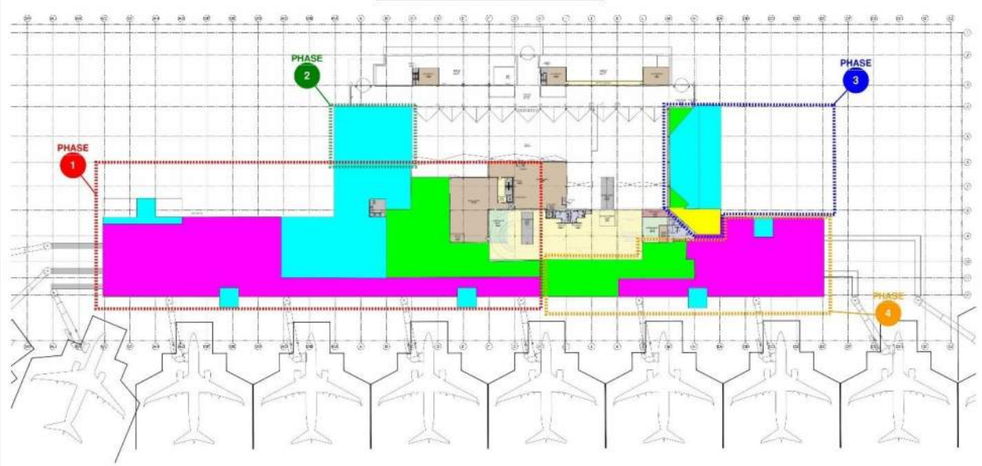


Redmond Municipal Airport
Terminal Area Concept Plan

Preliminary Concept Estimate - Rev-1
Construction Focus, Inc.
October 8, 2021

Basement

SHELL AREAS - LEVEL 2

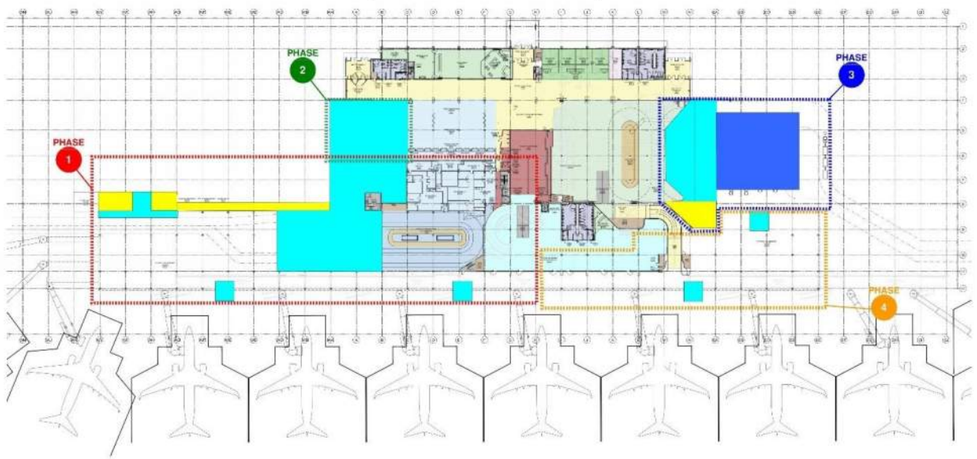


Redmond Municipal Airport
Terminal Area Concept Plan

Preliminary Concept Estimate - Rev-1
Construction Focus, Inc.
October 8, 2021

1-Story Shell
2-Story Shell
Level 2 Shell - Breezeway Below
Overbuild - Replace Roof With Floor

SHELL AREAS - LEVEL 1

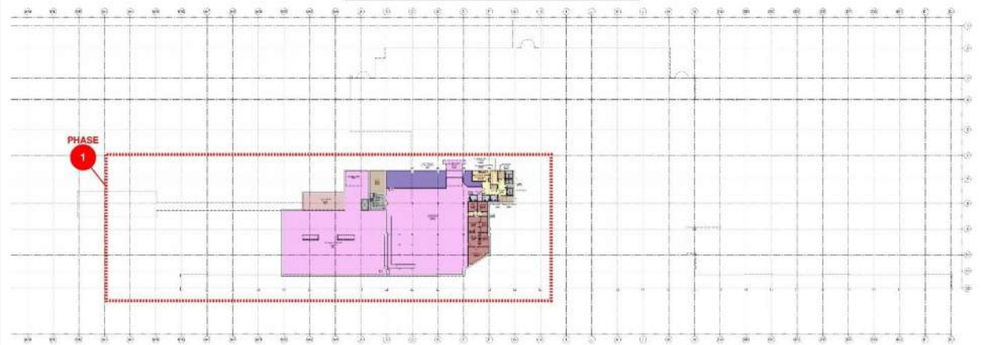


Redmond Municipal Airport
Terminal Area Concept Plan

Preliminary Concept Estimate - Rev-1
Construction Focus, Inc.
October 8, 2021

1-Story Shell
2-Story Shell
Canopy

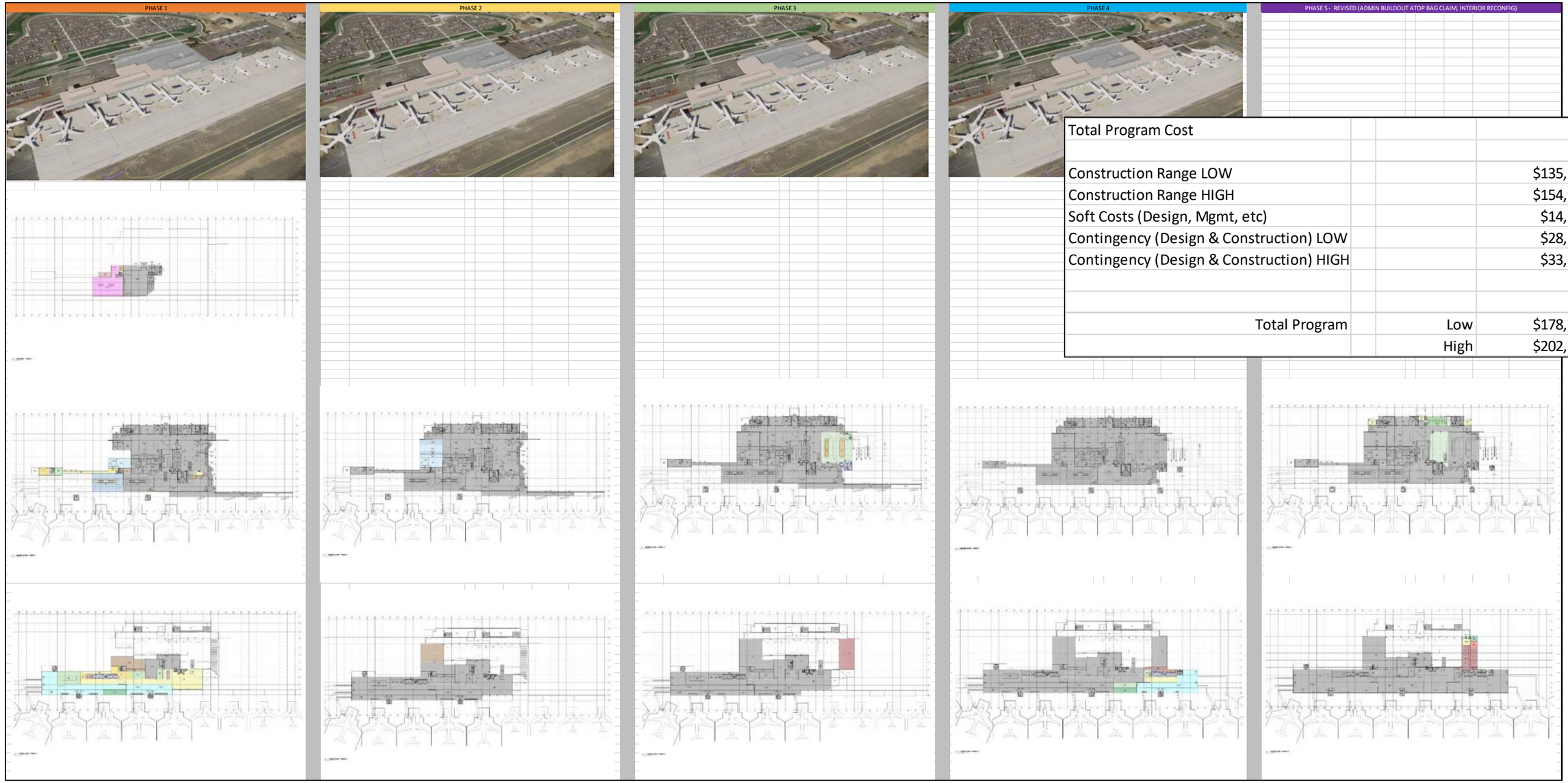
INTERIOR AREAS - BASEMENT
(Created by RS&H)



Redmond Municipal Airport
Terminal Area Concept Plan

Preliminary Concept Estimate
Construction Focus, Inc.
October 8, 2021

PHASE 1						PHASE 2						PHASE 3						PHASE 4						PHASE 5					
	Description	Qty	Unit	$/Unit	Total $		Description	Qty	Unit	$/Unit	Total $		Description	Qty	Unit	$/Unit	Total $		Description	Qty	Unit	$/Unit	Total $		Description	Qty	Unit	$/Unit	Total $
SHELL						SHELL						SHELL						SHELL						SHELL					
	Basement	11,410	sf	$120.00	$1,369,200		2-Story	12,780	sf	$190.00	$2,428,200		1-Story Shell (restrooms)	1,383	sf	$280.00	$387,240		2-Story (Egress Core)	2,050	sf	$220.00	$451,000						
	1-story shell	3,210	sf	$306.00	$982,260								2-Story7 Shell	12,790		$190.00	$2,430,100		2nd Level (Previous shell at 1st Level)	1,383	sf	$270.00	$373,410						
	2-Story	31,350	sf	$190.00	$5,956,500								2-Story (Replace Existing Roof with Floor)	758	sf	$220.00	$166,760		2nd Level (Breezeway at 1st Level)	15,282	sf	$180.00	$2,750,760						
	2-Story (rplace existing roof with floor)	10,552	sf	$295.00	$3,112,840								Covered Baggage Handling	8,750	sf	$90.00	$787,500		2-Story (Replace Existing Roof with Floor)	5,900	sf	$220.00	$1,298,000						
	2nd Lvl (Breezeway at 1st lvl)	25,026	sf	$206.00	$5,155,356																								
INTERIORS						INTERIORS						INTERIORS						INTERIORS						INTERIORS					
	Basement						**Basement**						**Basement**						**Basement**						**Basement**					
	Bag Sort	10,000	sf	$24.23	$242,300																								
	Admin offices	960	sf	$83.43	$80,093																								
	Communications	450	sf	$82.98	$37,341																								
	Level 1						**Level 1**						**Level 1**						**Level 1**						**Level 1**					
	Bag Make Up	8,500	sf	$22.23	$188,955		ATO/Ticketing	9,802	sf	$147.53	$1,446,089		Baggage Claim Addition	5,776	sf	$159.47	$921,099								Car Rental Demo/Remodel	5,250	sf	$77.97	$409,343
	Storage	410	sf	$78.98	$32,382								Bag Carousels	3,000	sf	$30.42	$91,260								Circulation	1,550	sf	$128.64	$199,392
	Circulation (w/ secure exiting)	2,275	sf	$114.83	$261,238								Baggage Claim Remodel	6,633	sf	$159.47	$1,057,765								Car Rental	2,700	sf	$144.58	$390,366
	MEP	1,140	sf	$83.98	$95,737								Comm	100	sf	$176.50	$17,650								Comm	380	sf	$176.50	$67,070
	Loading Dock	1,000	sf	$24.23	$24,230								Restroom Addition	1,383	sf	$183.60	$253,919								Future Space Shell	520	sf	$14.95	$7,774
	Trash Enclosure	1,100	sf	$26.23	$28,853																								
	Egress Core Circulation	1,200	sf	$520.11	$624,132																								
	Ramp Circulation	1,040	sf	$73.57	$76,513																								
	Future Genset	650	sf	$19.23	$12,500																								
	ATO Shell	3,412	sf	$10.95	$37,361																								
	Level 2						**Level 2**						**Level 2**						**Level 2**						**Level 2**					
	Restrooms	1,490	sf	$142.20	$211,878		MEP Suite	6,390	sf	$46.97	$300,138		Admin Shell	7,000	sf	$14.95	$104,650		Restrooms	1,760	sf	$142.20	$250,272		Admin	7,000	sf	$183.45	$1,284,150
	Concessions	8,780	sf	$10.95	$96,141														Concession	680	sf	$10.95	$7,446						
	Holdroom	19,500	sf	$83.18	$1,622,010														Holdrooms	14,900	sf	$83.18	$1,239,382						
	Storage	2,775	sf	$78.98	$219,170														Admin Shell	800	sf	$10.95	$8,760						
	Ramps (to apron)	1,750	sf	$62.08	$108,640														Ramps (to apron)	190	sf	$62.08	$11,795						
	Circulation	14,350	sf	$113.83	$1,633,461														Circulation	2,770	sf	$113.83	$315,309						
	MEP	6,640	sf	$83.98	$557,627														MEP/Comm/MDF	835	sf	$83.98	$70,123						
	Exterior Terrace	1,900	sf	$36.00	$68,400														Exterior Terrace	1,900	sf	$36.00	$68,400						
																			Egress Core	800	sf	$520.11	$416,088						
OTHER						OTHER						OTHER						OTHER						OTHER					
	Solar	89,322	sf	$1.25	$111,385		Solar	16,192	sf	$0.75	$12,144		Solar	23,892	sf	$0.75	$17,919		Solar	24,635	sf	$1.00	$24,635		Solar	17,400	sf	$0.75	$13,050
	Demolition	89,322	sf	$13.50	$1,205,847		Demolition	16,192	sf	$17.50	$283,360		Demolition	23,892	sf	$31.13	$743,758		Demolition	24,635	sf	$13.50	$332,573		Demolition	17,400	sf	$12.00	$208,800
	Baggage Handling Equipment	89,322	sf	$38.09	$3,402,405								Baggage Handling Equipment	23,892	sf	$116.12	$2,774,250												
	PBB (7 total)	89,322	sf	$90.12	$8,050,000														PBB (4 total)	24,635	sf	$186.73	$4,600,000						
CIVIL & MEP						CIVIL & MEP						CIVIL & MEP						CIVIL & MEP						CIVIL & MEP					
	Mechanical	89,322	sf	$35.79	$3,196,700		Mechanical	16,192	sf	$80.38	$1,301,570		Mechanical	23,892	sf	$24.24	$579,060		Mechanical	24,635	sf	$30.54	$752,275		Mechanical	17,400	sf	$31.86	$554,300
	Power Plant	89,322	sf	$30.60	$2,732,907								Power Plant	23,892	sf	$7.62	$182,065												
	Power & Lighting	89,322	sf	$66.08	$5,902,398		Power & Lighting	16,192	sf	$62.50	$1,012,000		Power & Lighting	23,892	sf	$62.50	$1,493,250		Power & Lighting	24,635	sf	$51.59	$1,270,920		Power & Lighting	17,400	sf	$54.53	$948,822
	Communications	89,322	sf	$6.35	$567,195		Communications	16,192	sf	$8.43	$136,499		Communications	23,892	sf	$8.43	$201,410		Communications	24,635	sf	$6.77	$166,779		Communications	17,400	sf	$7.77	$135,198
	Elec Safety & Security	89,322	sf	$5.53	$493,951		Elec Safety & Security	16,192	sf	$5.76	$93,266		Elec Safety & Security	23,892	sf	$5.76	$137,618		Elec Safety & Security	24,635	sf	$5.33	$131,305		Elec Safety & Security	17,400	sf	$5.15	$89,610
	Plumbing	89,322	sf	$6.46	$576,611		Plumbing	16,192	sf	$3.95	$63,900		Plumbing	23,892	sf	$7.60	$181,504		Plumbing	24,635	sf	$9.66	$237,910		Plumbing	17,400	sf	$2.66	$46,245
	Fire Sprinklers	89,322	sf	$4.17	$372,202		Fire Sprinklers	16,192	sf	$4.17	$67,472		Fire Sprinklers	23,892	sf	$3.63	$86,740		Fire Sprinklers	24,635	sf	$4.62	$113,742		Fire Sprinklers	17,400	sf	$1.60	$27,840
	Civil	89,322	sf	$56.06	$5,007,835		Civil	16,192	sf	$10.91	$176,725		Civil	23,892	sf	$33.34	$796,475		Civil	24,635	sf	$34.91	$860,000						
	Construction Subtotal				**$54,454,553**		**Construction Subtotal**				**$7,321,363**		**Construction Subtotal**				**$13,411,991**		**Construction Subtotal**				**$15,750,884**		**Construction Subtotal**				**$4,381,960**
			$609.64		$54,454,552				$452.16		$7,321,362				$561.36		$13,411,990				$639.37		$15,750,883				$251.84		$4,381,960
LOW						LOW						LOW						LOW						LOW					
	Estimating Contingency	15.00%			$8,168,183		Estimating Contingency	15.00%			$1,098,204		Estimating Contingency	15.00%			$2,011,799		Estimating Contingency	15.00%			$2,362,632		Estimating Contingency	15.00%			$657,294
	General Conditions	8.00%			$5,009,819		General Conditions	8.00%			$673,565		General Conditions	8.00%			$1,233,903		General Conditions	8.00%			$1,449,081		General Conditions	8.00%			$403,140
	Insurance	1.60%			$1,082,121		Insurance	1.60%			$145,490		Insurance	1.60%			$266,523		Insurance	1.60%			$313,002		Insurance	1.60%			$87,078
	Profit and Overhead	6.00%			$4,122,880		Profit and Overhead	6.00%			$554,317		Profit and Overhead	6.00%			$1,015,453		Profit and Overhead	6.00%			$1,192,536		Profit and Overhead	6.00%			$331,768
	Performance Bond	1.20%			$874,051		Performance Bond	1.20%			$117,515		Performance Bond	1.20%			$215,276		Performance Bond	1.20%			$252,818		Performance Bond	1.20%			$70,335
	Escalation	6.00%			$4,422,696		Escalation	9.00%			$891,941		Escalation	12.00%			$2,178,593		Escalation	15.00%			$3,198,143		Escalation	18.00%			$1,067,684
	CMGC Participation	6.00%			$4,688,058		CMGC Participation	6.00%			$648,144		CMGC Participation	6.00%			$1,220,012		CMGC Participation	6.00%			$1,471,146		CMGC Participation	6.00%			$419,956
	OR Gross Receipts Tax	0.57%			$445,366		OR Gross Receipts Tax	0.57%			$65,268		OR Gross Receipts Tax	0.57%			$122,855		OR Gross Receipts Tax	0.57%			$148,144		OR Gross Receipts Tax	0.57%			$42,290
	Makups Total				**$28,813,174**		**Makups Total**				**$4,194,445**		**Makups Total**				**$8,264,414**		**Makups Total**				**$10,387,502**		**Makups Total**				**$3,079,545**
HIGH						HIGH						HIGH						HIGH						HIGH					
	Estimating Contingency	20.00%			$10,890,910		Estimating Contingency	20.00%			$1,464,272		Estimating Contingency	20.00%			$2,682,398		Estimating Contingency	20.00%			$3,150,177		Estimating Contingency	20.00%			$876,392
	General Conditions	8.00%			$5,227,637		General Conditions	8.00%			$702,851		General Conditions	8.00%			$1,287,551		General Conditions	8.00%			$1,512,085		General Conditions	8.00%			$420,668
	Insurance	1.60%			$1,129,170		Insurance	1.60%			$151,816		Insurance	1.60%			$278,111		Insurance	1.60%			$326,610		Insurance	1.60%			$90,864
	Profit and Overhead	6.00%			$4,302,136		Profit and Overhead	6.00%			$578,418		Profit and Overhead	6.00%			$1,059,603		Profit and Overhead	6.00%			$1,244,385		Profit and Overhead	6.00%			$346,193
	Performance Bond	1.20%			$912,053		Performance Bond	1.20%			$122,625		Performance Bond	1.20%			$224,636		Performance Bond	1.20%			$263,810		Performance Bond	1.20%			$73,393
	Escalation	14.00%			$10,768,304		Escalation	21.00%			$2,171,682		Escalation	28.00%			$5,304,401		Escalation	35.00%			$7,786,782		Escalation	42.00%			$2,599,578
	CMGC Participation	6.00%			$5,261,086		CMGC Participation	6.00%			$750,782		CMGC Participation	6.00%			$1,454,921		CMGC Participation	6.00%			$1,802,084		CMGC Participation	6.00%			$527,343
	OR Gross Receipts Tax	0.57%			$499,803		OR Gross Receipts Tax	0.57%			$75,604		OR Gross Receipts Tax	0.57%			$146,511		OR Gross Receipts Tax	0.57%			$181,470		OR Gross Receipts Tax	0.57%			$53,103
	Makups Total				**$38,991,099**		**Makups Total**				**$6,018,049**		**Makups Total**				**$12,438,132**		**Makups Total**				**$16,267,403**		**Makups Total**				**$4,987,534**
Pre Construction Soft Costs						Pre Construction Soft Costs						Pre Construction Soft Costs						Pre Construction Soft Costs						Pre Construction Soft Costs					
	Design Fees	12.00%			$6,534,546		Design Fees	12.00%			$878,563		Design Fees	12.00%			$1,609,439		Design Fees	12.00%			$1,890,106		Design Fees	12.00%			$525,835
	Art	1.00%			$544,546		Art	1.00%			$73,214		Art	1.00%			$134,119.90		Art	1.00%			$157,508.83		Art	1.00%			$43,819.60
	City Testing/Inspections	1.00%			$544,546		City Testing/Inspections	1.00%			$73,214		City Testing/Inspections	1.00%			$134,119.90		City Testing/Inspections	1.00%			$157,508.83		City Testing/Inspections	1.00%			$43,819.60
	RDM Mgmt	1.00%			$544,546		RDM Mgmt	1.00%			$73,214		RDM Mgmt	1.00%			$134,119.90		RDM Mgmt	1.00%			$157,508.83		RDM Mgmt	1.00%			$43,819.60
	Design Contingency	15.00%			$8,168,183		Design Contingency	15.00%			$1,098,204		Design Contingency	15.00%			$2,011,798.50		Design Contingency	15.00%			$2,362,632.45		Design Contingency	15.00%			$657,294.00
	Subtotal Soft Costs				**$16,336,366**		**Subtotal Soft Costs**				**$2,196,409**		**Subtotal Soft Costs**				**$4,023,597**		**Subtotal Soft Costs**				**$4,725,265**		**Subtotal Soft Costs**				**$1,314,588**
	Program Cost Range						**Program Cost Range**						**Program Cost Range**						**Program Cost Range**						**Program Cost Range**					
	LOW				**$99,604,091**		**LOW**				**$13,712,216**		**LOW**				**$25,700,001**		**LOW**				**$30,863,649**		**LOW**				**$8,776,093**
	HIGH				**$109,782,017**		**HIGH**				**$15,535,820**		**HIGH**				**$29,873,719**		**HIGH**				**$36,743,551**		**HIGH**				**$10,684,082**
	Construction Range LOW				$75,099,543		Construction Range LOW				$10,417,603		Construction Range LOW				$19,664,606		Construction Range LOW				$23,775,752		Construction Range LOW				$6,804,211
	Construction Range HIGH				$82,554,741		Construction Range HIGH				$11,875,139		Construction Range HIGH				$23,167,724		Construction Range HIGH				$28,868,109		Construction Range HIGH				$8,493,102
	Soft Costs (Design, Mgmt, etc)				$8,168,183		Soft Costs (Design, Mgmt, etc)				$1,098,204		Soft Costs (Design, Mgmt, etc)				$2,011,799		Soft Costs (Design, Mgmt, etc)				$2,362,632		Soft Costs (Design, Mgmt, etc)				$657,294
	Contingency (Design & Construction) LOW				$16,336,366		Contingency (Design & Construction) LOW				$2,196,409		Contingency (Design & Construction) LOW				$4,023,597		Contingency (Design & Construction) LOW				$4,725,265		Contingency (Design & Construction) LOW				$1,314,588
	Contingency (Design & Construction) HIGH				$19,059,093		Contingency (Design & Construction) HIGH				$2,562,477		Contingency (Design & Construction) HIGH				$4,694,197		Contingency (Design & Construction) HIGH				$5,512,809		Contingency (Design & Construction) HIGH				$1,533,686
				% inc/dec						% inc/dec						% inc/dec						% inc/dec						% inc/dec	
	Total Program	LOW		17%	$99,604,091		Total Program	LOW		-37%	$13,712,216		Total Program	LOW		5%	$25,700,001		Total Program	LOW		5%	$30,863,649		Total Program	LOW		1%	$8,776,093
		HIGH		14%	$109,782,017			HIGH		-39%	$15,535,820			HIGH		2%	$29,873,719			HIGH		6%	$36,743,551			HIGH		2%	$10,684,082



Total Program Cost			
Construction Range LOW			$135,761,714
Construction Range HIGH			$154,958,815
Soft Costs (Design, Mgmt, etc)			$14,298,112
Contingency (Design & Construction) LOW			$28,596,224
Contingency (Design & Construction) HIGH			$33,362,261
Total Program		Low	$178,656,050
		High	$202,619,188

For information only, a ROM cost assessment was prepared for the potential concessions build out on the upper level as follows:

Concession Considerations:
A Full Bar
B Full Kitchen
C Retail/Gifts
D Minor Food Prep (Sandwich Shop)
E Combo Pizza Oven / Gift Area
(one of these two spots)

ID	Description	Area	Unit	Cost/SF	Total
A	Full Bar	4,400	sf	$226.03	$994,543
B	Restaurant w/ Full Kitchen	1,600	Sf	$397.15	$635,444
C	Retail/Gifts	880	Sf	$142.58	$125,467
D	Minor Food Pre (sandwich shop)	680	Sf	$270.56	$183,983
E	Combo Pizza Oven / Gift Area	1,900	Sf	$280.22	$593,424
	Total				**$2,471,861**

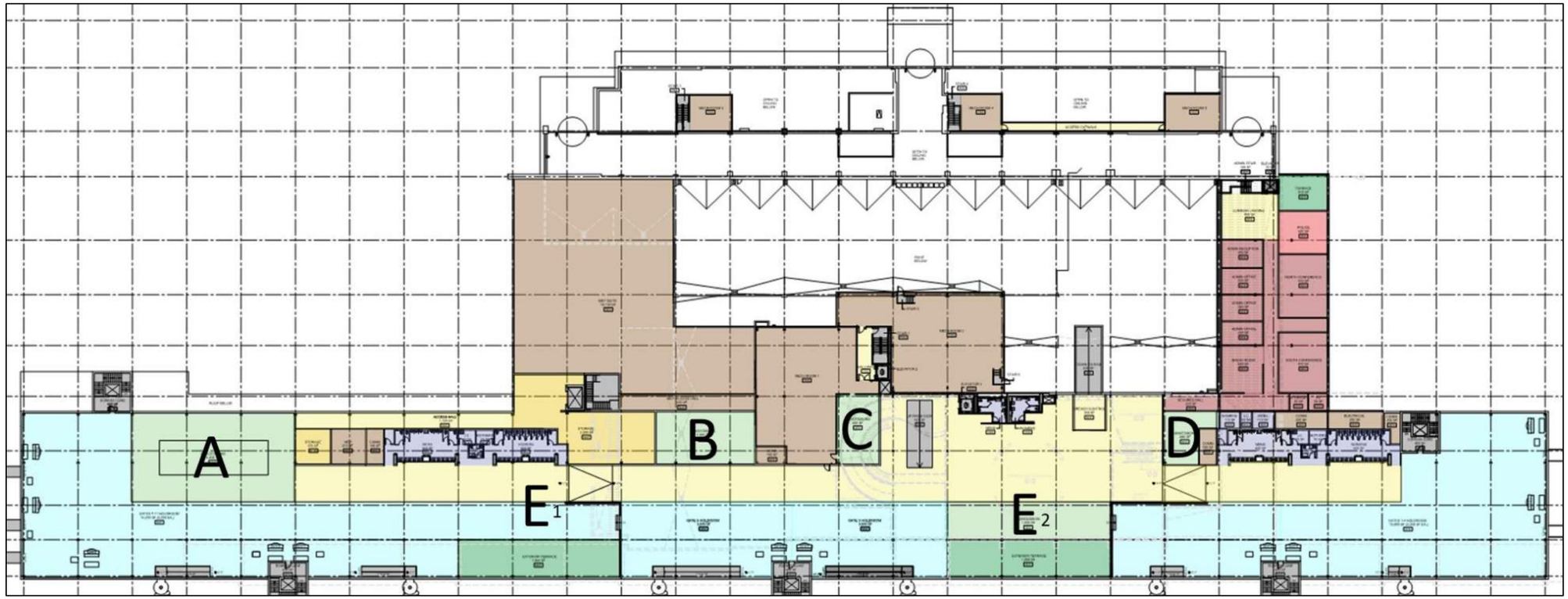


Exhibit ‘B’ Final Floor Plan

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

Proration Calculation

Building Components	*Square Footage*			
	Total	*(A) Eligible*	*(B)Non-Eligible*	*(C) Prorated*
Basement - Level 0	-	-	-	-
Main Level - Level 1	**32,693**	25,502	2,887	4,304
Concourse - Level 2	**46,909**	33,444	6,695	6,770
TOTAL	**79,602**	**58,946**	**9,582**	**11,074**

PFC Eligible % =A/(A+B)	***86.0%***

Project Cost Calculation

Construction	Sq. Feet	$/sf	Cost	% Eligible	Eligible	Non-Eligible
Building Construction	79,602	$ 637.74	$ 50,765,711	86.0%	$43,658,511.46	$7,107,199.54
Utility Costs						
Mechanical Systems			$ 17,322,115	86.0%	$14,897,018.90	$2,425,096.10
Electrical Systems			$ 20,481,281	86.0%	$17,613,901.66	$2,867,379.34
Fire Protection			$ 1,269,295	86.0%	$1,091,593.70	$177,701.30
Site			$ 8,124,886	86.0%	$6,987,401.96	$1,137,484.04
Landscaping			$ 287,285	0.0%	$0.00	$287,285.00
Equipment /Furnishings						
Furnishings			$ 1,340,321	100%	$1,340,321.00	$0.00
PBB, Elevators, Escalators			$ 9,919,606	100%	$9,919,606.00	$0.00
Baggage & Secure Exit			$ 4,188,803	100%	$4,188,803.00	$0.00
Dock Leveler			$ 26,652	0%	$0.00	$26,652.00
PBB (Glass)			$ 106,274	0%	$0.00	$106,274.00
Allowances						
Owner Contingency			$ 9,193,555	0%	$0.00	$9,193,555.00
Misc Allowances (Eligible)			$ 808,303	86%	$695,140.58	$113,162.42
Misc Allowances (Non-Eligible)			$ 10,000	0%	$0.00	$10,000.00
Indirect						
Preconstruction Services			$ 631,101	86%	$542,746.86	$88,354.14
Insurance			$ 3,514,624	86%	$3,022,576.64	$492,047.36
GC			$ 10,864,472	86%	$9,343,445.92	$1,521,026.08
Bonds			$ 858,169	86%	$738,025.34	$120,143.66
FEE			$ 3,963,347	86%	$3,408,478.42	$554,868.58
Soft Costs						
Inspection & Construction Mgmt.			$ 8,848,833	86.0%	$7,609,996.38	$1,238,836.62
Permits & Fees			$ 2,645,076	86.0%	$2,274,765.64	$370,310.68
Other Owner Related Costs			$ 9,480,517	0.0%	$0.00	$9,480,517.00
Art Program			$ 1,000,000	0.0%	$0.00	$1,000,000.00
Kid's Play Area			$ 200,000	86.0%	$172,000.00	$28,000.00
Design & Engineering			$ 12,269,967	86.0%	$10,552,171.62	$1,717,795.38
Project Financing						
Capitalized Interest			$ 9,383,956	100.0%	$9,383,956.15	$0.00
		TOTAL	**$ 187,504,149**		**$147,440,461**	**$40,063,688**

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

FUNDING						
Source	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
AIP 52 (ENT)	$2,261,101.00					$2,261,101.00
AIP 53 (IIJA)	$6,354,239.00					$6,354,239.00
AIP 54 (ATP)	$7,000,000.00					$7,000,000.00
AIP 55 (ENT)	$1,291,810.00					$1,291,810.00
AIP 56 (ENT) (FY2025)	$9,881,121.00					$9,881,121.00
AIP 57 (IIJA) (FY2025)	$8,388,743.00					$8,388,743.00
AIP 58 (ENT) (FY2026)	$3,511,498.00					$3,511,498.00
AIP 59 (IIJA) (FY2026)	$3,828,852.00					$3,828,852.00
AIP 60 (ENT) (FY2027)	$3,511,498.00					$3,511,498.00
AIP 61 (ENT) (FY2028)	$3,511,498.00					$3,511,498.00
Match to AIP (Local)					$3,204,445.05	$3,204,445.05
PFC Eligible Work (Pay as You Go)		$0.00				$0.00
CONNECT OREGON GRANT FOR NON-ELIGIBLE CONSTRUCTION				$10,000,000.00		$10,000,000.00
COAR Grants				$281,274.00		$281,274.00
LOCAL FUNDING FOR NON-ELIGIBLE CONSTRUCTION					$22,803,077.00	$22,803,077.00
LOCAL FUNDING TO BALANCE					$5,719,993.00	$5,719,993.00
LOCAL FUNDING (BONDS, NET OF ISSUANCE COSTS)			$95,955,000.00			$95,955,000.00
TOTAL CONSTRUCTION	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**
Debt Service	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Principle		$95,955,000.00				$95,955,000.00
Interest		$89,318,618.00				$89,318,618.00
Total Debt Service		**$185,273,618.00**				**$185,273,618.00**
	AIP	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Total Sources of Funds	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**

Calculate Principal and Interest Eligible for PFC Debt Service	
Total PFC Eligible Costs	**$147,440,461.23**
Eligible Funding Received	
AIP/BIL/IIJA (AIP Grants)	$49,540,360.00
Match to AIP (Local)	$3,204,445.05
PFC Eligible Work (Pay as You Go)	$0.00
Subtotal	**$52,744,805.05**
Remaining Eligible Costs	***$94,695,656.17***
Bonded Amount	***$95,955,000.00***
% Eligible for PFC Debt Service Payment	**98.69%**
Eligible for PFC Debt Service Payment	**$94,695,656**
Bond Interest Eligible for Debt Service	**$88,146,372**
Amount Eligible for PFC Debt Service Payment	**$182,842,028**

Check Other Grants < Ineligible Amount		
Ineligible Amount	$40,063,688	
Other Grant Sources	$10,281,274	**TRUE**

Exhibit ‘C’ Eligibility Calculations

BIL/PFC ELIGIBILITY

Eligibility Determination (per PFC ORDER, AIP Handbook):

A = Eligible Areas (AIP/PFC/BIL) funded)
B = Ineligible Areas (Locally Funded)
C = Prorated Utility Space (mech/elec/IT)
D = High Cost 100% Eligible (escalators, elevators, bridges, etc.)

Step 1: Determine eligible proration

Proration % = A / (A+B)

		Level-00	Level-01	Level-02	*Total*
(A)	Eligible Area =	0	25,502	33,444	*58,946*
(B)	Ineligible Area =	0	2,887	6,695	*9,582*
(C')	Prorated Area =	0	4,304	6,770	*11,074*
	Total Area =	*0*	*32,693*	*46,908*	*79,601*

Step 2 - Proration % = 86.0%

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 0

LEVEL-00 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

LEVEL-00 (BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
B024	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

LEVEL-00 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

TOTAL LEVEL-00 **#N/A**

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 1

LEVEL-01 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G155	ATO EXPANSION SHELL	2246	PFC Order Par. 4-6 d (2)	Counter
G157	MANUAL SCREENING	535	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G214	SECURE EXITING	412	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G145A	ELEVATOR	78	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G164	STAFF RESTROOM	64	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G165	STAFF RESTROOM	64	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G212	EXIT VESTIBULE	141	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G213	RAMP	1057	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G219	EGRESS HALL	66	Eligible per AIP	and Baggage
G220b	NEW BAGGAGE MAKE-UP	15034	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G222	STORAGE	199	PFC Order Par. 4-6 d (2)	Directly Related to other PFC eligible Space
G160	OPS HALL	2362	PFC Order Par. 4-6 d (2)	Directly Related to other PFC eligible Space
G167	VESTIBULE	220	Eligible per AIP	Required for ADA
G170	ACCESS HALLWAY	1627	Eligible per AIP	Required for ADA
EL2B	ELEVATOR	75	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES1B	EGRESS STAIR #1	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES2B	EGRESS STAIR #2	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES3B	EGRESS STAIR #3	326	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES4B	EGRESS STAIR #4	338	Eligible per AIP	Directly Related to Moving Passengers and Baggage
	SUBTOTAL	25,502		

LEVEL-01 (BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G011	FIRE RISER	353	Prorated Per AIP	Prorated Support Space
G156	FIRE RISER	13	Prorated Per AIP	Prorated Support Space
G159	MDF	203	Prorated Per AIP	Prorated Support Space
G162	ELECTRICAL	77	Prorated Per AIP	Prorated Support Space
G166	MECHANICAL	2571	Prorated Per AIP	Prorated Support Space
G171	ELECTRICAL	774	Prorated Per AIP	Prorated Support Space
G172	IT	313	Prorated Per AIP	Prorated Support Space
	SUBTOTAL	4,304		

LEVEL-01 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G161	LOADING DOCK	870	Not Eligible	Non Public
G163	JANITOR	83	Not Eligible	Non Public / Non Airline Space
G168	STAGING AREA	345	Not Eligible	Non Public
G169	STORAGE	306	Not Eligible	Non Public
G173	STORAGE	150	Not Eligible	Non Public
G174	AIRPORT STORAGE	432	Not Eligible	Non Public
G080	STORAGE	701	Not Eligible	Non Public
	SUBTOTAL	2,887		

TOTAL LEVEL-00 32,693

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 2

LEVEL-02 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
EL2	ELEVATOR	75	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES1	EGRESS STAIR #1	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES2	EGRESS STAIR #2	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES3	EGRESS STAIR #3	326	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES4	EGRESS STAIR #4	338	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S001	CONCOURSE CIRCULATION	9562	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S010	BOH HALL	108.5	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S012	PET RELIEF	108	Eligible per AIP	Required for ADA
S013	MOTHERS' ROOM	112	Eligible per AIP	Public Restroom
S015	WOMEN'S RESTROOM	1362	Eligible per AIP	Public Restroom
S016	COMPANION CARE RESTROOM	114	Eligible per AIP	Public Restroom
S018	MEN'S RESTROOM	1317	Eligible per AIP	Public Restroom
S019	FAMILY RESTROOM	77	Eligible per AIP	Public Restroom
S020	FAMILY RESTROOM	77	Eligible per AIP	Public Restroom
S025	VESTIBULE	129	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S230	GATE 8 HOLDROOM	2352	Eligible per AIP	Public Holdroom
S232	GATE 7 HOLDROOM	2414	Eligible per AIP	Public Holdroom
S234	FUTURE PLAY AREA	617	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S235	GATES 9,10, 11	8256	Eligible per AIP	Public Holdroom
S236	GATE 6 HOLDROOM	2300	Eligible per AIP	Public Holdroom
S237	GATE 5 HOLDROOM	3062	Eligible per AIP	Public Holdroom
g145B	ELEVATOR	79	Eligible per AIP	and Baggage
	SUBTOTAL	33,444		

LEVEL-02(BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G241	CHASE	500	Prorated Per AIP	Prorated Support Space
S007	MECHANICAL	5041	Prorated Per AIP	Prorated Support Space
S008	ELEC	510	Prorated Per AIP	Prorated Support Space
S009	IDF	208	Prorated Per AIP	Prorated Support Space
S014	CHASE	113	Prorated Per AIP	Prorated Support Space
S021	CHASE	103	Prorated Per AIP	Prorated Support Space
S024	MECH SUPPLY	112	Prorated Per AIP	Prorated Support Space
S026	MECH RETURN	93	Prorated Per AIP	Prorated Support Space
S027	MECH INTAKE	90	Prorated Per AIP	Prorated Support Space
	SUBTOTAL	6,770		

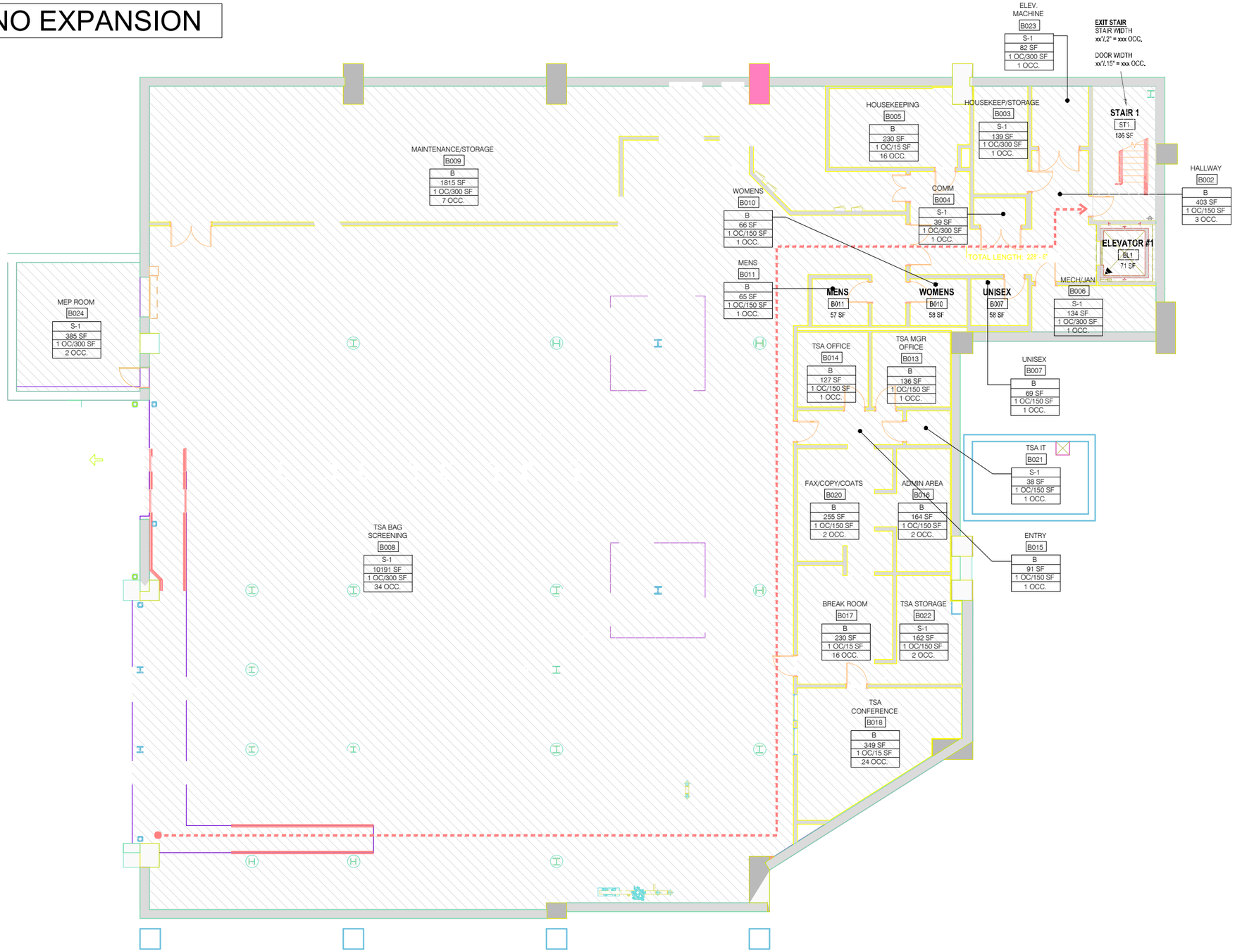
LEVEL-02 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
S011	STORAGE	149	Not Eligible	Non Public
S017	JANITOR	335	Not Eligible	Non Public / Non Airline Space
S023	CONCESSION	4304	Not Eligible	Revenue Generating
S233	CONCESSIONS	1798	Not Eligible	Revenue Generating
S010	BOH HALL	108.5	Eligible per AIP	and Baggage
	SUBTOTAL	6,695		

TOTAL LEVEL-00 46,908

PFC ELIGIBILITY

NO EXPANSION



BASEMENT LEVEL

LEGEND

NEW REMODEL

- PFC ELIGIBLE
- PFC NON ELIGIBLE
- PFC PRORATE
- EXISTING SPACE

KEY NOTES

1. NONE

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Morrison Maierle
engineers • surveyors • planners • scientists
MM PN:4867008

PROJECT TITLE:
REDMOND MUNICIPAL AIRPORT
REDMOND TERMINAL EXPANSION

PROJECT ADDRESS:
2522 JESSE BUTLER CIRCLE
REDMOND, OREGON 97756

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: 02/2023
REVIEWED BY:
DRAWN BY:
DESIGNED BY:
PROJECT NUMBER: 20241955001

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SEAL:

SHEET TITLE:
TERMINAL PFC ELIGIBILITY

BASEMENT LEVEL

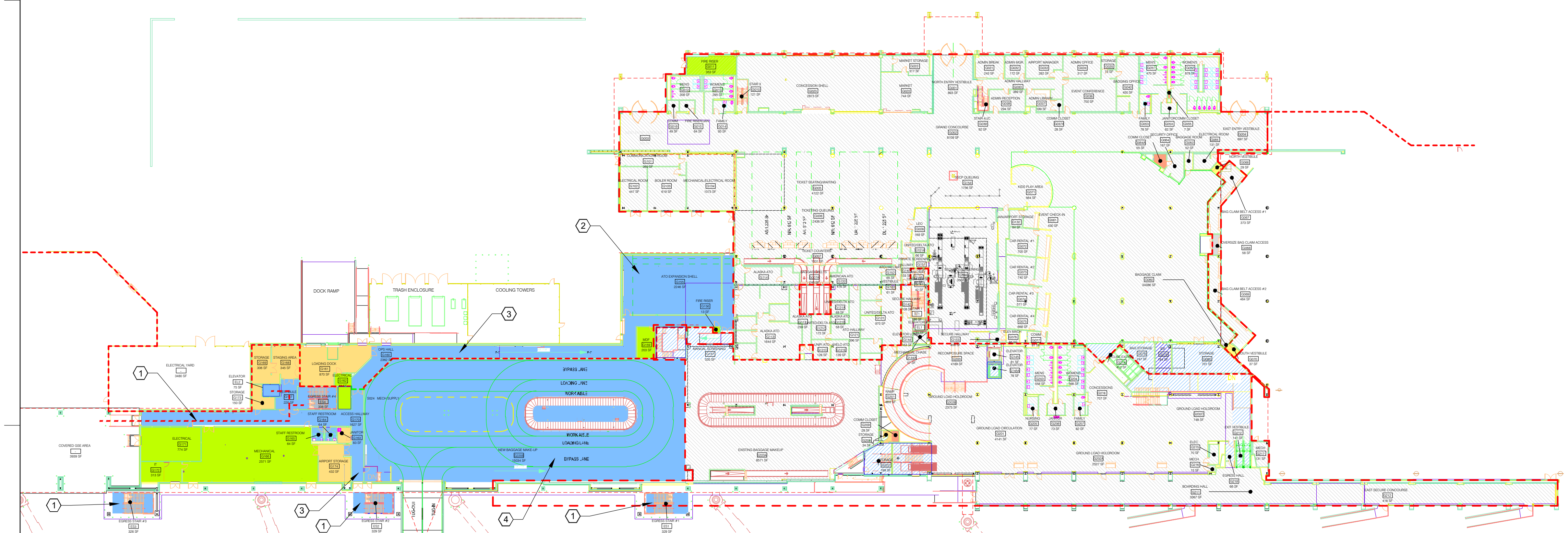
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PFC ELIGIBILITY



FIRST FLOOR OVERVIEW

LEGEND

	NEW	REMODEL
PFC ELIGIBLE		
PFC NON ELIGIBLE		
PFC PRORATE		
EXISTING SPACE		

[redacted]

KEYMAP

KEY NOTES

1. REQUIRED FOR EMERGENCY EGRESS.
2. ATO SPACE IS ELIGIBLE SINCE IT IS DIRECTLY ADJACENT TO TICKET COUNTERS.
3. AIRLINE CIRCULATION / ACCESS DIRECTLY UNDER HOLD ROOM
4. AIRLINE OPERATIONAL SPACE DIRECTLY UNDER HOLD ROOM.

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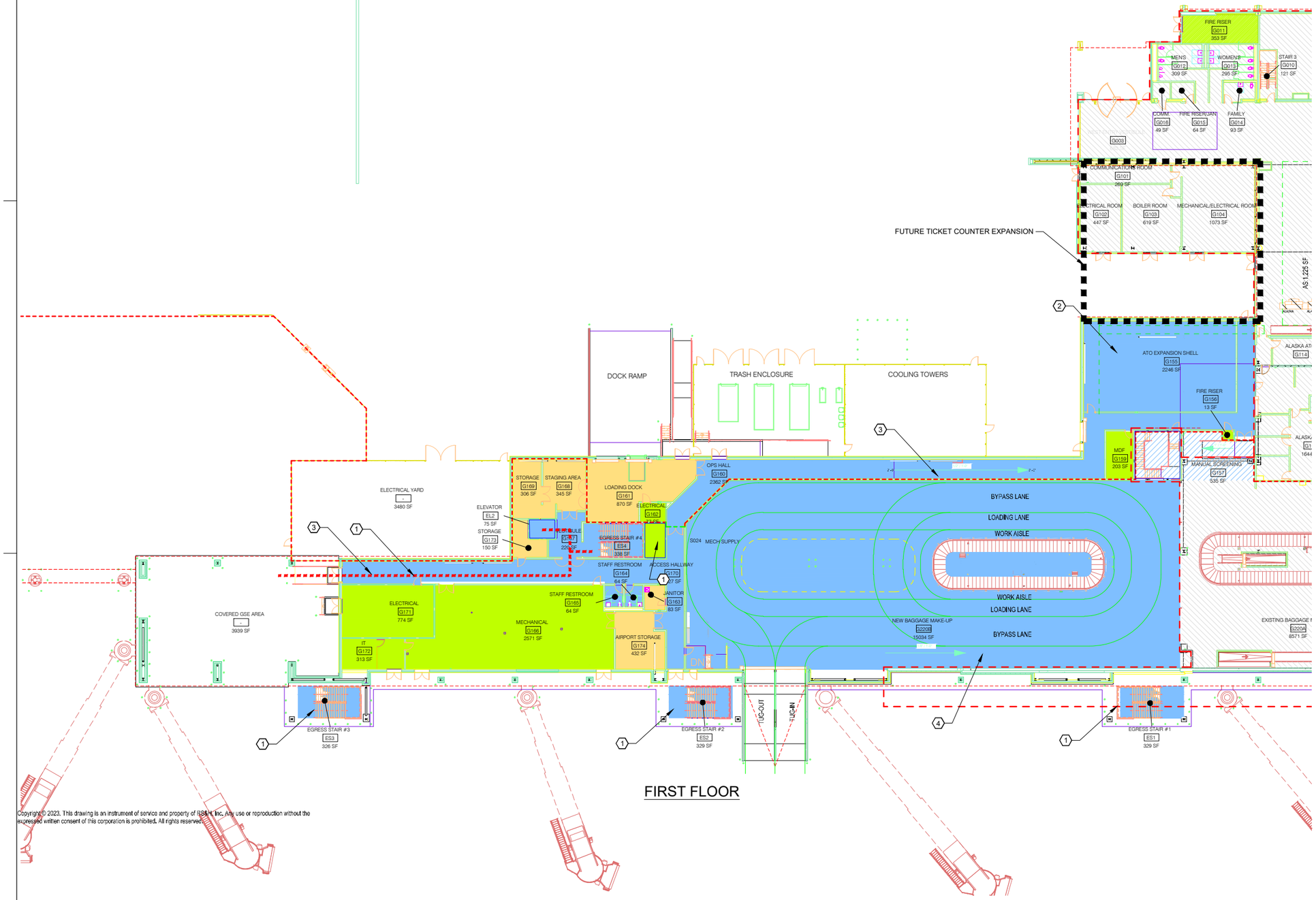
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PFC ELIGIBILITY



FIRST FLOOR

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LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

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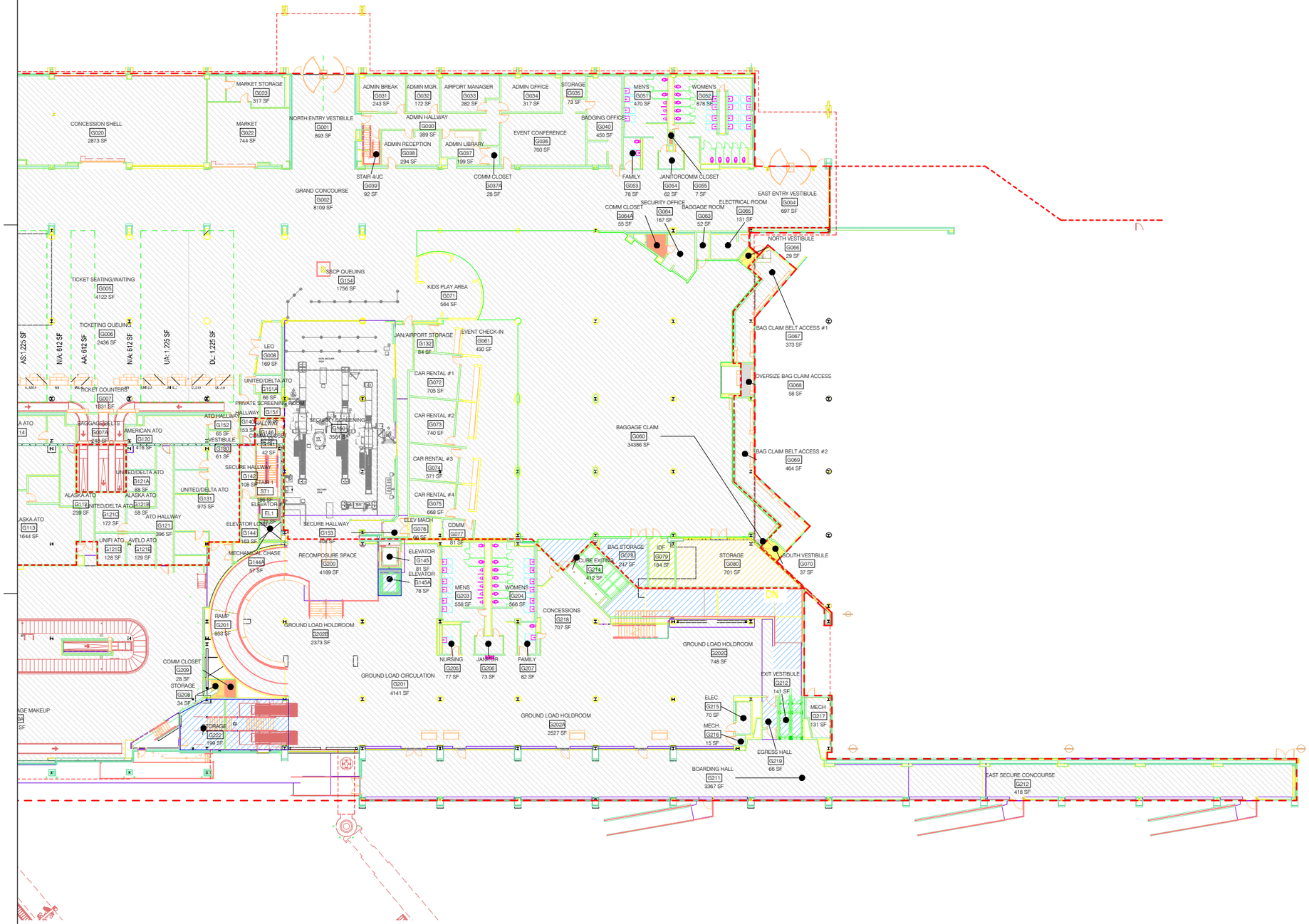
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MAIN LEVEL

SHEET ID:
FIG 2A

PROJECT STATUS:
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PFC ELIGIBILITY



FIRST FLOOR

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

KEYMAP

KEY NOTES

1. NONE.

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MAIN LEVEL

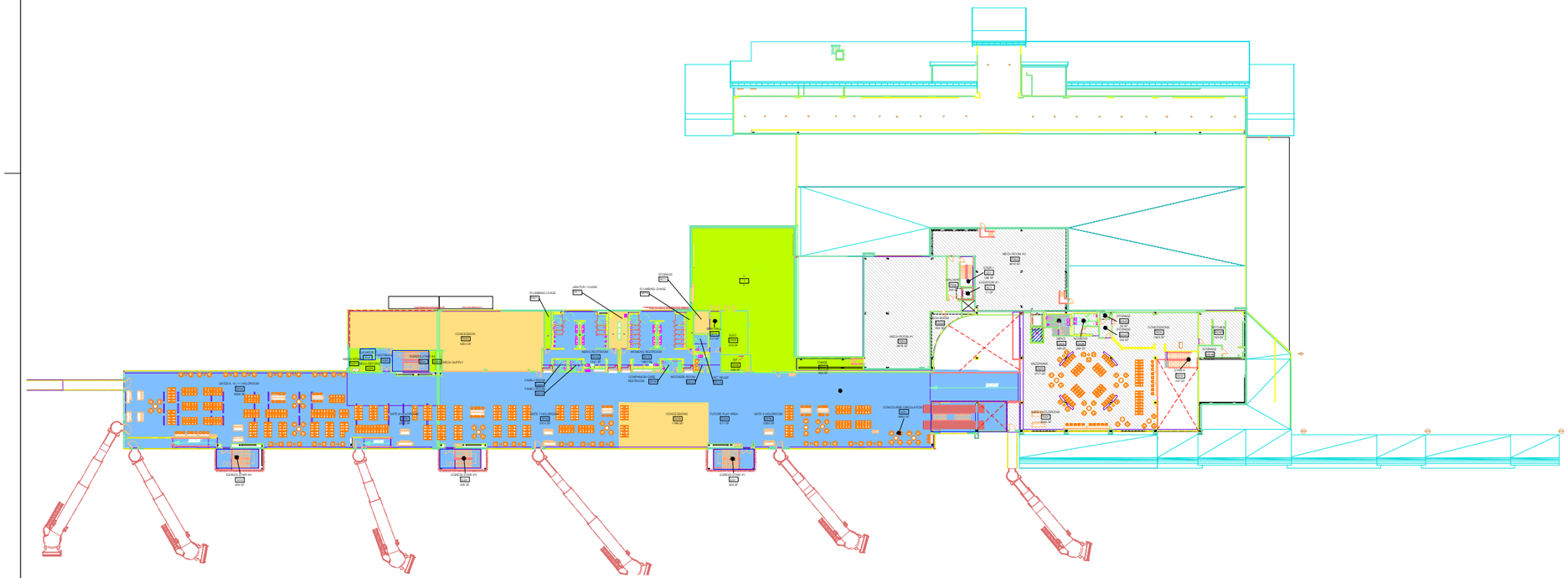
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PFC ELIGIBILITY



SECOND FLOOR - OVERVIEW

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE



KEYMAP

KEY NOTES

1. NONE

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2ND LEVEL

SHEET ID:

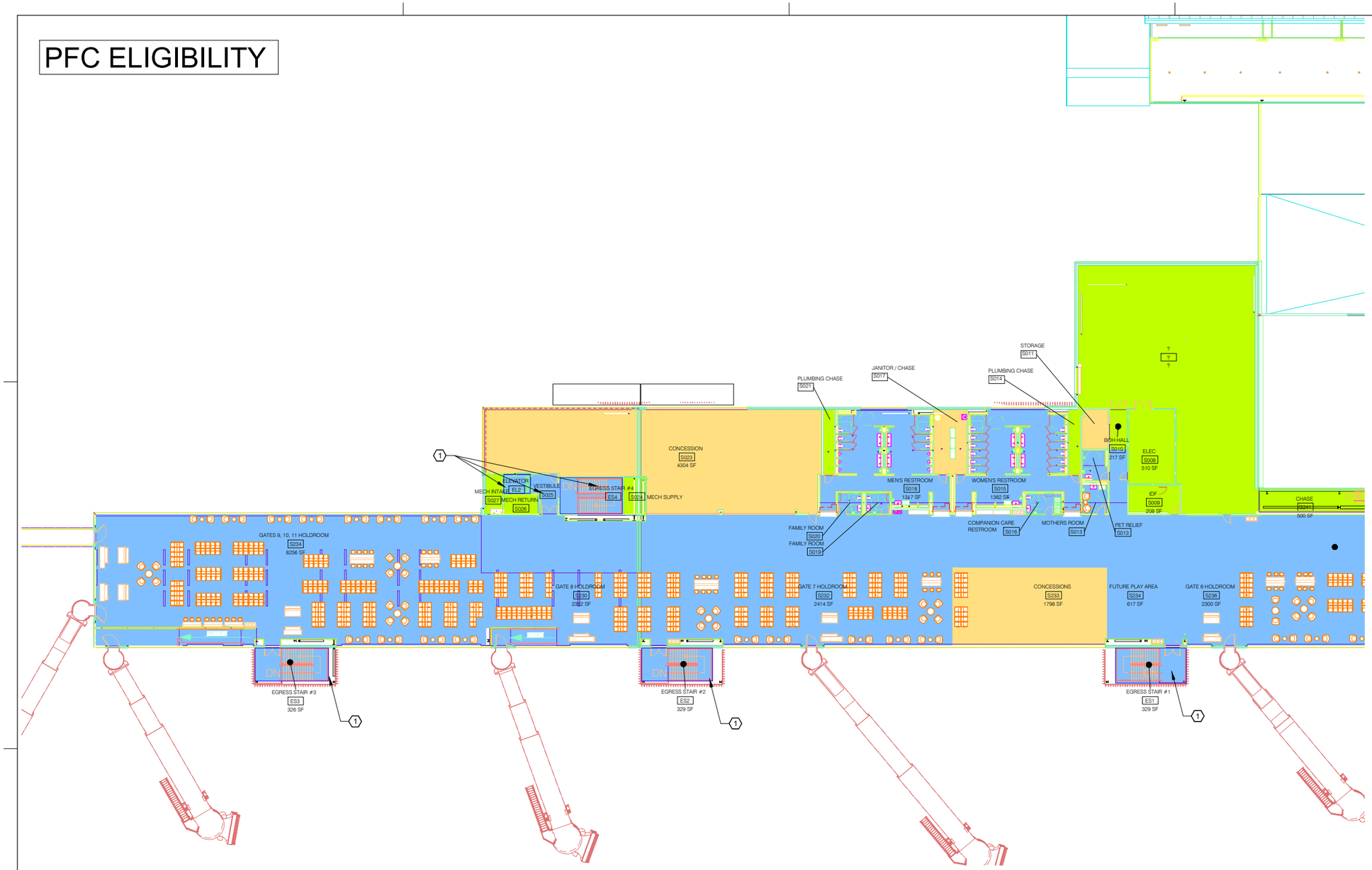
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PFC ELIGIBILITY



SECOND FLOOR

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
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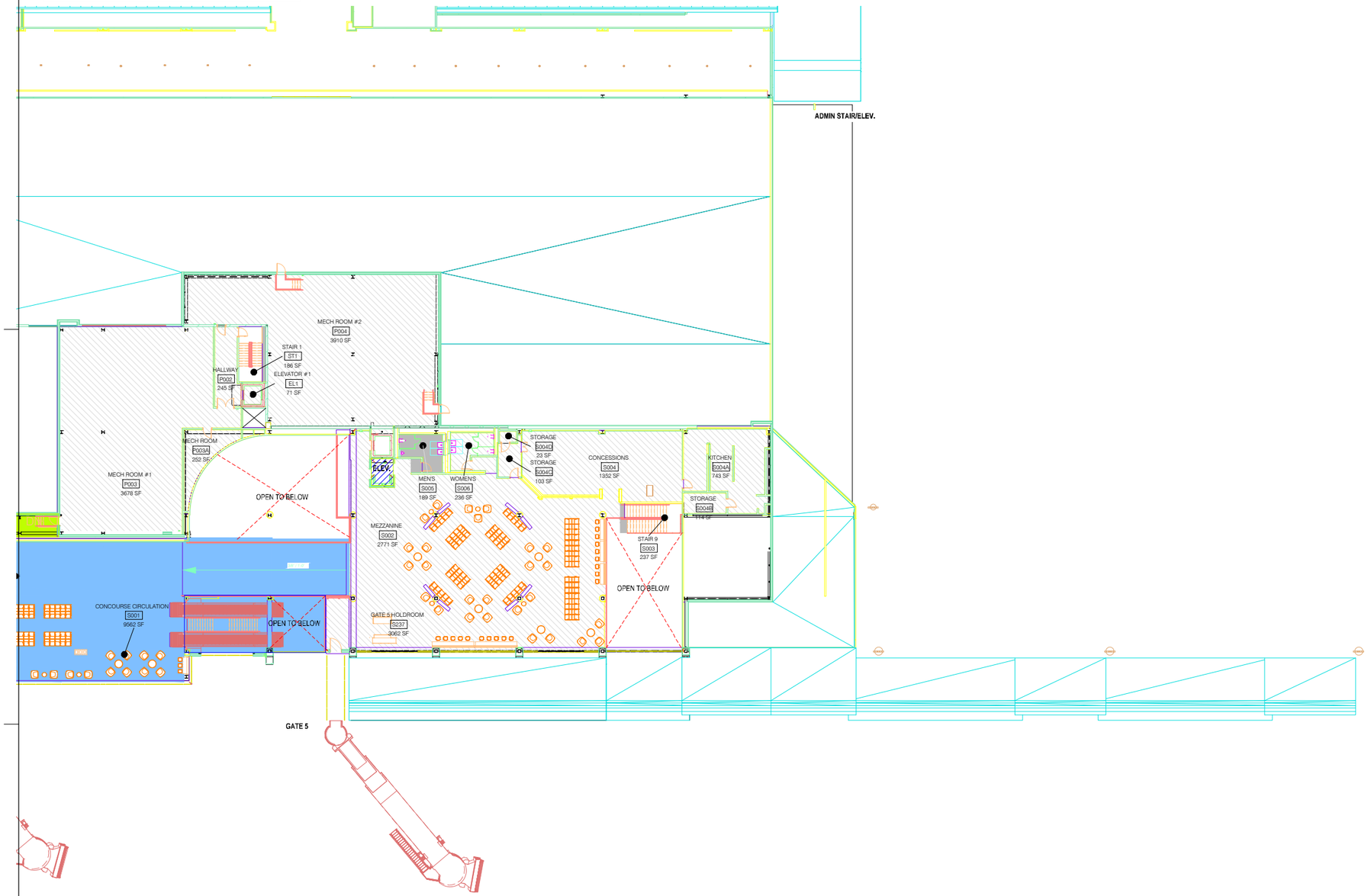
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PFC ELIGIBILITY



SECOND FLOOR

LEGEND

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KEYMAP

KEY NOTES

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SHEET ID:
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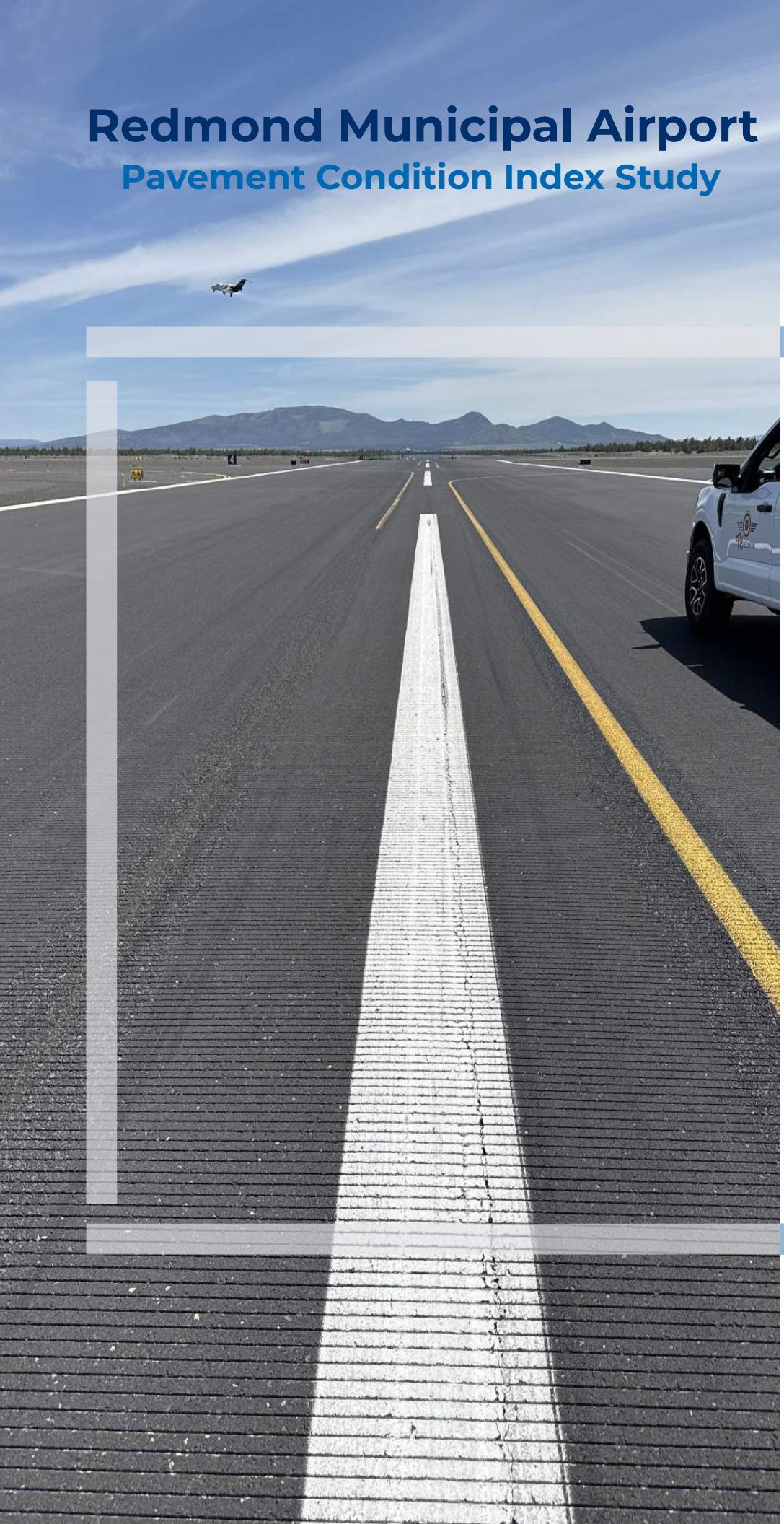
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Exhibit ‘D’ 2023 – Pavement Condition Index Study.

Redmond Municipal Airport

Pavement Condition Index Study

2023



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APPENDICES

Appendix 'A' - PCI Study Results – Figures
Appendix 'B' - PCI Study Results – Tables
Appendix 'C' - Pavement Management Program
Appendix 'D' - Inspection Results
Appendix 'E' - Distress Manuals

1. Introduction

In September of 2022, the Redmond Municipal Airport contracted with Morrison-Maierle to perform a Pavement Condition Index Survey (PCI) of airside pavements at the Redmond Municipal Airport. Specific objectives for the condition survey are:

A. To determine present condition of the pavement in terms of apparent structural integrity and operation surface condition.

B. To provide the Airport and FAA with a common index for comparing the condition and performance of pavements at the airport and provide a rational basis for justification of pavement rehabilitation projects.

C. To provide feedback on pavement performance for validation and improvement of current pavement design, evaluation, and maintenance procedures.

The airport pavement condition survey and the determination of the PCI are the primary means of obtaining and recording vital airport pavement performance data. The condition survey for both rigid and flexible pavement facilities consist principally of visual inspection of the pavement surface for signs of pavement distress resulting from the influence of aircraft traffic and environment.

Morrison-Maierle performed the last PCI study at the Redmond Municipal Airport in 2018. By performing the survey at predetermined intervals, i.e., three to four years, the performance of the pavement can be monitored to assist in determining timing of rehabilitation projects.

The typical life of an asphalt pavement is depicted below. Typically, asphalt pavements deteriorate quickly immediately following construction, then experience a slow deterioration over time to a point known as the Critical PCI. Beyond this point, asphalt pavement surfaces deteriorate rapidly. The Critical PCI is the point at which rapid deterioration begins, and maintenance becomes less economical than reconstruction. This typically occurs at 75% of the pavement's life span.

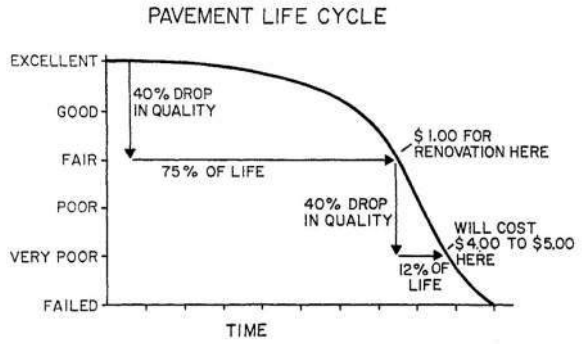


Figure 1 - Pavement Life Cycle

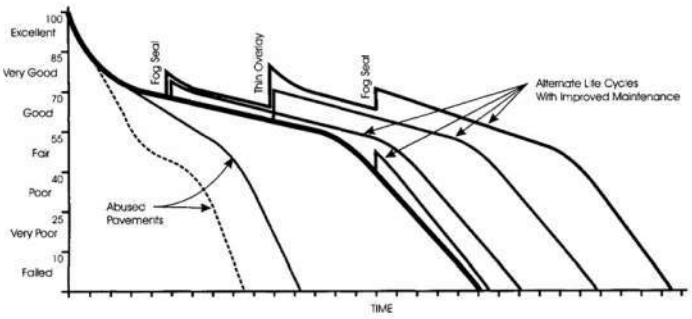


Figure 2 - Alternative Pavement Life Cycle

Pavement maintenance should be performed regularly on all the Airport's pavements. Maintenance should include annual crack sealing, and shoulder grading and fog sealing, as necessary. Figure two, above, indicates the effect of routine maintenance on the pavement life cycle curve. Thorough inspections of all paved areas should be conducted at least twice per year to verify pavement performance.

2. PCI Methodology & Format

The general scope of services required to complete the pavement condition survey program consisted of:

- Reviewing the previous PCI survey, current airport layout plans, and construction plans and pavement designs for projects constructed since the previous PCI survey;
- Updating base maps to show any changes due to construction since the previous PCI survey;
- Defining pavement networks and selecting sample units for inspection at changed areas due to construction;
- Conducting pavement visual condition surveys;
- Completing data analysis, based on data collected in 1-4 above; and
- Preparing a final report.

An airport's pavement network consists of all the paved areas providing access for air traffic that the agency is responsible for maintaining. Since the network typically is composed of many different pavement ages and compositions, the network is divided into smaller components: branches, sections, and sample units. Airport branches were identified using the current airport layout plan. A branch is an area of pavement that serves one function (for example - a single runway, a single taxiway, or a single apron area). Each branch was then divided into separate units called sections using pavement design records and construction plans. Sections are units of pavement having the same cross-section, construction history, maintenance history, and approximate overall condition. These sections were used as analysis units during the visual condition surveys. It should be noted that "branch" and "section" are the terminology used in Micro PAVER.

Prior to conducting the field surveys, the previously defined sections were subdivided into sample units. A sample unit is any identifiable area of a pavement section that is used for pavement inspection. The sample units for asphalt concrete pavements generally consisted of a 5000 square foot area, whereas the sample units for concrete pavements generally consisted of 20 adjacent slabs. In this survey, samples were selected randomly.

Once the base maps depicting the location of sections and sample units had been prepared, the minimum number of sample units that were needed to be surveyed to obtain an adequate estimate of the section PCI was determined. This task was accomplished using Attachment A, "Selection of Minimum Number of Sample Units", of the Northwest Mountain Region handout. The number of sample units selected provides a 95 percent probability that the estimate of the mean section PCI is within + 5 points of the true mean PCI. Sample units for inspection were randomly selected as per FAA guidelines. Field inspections began and were finished in May 2023.

A copy of the inspection reports is provided in ***Appendix 'D'***. The distress manuals used to determine the distresses in the field are included in ***Appendix 'E'***.

3. Pavement Work History

Since the last PCI survey in 2018, the airport has expanded, reconstructed, or rehabilitated a portion of the airfield pavements. Below is a general summary of the pavements that have been reconstructed or constructed since 2018.

- 2019
  - Terminal apron expanded west and south with new full-strength concrete.
  - New asphalt paved shoulders surrounding terminal apron.
  - Terminal apron asphalt connector taxiway to Taxiway 'E' ('A4') constructed in new location east of previous location and renamed Taxiway 'R1'.
  - A portion of Taxiway 'F' ('A') between Taxiway 'E' ('A4') and Taxiway 'H' ('A3') reconstructed with new asphalt pavement section.
  - Taxiway 'E' rehabilitated via mill and overlay, and a portion of Taxiway 'E' ('A4') removed full depth.

- 2022
  - Taxiway 'F' rehabilitated via mill overlay from 2019 full depth reconstruction end point to Taxiway 'A1' ('K') and renamed Taxiway 'A'.
  - Taxiway 'A' ('F') connector taxiways rehabilitated via mill and overlay and renamed Taxiway 'A1' ('K'), 'A2' ('N'), 'A3'('H'), and 'A4'('E').
  - Terminal apron asphalt connector taxiway to Taxiway 'H' ('A3') constructed in new location east of previous location, off the east edge of the apron, with concrete and asphalt and renamed Taxiway 'R2'.
  - A portion of the North General Aviation Apron reconstructed with construction of new FBO building.

See ***Appendix 'A'*** for the following Figures:

- Figure 1 – Redmond Municipal Airport Facilities
- Figure 2 – Redmond Municipal Airport Pavement Branches and Sections
- Figure 3 – Pavement Section Information

The table below is a summary of the branch and section changes since the 2018 PCI Report. Note that a (*) denotes a PCI value that is projected based off previous PCI study results as these pavements were not surveyed due to the poor quality of the pavement and their lack of eligibility for maintenance or reconstruction via federal funding.

Table 1 - Branch & Section Changes

Branch & Section Changes from 2018 to 2023					PCI Values	
2018 Branch ID	2018 Section ID	Branch & Section Change	2023 Branch ID	2023 Section ID	PCI 2018	PCI 2023
AFBO	1	No change	AFBO	1	51	43.14*
AFBO	2	No change	AFBO	2	49	40.91*
AFBO	3	No change	AFBO	3	62	55.89*
AFBO	4	No change	AFBO	4	78	76.97
AFBO	5	No change	AFBO	5	73	72.97
AFUEL	1	No change	AFUEL	1	83	73.97
AGA	1	No change	AGA	1	100	85.97
AGA	2	Split into 2 and 16 for FBO hangar construction	AGA	2	100	84.97
AGA	2	Split into 2 and 16 for FBO hangar construction	AGA	16	100	100.00
AGA	4	No change	AGA	4	11	10.84*
AGA	7	No change	AGA	7	13	11.08*
AGA	8	No change	AGA	8	8	2.15*
AGA	9	No change	AGA	9	11	10.84*
AGA	10	No change	AGA	10	82	66.98
AGA	12	No change	AGA	12	95	84.97
AGA	13	No change	AGA	13	0	0.00
AGA	14	Split into 14 and 17 for FBO hangar construction	AGA	14	83	70.96

Branch & Section Changes from 2018 to 2023					PCI Values	
2018 Branch ID	2018 Section ID	Branch & Section Change	2023 Branch ID	2023 Section ID	PCI 2018	PCI 2023
AGA	14	Split into 14 and 17 for FBO hangar construction	AGA	17	83	100.00
AGA	15	No change	AGA	15	76	70.97
ASGA	1	No change	ASGA	1	83	72.96
ASGA	2	No change	ASGA	2	73	59.95
ATERM	1	No change	ATERM	1	96	94.99
N/A	N/A	New Construction 2019	ATERM	2	N/A	92.96
N/A	N/A	New Construction 2022	ATERM	3	N/A	95.93
AWGA	1	No change	AWGA	1	64	59.97
AWGA	2	No change	AWGA	2	76	63.97
AWGA	3	No change	AWGA	3	76	64.97
AWGA	4	No change	AWGA	4	59	47.96
R05	1A	No change	R05	1A	100	89.94
R05	1B	No change	R05	1B	100	92.95
R05	1C	No change	R05	1C	100	90.95
R05	2A	No change	R05	2A	100	87.94
R05	2B	No change	R05	2B	100	86.94
R05	2C	No change	R05	2C	100	85.94
R05	3A	No change	R05	3A	100	82.93
R05	3B	No change	R05	3B	100	82.93
R05	3C	No change	R05	3C	100	82.93
R05	4A	No change	R05	4A	100	92.95
R05	4B	No change	R05	4B	100	90.95
R05	4C	No change	R05	4C	100	90.95
R11	1	No change	R11	1	100	96.97
R11	2	No change	R11	2	100	94.96
R11	3	No change	R11	3	100	89.94
R11	4	No change	R11	4	100	94.96
R11	5	No change	R11	5	100	98.98
TA1	1	Renamed 2022	TFBO	3	39	36.19*
TA2	1	Renamed 2022	TSGA	1	92	80.93
TB	1	No change	TB	1	98	78.93
TB	2	No change	TB	2	100	87.94
TB	3	No change	TB	3	100	86.94

Branch & Section Changes from 2018 to 2023					PCI Values	
2018 Branch ID	2018 Section ID	Branch & Section Change	2023 Branch ID	2023 Section ID	PCI 2018	PCI 2023
TB	4	No change	TB	4	84	69.92
TB1	1	No change	TB1	1	100	97.98
TB2	1	No change	TB2	1	100	90.95
TB3	1	No change	TB3	1	100	97.98
TB4	1	No change	TB4	1	100	100.00
TC	1	No change	TC	1	96	71.92
TC	2	No change	TC	2	96	74.92
TC	3	No change	TC	3	64	100.00
TC	4A	No change	TC	4A	50	90.95
TC	4B	No change	TC	4B	100	100.00
TC	5	No change	TC	5	99	92.95
TC1	1	No change	TC1	1	100	90.95
TC2	1	No change	TC2	1	100	87.94
TC3	1	No change	TC3	1	100	97.98
TC4	1	No change	TC4	1	100	95.96
TD	1	No change	TD	1	100	97.98
TE	1	Removed 2019	-	-	52	-
TE	2	Geometry redefined 2019, Renamed 2022	TA4	2	52	100.00
TE	3	Geometry redefined 2019, Renamed 2022	TA4	3	100	89.94
TF	1	Split into 1 and 9 for 2019 construction, renamed 2022	TA	1	50	100.00
TF	1	Split into 1 and 9 for 2019 construction, renamed 2022	TA	9	50	100.00
TF	2	Renamed 2022	TA	2	100	96.97
TF	3	Renamed 2022	TA	3	100	89.94
TF	4	Renamed 2022	TA	4	100	100.00
TF	5	Renamed 2022	TA	5	100	96.97
TF	6	Renamed 2022	TA	6	100	93.96
TF	7	Renamed 2022	TA	7	100	90.95
TF	8	Renamed 2022	TA	8	68	100.00

Branch & Section Changes from 2018 to 2023					PCI Values	
2018 Branch ID	2018 Section ID	Branch & Section Change	2023 Branch ID	2023 Section ID	PCI 2018	PCI 2023
TFBO	1	No change	TFBO	1	100	76.92
TFBO	2	No change	TFBO	2	72	43.95
TH	1	Removed 2022	-	-	46	-
TH	2	Renamed 2022	TA3	2	53	100.00
TH	3	Renamed 2022	TA3	3	100	84.93
TK	1	Geometry redefined 2022, Renamed 2022	TA1	1	63	100.00
TK	2	Geometry redefined 2022, Renamed 2022	TA1	2	100	100.00
TN	2	Renamed 2022	TA2	2	87	100.00
TN	3	Renamed 2022	TA2	3	100	93.96
N/A	N/A	New construction 2019	TR1	1	N/A	100.00
N/A	N/A	New construction 2022	TR2	1	N/A	100.00
TWGA	1	No change	TWGA	1	87	74.92
TWGA	2	No change	TWGA	2	85	70.92
TWGA	3	No change	TWGA	3	79	63.92
TWGA	4	No change	TWGA	4	82	47.94
TWGA	5	No change	TWGA	5	79	69.92
TZ1	1	No change	TZ1	1	100	100.00
TZ2	1	No change	TZ2	1	100	71.92
TZ2	2	No change	TZ2	2	72	71.92
TZ3	1	No change	TZ3	1	92	71.92
TZ3	2	No change	TZ3	2	96	79.93

4. Summary of 2023 PCI Results

The 2023 PCI values for each section of each pavement branch are provided herein. The predicted PCI values for 2028 and 2033 are also provided. The predicted PCI values are based on actual data based on past inspections to determine pavement deterioration curves for similar classes of pavements.

The following figures are provided in ***Appendix 'A'***.

- Figure 4 – Pavement Condition 2023
- Figure 5 – Pavement Condition 2028
- Figure 6 – Pavement Condition 2033
- Figure 7 – Pavement Age in 2023

The results are organized below according to pavement use; Runways, Taxiways, Aprons, Taxilanes, and Miscellaneous.

Table 2 - Pavement Condition Rating

Pavement Condition Rating	PCI Range
Good	86-100
Satisfactory	71-85
Fair	56-71
Poor	41-55
Very Poor	26-40
Serious	11-25
Failed	0-10

A. Runways

RUNWAY 5-23

Runway 5-23 was completely reconstructed in 2014 and 2016. The pavements are in good condition but are beginning to show low severity cracking at the pavement joints. The pavement is showing signs of slight rubber buildup that should be monitored to maintain surface friction.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
R05	01A	8/31/2014	9	100	89.94	74.19	56.42
R05	01B	8/7/2014	9	100	92.95	78.63	60.78
R05	01C	8/7/2014	9	100	90.95	75.61	57.77
R05	02A	8/7/2016	7	100	87.94	71.49	53.97
R05	02B	8/7/2016	7	100	86.94	70.21	52.85
R05	02C	8/7/2016	7	100	85.94	68.96	51.79
R05	03A	8/7/2016	7	100	82.93	65.42	48.93
R05	03B	8/7/2016	7	100	82.93	65.42	48.93
R05	03C	8/7/2016	7	100	82.93	65.42	48.93
R05	04A	8/7/2016	7	100	92.95	78.63	60.78
R05	04B	8/7/2016	7	100	90.95	75.61	57.77
R05	04C	8/7/2016	7	100	90.95	75.61	57.77



Figure 3 - Typical Cracking on Runway 5-23



Figure 4 - Typical Pavement Condition on Runway 5-23 – Some Rubber Buildup

RUNWAY 11-29

Runway 11-29 has been completely reconstructed. In 2016 the intersection with Runway 5-23 was reconstructed and the remaining portions of the runway were reconstructed in 2018. Portions of the pavement are showing low severity cracking, primarily at the intersection of Runway 5-23 constructed in 2016. There are areas of pavement scarring resulting from paint removal via water blasting in R11-03, which was categorized as low severity raveling. Additionally, a diesel spill on the 29 end of the runway resulted in a required pavement removal and patch in R11-05. Similar to Runway 5-23, rubber buildup is occurring that should be monitored to maintain surface friction.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
R11	01	7/31/2018	5	100	96.97	85.87	68.89
R11	02	8/7/2016	7	100	94.96	81.99	64.37
R11	03	8/7/2016	7	100	89.94	74.19	56.42
R11	04	8/7/2016	7	100	94.96	81.99	64.37
R11	05	9/13/2018	5	100	98.98	90.96	75.63



Figure 5 – Low Severity Cracking on Runway 11-29



Figure 6 – Some Pavement Scarring (Left) from Paint Removal on Runway 11-29



Figure 7 – Rubber Buildup on Runway 11-29

B. Taxiways

TAXIWAY 'A'

Taxiway 'A' (formerly Taxiway 'F') serves as the primary parallel taxiway for Runway 5-23. Portions of the taxiway were reconstructed during the Runway 5-23 project in 2016. These areas are associated with the intersection of Runway 11-29. A full reconstruction of pavement was also completed between Taxiway 'A3' and Taxiway 'A4' in 2019, and the remaining portions of the taxiway were rehabilitated via a 4.5" mill and overlay in 2022. Overall, the pavements are in good condition. The only signs of distress are in the aforementioned Runway 11-29 intersection, which is showing some low severity cracking as well as scarring from water blasting.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TA	01	6/5/2022	1	50	100.00	96.66	85.24
TA	02	6/4/2016	7	100	96.97	85.87	68.89
TA	03	6/5/2016	7	100	89.94	74.19	56.42
TA	04	6/5/2016	7	100	100.00	96.66	85.24
TA	05	8/7/2016	7	100	96.97	85.87	68.89
TA	06	6/5/2016	7	100	93.96	80.26	62.49
TA	07	6/5/2016	7	100	90.95	75.61	57.77
TA	08	6/5/2022	1	68	100.00	96.66	85.24
TA	09	6/5/2019	4	50	100.00	96.66	85.24



Figure 8 - Typical Pavement Condition for Taxiway 'A'



Figure 9 – Pavement Scarring from Water Blasting at Taxiway 'A' - Runway 11-29 Intersection

TAXIWAYS 'A1', 'A2', 'A3', & 'A4'

Taxiways 'A1', 'A2', 'A3', and 'A4' (formerly Taxiways 'K', 'N', 'H', and 'E', respectively) serve as connector taxiways from Taxiway 'A' to Runway 5-23. Taxiway 'A1' was fully rehabilitated in 2022 via a 4.5" mill and overlay. The geometry of the pavement was also changed at this time to meet current FAA standards. Taxiways 'A2' and 'A3' were also largely rehabilitated at this time, but the portions on the Runway 5-23 side of the hold bars were not. These portions were reconstructed in 2016. Taxiway 'A4' was rehabilitated in 2019 from Taxiway 'A' to the hold bar of Runway 5-23, and the remainder of the taxiway was reconstructed in 2014.

All pavements are in good or satisfactory condition. Pavements rehabilitated in 2019 and 2022 are showing no signs of distress. Pavements reconstructed with Runway 5-23 in 2014 and 2016 are showing low severity transverse and/or longitudinal cracking and on Taxiway 'A3', there is some low severity raveling.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TA1	01	6/5/2022	1	63	100.00	96.66	85.24
TA1	02	6/5/2022	1	100	100.00	96.66	85.24
TA2	01	6/5/2022	1	87	100.00	96.66	85.24
TA2	02	6/30/2016	7	100	93.96	80.26	62.49
TA3	02	6/5/2022	1	53	100.00	96.66	85.24
TA3	03	9/18/2016	7	100	84.93	67.75	50.79
TA4	02	6/5/2019	4	52	100.00	96.66	85.24
TA4	03	9/17/2016	7	100	89.94	74.19	56.42



Figure 10 - Typical Pavement Condition on Taxiway 'A1'



Figure 11 – Some Low Severity Cracking on Taxiway 'A2'



Figure 12 – Newer (2022) Taxiway 'A2' Pavement



Figure 13 – Typical Raveling on Taxiway 'A3'



Figure 14 – Newer (2022) Taxiway 'A3' Pavement



Figure 15 – Typical Cracking on Taxiway 'A4'

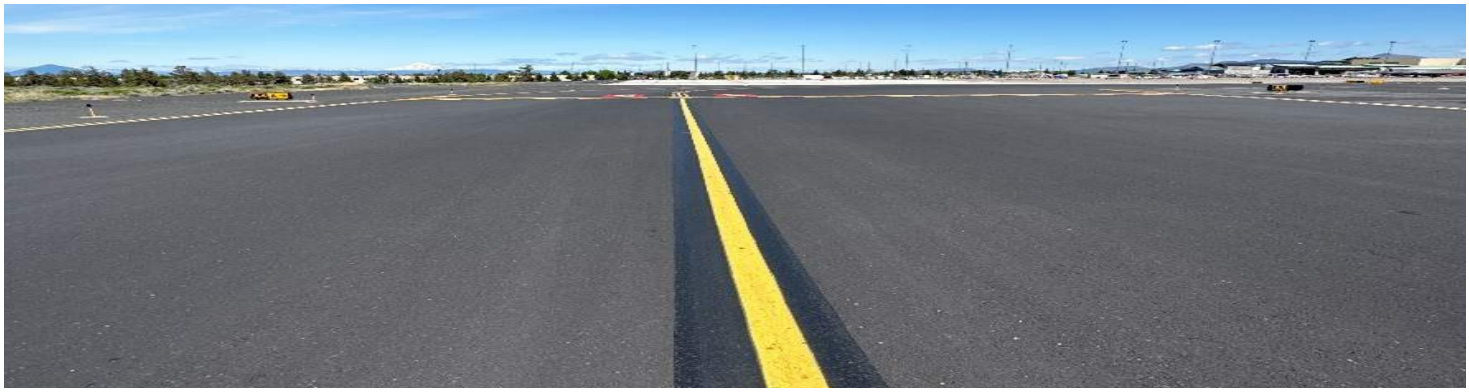


Figure 16 – Newer (2019) Taxiway 'A4' Pavement

TAXIWAY 'B'

Taxiway 'B' from Runway 11 to the Taxiway 'A' intersection was reconstructed in 2010 (TB-01). The portions between Taxiway 'A' and Runway 5-23, and east of Runway 5-23 up to the hold bar were reconstructed in 2016 with the Runway 5-23 project (TB-02 and TB-03). The remaining portion from Runway 5-23 to Runway 11 is the original pavement from 1997 (TB-04).

The number of distresses in the pavements is directly proportional to the age of the pavements. Pavements reconstructed in 2016 are still in good condition, 2011 pavement is satisfactory, and the original pavement constructed in 1997 is just fair. Longitudinal and transverse cracking is the most prevalent distress found across the pavements, but there are a couple isolated areas of low severity alligator cracking and raveling. The 1997 pavement has a depression on centerline, full length. Cracking on this pavement is more severe and will need rehabilitation soon.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TB	01	6/29/2011	12	98	78.93	61.08	45.74
TB	02	8/18/2016	7	100	87.94	71.49	53.97
TB	03	9/18/2016	7	100	86.94	70.21	52.85
TB	04	9/18/1997	26	84	69.92	52.59	40.54



Figure 17 - Isolated Low Severity Alligator Cracking, TB-01



Figure 18 - Medium Severity Transverse Crack, TB-01



Figure 19 – Typical Low Severity Longitudinal Cracking on Pavement Joints, TB-01



Figure 20 – Typical Cracking, TB-04 – Higher Severity, but Sealed



Figure 21 – Higher Severity Cracking, TB-04 – Needs Reseal

TAXIWAYS 'B1', 'B2', 'B3', & 'B4'

Taxiways 'B1', 'B2', 'B3', & 'B4' were largely reconstructed during the Runway 11-29 project in 2018, but portions of the sample areas are still older and showing some distress. However, these pavements are largely in good condition.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TB1	01	7/1/2018	5	100	97.98	88.16	71.79
TB2	01	7/1/2018	5	100	90.95	75.61	57.77
TB3	01	9/16/2018	5	100	97.98	88.16	71.79
TB4	01	9/16/2018	5	100	100.00	96.66	85.24



Figure 22 – Typical Cracking, Portion of Taxiway 'B2' not Reconstructed in 2018



Figure 23 – Typical 2018 Reconstruction Pavements, TB-Ladder Taxiways, No Distresses

TAXIWAY 'C'

Taxiway 'C' is located parallel to Runway 11-29 on the north side. Portions of the taxiway were rehabilitated via 4.5" mill and overlay in 2022 with the Taxiway 'A' project (TC-03 and TC-04A). These are located at the intersection of Taxiway 'A'. A portion of the taxiway was reconstructed in 2010 from the Runway 11 end to the intersection of Taxiway 'A' (TC-01 and TC-02). Between Taxiway 'A' and Runway 5-23 was reconstructed in 2016 as part of that project (TC-04B). A new section of Taxiway 'C' was constructed in 2013 from Runway 5-23 to the Runway 29 end.

Most pavements are in good condition, but from the Runway 11 end to Taxiway 'A' (TC-01 and TC-02, constructed in 2011), there is an increasing amount of longitudinal and transverse cracking appearing since the last PCI. Most of the cracking is low severity due to previous crack seal applications.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TC	01	8/30/2011	12	96	71.92	54.34	41.49
TC	02	9/16/2011	12	96	74.92	57.10	43.13
TC	03	6/5/2022	1	64	100.00	96.66	85.24
TC	05	8/7/2013	10	99	90.95	75.61	57.77
TC	04A	6/5/2022	1	50	100.00	96.66	85.24
TC	04B	7/31/2016	7	100	92.95	78.63	60.78



Figure 24 - Typical Pavement Condition on TC-01, Sealed Longitudinal and Transverse Cracks



Figure 25 – 2022 Rehabilitated Pavement, TC-03

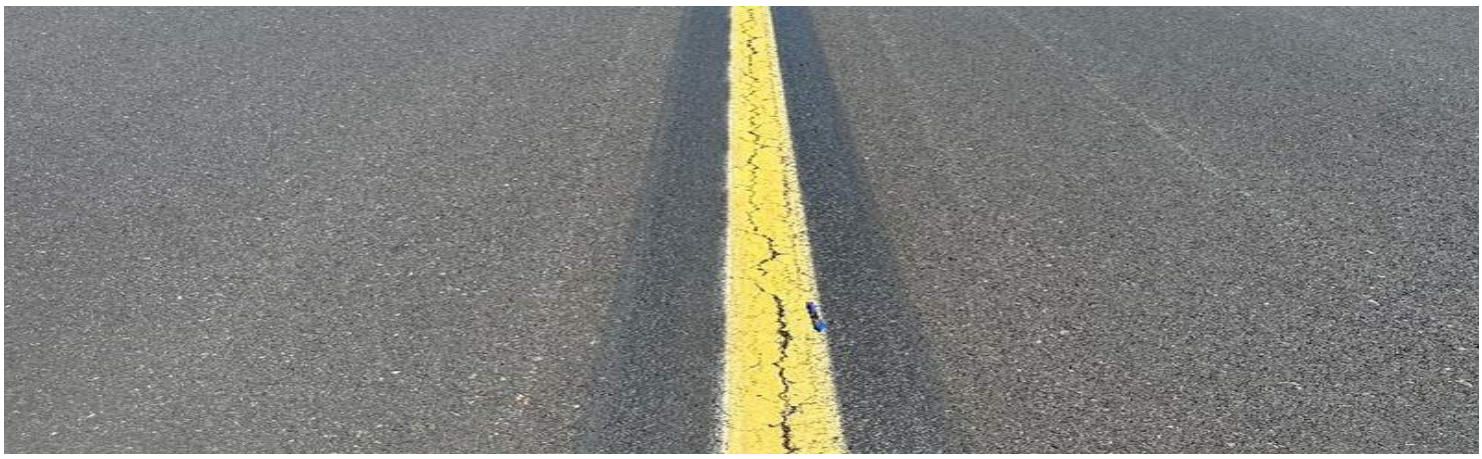


Figure 26- Typical Low Severity Longitudinal Cracking on Centerline, TC-05

TAXIWAYS 'C1', 'C2', 'C3', & 'C4'

Similar to the ladder taxiways coming off Taxiway 'B', Taxiways 'C1', 'C2', 'C3', and 'C4' were largely reconstructed during the Runway 11-29 project in 2018, but portions of the sample areas are still older and showing some distress. However, these pavements are largely in good condition. Most of the cracking is on the older pavements, and there is some raveling in places due to water blasting.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TC1	01	7/7/2018	5	100	90.95	75.61	57.77
TC2	01	7/31/2018	5	100	87.94	71.49	53.97
TC3	01	9/16/2018	5	100	97.98	88.16	71.79
TC4	01	9/16/2018	5	100	95.96	83.84	66.47



Figure 27 – Typical Distresses, Portion of Taxiway 'C2' not Reconstructed in 2018



Figure 28 – Typical 2018 Reconstruction Pavements, TC-Ladder Taxiways, No Distresses



Figure 29 – Some Raveling due to Water Blasting, TC4

TAXIWAY 'D'

Taxiway 'D' was reconstructed in 2017. The pavement is in good condition and is showing minimal distresses at this time. There are a few areas with some low severity cracking.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TD	01	4/30/2017	6	100	97.98	88.16	71.79



Figure 30 - Taxiway 'D' Typical Condition



Figure 31 – Low Severity Cracking on Taxiway 'D'

TAXIWAYS 'R1' & 'R2'

Taxiway 'R1' was constructed in 2019 with the terminal apron expansion, and Taxiway 'R2' was constructed in 2022 with the Taxiway 'A' rehabilitation project. Both taxiways provide access from the terminal apron the Taxiway 'A'. Because they are newer pavements, they are not currently showing any distress.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TR1	01	6/5/2019	4	N/A	100.00	96.66	85.24
TR2	01	6/5/2022	1	N/A	100.00	96.66	85.24



Figure 32 - Taxiway 'R1' Typical Condition

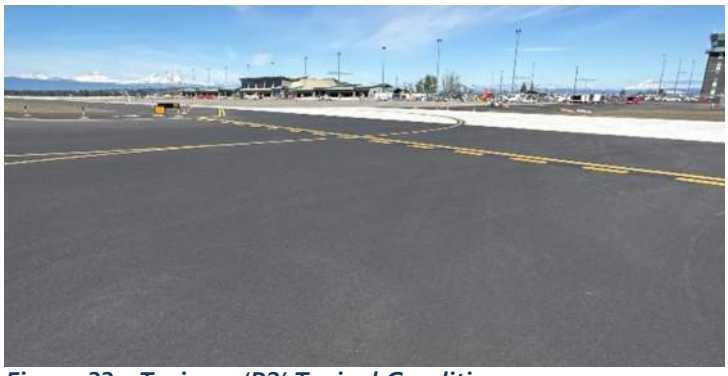


Figure 33 - Taxiway 'R2' Typical Condition

C. Aprons

FLIGHT SCHOOL AND LIFE FLIGHT PAVEMENTS

The pavements in the vicinity of the flight school and life flight are referred to as AFBO Section 1, 2, & 3. TFBO-03 is the taxilane connecting these aprons to Taxilane 'Z2'.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
AFBO	01	5/31/2003	20	51	43.14*	34.17	25.39
AFBO	02	8/31/1981	42	49	40.91*	31.88	23.34
AFBO	03	5/31/2004	19	62	55.89*	48.36	39.78
TFBO	03	6/5/1981	42	39	36.19*	35.12	29.32

**** Denotes predicted value - pavement not surveyed in 2023***

The pavement sections around the flight school and life flight apron are heavily deteriorated. Large longitudinal and transverse cracking, alligator cracking, block cracking, rutting, raveling, and patching is present on the pavements. Some of the areas of pavement show signs of vegetation growing in the cracks. PCI values for this area are projected based off previous PCI study results as these pavements were not surveyed due to the poor quality of the pavement and their lack of eligibility for maintenance or reconstruction via federal funding.



Figure 34 - Flight School Apron, AFBO-1



Figure 35- Flight School Apron, AFBO-2



Figure 36 - Life Flight Apron, AFBO-3



Figure 37 – Flight School Taxilane, TFBO-03

GENERAL AVIATION APRONS - NORTH

The pavement branch AGA references the general aviation parking aprons and hangar aprons on the north side of the airfield. This area has a combination of original airfield pavements and reconstructed pavements. A large portion of the general aviation parking apron was reconstructed in 2005, and in 2012, the remaining portion of the parking apron was reconstructed, and the concrete hard stands were removed. The pavements between the hangar rows are still the original pavements from 1943 or consist of old concrete slabs from demolished hangars.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
AGA	01	9/20/2012	11	100	85.97	78.45	72.01
AGA	02	9/20/2012	11	100	84.97	77.58	71.26
AGA	04	9/20/1948	75	11	10.84*	10.32	9.87
AGA	07	5/2/1943	80	13	11.08*	10.87	10.40
AGA	08	10/7/1943	80	8	2.15*	0	0
AGA	09	5/9/1943	80	11	10.84*	10.32	9.87
AGA	10	9/1/2008	15	82	66.98	61.15	54.57
AGA	12	8/6/2011	12	95	84.97	78.61	72.25
AGA	13	8/31/1943	80	0	0	0	0
AGA	14	4/30/2005	18	83	70.96	62.93	54.91
AGA	15	8/31/1987	36	76	70.97	63.67	55.57
AGA	16	5/31/2022	1	100	100	84.93	69.93
AGA	17	5/30/2022	1	83	100	84.93	69.93

**** Denotes predicted value - pavement not surveyed in 2023***

The west portion (AGA-01) of the general aviation ramp is in satisfactory condition. The pavement is showing some transverse and longitudinal cracking. The cracking is mostly low severity, but there is some medium severity as well.



Figure 38 – AGA-01 – Typical Pavement, Some Low Severity Cracking



Figure 39 – AGA-01 – Medium Severity Longitudinal Cracking

The central section of the ramp (AGA-02) is showing similar distresses and is in comparable, satisfactory condition.



Figure 40 - AGA-02 – Typical Pavement, Some Low Severity Cracking



Figure 41 - AGA-02 –Low Severity Cracking



Figure 42 - AGA-14 – Cracks in Need of Seal and Reseal

The east section of the ramp (AGA-14) is showing more distresses than the central and west sections. Crack sealing has kept cracks in decent condition, but some of the larger cracks are in need of new seal, and other cracks have not yet been sealed. Vegetation is present in some of the cracks.



Figure 43 - AGA-14 –More Severe Cracking



Figure 44 – Typical Pavement Condition AGA-16 and AGA-17

Portions of AGA-02 and AGA-14 were reconstructed with the new FBO. Now identified as AGA-16 and AGA-17, these new pavements are in good condition.

The farthest west section of apron in front of the Les Schwab hangar, AGA-10 is showing an extensive amount of cracking. Cracks are largely low severity due to the presence of crack seal in good condition, but the pavement is only in fair condition due to the amount of cracking.



Figure 45 – Typical Pavement Condition AGA-10, Multiple Low Severity Cracks

The pavements between the hangars (AGA-04, 07, 08, & 09) are in serious to failed condition. PCI values for this area are projected based off previous PCI study results as these pavements were not surveyed due to the poor quality of the pavement and their lack of eligibility for maintenance or reconstruction via federal funding.



Figure 46- AGA-04 Pavement Condition



Figure 47 – AGA-07 Pavement Condition



Figure 48- AGA-08 Old Concrete Foundation



Figure 49 – AGA-09 Pavement Condition

AGA-13, an old concrete foundation, has failed as well.



Figure 50 – AGA-13 Pavement Condition

The concrete apron (AGA-15) in the west general aviation area is in fair condition. Common distresses are linear cracking, joint and corner breaks and spalling, and shrinkage cracking. Joint seal damage is medium to high severity across the entire section.



Figure 51 – Cracking and Shrinkage Cracks on AGA-15



Figure 52 - Cracking and Corner Breaks on AGA-15



Figure 53 - Joint Spalling on AGA-15



Figure 54 – AGA-15 Typical Joint Seal Condition

TERMINAL APRON

A large portion of the terminal apron was constructed in 2002 (ATERM-01) and is primarily used for commercial aircraft parking and servicing. The apron was expanded to the West in 2019 (ATERM-02), adding two more commercial aircraft parking positions. A third and smaller expansion was completed in 2022 with the addition of new Taxiway 'R2' (ATERM-03).

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
ATERM	01	9/2/2002	21	96	94.99	91.58	87.37
ATERM	02	6/30/2019	4	N/A	92.96	83.97	74.99
ATERM	03	5/31/2022	1	N/A	95.93	80.93	65.93

The concrete is in good condition on the apron. The primary distresses consist of joint spalling and patching, with some additional cracking and popouts on the older pavement (ATERM-01). It is not anticipated that the PCI values for ATERM-02 and ATERM-03 will be significantly less than their current value over the next 10 years. The predicted values shown have been driven down due to the age of the pavements and the fact that no previous data is available. Distresses found are from when the pavements were constructed, and it is expected that new distresses will be minimal in the next ten years if the concrete performs as well as that of ATERM-01. Therefore, it is anticipated that these pavements will be in 'Good' condition, not what is being shown in the predictions.



Figure 55 – Typical, Good Condition Pavement – ATERM-01



Figure 56 – Low Severity Cracking ATERM-01

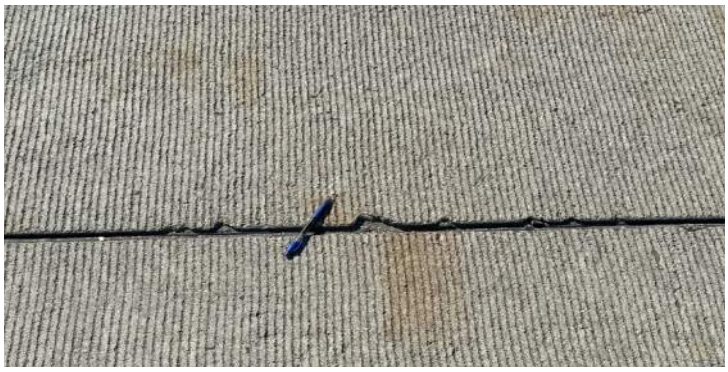


Figure 57 – Low Severity Spalling and Typical Joint Seal Condition ATERM-01



Figure 58 – Typical Patching, but Good Pavement Condition ATERM-02



Figure 59 – Typical Good Pavement Condition ATERM-03

D. Taxilanes

WEST HANGAR TAXILANES

The west hangar taxilanes and the corresponding hangar approach aprons serve the west hangars at the airport. The taxilanes were last rehabilitated in 2005, while the apron approaches were last constructed in 1994. The pavements are mostly in fair condition with a large amount of longitudinal and transverse cracking that has been maintained via crack seal but vary between low and medium severity. There are also isolated areas of raveling, alligator cracking, patching, weathering, and rutting.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TWGA	01	7/10/2005	18	87	74.92	57.10	43.13
TWGA	02	7/10/2005	18	85	70.92	53.46	41.00
TWGA	03	7/10/2005	18	79	63.92	47.78	38.30
TWGA	04	7/10/2005	18	82	47.94	38.36	36.16
TWGA	05	7/10/2005	18	79	69.92	52.59	40.54
AWGA	01	8/31/1994	29	64	59.97	53.17	45.21
AWGA	02	8/31/1994	29	76	63.97	57.83	50.65
AWGA	03	8/31/1994	29	76	64.97	58.96	51.98
AWGA	04	8/31/1994	29	59	47.96	39.33	30.31



Figure 60 – Typical West Taxilane and Hangar Apron Pavement Condition

'Z' TAXILANES

Taxilanes 'Z1', 'Z2', and 'Z3' serve the west hangars, Hangar Row 'A', and the flight school and life flight aprons.

Taxilane 'Z1' is the primary access to the west hangars from the airfield. It was reconstructed in 2018 with the Runway 11-29 reconstruction and is not showing any distresses.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TZ1	01	6/30/2018	5	100	100.00	96.66	85.24

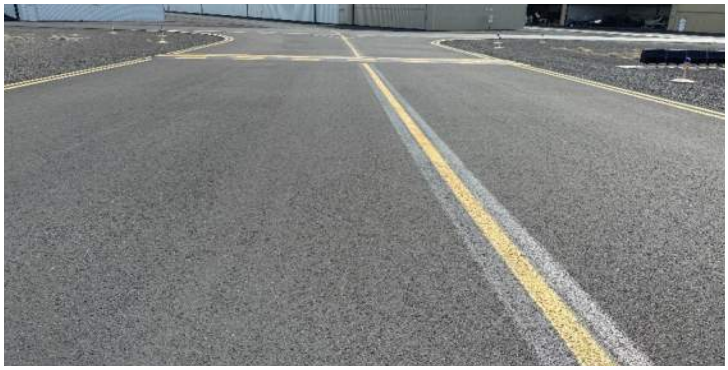


Figure 61 – Taxilane 'Z1' Pavement Condition

Taxilane 'Z2' was originally constructed in 2004 with a small transition section being reconstructed in 2011 with the Taxiway 'G' rehabilitation. The pavement is in satisfactory condition as it is showing longitudinal and transverse cracking as well as some isolated areas of alligator cracking.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TZ2	01	8/7/2011	12	100	71.92	54.34	41.49
TZ2	02	7/8/2004	19	72	71.92	54.34	41.49

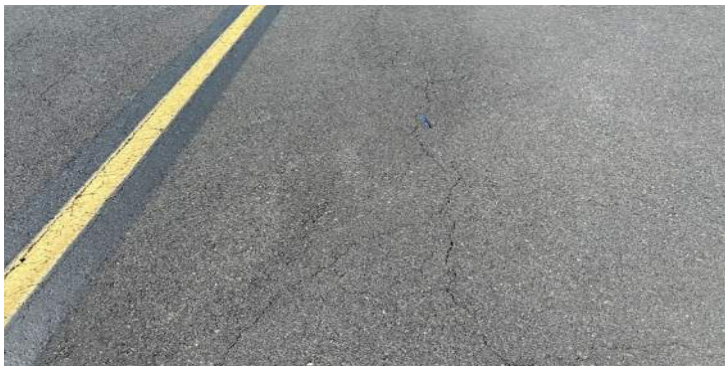


Figure 62 – Taxilane 'Z2' Alligator Cracking



Figure 63 – Taxilane 'Z2' Typical Pavement Condition

Taxilane TZ3 is the connector taxiway to the fight school apron. It was reconstructed in 2011 with the Taxiway 'G' rehabilitation project. The pavement is in satisfactory condition as it has developed some longitudinal and transverse cracking.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
TZ3	01	8/7/2011	12	92	71.92	54.34	41.49
TZ3	02	8/7/2011	12	96	79.93	62.13	46.48



Figure 64 - Taxilane 'Z3' Typical Pavement Condition

E. Miscellaneous

The following pavement areas consist of miscellaneous pavements on the airfield that either serve as hangar approach apron, paving around fueling areas, or for vehicular access routes. These areas are typically of low priority.

The AFUEL branch is pavement around the fuel tanks off Taxilane Z2. This pavement is showing low severity cracking but is in satisfactory condition.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
AFUEL	01	8/31/2006	17	83	73.97	68.07	62.32



Figure 65 - AFUEL Apron

The ASGA Branch are the pavements serving as hangar approach aprons on Taxilane 'Z2' (Hangar Row 'A') and a private hangar. TSGA is the taxilane serving the private hangar. These pavements are showing a lot of low to medium severity cracking and are in fair to satisfactory condition.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
ASGA	01	8/31/2006	17	83	72.96	64.89	56.82
ASGA	02	8/31/2006	17	73	59.95	47.98	36.03
TSGA	01	8/7/2005	18	92	80.93	63.20	47.26



Figure 66 - Private Hangar Taxilane and Apron (TSGA-01 and ASGA-01)



Figure 67 - Higher Severity Cracking ASGA-01



Figure 68 - Typical Hangar Row 'A' Apron Condition (ASGA-02)

The TFBO branch is the pavement connecting the ARFF station to Taxiway 'B'. AFBO-04 and AFBO-05 are the airside pavements at the Facilities building and ARFF station. These pavements are generally in satisfactory condition with a large amount of sealed longitudinal and transverse low severity cracks. There are also some other isolated distresses. TFBO-02 has more distresses and is in poor condition.

Branch ID	Section ID	Last Const. Date	Age	2018 PCI	2023 PCI	Predicted 2028 PCI	Predicted 2033 PCI
AFBO	04	8/31/2003	20	78	76.97	70.73	65.01
AFBO	05	8/31/2003	20	73	72.97	67.15	61.35
TFBO	01	6/2/2011	12	100	76.92	59.05	44.37
TFBO	02	8/31/2006	17	72	43.95	36.99	36.13



Figure 69 – Pavement at Facilities Building (AFBO-04)



Figure 70 – Larger Sealed Crack at ARFF Station (AFBO-05)



Figure 71 – TFBO-02 Pavement Condition

5. Summary of Results

The tables below summarize the inspection results for the Redmond Municipal Airport. The results of the study are sorted for various parameters to compare the results of the pavement condition. Additional tables are also provided in ***Appendix 'B'***.

Table 3 - Pavement Condition Rating

Pavement Condition Rating	PCI Range
Good	86-100
Satisfactory	71-85
Fair	56-71
Poor	41-55
Very Poor	26-40
Serious	11-25
Failed	0-10

Table 4 - Overall Pavement Condition

Rating	PCI Range	Area(SF)	%
Good	86-100	3,703,545	70.2%
Satisfactory	71-85	810,496	15.4%
Fair	56-71	527,259	10.0%
Poor	41-55	79,952	1.5%
Very Poor	26-40	58,563	1.1%
Serious	11-25	23,742	0.4%
Failed	0-10	73,422	1.4%

Table 5 - Pavement Condition Ranking by PCI

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
AGA	16	5/31/2022	AC	APRON	S	11,245	1	5/23/2023	100.00	Good
AGA	17	5/30/2022	AC	APRON	P	24,921	1	5/23/2023	100.00	Good
TA	01	6/5/2022	AC	TAXIWAY	P	108,795	1	5/23/2023	100.00	Good
TA	04	6/5/2016	AC	TAXIWAY	P	1,692	7	5/23/2023	100.00	Good
TA	08	6/5/2022	AC	TAXIWAY	P	177,955	1	5/23/2023	100.00	Good
TA	09	6/5/2019	AC	TAXIWAY	P	45,438	4	5/23/2023	100.00	Good
TA1	01	6/5/2022	AC	TAXIWAY	P	41,755	1	5/23/2023	100.00	Good
TA1	02	6/5/2022	AC	TAXIWAY	P	6,045	1	5/23/2023	100.00	Good
TA2	01	6/5/2022	AC	TAXIWAY	P	17,378	1	5/23/2023	100.00	Good
TA3	02	6/5/2022	AC	TAXIWAY	P	21,539	1	5/23/2023	100.00	Good
TA4	02	6/5/2019	AC	TAXIWAY	P	28,746	4	5/23/2023	100.00	Good
TB4	01	9/16/2018	AC	TAXIWAY	P	29,656	5	5/23/2023	100.00	Good
TC	03	6/5/2022	AC	TAXIWAY	P	28,414	1	5/23/2023	100.00	Good
TC	04A	6/5/2022	AC	TAXIWAY	P	19,920	1	5/23/2023	100.00	Good
TR1	01	6/5/2019	AC	TAXIWAY	P	15,570	4	5/23/2023	100.00	Good
TR2	01	6/5/2022	AC	TAXIWAY	P	18,255	1	5/23/2023	100.00	Good
TZ1	01	6/30/2018	AC	TAXIWAY	S	27,358	5	5/23/2023	100.00	Good
R11	05	9/13/2018	AC	RUNWAY	P	339,000	5	5/23/2023	98.98	Good
TB1	01	7/1/2018	AC	TAXIWAY	P	34,902	5	5/23/2023	97.98	Good
TB3	01	9/16/2018	AC	TAXIWAY	P	44,039	5	5/23/2023	97.98	Good
TC3	01	9/16/2018	AC	TAXIWAY	P	39,172	5	5/23/2023	97.98	Good
TD	01	4/30/2017	AAC	TAXIWAY	P	323,530	6	5/23/2023	97.98	Good
R11	01	7/31/2018	AC	RUNWAY	P	281,900	5	5/23/2023	96.97	Good
TA	02	6/4/2016	AC	TAXIWAY	P	2,133	7	5/23/2023	96.97	Good
TA	05	8/7/2016	AC	TAXIWAY	P	2,094	7	5/23/2023	96.97	Good
TC4	01	9/16/2018	AC	TAXIWAY	P	27,394	5	5/23/2023	95.96	Good
ATERM	03	5/31/2022	PCC	APRON	P	15,600	1	5/23/2023	95.93	Good
ATERM	01	9/2/2002	PCC	APRON	P	378,675	21	5/23/2023	94.99	Good
R11	02	8/7/2016	AC	RUNWAY	P	5,728	7	5/23/2023	94.96	Good
R11	04	8/7/2016	AC	RUNWAY	P	27,145	7	5/23/2023	94.96	Good
TA	06	6/5/2016	AC	TAXIWAY	P	6,110	7	5/23/2023	93.96	Good
TA2	02	6/30/2016	AC	TAXIWAY	P	16,965	7	5/23/2023	93.96	Good
ATERM	02	6/30/2019	PCC	APRON	P	106,400	4	5/23/2023	92.96	Good
R05	01B	8/7/2014	AC	RUNWAY	P	65,000	9	5/23/2023	92.95	Good

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
R05	04A	8/7/2016	AC	RUNWAY	P	179,660	7	5/23/2023	92.95	Good
TC	04B	7/31/2016	AC	TAXIWAY	P	23,500	7	5/23/2023	92.95	Good
R05	01C	8/7/2014	AC	RUNWAY	P	65,000	9	5/23/2023	90.95	Good
R05	04B	8/7/2016	AC	RUNWAY	P	178,406	7	5/23/2023	90.95	Good
R05	04C	8/7/2016	AC	RUNWAY	P	174,121	7	5/23/2023	90.95	Good
TA	07	6/5/2016	AC	TAXIWAY	P	2,589	7	5/23/2023	90.95	Good
TB2	01	7/1/2018	AC	TAXIWAY	P	46,118	5	5/23/2023	90.95	Good
TC	05	8/7/2013	AC	TAXIWAY	P	223,734	10	5/23/2023	90.95	Good
TC1	01	7/7/2018	AC	TAXIWAY	P	47,550	5	5/23/2023	90.95	Good
R05	01A	8/31/2014	AC	RUNWAY	P	65,000	9	5/23/2023	89.94	Good
R11	03	8/7/2016	AC	RUNWAY	P	39,360	7	5/23/2023	89.94	Good
TA	03	6/5/2016	AC	TAXIWAY	P	5,662	7	5/23/2023	89.94	Good
TA4	03	9/17/2016	AC	TAXIWAY	P	10,966	7	5/23/2023	89.94	Good
R05	02A	8/7/2016	AC	RUNWAY	P	101,783	7	5/23/2023	87.94	Good
TB	02	8/18/2016	AC	TAXIWAY	P	35,242	7	5/23/2023	87.94	Good
TC2	01	7/31/2018	AC	TAXIWAY	P	46,090	5	5/23/2023	87.94	Good
R05	02B	8/7/2016	AC	RUNWAY	P	102,783	7	5/23/2023	86.94	Good
TB	03	9/18/2016	AC	TAXIWAY	P	15,512	7	5/23/2023	86.94	Good
AGA	01	9/20/2012	AC	APRON	S	181,412	11	5/23/2023	85.97	Satisfactory
R05	02C	8/7/2016	AC	RUNWAY	P	103,822	7	5/23/2023	85.94	Satisfactory
AGA	12	8/6/2011	AC	APRON	S	42,305	12	5/23/2023	84.97	Satisfactory
AGA	02	9/20/2012	AC	APRON	S	74,902	11	5/23/2023	84.97	Satisfactory
TA3	03	9/18/2016	AC	TAXIWAY	P	11,779	7	5/23/2023	84.93	Satisfactory
R05	03A	8/7/2016	AC	RUNWAY	P	5,689	7	5/23/2023	82.93	Satisfactory
R05	03B	8/7/2016	AC	RUNWAY	P	5,689	7	5/23/2023	82.93	Satisfactory
R05	03C	8/7/2016	AC	RUNWAY	P	5,552	7	5/23/2023	82.93	Satisfactory
TSGA	01	8/7/2005	AC	TAXIWAY	S	11,266	18	5/23/2023	80.93	Satisfactory
TZ3	02	8/7/2011	AC	TAXIWAY	S	4,600	12	5/23/2023	79.93	Satisfactory
TB	01	6/29/2011	AC	TAXIWAY	P	148,825	12	5/23/2023	78.93	Satisfactory
AFBO	04	8/31/2003	AC	APRON	S	16,082	20	5/23/2023	76.97	Satisfactory
TFBO	01	6/2/2011	AC	TAXIWAY	S	5,923	12	5/23/2023	76.92	Satisfactory
TC	02	9/16/2011	AC	TAXIWAY	P	59,831	12	5/23/2023	74.92	Satisfactory
TWGA	01	7/10/2005	AAC	TAXIWAY	S	11,841	18	5/23/2023	74.92	Satisfactory
AFUEL	01	8/31/2006	AC	APRON	S	7,519	17	5/23/2023	73.97	Satisfactory

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
AFBO	05	8/31/2003	AC	APRON	S	11,826	20	5/23/2023	72.97	Satisfactory
ASGA	01	8/31/2006	AC	APRON	S	8,100	17	5/23/2023	72.96	Satisfactory
TC	01	8/30/2011	AC	TAXIWAY	P	58,232	12	5/23/2023	71.92	Satisfactory
TZ2	01	8/7/2011	AC	TAXIWAY	S	7,233	12	5/23/2023	71.92	Satisfactory
TZ2	02	7/8/2004	AC	TAXIWAY	S	23,245	19	5/23/2023	71.92	Satisfactory
TZ3	01	8/7/2011	AC	TAXIWAY	S	4,823	12	5/23/2023	71.92	Satisfactory
AGA	15	8/31/1987	PCC	APRON	S	118,400	36	5/23/2023	70.97	Fair
AGA	14	4/30/2005	AC	APRON	S	99,595	18	5/23/2023	70.96	Fair
TWGA	02	7/10/2005	AAC	TAXIWAY	S	21,259	18	5/23/2023	70.92	Fair
TB	04	9/18/1997	AC	TAXIWAY	P	177,306	26	5/23/2023	69.92	Fair
TWGA	05	7/10/2005	AAC	TAXIWAY	S	10,740	18	5/23/2023	69.92	Fair
AGA	10	9/1/2008	AC	APRON	S	49,623	15	5/23/2023	66.98	Fair
AWGA	03	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	64.97	Fair
AWGA	02	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	63.97	Fair
TWGA	03	7/10/2005	AAC	TAXIWAY	S	17,133	18	5/23/2023	63.92	Fair
AWGA	01	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	59.97	Fair
ASGA	02	8/31/2006	AC	APRON	S	14,303	17	5/23/2023	59.95	Fair
AFBO	03	5/31/2004	AC	APRON	S	37,678	19	8/26/2018	55.89	Poor
AWGA	04	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	47.96	Poor
TWGA	04	7/10/2005	AAC	TAXIWAY	S	7,435	18	5/23/2023	47.94	Poor
TFBO	02	8/31/2006	AC	TAXIWAY	S	5,066	17	5/23/2023	43.95	Poor
AFBO	01	5/31/2003	AC	APRON	S	23,473	20	8/26/2018	43.14	Poor
AFBO	02	8/31/1981	AC	APRON	S	48,966	42	8/26/2018	40.91	Very Poor
TFBO	03	6/5/1981	AC	TAXIWAY	P	9,597	42	8/26/2018	36.19	Very Poor
AGA	07	5/2/1943	AC	APRON	S	23,742	80	8/26/2018	11.08	Serious
AGA	04	9/20/1948	AC	APRON	S	21,393	75	8/26/2018	10.84	Failed
AGA	09	5/9/1943	AC	APRON	S	21,324	80	8/26/2018	10.84	Failed
AGA	08	10/7/1943	AC	APRON	S	23,505	80	8/26/2018	2.15	Failed
AGA	13	8/31/1943	PCC	APRON	S	7,200	80	5/23/2023	0.00	Failed

Table 6 - Pavement Condition Ranking by Age

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
AGA	17	5/30/2022	AC	APRON	P	24,921	1	5/23/2023	100.00	Good
AGA	16	5/31/2022	AC	APRON	S	11,245	1	5/23/2023	100.00	Good
ATERM	03	5/31/2022	PCC	APRON	P	15,600	1	5/23/2023	95.93	Good
TA	08	6/5/2022	AC	TAXIWAY	P	177,955	1	5/23/2023	100.00	Good
TA	01	6/5/2022	AC	TAXIWAY	P	108,795	1	5/23/2023	100.00	Good
TA1	02	6/5/2022	AC	TAXIWAY	P	6,045	1	5/23/2023	100.00	Good
TA1	01	6/5/2022	AC	TAXIWAY	P	41,755	1	5/23/2023	100.00	Good
TA2	01	6/5/2022	AC	TAXIWAY	P	17,378	1	5/23/2023	100.00	Good
TA3	02	6/5/2022	AC	TAXIWAY	P	21,539	1	5/23/2023	100.00	Good
TC	04A	6/5/2022	AC	TAXIWAY	P	19,920	1	5/23/2023	100.00	Good
TC	03	6/5/2022	AC	TAXIWAY	P	28,414	1	5/23/2023	100.00	Good
TR2	01	6/5/2022	AC	TAXIWAY	P	18,255	1	5/23/2023	100.00	Good
ATERM	02	6/30/2019	PCC	APRON	P	106,400	4	5/23/2023	92.96	Good
TA	09	6/5/2019	AC	TAXIWAY	P	45,438	4	5/23/2023	100.00	Good
TA4	02	6/5/2019	AC	TAXIWAY	P	28,746	4	5/23/2023	100.00	Good
TR1	01	6/5/2019	AC	TAXIWAY	P	15,570	4	5/23/2023	100.00	Good
R11	05	9/13/2018	AC	RUNWAY	P	339,000	5	5/23/2023	98.98	Good
R11	01	7/31/2018	AC	RUNWAY	P	281,900	5	5/23/2023	96.97	Good
TB1	01	7/1/2018	AC	TAXIWAY	P	34,902	5	5/23/2023	97.98	Good
TB2	01	7/1/2018	AC	TAXIWAY	P	46,118	5	5/23/2023	90.95	Good
TB3	01	9/16/2018	AC	TAXIWAY	P	44,039	5	5/23/2023	97.98	Good
TB4	01	9/16/2018	AC	TAXIWAY	P	29,656	5	5/23/2023	100.00	Good
TC1	01	7/7/2018	AC	TAXIWAY	P	47,550	5	5/23/2023	90.95	Good
TC2	01	7/31/2018	AC	TAXIWAY	P	46,090	5	5/23/2023	87.94	Good
TC3	01	9/16/2018	AC	TAXIWAY	P	39,172	5	5/23/2023	97.98	Good
TC4	01	9/16/2018	AC	TAXIWAY	P	27,394	5	5/23/2023	95.96	Good
TZ1	01	6/30/2018	AC	TAXIWAY	S	27,358	5	5/23/2023	100.00	Good
TD	01	4/30/2017	AAC	TAXIWAY	P	323,530	6	5/23/2023	97.98	Good
R05	04C	8/7/2016	AC	RUNWAY	P	174,121	7	5/23/2023	90.95	Good
R05	04B	8/7/2016	AC	RUNWAY	P	178,406	7	5/23/2023	90.95	Good
R05	04A	8/7/2016	AC	RUNWAY	P	179,660	7	5/23/2023	92.95	Good
R05	03C	8/7/2016	AC	RUNWAY	P	5,552	7	5/23/2023	82.93	Satisfactory

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
R05	03B	8/7/2016	AC	RUNWAY	P	5,689	7	5/23/2023	82.93	Satisfactory
R05	03A	8/7/2016	AC	RUNWAY	P	5,689	7	5/23/2023	82.93	Satisfactory
R05	02C	8/7/2016	AC	RUNWAY	P	103,822	7	5/23/2023	85.94	Satisfactory
R05	02B	8/7/2016	AC	RUNWAY	P	102,783	7	5/23/2023	86.94	Good
R05	02A	8/7/2016	AC	RUNWAY	P	101,783	7	5/23/2023	87.94	Good
R11	04	8/7/2016	AC	RUNWAY	P	27,145	7	5/23/2023	94.96	Good
R11	03	8/7/2016	AC	RUNWAY	P	39,360	7	5/23/2023	89.94	Good
R11	02	8/7/2016	AC	RUNWAY	P	5,728	7	5/23/2023	94.96	Good
TA	07	6/5/2016	AC	TAXIWAY	P	2,589	7	5/23/2023	90.95	Good
TA	06	6/5/2016	AC	TAXIWAY	P	6,110	7	5/23/2023	93.96	Good
TA	05	8/7/2016	AC	TAXIWAY	P	2,094	7	5/23/2023	96.97	Good
TA	04	6/5/2016	AC	TAXIWAY	P	1,692	7	5/23/2023	100.00	Good
TA	03	6/5/2016	AC	TAXIWAY	P	5,662	7	5/23/2023	89.94	Good
TA	02	6/4/2016	AC	TAXIWAY	P	2,133	7	5/23/2023	96.97	Good
TA2	02	6/30/2016	AC	TAXIWAY	P	16,965	7	5/23/2023	93.96	Good
TA3	03	9/18/2016	AC	TAXIWAY	P	11,779	7	5/23/2023	84.93	Satisfactory
TA4	03	9/17/2016	AC	TAXIWAY	P	10,966	7	5/23/2023	89.94	Good
TB	03	9/18/2016	AC	TAXIWAY	P	15,512	7	5/23/2023	86.94	Good
TB	02	8/18/2016	AC	TAXIWAY	P	35,242	7	5/23/2023	87.94	Good
TC	04B	7/31/2016	AC	TAXIWAY	P	23,500	7	5/23/2023	92.95	Good
R05	01C	8/7/2014	AC	RUNWAY	P	65,000	9	5/23/2023	90.95	Good
R05	01B	8/7/2014	AC	RUNWAY	P	65,000	9	5/23/2023	92.95	Good
R05	01A	8/31/2014	AC	RUNWAY	P	65,000	9	5/23/2023	89.94	Good
TC	05	8/7/2013	AC	TAXIWAY	P	223,734	10	5/23/2023	90.95	Good
AGA	02	9/20/2012	AC	APRON	S	74,902	11	5/23/2023	84.97	Satisfactory
AGA	01	9/20/2012	AC	APRON	S	181,412	11	5/23/2023	85.97	Satisfactory
AGA	12	8/6/2011	AC	APRON	S	42,305	12	5/23/2023	84.97	Satisfactory
TB	01	6/29/2011	AC	TAXIWAY	P	148,825	12	5/23/2023	78.93	Satisfactory
TC	02	9/16/2011	AC	TAXIWAY	P	59,831	12	5/23/2023	74.92	Satisfactory
TC	01	8/30/2011	AC	TAXIWAY	P	58,232	12	5/23/2023	71.92	Satisfactory
TFBO	01	6/2/2011	AC	TAXIWAY	S	5,923	12	5/23/2023	76.92	Satisfactory
TZ2	01	8/7/2011	AC	TAXIWAY	S	7,233	12	5/23/2023	71.92	Satisfactory
TZ3	02	8/7/2011	AC	TAXIWAY	S	4,600	12	5/23/2023	79.93	Satisfactory
TZ3	01	8/7/2011	AC	TAXIWAY	S	4,823	12	5/23/2023	71.92	Satisfactory

Branch ID	Section ID	Last Const. Date	Surface	Use	Section Rank	True Area (SqFt)	Age	Last Inspection Date	PCI	Pavement Condition
AGA	10	9/1/2008	AC	APRON	S	49,623	15	5/23/2023	66.98	Fair
AFUEL	01	8/31/2006	AC	APRON	S	7,519	17	5/23/2023	73.97	Satisfactory
ASGA	02	8/31/2006	AC	APRON	S	14,303	17	5/23/2023	59.95	Fair
ASGA	01	8/31/2006	AC	APRON	S	8,100	17	5/23/2023	72.96	Satisfactory
TFBO	02	8/31/2006	AC	TAXIWAY	S	5,066	17	5/23/2023	43.95	Poor
AGA	14	4/30/2005	AC	APRON	S	99,595	18	5/23/2023	70.96	Fair
TSGA	01	8/7/2005	AC	TAXIWAY	S	11,266	18	5/23/2023	80.93	Satisfactory
TWGA	05	7/10/2005	AAC	TAXIWAY	S	10,740	18	5/23/2023	69.92	Fair
TWGA	04	7/10/2005	AAC	TAXIWAY	S	7,435	18	5/23/2023	47.94	Poor
TWGA	03	7/10/2005	AAC	TAXIWAY	S	17,133	18	5/23/2023	63.92	Fair
TWGA	02	7/10/2005	AAC	TAXIWAY	S	21,259	18	5/23/2023	70.92	Fair
TWGA	01	7/10/2005	AAC	TAXIWAY	S	11,841	18	5/23/2023	74.92	Satisfactory
AFBO	03	5/31/2004	AC	APRON	S	37,678	19	8/26/2018	55.89	Poor
TZ2	02	7/8/2004	AC	TAXIWAY	S	23,245	19	5/23/2023	71.92	Satisfactory
AFBO	05	8/31/2003	AC	APRON	S	11,826	20	5/23/2023	72.97	Satisfactory
AFBO	04	8/31/2003	AC	APRON	S	16,082	20	5/23/2023	76.97	Satisfactory
AFBO	01	5/31/2003	AC	APRON	S	23,473	20	8/26/2018	43.14	Poor
ATERM	01	9/2/2002	PCC	APRON	P	378,675	21	5/23/2023	94.99	Good
TB	04	9/18/1997	AC	TAXIWAY	P	177,306	26	5/23/2023	69.92	Fair
AWGA	04	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	47.96	Poor
AWGA	03	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	64.97	Fair
AWGA	02	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	63.97	Fair
AWGA	01	8/31/1994	AC	APRON	S	6,300	29	5/23/2023	59.97	Fair
AGA	15	8/31/1987	PCC	APRON	S	118,400	36	5/23/2023	70.97	Fair
AFBO	02	8/31/1981	AC	APRON	S	48,966	42	8/26/2018	40.91	Very Poor
TFBO	03	6/5/1981	AC	TAXIWAY	P	9,597	42	8/26/2018	36.19	Very Poor
AGA	04	9/20/1948	AC	APRON	S	21,393	75	8/26/2018	10.84	Failed
AGA	13	8/31/1943	PCC	APRON	S	7,200	80	5/23/2023	.00	Failed
AGA	09	5/9/1943	AC	APRON	S	21,324	80	8/26/2018	10.84	Failed
AGA	08	10/7/1943	AC	APRON	S	23,505	80	8/26/2018	2.15	Failed
AGA	07	5/2/1943	AC	APRON	S	23,742	80	8/26/2018	11.08	Serious

In addition to the PCI number a Structural Condition Index Number (SCI) can also be calculated. The SCI is a measure of pavement distresses that are load related, which may indicate that the pavement section is overloaded or that there may be issues with the base and subgrade of the pavement section. The SCI is also ranked from 0-100. If the pavement has a SCI below 80, it indicates that the pavement section has "Structurally Failed". These pavements should be evaluated for complete reconstruction.

Table 7 - Structurally Failed Airport Pavements

Branch ID	Section ID	Last Const. Date	Surface	Use	True Area (SqFt)	Age	SCI
ASGA	01	8/31/2006	AC	APRON	8,100	17	78
TWGA	04	7/10/2005	AAC	TAXIWAY	7,435	18	76
AWGA	04	8/31/1994	AC	APRON	6,300	29	75
AFBO	02	8/31/1981	AC	APRON	48,966	42	65
AFBO	01	5/31/2003	AC	APRON	23,473	20	60
TFBO	02	8/31/2006	AC	TAXIWAY	5,066	17	59
TFBO	03	6/5/1981	AC	TAXIWAY	9,597	42	49
AGA	13	8/31/1943	PCC	APRON	7,200	80	0

6. Conclusions & Recommendations

The Redmond Municipal Airport has invested significantly in the airfield pavements over the past 5 years. This is reflected in the results of the latest PCI inspection. The results of the PCI inspection did not produce any unexpected results, and the performance of the pavements is consistent with what was expected for the pavement age. The pavement section that is of primary concern is on Taxiway 'B' east of Runway 5-23. As a higher priority and primary use pavement, it is recommended that this pavement be rehabilitated in the next 5 years due to the size and amount of longitudinal and transverse cracking discovered in this study. The cracks have maintained via crack seal but are large and deep. There is also apparent rutting along centerline of this pavement. By 2028, this pavement is projected to be in 'Poor' condition .

In addition to the East portion of Taxiway 'B', the following table shows pavements that should also be considered to be included in the 10-year CIP for pavement rehabilitations. The recommended work to be performed on the pavements is also included in the table.

Table 8 - 10 Year CIP Recommended Pavement Rehabilitation

Pavement Information						2033		Recommended Work
Location Description	Branch ID	Section ID	Last Const. Date	Surface	Use	Age	Predicted PCI	
Taxiway 'B' - West of Taxiway 'A'	TB	01	6/29/2011	AC	TAXIWAY	22	45.74	Mill and Overlay
Taxiway 'B' - East of Runway 5-23	TB	04	9/18/1997	AC	TAXIWAY	36	40.54	Mill and Overlay
Taxiway 'C' - West of Taxiway 'A'	TC	01	8/30/2011	AC	TAXIWAY	22	41.49	Mill and Overlay
Taxiway 'C' - West of Taxiway 'A'	TC	02	9/16/2011	AC	TAXIWAY	22	43.13	Mill and Overlay
Taxiway 'C' - East of Runway 5-23	TC	05	8/7/2013	AC	TAXIWAY	20	57.77	Mill and Overlay
North GA Apron	AGA	01	9/20/2012	AC	APRON	21	72.01	Mill and Overlay
North GA Apron	AGA	02	9/20/2012	AC	APRON	21	71.26	Mill and Overlay
North GA Apron	AGA	12	8/6/2011	AC	APRON	22	72.25	Mill and Overlay
North GA Apron	AGA	14	4/30/2005	AC	APRON	28	54.91	Mill and Overlay
North GA Apron - Concrete	AGA	15	8/31/1987	PCC	APRON	46	55.57	Spall Repair and Joint Seal Replacement
Les Schwab Apron	AGA	10	9/1/2008	AC	APRON	25	54.57	Mill and Overlay

The airport should perform pavement maintenance on other pavements as needed based on the condition of the pavement, the age of the pavement, and timing of the next major rehabilitation on the pavement section. The airport has large expanses of pavement on the airfield and has limited budgets to maintain them. Typically, in the past, the airport has performed periodic crack seals with internal and/or City of Redmond staff on the airfield pavements. They have done a good job keeping up with periodic crack seals on the airport. It is also recommended that periodic fog seal or seal coats be performed to assist in rejuvenating the pavement surface periodically to maintain the oil content and flexibility of the asphalts on the airfield.

Maintenance Methods

The following categories of pavement maintenance/rehabilitation are recommended for the airfield pavements. Self-performed work may have a lower overall cost, but high local cost since 100% of the self-performed is from local funds.

CRACK SEAL

Crack Seals on asphalt pavements extend the life of the pavement section by preventing the infiltration of water into the pavement section and reducing the potential damage to the pavement structure. Crack sealing also mitigates the potential for FOD being produced from edges of the cracks spalling.

Crack seal costs per square yard can vary depending on the total amount of cracks on a pavement. Newer pavements will initially see the formation of transverse cracks first as thermal stresses of expansion and contraction will cause cracks to form across the narrow sections of the pavement. As the pavement ages, cracks will start to form along the pavement joints as well since there is a weaker bond in the asphalt matrix. Crack seals should be performed on 3-to-5-year intervals depending on the age of the pavement and the severity of the cracks.

Pavements with PCI lower than 41 should be evaluated on a case-by-case basis to determine if the crack seal would be beneficial in preventing propagation of FOD.

FOG SEAL

Due to the history of block cracking of the pavements on the airfield, periodic fog seals or seal coats should be considered to rejuvenate the pavements. Fog Seals should be considered for pavements on 5–7-year intervals to be scheduled with crack seal projects. Fog Seals also required that new markings be placed in conjunction with the project. Due to the higher cost of fog seal, this method should be reserved to higher priority pavements.

PCC – JOINT SEAL REPLACEMENT

The condition of the joint seals on PCC pavement is critical to preventing moisture infiltration into the sublayers and to provide edge support for the concrete to reduce spalling along the joints. There are two types of joint seal commonly used in the area: liquid or precompressed joint seals. Liquid joint seal costs less than precompressed joint seal; however, precompressed joint seal has performed well at the airport and is recommended if funds are available.

PCC SPALL REPAIR

Spall repair along joints consists of localized removal of the concrete and replacement of the material with an approved material. Depending on the replacement material, the cost to repair the pavements varies. Delpatch performance is of the highest quality of material available but is also of the most expensive. Alternative materials should be considered depending on the priority of the pavement.

MILL AND OVERLAY – AIR CARRIER PAVEMENTS

The mill and overlay of air carrier airfield pavement should be considered when the pavements are approaching the critical PCI value of 55. Due to the impacts of taking Air Carrier pavement out of service, the rehabilitation should consider the removal and replacement 4" to 5" of asphalt.

MILL AND OVERLAY – GENERAL AVIATION PAVEMENTS

The mill and overlay of general aviation airfield pavement should be considered when the pavements are approaching the critical PCI value of 55. These pavement sections typically consist of 4" of asphalt. The mill and overlay depth is recommended to be a minimum of 2".

PAVEMENT RECONSTRUCTION – AIR CARRIER PAVEMENTS

Pavement Sections should be considered for reconstruction when the pavements exhibit signs of structural or load related failure. Typical signs of structural failure are alligator cracking, high severity longitudinal cracking, rutting, corrugation, and slippage cracking. The air carrier pavement section at the Redmond Airport is typically 9" of asphalt, 6" of base, and 6" of subbase.

Pavement Reconstruction – General Aviation Pavements

Pavement Sections should be considered for reconstruction when the pavements exhibit signs of structural or load related failure. Typical signs of structural failure are alligator cracking, high severity longitudinal cracking, rutting, corrugation, and slippage cracking. The general aviation pavement section at the Redmond Airport is typically 4" of asphalt, 6" of base, and 9.5" of subbase.

Concrete Slab Replacement

Concrete slab replacement should be considered when the slabs appear to be shattered or when the joint spall repair cost would exceed the replacement cost.

Pavement Priority Ranking

Airports often have limited budgets to commit to pavement preservation. With limited budgets, it is necessary to assign priority ranking numbers to pavement sections that consider the following:

- Use of the pavement. Is it critical to ongoing operations at the airfield?
- Funding source of original construction. Is the pavement section tied to AIP funds and grant assurances?
- Safety Concerns. Is the pavement located on high-speed pavements (runways)? Is there a potential for aircraft damage due to FOD ingestion (runways, taxiways, run-up areas)?

The following table summarizes the priority numbers assigned to typical pavement sections at the Redmond Municipal Airport. Figure 8 in ***Appendix 'A'*** shows the pavement areas by priority.

Table 9- Pavement Priority Ranking

Priority Number	Typical Pavement Sections
1	Runways
2	Taxiways
3	Aprons – Air Carrier & General Aviation Parking (Jet)
4	Taxilanes and General Aviation Parking Aprons (Prop)
5	Taxilanes and Aprons – Hangar Areas
6	Airfield Support Pavements – SRE, Facilities, & ARFF
7	Currently Failed Pavement Sections – Hangar Areas

The above ranking should be considered when evaluating pavement preservation and availability of local budgets. A table showing pavement sections sorted by priority can be found in ***Appendix 'B'***.

7. Pavement Management Program

A. Compliance with Grant Assurances

The pavement condition index study is one component of the Pavement Management Program for the Redmond Municipal Airport. The Federal Aviation Administration Airport Improvement Program (AIP) has special grant assurances for Pavement Maintenance Management Programs tied to any federal funds used for pavement construction. Below is the wording from the grant condition.

PAVEMENT MAINTENANCE MANAGEMENT PROGRAM

The sponsor agrees that it will implement an effective pavement maintenance management program as required by the Grant Assurance Pavement Preventative Management. The Sponsor agrees that it will use the program for the useful life of any of the pavement constructed, reconstructed, or repaired with federal financial assistance at the airport. The Sponsor further agrees that the program will:

A. Follow FAA Advisor Circular 150/5380-6, "Guidelines and Procedures for Maintenance of Airport Pavements", for specific guidelines and procedures for maintaining airport pavements, establishing and effective maintenance program, specific types of distresses and its probable cause, inspection guidelines, and recommended methods of repair;

B. Detail the procedures to be followed to assure the proper pavement maintenance, both preventive and repair, is performed;

C. Include a Pavement Inventory, Inspection Schedule, Record Keeping, Information Retrieval, and Reference, meeting the following requirements:

1. Pavement Inventory
   01. Location of all runways, taxiways, and aprons;
   02. Dimensions;
   03. Type of Pavement; and,
   04. Year of Construction or most recent rehabilitation
2. Inspection Schedule.
   01. Detailed Inspection. A detailed inspection must be performed at least once a year. If a history of recorded pavement deterioration is available, i.e., a Pavement Condition Index (PCI) Survey as set forth in AC150/5380-6, the frequency may be extended to three years.
   02. Drive-By Inspection. A drive-by inspection must be performed a minimum of once per month to detect any unexpected changes in the pavement condition. For drive-by inspections, the date of the inspection and any maintenance performed must be recorded.
3. Record Keeping. Complete Information on the findings of the detailed inspections and on the maintenance performed must be recorded and kept on file for a minimum of 5 years. The type of distress, location, and remedial action, schedule or performed, must be documented. The minimum information is:
   01. Inspection Date
   02. Location
   03. Distress Type; and
   04. Maintenance Scheduled or Performed.
4. Information Retrieval System. The sponsor must be able to retrieve the information and records produced by the pavement survey to provide a report to the FAA as may be required.

The airport is required to comply with the above grant assurance. It is recommended that the Airport develop a separate plan that will outline the procedures and guidelines for complying with the grant assurance. The grant assurance and AC150/5380-6 do not define what the requirements of the annual "Detailed Inspection". The below resources are provided with this report to assist in the development of a Pavement Maintenance Management Program (PMMP) and the required record keeping.

- Pavement Inventory Maps
- Spreadsheets of pavement inventory for assistance in scheduling and record keeping.
- Photos of Pavement Conditions.

B. Recommended Best Practices for Record Keeping

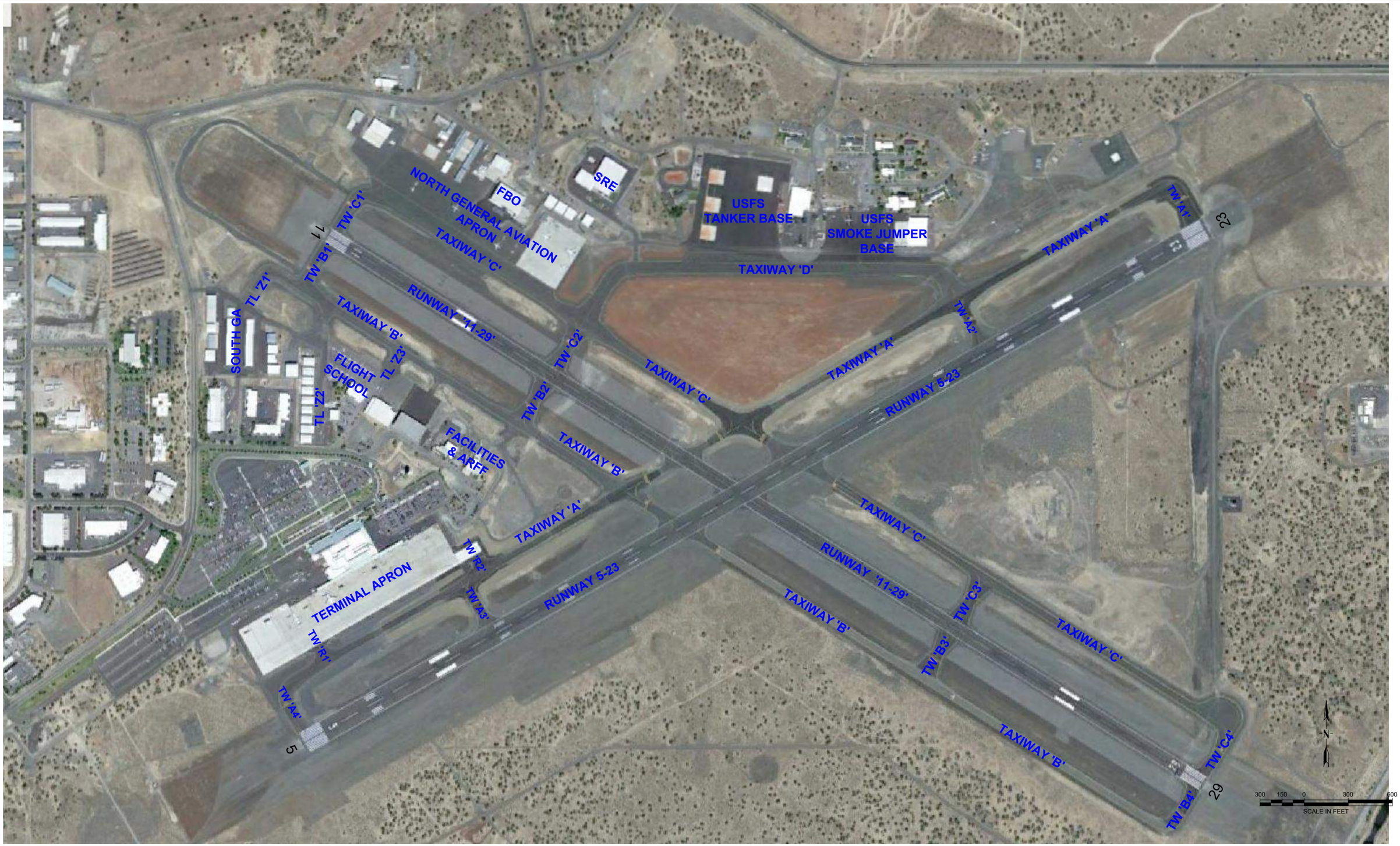
DETAILED INSPECTIONS (3-YEAR INTERVALS)

- Create a Standard Form to be used for the inspections.
- Take photos, document date and location of photo.
  - Note there are Apps available that will geo-locate the photo and export to a KMZ file. These photos show up in Google Earth and can be viewed and downloaded from Google Earth.
- When documenting inspections, use the same naming convention as the pavement inventory.
- Print a copy of the pavement inventory sheet and highlight the sections inspected.
- Example forms provided in ***Appendix 'C'***

PAVEMENT MAINTENANCE RECORDS

- Create a standard form to be used for recording pavement maintenance activities performed by the airport The form should have the following information to assist in record keeping and future budgeting.
  - Pavement sections where maintenance was performed.
  - Be consistent with Pavement Inventory Map.
  - Type of maintenance performed.
  - Estimated labor hours to perform work.
  - Estimated equipment hours to perform work.
  - Estimated material cost in work performed.
  - Attach a copy of the pavement inventory with the areas highlighted that received the maintenance.
- Example forms provided in ***Appendix 'C'***.

Appendix ‘A’ – PCI Study Results – Figures



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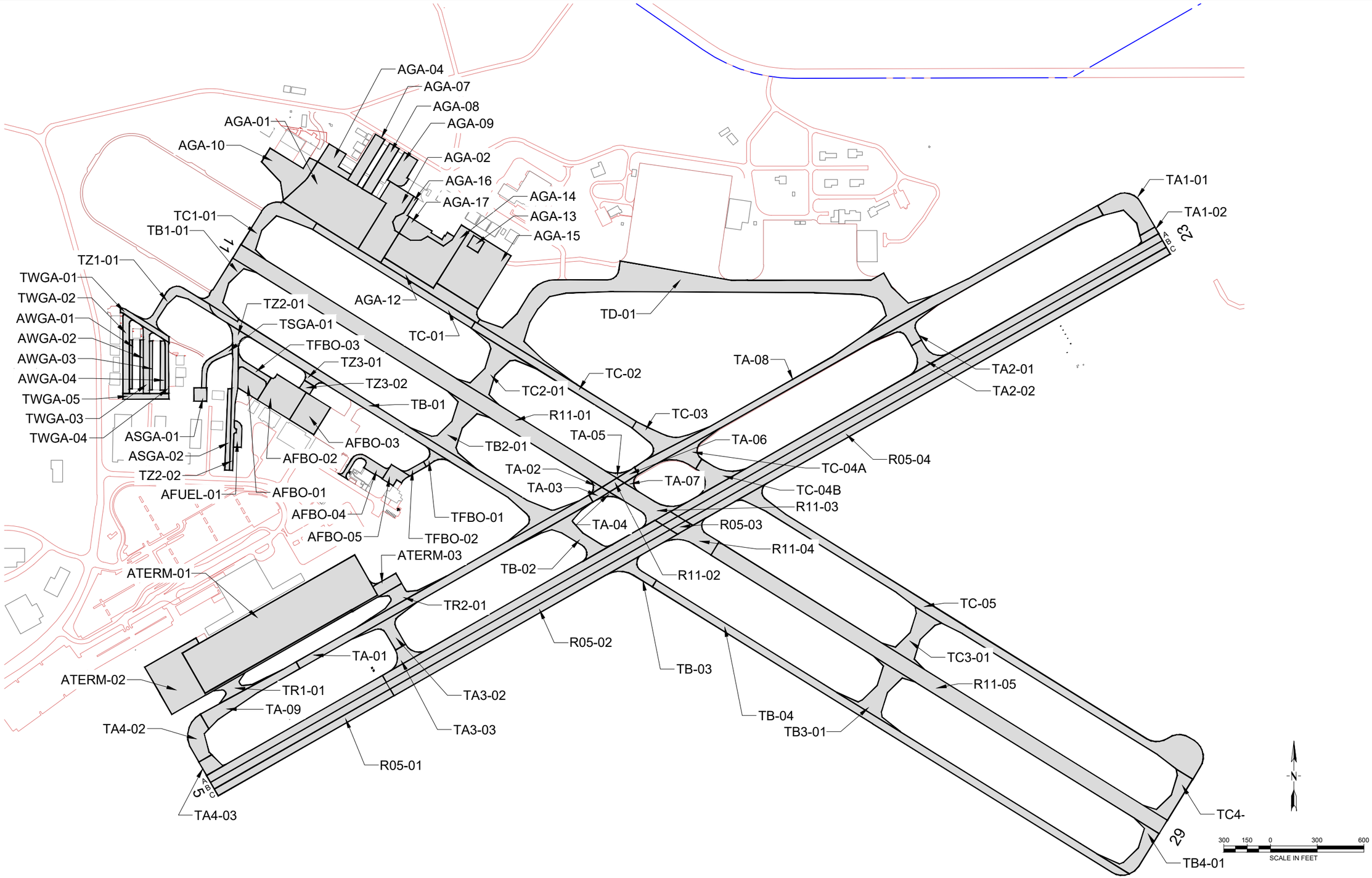
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REDMOND MUNICIPAL AIRPORT
2023 PCI STUDY
REDMOND OREGON

FACILITIES LAYOUT

PROJECT NUMBER 2143.077
SHEET NUMBER
DRAWING NUMBER FIGURE 1



#

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2023 PCI STUDY

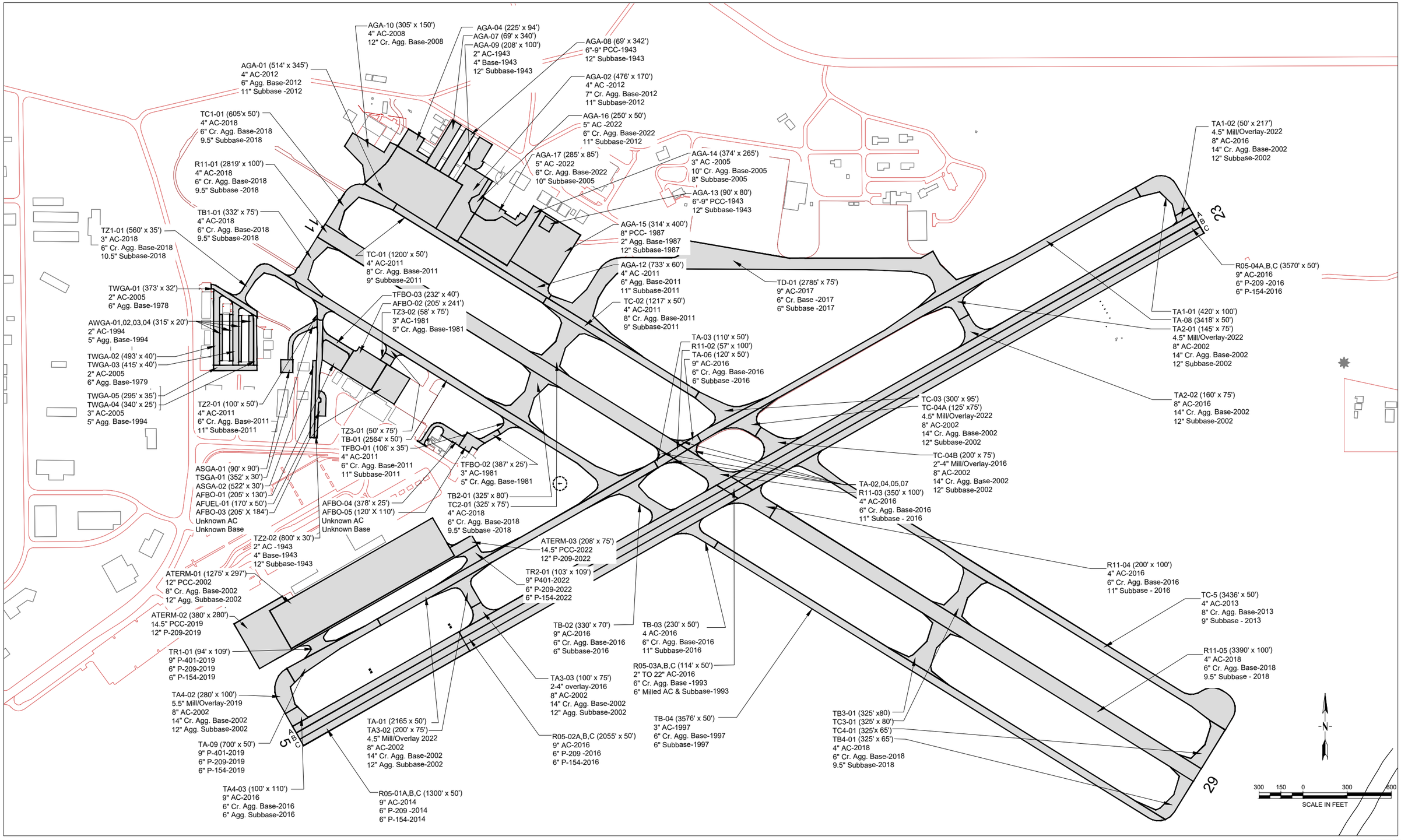
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PAVEMENT BRANCHES AND SECTIONS

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
FIGURE 2



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R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\PAVEMENT CROSS SECTION 2022 FIG 3.DWG PLOTTED BY:THOMAS DENISON ON Oct/23/2023

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REDMOND MUNICIPAL AIRPORT
2023 PCI STUDY

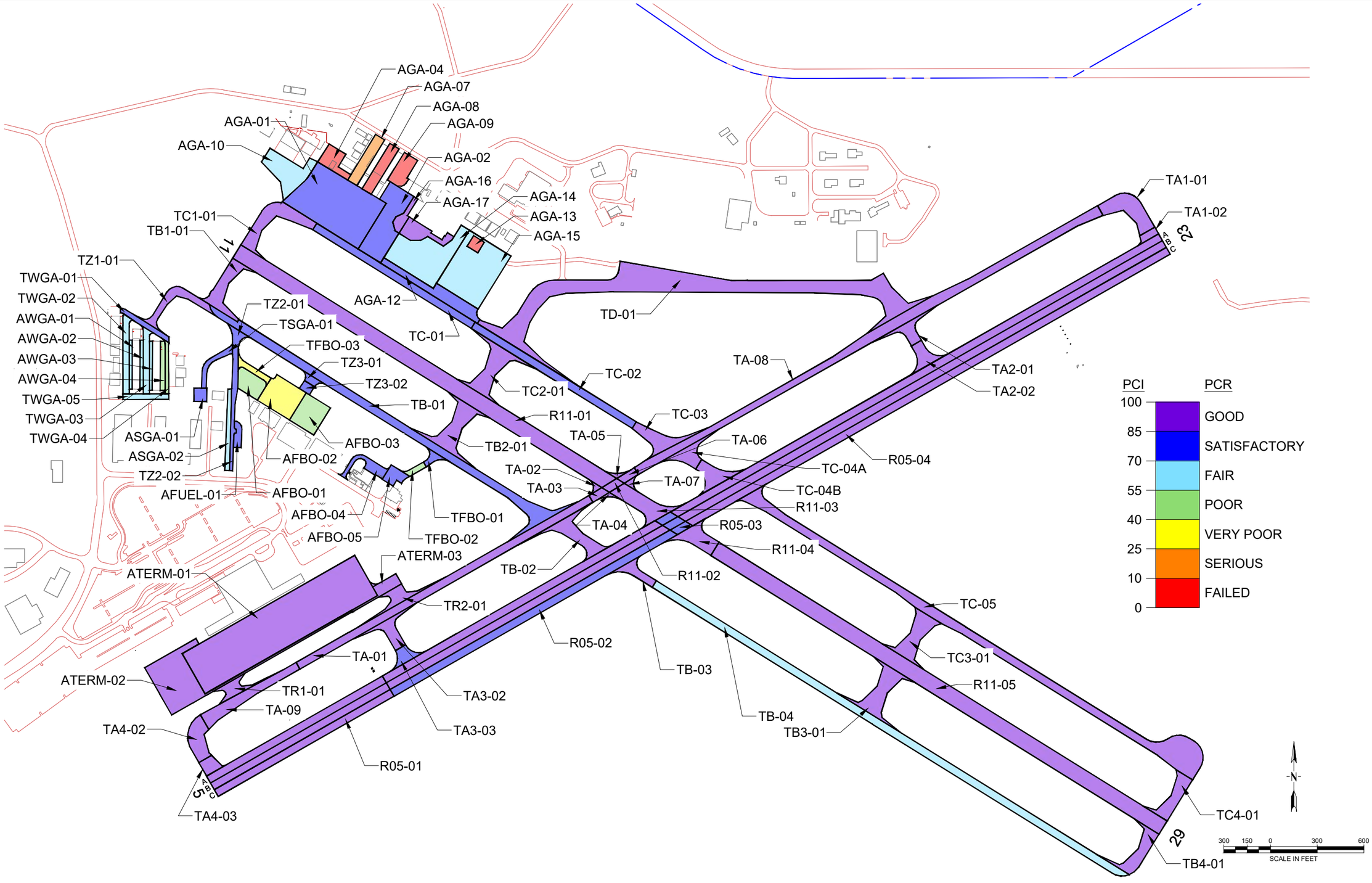
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PAVEMENT SECTION INFORMATION

PROJECT NUMBER
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SHEET NUMBER

DRAWING NUMBER
FIGURE 3



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2023 PCI STUDY

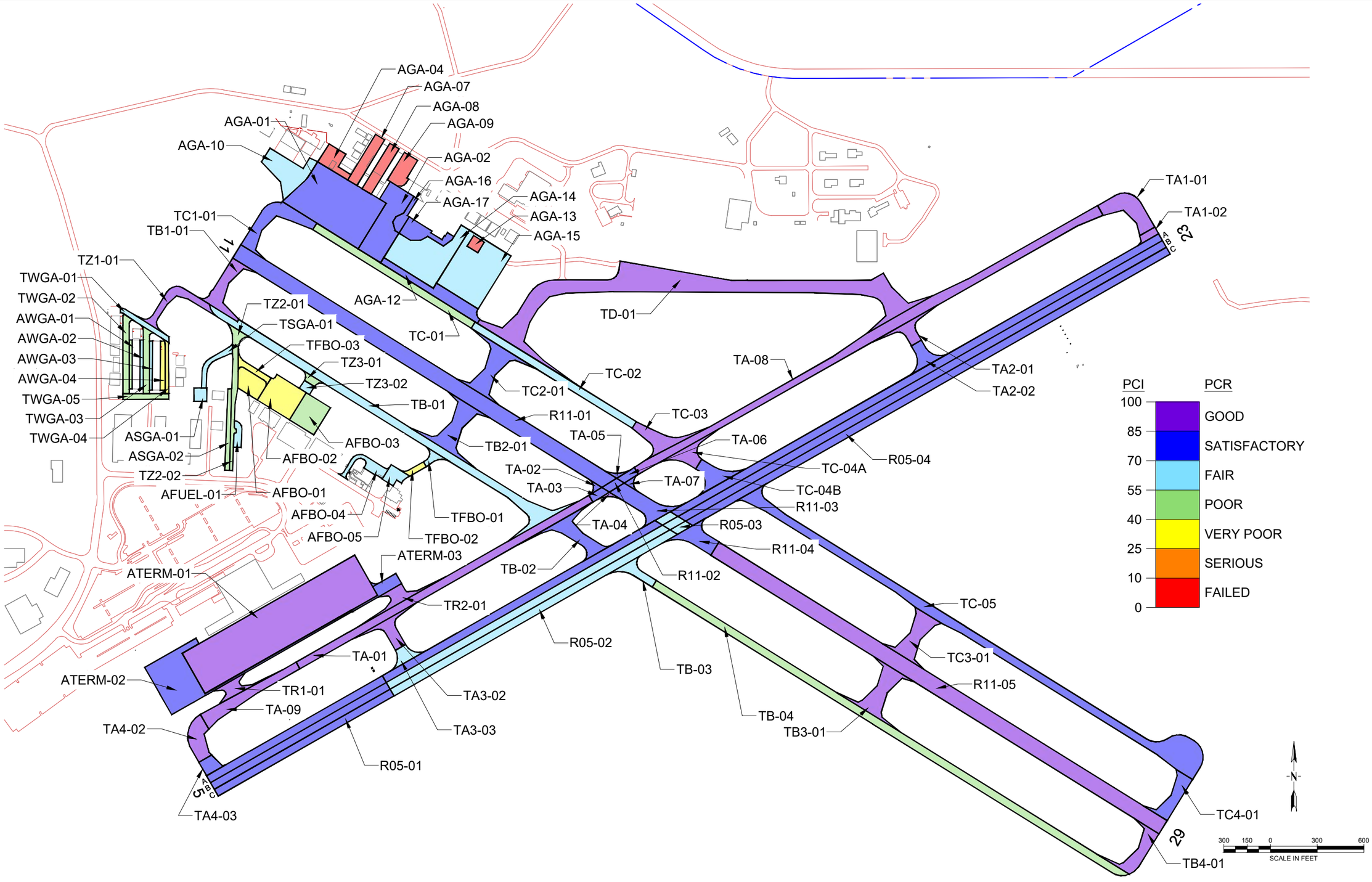
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PAVEMENT CONDITION 2023

PROJECT NUMBER
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SHEET NUMBER

DRAWING NUMBER
FIGURE 4



VERIFY SCALE!

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MODIFY SCALE ACCORDINGLY!

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R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\PAVEMENT CONDITION 2028 FIG 5.DWG PLOTTED BY:THOMAS DENISON ON Oct/24/2023

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REDMOND MUNICIPAL AIRPORT
2023 PCI STUDY

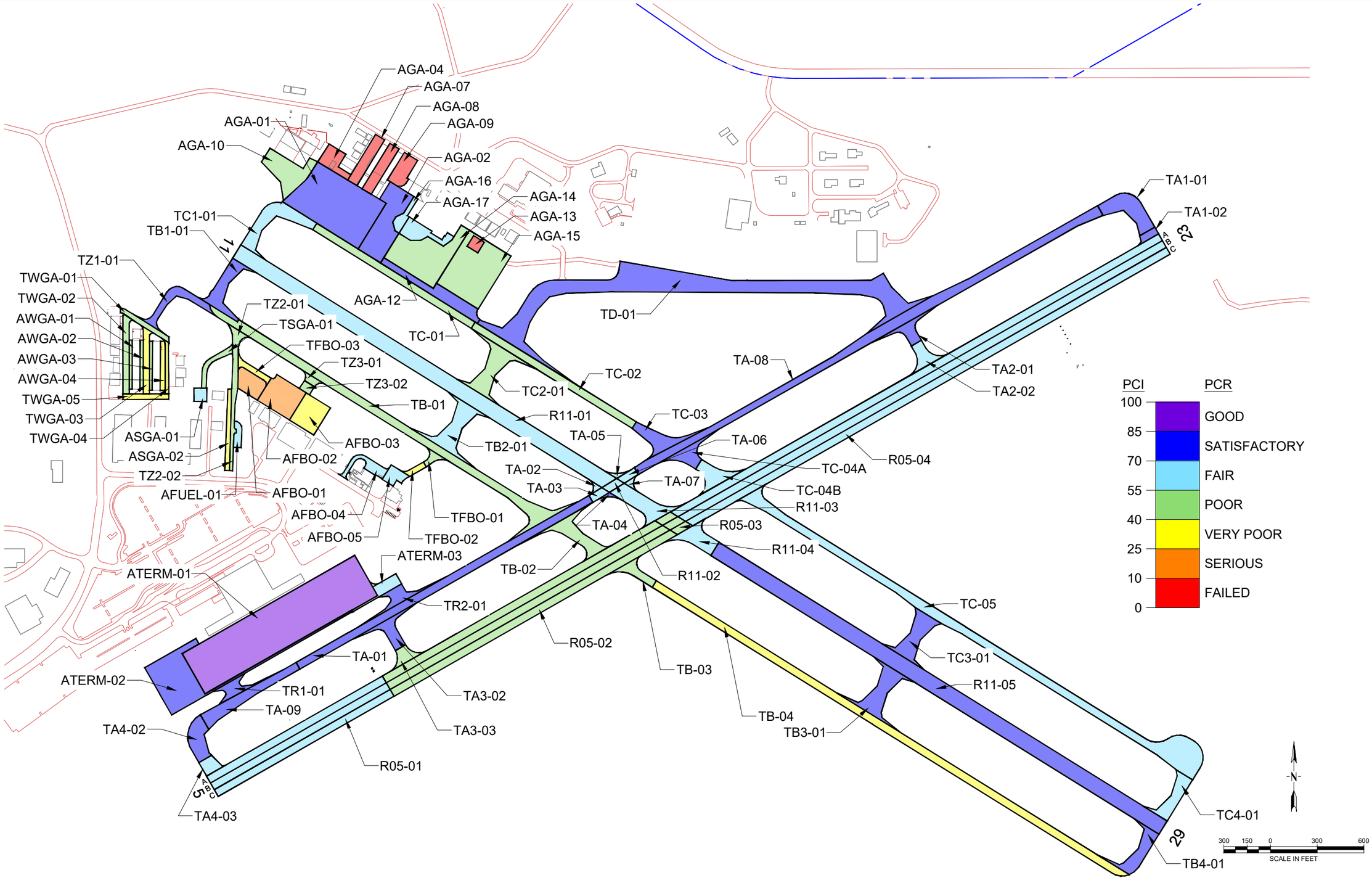
REDMOND OREGON

PAVEMENT CONDITION 2028

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
FIGURE 5



VERIFY SCALE!

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R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\PAVEMENT CONDITION 2033 FIG 6.DWG PLOTTED BY:THOMAS DENISON ON Oct/24/2023

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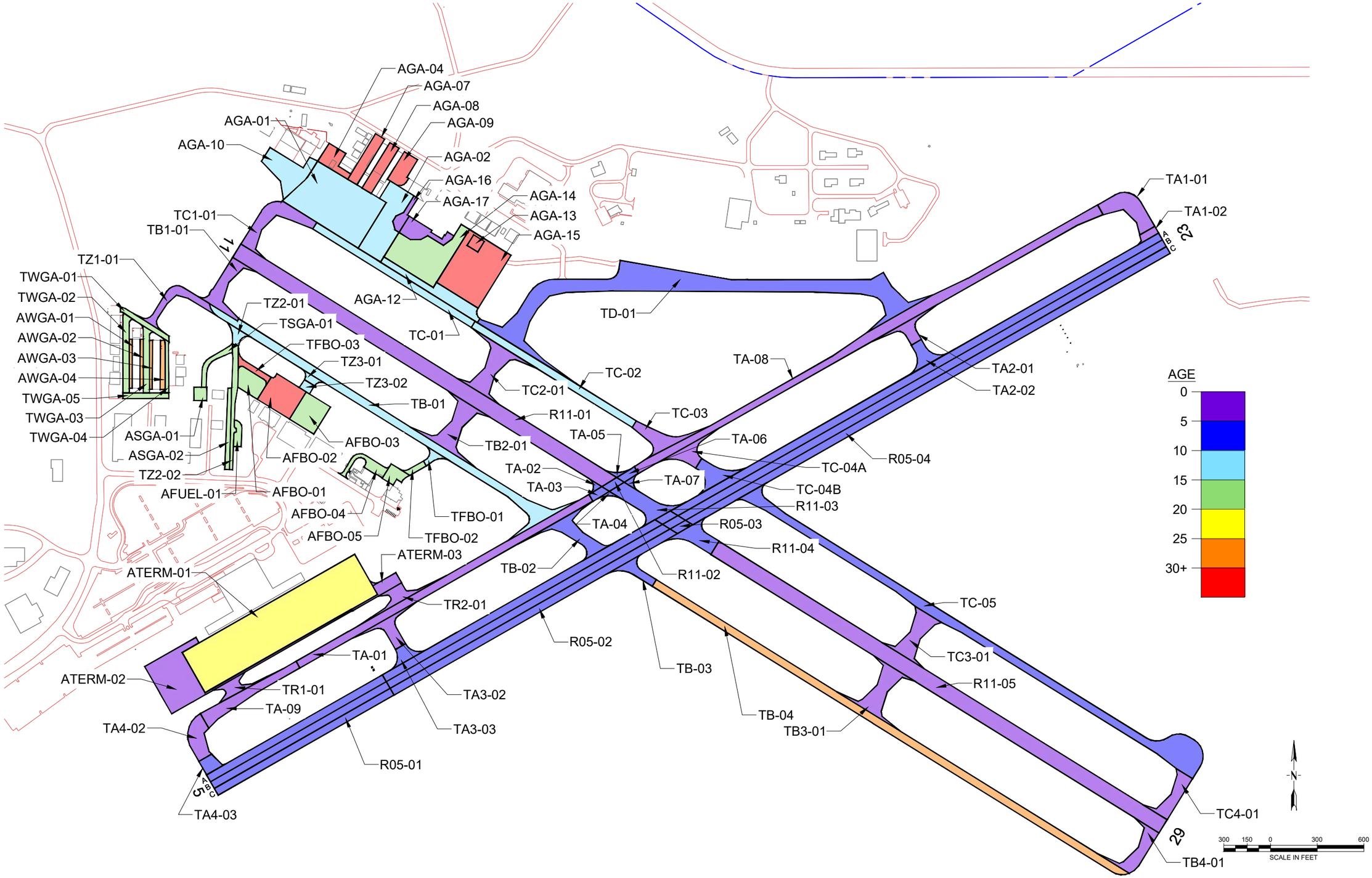
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PAVEMENT CONDITION 2033

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
FIGURE 6



VERIFY SCALE!

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REVISIONS

NO.	DESCRIPTION	BY	DATE

R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\PAVEMENT AGE 2023 FIG 7.DWG PLOTTED BY:THOMAS DENISON ON Oct/24/2023

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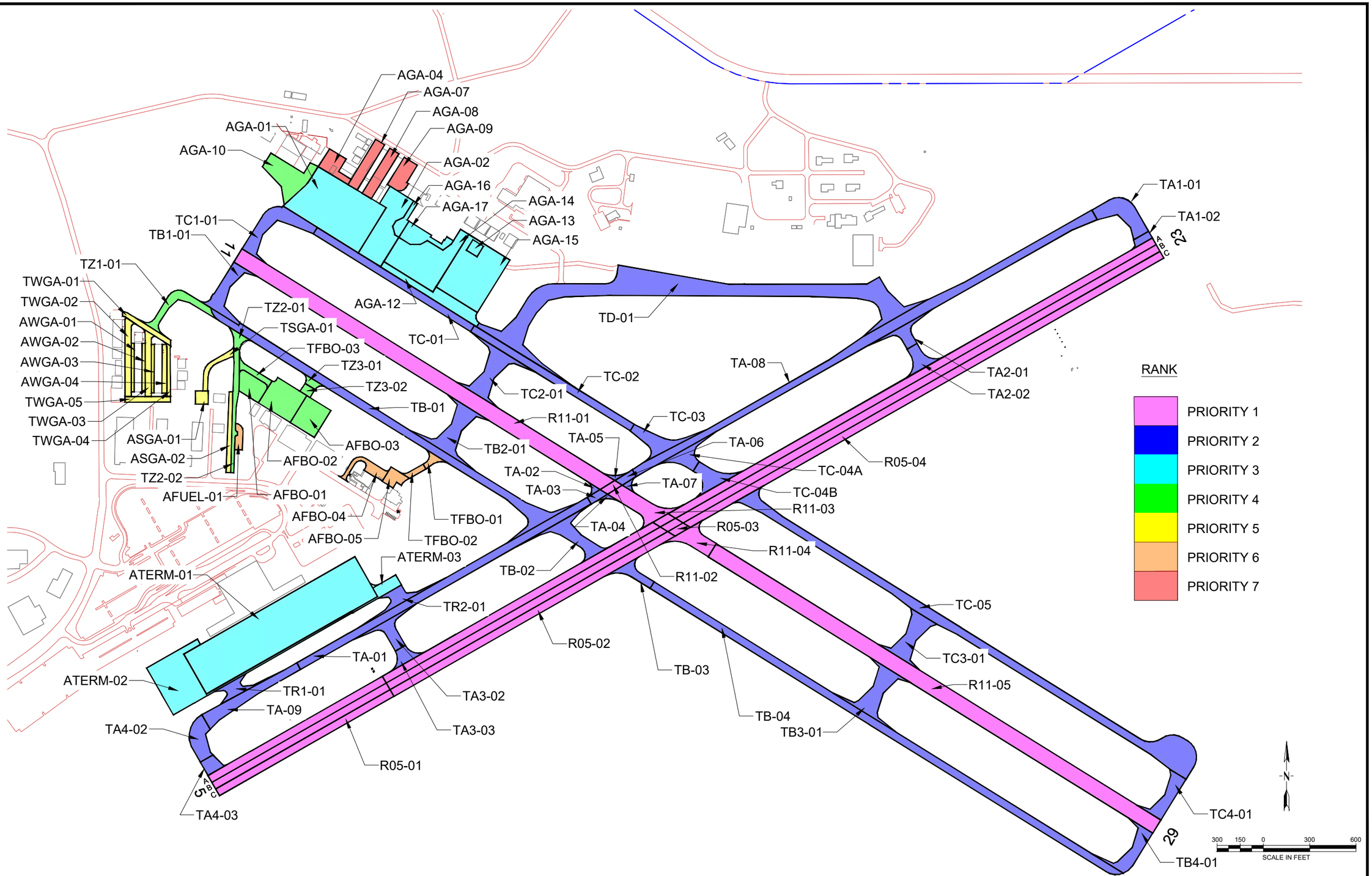
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PAVEMENT AGE

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
FIGURE 7



VERIFY SCALE!

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MODIFY SCALE ACCORDINGLY!

REVISIONS

NO.	DESCRIPTION	BY	DATE

R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\PAVEMENT RANK 2023 FIG 8.DWG PLOTTED BY:THOMAS DENISON ON Oct/24/2023

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2023 PCI STUDY

REDMOND OREGON

PAVEMENT RANK AND PRIORITY

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
FIGURE 8

Appendix ‘B’ – PCI Study Results – Tables

Table 1
Pavement Condition - Sorted by Branch and Section

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AFBO	01	5/31/2003	AC	APRON	4	23,473	20	60.00	43.14	Poor	34.17	Very Poor	25.39	Serious
AFBO	02	8/31/1981	AC	APRON	4	48,966	42	65.00	40.91	Very Poor	31.88	Very Poor	23.34	Serious
AFBO	03	5/31/2004	AC	APRON	4	37,678	19	84.00	55.89	Poor	48.36	Poor	39.78	Very Poor
AFBO	04	8/31/2003	AC	APRON	6	16,082	20	100.00	76.97	Satisfactory	70.73	Fair	65.01	Fair
AFBO	05	8/31/2003	AC	APRON	6	11,826	20	90.00	72.97	Satisfactory	67.15	Fair	61.35	Fair
AFUEL	01	8/31/2006	AC	APRON	6	7,519	17	100.00	73.97	Satisfactory	68.07	Fair	62.32	Fair
AGA	01	9/20/2012	AC	APRON	3	181,412	11	100.00	85.97	Satisfactory	78.45	Satisfactory	72.01	Satisfactory
AGA	02	9/20/2012	AC	APRON	3	74,902	11	100.00	84.97	Satisfactory	77.58	Satisfactory	71.26	Satisfactory
AGA	04	9/20/1948	AC	APRON	7	21,393	75	100.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	07	5/2/1943	AC	APRON	7	23,742	80	100.00	11.08	Serious	10.87	Failed	10.40	Failed
AGA	08	10/7/1943	AC	APRON	7	23,505	80	100.00	2.15	Failed	.00	Failed	.00	Failed
AGA	09	5/9/1943	AC	APRON	7	21,324	80	83.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	10	9/1/2008	AC	APRON	4	49,623	15	97.00	66.98	Fair	61.15	Fair	54.57	Poor
AGA	12	8/6/2011	AC	APRON	3	42,305	12	100.00	84.97	Satisfactory	78.61	Satisfactory	72.25	Satisfactory
AGA	13	8/31/1943	PCC	APRON	3	7,200	80	.00	.00	Failed	.00	Failed	.00	Failed
AGA	14	4/30/2005	AC	APRON	3	99,595	18	100.00	70.96	Fair	62.93	Fair	54.91	Poor
AGA	15	8/31/1987	PCC	APRON	3	118,400	36	91.00	70.97	Fair	63.67	Fair	55.57	Poor
AGA	16	5/31/2022	AC	APRON	3	11,245	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
AGA	17	5/30/2022	AC	APRON	3	24,921	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
ASGA	01	8/31/2006	AC	APRON	5	8,100	17	78.00	72.96	Satisfactory	64.89	Fair	56.82	Fair
ASGA	02	8/31/2006	AC	APRON	5	14,303	17	84.00	59.95	Fair	47.98	Poor	36.03	Very Poor
ATERM	01	9/2/2002	PCC	APRON	3	378,675	21	100.00	94.99	Good	91.58	Good	87.37	Good
ATERM	02	6/30/2019	PCC	APRON	3	106,400	4	100.00	92.96	Good	83.97	Satisfactory	74.99	Satisfactory
ATERM	03	5/31/2022	PCC	APRON	3	15,600	1	100.00	95.93	Good	80.93	Satisfactory	65.93	Fair
AWGA	01	8/31/1994	AC	APRON	5	6,300	29	100.00	59.97	Fair	53.17	Poor	45.21	Poor
AWGA	02	8/31/1994	AC	APRON	5	6,300	29	100.00	63.97	Fair	57.83	Fair	50.65	Poor
AWGA	03	8/31/1994	AC	APRON	5	6,300	29	100.00	64.97	Fair	58.96	Fair	51.98	Poor
AWGA	04	8/31/1994	AC	APRON	5	6,300	29	75.00	47.96	Poor	39.33	Very Poor	30.31	Very Poor
R05	01A	8/31/2014	AC	RUNWAY	1	65,000	9	99.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R05	01B	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	01C	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	02A	8/7/2016	AC	RUNWAY	1	101,783	7	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
R05	02B	8/7/2016	AC	RUNWAY	1	102,783	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
R05	02C	8/7/2016	AC	RUNWAY	1	103,822	7	99.00	85.94	Satisfactory	68.96	Fair	51.79	Poor
R05	03A	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03B	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03C	8/7/2016	AC	RUNWAY	1	5,552	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	04A	8/7/2016	AC	RUNWAY	1	179,660	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	04B	8/7/2016	AC	RUNWAY	1	178,406	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	04C	8/7/2016	AC	RUNWAY	1	174,121	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R11	01	7/31/2018	AC	RUNWAY	1	281,900	5	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
R11	02	8/7/2016	AC	RUNWAY	1	5,728	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	03	8/7/2016	AC	RUNWAY	1	39,360	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R11	04	8/7/2016	AC	RUNWAY	1	27,145	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	05	9/13/2018	AC	RUNWAY	1	339,000	5	100.00	98.98	Good	90.96	Good	75.63	Satisfactory
TA	01	6/5/2022	AC	TAXIWAY	2	108,795	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	02	6/4/2016	AC	TAXIWAY	2	2,133	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	03	6/5/2016	AC	TAXIWAY	2	5,662	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TA	04	6/5/2016	AC	TAXIWAY	2	1,692	7	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	05	8/7/2016	AC	TAXIWAY	2	2,094	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	06	6/5/2016	AC	TAXIWAY	2	6,110	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA	07	6/5/2016	AC	TAXIWAY	2	2,589	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TA	08	6/5/2022	AC	TAXIWAY	2	177,955	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	09	6/5/2019	AC	TAXIWAY	2	45,438	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	01	6/5/2022	AC	TAXIWAY	2	41,755	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	02	6/5/2022	AC	TAXIWAY	2	6,045	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	01	6/5/2022	AC	TAXIWAY	2	17,378	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	02	6/30/2016	AC	TAXIWAY	2	16,965	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA3	02	6/5/2022	AC	TAXIWAY	2	21,539	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA3	03	9/18/2016	AC	TAXIWAY	2	11,779	7	100.00	84.93	Satisfactory	67.75	Fair	50.79	Poor
TA4	02	6/5/2019	AC	TAXIWAY	2	28,746	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA4	03	9/17/2016	AC	TAXIWAY	2	10,966	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TB	01	6/29/2011	AC	TAXIWAY	2	148,825	12	99.00	78.93	Satisfactory	61.08	Fair	45.74	Poor
TB	02	8/18/2016	AC	TAXIWAY	2	35,242	7	99.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TB	03	9/18/2016	AC	TAXIWAY	2	15,512	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
TB	04	9/18/1997	AC	TAXIWAY	2	177,306	26	87.00	69.92	Fair	52.59	Poor	40.54	Very Poor
TB1	01	7/1/2018	AC	TAXIWAY	2	34,902	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB2	01	7/1/2018	AC	TAXIWAY	2	46,118	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TB3	01	9/16/2018	AC	TAXIWAY	2	44,039	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB4	01	9/16/2018	AC	TAXIWAY	2	29,656	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	01	8/30/2011	AC	TAXIWAY	2	58,232	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TC	02	9/16/2011	AC	TAXIWAY	2	59,831	12	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TC	03	6/5/2022	AC	TAXIWAY	2	28,414	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	05	8/7/2013	AC	TAXIWAY	2	223,734	10	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC	04A	6/5/2022	AC	TAXIWAY	2	19,920	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	04B	7/31/2016	AC	TAXIWAY	2	23,500	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
TC1	01	7/7/2018	AC	TAXIWAY	2	47,550	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC2	01	7/31/2018	AC	TAXIWAY	2	46,090	5	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TC3	01	9/16/2018	AC	TAXIWAY	2	39,172	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TC4	01	9/16/2018	AC	TAXIWAY	2	27,394	5	100.00	95.96	Good	83.84	Satisfactory	66.47	Fair
TD	01	4/30/2017	AAC	TAXIWAY	2	323,530	6	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TFBO	01	6/2/2011	AC	TAXIWAY	6	5,923	12	100.00	76.92	Satisfactory	59.05	Fair	44.37	Poor
TFBO	02	8/31/2006	AC	TAXIWAY	6	5,066	17	59.00	43.95	Poor	36.99	Very Poor	36.13	Very Poor
TFBO	03	6/5/1981	AC	TAXIWAY	4	9,597	42	49.00	36.19	Very Poor	35.12	Very Poor	29.32	Very Poor
TR1	01	6/5/2019	AC	TAXIWAY	2	15,570	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR2	01	6/5/2022	AC	TAXIWAY	2	18,255	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory

Table 1
Pavement Condition - Sorted by Branch and Section

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
TSGA	01	8/7/2005	AC	TAXIWAY	5	11,266	18	100.00	80.93	Satisfactory	63.20	Fair	47.26	Poor
TWGA	01	7/10/2005	AAC	TAXIWAY	5	11,841	18	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TWGA	02	7/10/2005	AAC	TAXIWAY	5	21,259	18	98.00	70.92	Fair	53.46	Poor	41.00	Poor
TWGA	03	7/10/2005	AAC	TAXIWAY	5	17,133	18	91.00	63.92	Fair	47.78	Poor	38.30	Very Poor
TWGA	04	7/10/2005	AAC	TAXIWAY	5	7,435	18	76.00	47.94	Poor	38.36	Very Poor	36.16	Very Poor
TWGA	05	7/10/2005	AAC	TAXIWAY	5	10,740	18	100.00	69.92	Fair	52.59	Poor	40.54	Very Poor
TZ1	01	6/30/2018	AC	TAXIWAY	4	27,358	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TZ2	01	8/7/2011	AC	TAXIWAY	4	7,233	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ2	02	7/8/2004	AC	TAXIWAY	4	23,245	19	88.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	01	8/7/2011	AC	TAXIWAY	4	4,823	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	02	8/7/2011	AC	TAXIWAY	4	4,600	12	100.00	79.93	Satisfactory	62.13	Fair	46.48	Poor

Table 2
Pavement Condition - Sorted by PCI

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AGA	16	5/31/2022	AC	APRON	3	11,245	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
AGA	17	5/30/2022	AC	APRON	3	24,921	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
TA	01	6/5/2022	AC	TAXIWAY	2	108,795	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	08	6/5/2022	AC	TAXIWAY	2	177,955	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	01	6/5/2022	AC	TAXIWAY	2	41,755	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	02	6/5/2022	AC	TAXIWAY	2	6,045	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	01	6/5/2022	AC	TAXIWAY	2	17,378	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA3	02	6/5/2022	AC	TAXIWAY	2	21,539	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	03	6/5/2022	AC	TAXIWAY	2	28,414	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	04A	6/5/2022	AC	TAXIWAY	2	19,920	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR2	01	6/5/2022	AC	TAXIWAY	2	18,255	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	09	6/5/2019	AC	TAXIWAY	2	45,438	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA4	02	6/5/2019	AC	TAXIWAY	2	28,746	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR1	01	6/5/2019	AC	TAXIWAY	2	15,570	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TB4	01	9/16/2018	AC	TAXIWAY	2	29,656	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TZ1	01	6/30/2018	AC	TAXIWAY	4	27,358	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	04	6/5/2016	AC	TAXIWAY	2	1,692	7	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
R11	05	9/13/2018	AC	RUNWAY	1	339,000	5	100.00	98.98	Good	90.96	Good	75.63	Satisfactory
TB1	01	7/1/2018	AC	TAXIWAY	2	34,902	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB3	01	9/16/2018	AC	TAXIWAY	2	44,039	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TC3	01	9/16/2018	AC	TAXIWAY	2	39,172	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TD	01	4/30/2017	AAC	TAXIWAY	2	323,530	6	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
R11	01	7/31/2018	AC	RUNWAY	1	281,900	5	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	02	6/4/2016	AC	TAXIWAY	2	2,133	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	05	8/7/2016	AC	TAXIWAY	2	2,094	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TC4	01	9/16/2018	AC	TAXIWAY	2	27,394	5	100.00	95.96	Good	83.84	Satisfactory	66.47	Fair
ATERM	03	5/31/2022	PCC	APRON	3	15,600	1	100.00	95.93	Good	80.93	Satisfactory	65.93	Fair
ATERM	01	9/2/2002	PCC	APRON	3	378,675	21	100.00	94.99	Good	91.58	Good	87.37	Good
R11	02	8/7/2016	AC	RUNWAY	1	5,728	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	04	8/7/2016	AC	RUNWAY	1	27,145	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
TA	06	6/5/2016	AC	TAXIWAY	2	6,110	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA2	02	6/30/2016	AC	TAXIWAY	2	16,965	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
ATERM	02	6/30/2019	PCC	APRON	3	106,400	4	100.00	92.96	Good	83.97	Satisfactory	74.99	Satisfactory
R05	04A	8/7/2016	AC	RUNWAY	1	179,660	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
TC	04B	7/31/2016	AC	TAXIWAY	2	23,500	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	01B	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
TB2	01	7/1/2018	AC	TAXIWAY	2	46,118	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC1	01	7/7/2018	AC	TAXIWAY	2	47,550	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	04B	8/7/2016	AC	RUNWAY	1	178,406	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	04C	8/7/2016	AC	RUNWAY	1	174,121	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TA	07	6/5/2016	AC	TAXIWAY	2	2,589	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	01C	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC	05	8/7/2013	AC	TAXIWAY	2	223,734	10	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R11	03	8/7/2016	AC	RUNWAY	1	39,360	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TA	03	6/5/2016	AC	TAXIWAY	2	5,662	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TA4	03	9/17/2016	AC	TAXIWAY	2	10,966	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R05	01A	8/31/2014	AC	RUNWAY	1	65,000	9	99.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TC2	01	7/31/2018	AC	TAXIWAY	2	46,090	5	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
R05	02A	8/7/2016	AC	RUNWAY	1	101,783	7	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TB	02	8/18/2016	AC	TAXIWAY	2	35,242	7	99.00	87.94	Good	71.49	Satisfactory	53.97	Poor
R05	02B	8/7/2016	AC	RUNWAY	1	102,783	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
TB	03	9/18/2016	AC	TAXIWAY	2	15,512	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
AGA	01	9/20/2012	AC	APRON	3	181,412	11	100.00	85.97	Satisfactory	78.45	Satisfactory	72.01	Satisfactory
R05	02C	8/7/2016	AC	RUNWAY	1	103,822	7	99.00	85.94	Satisfactory	68.96	Fair	51.79	Poor
AGA	02	9/20/2012	AC	APRON	3	74,902	11	100.00	84.97	Satisfactory	77.58	Satisfactory	71.26	Satisfactory
AGA	12	8/6/2011	AC	APRON	3	42,305	12	100.00	84.97	Satisfactory	78.61	Satisfactory	72.25	Satisfactory
TA3	03	9/18/2016	AC	TAXIWAY	2	11,779	7	100.00	84.93	Satisfactory	67.75	Fair	50.79	Poor
R05	03A	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03B	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03C	8/7/2016	AC	RUNWAY	1	5,552	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
TSGA	01	8/7/2005	AC	TAXIWAY	5	11,266	18	100.00	80.93	Satisfactory	63.20	Fair	47.26	Poor
TZ3	02	8/7/2011	AC	TAXIWAY	4	4,600	12	100.00	79.93	Satisfactory	62.13	Fair	46.48	Poor
TB	01	6/29/2011	AC	TAXIWAY	2	148,825	12	99.00	78.93	Satisfactory	61.08	Fair	45.74	Poor
AFBO	04	8/31/2003	AC	APRON	6	16,082	20	100.00	76.97	Satisfactory	70.73	Fair	65.01	Fair
TFBO	01	6/2/2011	AC	TAXIWAY	6	5,923	12	100.00	76.92	Satisfactory	59.05	Fair	44.37	Poor
TC	02	9/16/2011	AC	TAXIWAY	2	59,831	12	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TWGA	01	7/10/2005	AAC	TAXIWAY	5	11,841	18	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
AFUEL	01	8/31/2006	AC	APRON	6	7,519	17	100.00	73.97	Satisfactory	68.07	Fair	62.32	Fair
AFBO	05	8/31/2003	AC	APRON	6	11,826	20	90.00	72.97	Satisfactory	67.15	Fair	61.35	Fair
ASGA	01	8/31/2006	AC	APRON	5	8,100	17	78.00	72.96	Satisfactory	64.89	Fair	56.82	Fair
TC	01	8/30/2011	AC	TAXIWAY	2	58,232	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ2	01	8/7/2011	AC	TAXIWAY	4	7,233	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	01	8/7/2011	AC	TAXIWAY	4	4,823	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ2	02	7/8/2004	AC	TAXIWAY	4	23,245	19	88.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
AGA	15	8/31/1987	PCC	APRON	3	118,400	36	91.00	70.97	Fair	63.67	Fair	55.57	Poor
AGA	14	4/30/2005	AC	APRON	3	99,595	18	100.00	70.96	Fair	62.93	Fair	54.91	Poor
TWGA	02	7/10/2005	AAC	TAXIWAY	5	21,259	18	98.00	70.92	Fair	53.46	Poor	41.00	Poor
TWGA	05	7/10/2005	AAC	TAXIWAY	5	10,740	18	100.00	69.92	Fair	52.59	Poor	40.54	Very Poor
TB	04	9/18/1997	AC	TAXIWAY	2	177,306	26	87.00	69.92	Fair	52.59	Poor	40.54	Very Poor
AGA	10	9/1/2008	AC	APRON	4	49,623	15	97.00	66.98	Fair	61.15	Fair	54.57	Poor
AWGA	03	8/31/1994	AC	APRON	5	6,300	29	100.00	64.97	Fair	58.96	Fair	51.98	Poor
AWGA	02	8/31/1994	AC	APRON	5	6,300	29	100.00	63.97	Fair	57.83	Fair	50.65	Poor
TWGA	03	7/10/2005	AAC	TAXIWAY	5	17,133	18	91.00	63.92	Fair	47.78	Poor	38.30	Very Poor
AWGA	01	8/31/1994	AC	APRON	5	6,300	29	100.00	59.97	Fair	53.17	Poor	45.21	Poor
ASGA	02	8/31/2006	AC	APRON	5	14,303	17	84.00	59.95	Fair	47.98	Poor	36.03	Very Poor
AFBO	03	5/31/2004	AC	APRON	4	37,678	19	84.00	55.89	Poor	48.36	Poor	39.78	Very Poor
AWGA	04	8/31/1994	AC	APRON	5	6,300	29	75.00	47.96	Poor	39.33	Very Poor	30.31	Very Poor
TWGA	04	7/10/2005	AAC	TAXIWAY	5	7,435	18	76.00	47.94	Poor	38.36	Very Poor	36.16	Very Poor
TFBO	02	8/31/2006	AC	TAXIWAY	6	5,066	17	59.00	43.95	Poor	36.99	Very Poor	36.13	Very Poor

Table 2
Pavement Condition - Sorted by PCI

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AFBO	01	5/31/2003	AC	APRON	4	23,473	20	60.00	43.14	Poor	34.17	Very Poor	25.39	Serious
AFBO	02	8/31/1981	AC	APRON	4	48,966	42	65.00	40.91	Very Poor	31.88	Very Poor	23.34	Serious
TFBO	03	6/5/1981	AC	TAXIWAY	4	9,597	42	49.00	36.19	Very Poor	35.12	Very Poor	29.32	Very Poor
AGA	07	5/2/1943	AC	APRON	7	23,742	80	100.00	11.08	Serious	10.87	Failed	10.40	Failed
AGA	04	9/20/1948	AC	APRON	7	21,393	75	100.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	09	5/9/1943	AC	APRON	7	21,324	80	83.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	08	10/7/1943	AC	APRON	7	23,505	80	100.00	2.15	Failed	.00	Failed	.00	Failed
AGA	13	8/31/1943	PCC	APRON	3	7,200	80	.00	.00	Failed	.00	Failed	.00	Failed

Table 3
Pavement Condition - Sorted by Age

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AGA	16	5/31/2022	AC	APRON	3	11,245	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
AGA	17	5/30/2022	AC	APRON	3	24,921	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
ATERM	03	5/31/2022	PCC	APRON	3	15,600	1	100.00	95.93	Good	80.93	Satisfactory	65.93	Fair
TA	01	6/5/2022	AC	TAXIWAY	2	108,795	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	08	6/5/2022	AC	TAXIWAY	2	177,955	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	01	6/5/2022	AC	TAXIWAY	2	41,755	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	02	6/5/2022	AC	TAXIWAY	2	6,045	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	01	6/5/2022	AC	TAXIWAY	2	17,378	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA3	02	6/5/2022	AC	TAXIWAY	2	21,539	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	03	6/5/2022	AC	TAXIWAY	2	28,414	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	04A	6/5/2022	AC	TAXIWAY	2	19,920	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR2	01	6/5/2022	AC	TAXIWAY	2	18,255	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
ATERM	02	6/30/2019	PCC	APRON	3	106,400	4	100.00	92.96	Good	83.97	Satisfactory	74.99	Satisfactory
TA	09	6/5/2019	AC	TAXIWAY	2	45,438	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA4	02	6/5/2019	AC	TAXIWAY	2	28,746	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR1	01	6/5/2019	AC	TAXIWAY	2	15,570	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
R11	01	7/31/2018	AC	RUNWAY	1	281,900	5	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
R11	05	9/13/2018	AC	RUNWAY	1	339,000	5	100.00	98.98	Good	90.96	Good	75.63	Satisfactory
TB1	01	7/1/2018	AC	TAXIWAY	2	34,902	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB2	01	7/1/2018	AC	TAXIWAY	2	46,118	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TB3	01	9/16/2018	AC	TAXIWAY	2	44,039	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB4	01	9/16/2018	AC	TAXIWAY	2	29,656	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC1	01	7/7/2018	AC	TAXIWAY	2	47,550	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC2	01	7/31/2018	AC	TAXIWAY	2	46,090	5	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TC3	01	9/16/2018	AC	TAXIWAY	2	39,172	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TC4	01	9/16/2018	AC	TAXIWAY	2	27,394	5	100.00	95.96	Good	83.84	Satisfactory	66.47	Fair
TZ1	01	6/30/2018	AC	TAXIWAY	4	27,358	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TD	01	4/30/2017	AAC	TAXIWAY	2	323,530	6	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
R05	02A	8/7/2016	AC	RUNWAY	1	101,783	7	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
R05	02B	8/7/2016	AC	RUNWAY	1	102,783	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
R05	02C	8/7/2016	AC	RUNWAY	1	103,822	7	99.00	85.94	Satisfactory	68.96	Fair	51.79	Poor
R05	03A	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03B	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03C	8/7/2016	AC	RUNWAY	1	5,552	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	04A	8/7/2016	AC	RUNWAY	1	179,660	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	04B	8/7/2016	AC	RUNWAY	1	178,406	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	04C	8/7/2016	AC	RUNWAY	1	174,121	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R11	02	8/7/2016	AC	RUNWAY	1	5,728	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	03	8/7/2016	AC	RUNWAY	1	39,360	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R11	04	8/7/2016	AC	RUNWAY	1	27,145	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
TA	02	6/4/2016	AC	TAXIWAY	2	2,133	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	03	6/5/2016	AC	TAXIWAY	2	5,662	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TA	04	6/5/2016	AC	TAXIWAY	2	1,692	7	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	05	8/7/2016	AC	TAXIWAY	2	2,094	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	06	6/5/2016	AC	TAXIWAY	2	6,110	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA	07	6/5/2016	AC	TAXIWAY	2	2,589	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TA2	02	6/30/2016	AC	TAXIWAY	2	16,965	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA3	03	9/18/2016	AC	TAXIWAY	2	11,779	7	100.00	84.93	Satisfactory	67.75	Fair	50.79	Poor
TA4	03	9/17/2016	AC	TAXIWAY	2	10,966	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TB	02	8/18/2016	AC	TAXIWAY	2	35,242	7	99.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TB	03	9/18/2016	AC	TAXIWAY	2	15,512	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
TC	04B	7/31/2016	AC	TAXIWAY	2	23,500	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	01A	8/31/2014	AC	RUNWAY	1	65,000	9	99.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R05	01B	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	01C	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC	05	8/7/2013	AC	TAXIWAY	2	223,734	10	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
AGA	01	9/20/2012	AC	APRON	3	181,412	11	100.00	85.97	Satisfactory	78.45	Satisfactory	72.01	Satisfactory
AGA	02	9/20/2012	AC	APRON	3	74,902	11	100.00	84.97	Satisfactory	77.58	Satisfactory	71.26	Satisfactory
AGA	12	8/6/2011	AC	APRON	3	42,305	12	100.00	84.97	Satisfactory	78.61	Satisfactory	72.25	Satisfactory
TB	01	6/29/2011	AC	TAXIWAY	2	148,825	12	99.00	78.93	Satisfactory	61.08	Fair	45.74	Poor
TC	01	8/30/2011	AC	TAXIWAY	2	58,232	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TC	02	9/16/2011	AC	TAXIWAY	2	59,831	12	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TFBO	01	6/2/2011	AC	TAXIWAY	6	5,923	12	100.00	76.92	Satisfactory	59.05	Fair	44.37	Poor
TZ2	01	8/7/2011	AC	TAXIWAY	4	7,233	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	01	8/7/2011	AC	TAXIWAY	4	4,823	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	02	8/7/2011	AC	TAXIWAY	4	4,600	12	100.00	79.93	Satisfactory	62.13	Fair	46.48	Poor
AGA	10	9/1/2008	AC	APRON	4	49,623	15	97.00	66.98	Fair	61.15	Fair	54.57	Poor
AFUEL	01	8/31/2006	AC	APRON	6	7,519	17	100.00	73.97	Satisfactory	68.07	Fair	62.32	Fair
ASGA	01	8/31/2006	AC	APRON	5	8,100	17	78.00	72.96	Satisfactory	64.89	Fair	56.82	Fair
ASGA	02	8/31/2006	AC	APRON	5	14,303	17	84.00	59.95	Fair	47.98	Poor	36.03	Very Poor
TFBO	02	8/31/2006	AC	TAXIWAY	6	5,066	17	59.00	43.95	Poor	36.99	Very Poor	36.13	Very Poor
AGA	14	4/30/2005	AC	APRON	3	99,595	18	100.00	70.96	Fair	62.93	Fair	54.91	Poor
TSGA	01	8/7/2005	AC	TAXIWAY	5	11,266	18	100.00	80.93	Satisfactory	63.20	Fair	47.26	Poor
TWGA	01	7/10/2005	AAC	TAXIWAY	5	11,841	18	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TWGA	02	7/10/2005	AAC	TAXIWAY	5	21,259	18	98.00	70.92	Fair	53.46	Poor	41.00	Poor
TWGA	03	7/10/2005	AAC	TAXIWAY	5	17,133	18	91.00	63.92	Fair	47.78	Poor	38.30	Very Poor
TWGA	04	7/10/2005	AAC	TAXIWAY	5	7,435	18	76.00	47.94	Poor	38.36	Very Poor	36.16	Very Poor
TWGA	05	7/10/2005	AAC	TAXIWAY	5	10,740	18	100.00	69.92	Fair	52.59	Poor	40.54	Very Poor
AFBO	03	5/31/2004	AC	APRON	4	37,678	19	84.00	55.89	Poor	48.36	Poor	39.78	Very Poor
TZ2	02	7/8/2004	AC	TAXIWAY	4	23,245	19	88.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
AFBO	01	5/31/2003	AC	APRON	4	23,473	20	60.00	43.14	Poor	34.17	Very Poor	25.39	Serious
AFBO	04	8/31/2003	AC	APRON	6	16,082	20	100.00	76.97	Satisfactory	70.73	Fair	65.01	Fair
AFBO	05	8/31/2003	AC	APRON	6	11,826	20	90.00	72.97	Satisfactory	67.15	Fair	61.35	Fair
ATERM	01	9/2/2002	PCC	APRON	3	378,675	21	100.00	94.99	Good	91.58	Good	87.37	Good
TB	04	9/18/1997	AC	TAXIWAY	2	177,306	26	87.00	69.92	Fair	52.59	Poor	40.54	Very Poor
AWGA	01	8/31/1994	AC	APRON	5	6,300	29	100.00	59.97	Fair	53.17	Poor	45.21	Poor
AWGA	02	8/31/1994	AC	APRON	5	6,300	29	100.00	63.97	Fair	57.83	Fair	50.65	Poor
AWGA	03	8/31/1994	AC	APRON	5	6,300	29	100.00	64.97	Fair	58.96	Fair	51.98	Poor
AWGA	04	8/31/1994	AC	APRON	5	6,300	29	75.00	47.96	Poor	39.33	Very Poor	30.31	Very Poor

Table 3
Pavement Condition - Sorted by Age

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AGA	15	8/31/1987	PCC	APRON	3	118,400	36	91.00	70.97	Fair	63.67	Fair	55.57	Poor
AFBO	02	8/31/1981	AC	APRON	4	48,966	42	65.00	40.91	Very Poor	31.88	Very Poor	23.34	Serious
TFBO	03	6/5/1981	AC	TAXIWAY	4	9,597	42	49.00	36.19	Very Poor	35.12	Very Poor	29.32	Very Poor
AGA	04	9/20/1948	AC	APRON	7	21,393	75	100.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	07	5/2/1943	AC	APRON	7	23,742	80	100.00	11.08	Serious	10.87	Failed	10.40	Failed
AGA	08	10/7/1943	AC	APRON	7	23,505	80	100.00	2.15	Failed	.00	Failed	.00	Failed
AGA	09	5/9/1943	AC	APRON	7	21,324	80	83.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	13	8/31/1943	PCC	APRON	3	7,200	80	.00	.00	Failed	.00	Failed	.00	Failed

Table 4
Pavement Condition - Sorted by Priority

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
R05	01A	8/31/2014	AC	RUNWAY	1	65,000	9	99.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R05	01B	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	01C	8/7/2014	AC	RUNWAY	1	65,000	9	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	02A	8/7/2016	AC	RUNWAY	1	101,783	7	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
R05	02B	8/7/2016	AC	RUNWAY	1	102,783	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
R05	02C	8/7/2016	AC	RUNWAY	1	103,822	7	99.00	85.94	Satisfactory	68.96	Fair	51.79	Poor
R05	03A	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03B	8/7/2016	AC	RUNWAY	1	5,689	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	03C	8/7/2016	AC	RUNWAY	1	5,552	7	100.00	82.93	Satisfactory	65.42	Fair	48.93	Poor
R05	04A	8/7/2016	AC	RUNWAY	1	179,660	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
R05	04B	8/7/2016	AC	RUNWAY	1	178,406	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R05	04C	8/7/2016	AC	RUNWAY	1	174,121	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
R11	01	7/31/2018	AC	RUNWAY	1	281,900	5	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
R11	02	8/7/2016	AC	RUNWAY	1	5,728	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	03	8/7/2016	AC	RUNWAY	1	39,360	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
R11	04	8/7/2016	AC	RUNWAY	1	27,145	7	100.00	94.96	Good	81.99	Satisfactory	64.37	Fair
R11	05	9/13/2018	AC	RUNWAY	1	339,000	5	100.00	98.98	Good	90.96	Good	75.63	Satisfactory
TA	01	6/5/2022	AC	TAXIWAY	2	108,795	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	02	6/4/2016	AC	TAXIWAY	2	2,133	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	03	6/5/2016	AC	TAXIWAY	2	5,662	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TA	04	6/5/2016	AC	TAXIWAY	2	1,692	7	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	05	8/7/2016	AC	TAXIWAY	2	2,094	7	100.00	96.97	Good	85.87	Satisfactory	68.89	Fair
TA	06	6/5/2016	AC	TAXIWAY	2	6,110	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA	07	6/5/2016	AC	TAXIWAY	2	2,589	7	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TA	08	6/5/2022	AC	TAXIWAY	2	177,955	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA	09	6/5/2019	AC	TAXIWAY	2	45,438	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	01	6/5/2022	AC	TAXIWAY	2	41,755	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA1	02	6/5/2022	AC	TAXIWAY	2	6,045	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	01	6/5/2022	AC	TAXIWAY	2	17,378	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA2	02	6/30/2016	AC	TAXIWAY	2	16,965	7	100.00	93.96	Good	80.26	Satisfactory	62.49	Fair
TA3	02	6/5/2022	AC	TAXIWAY	2	21,539	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA3	03	9/18/2016	AC	TAXIWAY	2	11,779	7	100.00	84.93	Satisfactory	67.75	Fair	50.79	Poor
TA4	02	6/5/2019	AC	TAXIWAY	2	28,746	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TA4	03	9/17/2016	AC	TAXIWAY	2	10,966	7	100.00	89.94	Good	74.19	Satisfactory	56.42	Fair
TB	01	6/29/2011	AC	TAXIWAY	2	148,825	12	99.00	78.93	Satisfactory	61.08	Fair	45.74	Poor
TB	02	8/18/2016	AC	TAXIWAY	2	35,242	7	99.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TB	03	9/18/2016	AC	TAXIWAY	2	15,512	7	100.00	86.94	Good	70.21	Fair	52.85	Poor
TB	04	9/18/1997	AC	TAXIWAY	2	177,306	26	87.00	69.92	Fair	52.59	Poor	40.54	Very Poor
TB1	01	7/1/2018	AC	TAXIWAY	2	34,902	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB2	01	7/1/2018	AC	TAXIWAY	2	46,118	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TB3	01	9/16/2018	AC	TAXIWAY	2	44,039	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TB4	01	9/16/2018	AC	TAXIWAY	2	29,656	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	01	8/30/2011	AC	TAXIWAY	2	58,232	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TC	02	9/16/2011	AC	TAXIWAY	2	59,831	12	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TC	03	6/5/2022	AC	TAXIWAY	2	28,414	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	05	8/7/2013	AC	TAXIWAY	2	223,734	10	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC	04A	6/5/2022	AC	TAXIWAY	2	19,920	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TC	04B	7/31/2016	AC	TAXIWAY	2	23,500	7	100.00	92.95	Good	78.63	Satisfactory	60.78	Fair
TC1	01	7/7/2018	AC	TAXIWAY	2	47,550	5	100.00	90.95	Good	75.61	Satisfactory	57.77	Fair
TC2	01	7/31/2018	AC	TAXIWAY	2	46,090	5	100.00	87.94	Good	71.49	Satisfactory	53.97	Poor
TC3	01	9/16/2018	AC	TAXIWAY	2	39,172	5	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TC4	01	9/16/2018	AC	TAXIWAY	2	27,394	5	100.00	95.96	Good	83.84	Satisfactory	66.47	Fair
TD	01	4/30/2017	AAC	TAXIWAY	2	323,530	6	100.00	97.98	Good	88.16	Good	71.79	Satisfactory
TR1	01	6/5/2019	AC	TAXIWAY	2	15,570	4	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TR2	01	6/5/2022	AC	TAXIWAY	2	18,255	1	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
AGA	01	9/20/2012	AC	APRON	3	181,412	11	100.00	85.97	Satisfactory	78.45	Satisfactory	72.01	Satisfactory
AGA	02	9/20/2012	AC	APRON	3	74,902	11	100.00	84.97	Satisfactory	77.58	Satisfactory	71.26	Satisfactory
AGA	12	8/6/2011	AC	APRON	3	42,305	12	100.00	84.97	Satisfactory	78.61	Satisfactory	72.25	Satisfactory
AGA	13	8/31/1943	PCC	APRON	3	7,200	80	.00	.00	Failed	.00	Failed	.00	Failed
AGA	14	4/30/2005	AC	APRON	3	99,595	18	100.00	70.96	Fair	62.93	Fair	54.91	Poor
AGA	15	8/31/1987	PCC	APRON	3	118,400	36	91.00	70.97	Fair	63.67	Fair	55.57	Poor
AGA	16	5/31/2022	AC	APRON	3	11,245	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
AGA	17	5/30/2022	AC	APRON	3	24,921	1	100.00	100.00	Good	84.93	Satisfactory	69.93	Fair
ATERM	01	9/2/2002	PCC	APRON	3	378,675	21	100.00	94.99	Good	91.58	Good	87.37	Good
ATERM	02	6/30/2019	PCC	APRON	3	106,400	4	100.00	92.96	Good	83.97	Satisfactory	74.99	Satisfactory
ATERM	03	5/31/2022	PCC	APRON	3	15,600	1	100.00	95.93	Good	80.93	Satisfactory	65.93	Fair
AFBO	01	5/31/2003	AC	APRON	4	23,473	20	60.00	43.14	Poor	34.17	Very Poor	25.39	Serious
AFBO	02	8/31/1981	AC	APRON	4	48,966	42	65.00	40.91	Very Poor	31.88	Very Poor	23.34	Serious
AFBO	03	5/31/2004	AC	APRON	4	37,678	19	84.00	55.89	Poor	48.36	Poor	39.78	Very Poor
AGA	10	9/1/2008	AC	APRON	4	49,623	15	97.00	66.98	Fair	61.15	Fair	54.57	Poor
TFBO	03	6/5/1981	AC	TAXIWAY	4	9,597	42	49.00	36.19	Very Poor	35.12	Very Poor	29.32	Very Poor
TZ1	01	6/30/2018	AC	TAXIWAY	4	27,358	5	100.00	100.00	Good	96.66	Good	85.24	Satisfactory
TZ2	01	8/7/2011	AC	TAXIWAY	4	7,233	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ2	02	7/8/2004	AC	TAXIWAY	4	23,245	19	88.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	01	8/7/2011	AC	TAXIWAY	4	4,823	12	100.00	71.92	Satisfactory	54.34	Poor	41.49	Poor
TZ3	02	8/7/2011	AC	TAXIWAY	4	4,600	12	100.00	79.93	Satisfactory	62.13	Fair	46.48	Poor
ASGA	01	8/31/2006	AC	APRON	5	8,100	17	78.00	72.96	Satisfactory	64.89	Fair	56.82	Fair
ASGA	02	8/31/2006	AC	APRON	5	14,303	17	84.00	59.95	Fair	47.98	Poor	36.03	Very Poor
AWGA	01	8/31/1994	AC	APRON	5	6,300	29	100.00	59.97	Fair	53.17	Poor	45.21	Poor
AWGA	02	8/31/1994	AC	APRON	5	6,300	29	100.00	63.97	Fair	57.83	Fair	50.65	Poor
AWGA	03	8/31/1994	AC	APRON	5	6,300	29	100.00	64.97	Fair	58.96	Fair	51.98	Poor
AWGA	04	8/31/1994	AC	APRON	5	6,300	29	75.00	47.96	Poor	39.33	Very Poor	30.31	Very Poor
TSGA	01	8/7/2005	AC	TAXIWAY	5	11,266	18	100.00	80.93	Satisfactory	63.20	Fair	47.26	Poor
TWGA	01	7/10/2005	AAC	TAXIWAY	5	11,841	18	100.00	74.92	Satisfactory	57.10	Fair	43.13	Poor
TWGA	02	7/10/2005	AAC	TAXIWAY	5	21,259	18	98.00	70.92	Fair	53.46	Poor	41.00	Poor
TWGA	03	7/10/2005	AAC	TAXIWAY	5	17,133	18	91.00	63.92	Fair	47.78	Poor	38.30	Very Poor
TWGA	04	7/10/2005	AAC	TAXIWAY	5	7,435	18	76.00	47.94	Poor	38.36	Very Poor	36.16	Very Poor
TWGA	05	7/10/2005	AAC	TAXIWAY	5	10,740	18	100.00	69.92	Fair	52.59	Poor	40.54	Very Poor

Table 4
Pavement Condition - Sorted by Priority

Pavement Information									2023		2028		2033	
Branch ID	Section ID	Last Const. Date	Surface	Use	Priority Rank	True Area (SqFt)	Age	SCI	PCI	Pavement Condition	PCI	Pavement Condition	PCI	Pavement Condition
AFBO	04	8/31/2003	AC	APRON	6	16,082	20	100.00	76.97	Satisfactory	70.73	Fair	65.01	Fair
AFBO	05	8/31/2003	AC	APRON	6	11,826	20	90.00	72.97	Satisfactory	67.15	Fair	61.35	Fair
AFUEL	01	8/31/2006	AC	APRON	6	7,519	17	100.00	73.97	Satisfactory	68.07	Fair	62.32	Fair
TFBO	01	6/2/2011	AC	TAXIWAY	6	5,923	12	100.00	76.92	Satisfactory	59.05	Fair	44.37	Poor
TFBO	02	8/31/2006	AC	TAXIWAY	6	5,066	17	59.00	43.95	Poor	36.99	Very Poor	36.13	Very Poor
AGA	04	9/20/1948	AC	APRON	7	21,393	75	100.00	10.84	Failed	10.32	Failed	9.87	Failed
AGA	07	5/2/1943	AC	APRON	7	23,742	80	100.00	11.08	Serious	10.87	Failed	10.40	Failed
AGA	08	10/7/1943	AC	APRON	7	23,505	80	100.00	2.15	Failed	.00	Failed	.00	Failed
AGA	09	5/9/1943	AC	APRON	7	21,324	80	83.00	10.84	Failed	10.32	Failed	9.87	Failed

Appendix ‘C’ – Pavement Management Program

Redmond Municipal Airport

Pavement Maintenance Management Plan

The following pavement maintenance management plan (PMP) follows the guidelines of FAA Advisory Circular 150/5380-7B – *Airport Pavement Management,* Appendix A.

1. PAVEMENT INVENTORY

The inventory of airfield pavement is shown in Appendix 1. This document will be updated as projects get completed.

Information on this document includes:

1. Identification of all runways, taxiways and aprons broken down into sections each having similar properties.
2. Dimensions of pavement sections, including material types.
3. Type of pavement surface.
4. Year of construction and /or most recent major rehabilitation.
5. Identification if FAA AIP funds were used for construction and/or reconstruction of pavement.

2. PAVEMENT INSPECTION SCHEDULE

RDM intends to perform a detailed inspection of airfield pavement using the pavement condition index survey approximately every three years.

Airport Operations staff routinely visually inspect airfield pavements as part of the daily inspection process. This drive-by inspection identifies areas of concern which are noted and work orders established. Data is stored through the use of airfield data management software. Maintenance projects are then performed using RDM staff and equipment. This work includes crack sealing, joint sealing, paint marking, and FOD removal.

No AIP funds have been used to perform this work. Maintenance projects are developed on an as-needed basis as determined by inspections done by the Operations staff. Projects are then budgeted into the Airport's annual budget and performed once funding and labor is available.

3. RECORD KEEPING

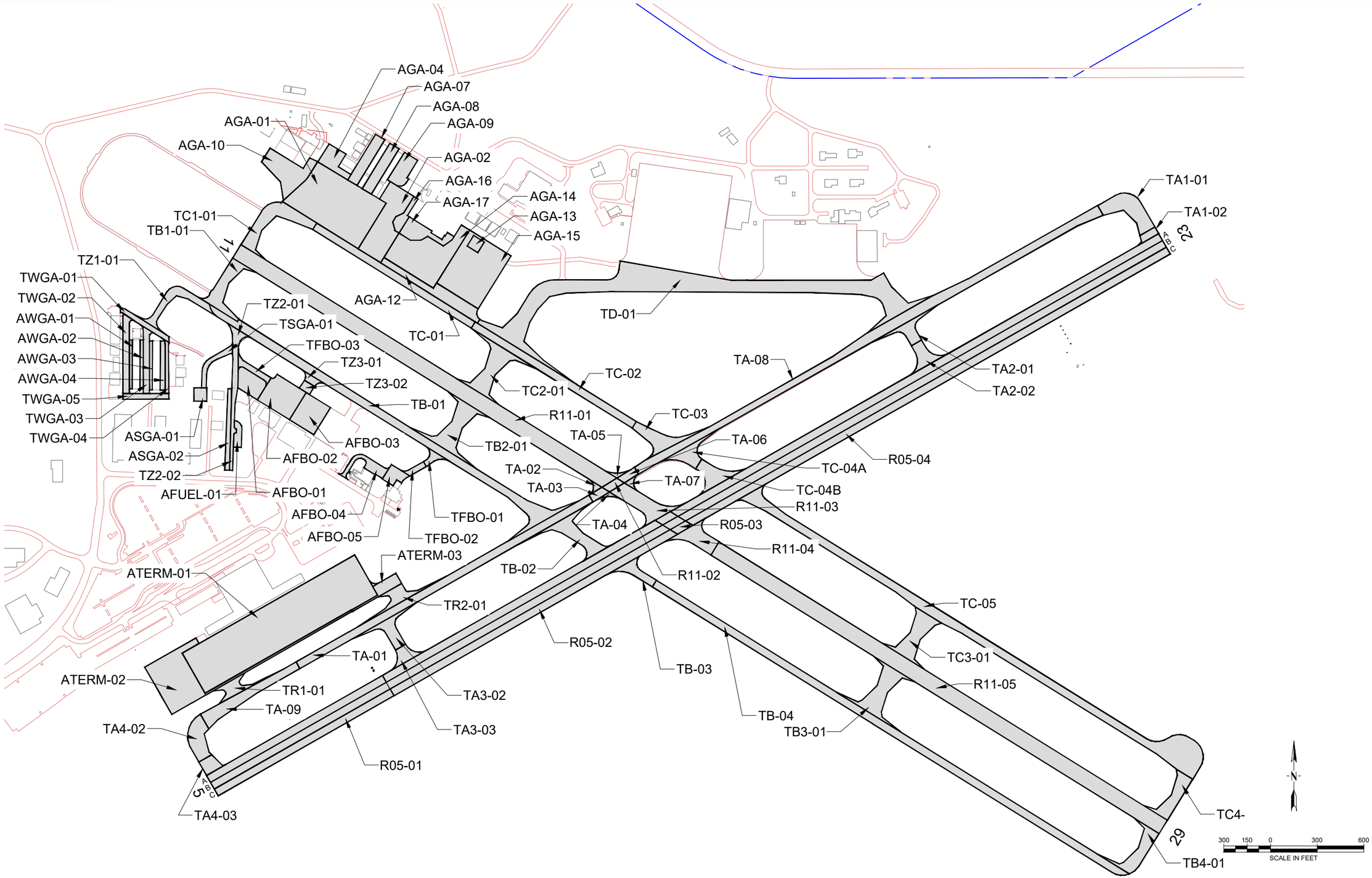
As part of the pavement condition index surveys performed, information is gathered that includes:

- Inspection dates
- Location
    - Refer to the inventory map for proper identification.
- Distress types
- Maintenance scheduled

The PCI studies help identify which pavements should receive either maintenance or reconstruction, and when. This information can is used as a planning tool for possible future AIP funded rehabilitation or maintenance projects.

In addition, Airport operations keeps records on pavement maintenance that is performed annually on the airfield and non- airfield pavements. This information is found in Appendix 2.

APPENDIX 1
RDM PAVEMENT INVENTORY MAP



#

VERIFY SCALE!

THESE PRINTS MAY BE REDUCED. LINE BELOW MEASURES ONE INCH ON ORIGINAL DRAWING.

MODIFY SCALE ACCORDINGLY!

REVISIONS

NO.	DESCRIPTION	BY	DATE

R:\2143\2143-077 PCI STUDY UPDATE\ACAD\CIVIL\BRANCH AND SECTIONS 2023 FIG 2.DWG PLOTTED BY:THOMAS DENISON ON Dec/08/2023

Morrison Maierle
engineers ▪ surveyors ▪ planners ▪ scientists
1 Engineering Place
Helena, MT 59602
406.442.3050
www.m-m.net

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DRAWN BY: _____
DSGN. BY: _____
APPR. BY: _____
DATE: _____

Q.C. REVIEW
BY: _____
DATE: _____

REDMOND MUNICIPAL AIRPORT
2023 PCI STUDY

REDMOND OREGON

PAVEMENT BRANCHES AND SECTIONS

PROJECT NUMBER
2143.077

SHEET NUMBER

DRAWING NUMBER
A-1

APPENDIX 2
RDM PAVEMENT MAINTENANCE WORK HISTORY AND SCHEDULE

APPENDIX 3
RDM PAVEMENT INSPECTION FORMS

Drive By Pavement Inspection Form

Date

Name

Areas Inspected

	Yes	No
Is Pavement showing unusual or unexpected conditions?		

	Yes	No
Is Pavement showing signs of Load Related Distresses?		

(Primary indicator would be Alligator Cracking or Rutting)

	Yes	No
Is Pavement showing potential for FOD generation?		

(Primary indicator loose or poory attached aggregate, spalling of joints, small section of asphalt or concrete missing along cracks)

Other Notes :

Annual Detailed Pavement Inspection Form

(Fill out form for each pavement section)

See Inventory Map

Date

Name

Location	**General Desc.**		
	Branch ID		*See Inventory Map*
	Section ID		*See Inventory Map*

	Distresses	Present on Pavement Section	Check Appropriate Boxes
41	Alligator Cracking		
42	Bleeding		
43	Block Cracking		
44	Corrugation		
45	Depression		
46	Jet Blast		
47	Joint Reflection Cracking		
48	Longitudinal and Transverse Cracking		
49	Oil Spillage		
50	Patching		
51	Polished Aggregate		
52	Raveling		
53	Rutting		
54	Shoving from PCC		
55	Slippage Cracking		
56	Swell		
57	Weathering		

	Yes	No
Is Pavement showing signs of Load Related Distresses?		

(Primary indicator would be Alligator Cracking or Rutting)

	Yes	No
Is Pavement showing potential for FOD generation?		

(Primary indicator loose or poorly attached aggregate, spalling of joints, small section of asphalt or concrete missing along cracks)

Other Notes :

Photos

Pavement Maintenance Record Form

Date

Name

Location	**General Desc.**		
	Branch ID		*See Inventory Map*
	Section ID		*See Inventory Map*

Pavement Maintenance Performed

Type of Material Used

Estimated Labor Hours

Estimated Equipment Hours

Estimated Material Cost

Or

Total Cost of Maintenance

MAP: ATTACH INVENTORY MAP WITH HIGHLIGHTED AREAS

Other Notes or Photos: See Below

Pavements (Refer to Inventory Map for Location)					Maintenance Activities (Indicate Type of Maintenance Performed, Crack Seal, Fog Seal, Striping, Patching)												
General Description	Branch ID	Section ID	Last Const. Date	True Area (SqFt)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Flight School Apron	AFBO	01	5/31/2003	23,473													
Flight School Apron	AFBO	02	8/31/1981	48,966													
Life Flight Apron	AFBO	03	5/31/2004	37,678													
Facilities Building	AFBO	04	8/31/2003	16,082													
ARFF Station	AFBO	05	8/31/2003	11,826													
Fueling Area - Taxilane Z2	AFUEL	01	8/31/2006	7,519													
General Aviation Apron	AGA	01	9/20/2012	181,412													
General Aviation Apron	AGA	02	9/20/2012	74,902													
General Aviation Apron- Hangars	AGA	04	9/20/1948	21,393													
General Aviation Apron- Hangars	AGA	07	5/2/1943	23,742													
General Aviation Apron- Hangars	AGA	08	10/7/1943	23,505													
General Aviation Apron- Hangars	AGA	09	5/9/1943	21,324													
General Aviation Apron- Les Schwab	AGA	10	9/1/2008	49,623													
General Aviation Apron - North of TW 'C'	AGA	12	8/6/2011	42,305													
General Aviation Apron - Concrete	AGA	13	8/31/1943	7,200													
General Aviation Apron - FBO	AGA	14	4/30/2005	99,595													
General Aviation Apron - FBO - Concrete	AGA	15	8/31/1987	118,400													
General Aviation Apron - FBO	AGA	16	5/31/2022	11,245													
General Aviation Apron - FBO	AGA	17	5/30/2022	24,921													
Hangar Apron - West Side Blue Hangar	ASGA	01	8/31/2006	8,100													
Hangar Apron - Taxilane Z2 Hangars	ASGA	02	8/31/2006	14,303													

Pavements (Refer to Inventory Map for Location)					Maintenance Activities (Indicate Type of Maintenance Performed, Crack Seal, Fog Seal, Striping, Patching)												
General Description	Branch ID	Section ID	Last Const. Date	True Area (SqFt)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Terminal Apron	ATERM	01	9/2/2002	378,675													
Terminal Apron	ATERM	02	6/30/2019	106,400													
Terminal Apron	ATERM	03	5/31/2022	15,600													
West GA Hangar Aprons	AWGA	01	8/31/1994	6,300													
West GA Hangar Aprons	AWGA	02	8/31/1994	6,300													
West GA Hangar Aprons	AWGA	03	8/31/1994	6,300													
West GA Hangar Aprons	AWGA	04	8/31/1994	6,300													
Runway 5-23, See Map	R05	01A	8/31/2014	65,000													
Runway 5-23, See Map	R05	01B	8/7/2014	65,000													
Runway 5-23, See Map	R05	01C	8/7/2014	65,000													
Runway 5-23, See Map	R05	02A	8/7/2016	101,783													
Runway 5-23, See Map	R05	02B	8/7/2016	102,783													
Runway 5-23, See Map	R05	02C	8/7/2016	103,822													
Runway 5-23, See Map	R05	03A	8/7/2016	5,689													
Runway 5-23, See Map	R05	03B	8/7/2016	5,689													
Runway 5-23, See Map	R05	03C	8/7/2016	5,552													
Runway 5-23, See Map	R05	04A	8/7/2016	179,660													
Runway 5-23, See Map	R05	04B	8/7/2016	178,406													
Runway 5-23, See Map	R05	04C	8/7/2016	174,121													

Pavements (Refer to Inventory Map for Location)					Maintenance Activities (Indicate Type of Maintenance Performed, Crack Seal, Fog Seal, Striping, Patching)												
General Description	Branch ID	Section ID	Last Const. Date	True Area (SqFt)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Runway 11-29, See Map	R11	01	7/31/2018	281,900													
Runway 11-29, See Map	R11	02	8/7/2016	5,728													
Runway 11-29, See Map	R11	03	8/7/2016	39,360													
Runway 11-29, See Map	R11	04	8/7/2016	27,145													
Runway 11-29, See Map	R11	05	9/13/2018	339,000													
Taxiway 'A', See Map	TA	01	6/5/2022	108,795													
Taxiway 'A', Radiuses to RW 11-29	TA	02	6/4/2016	2,133													
Taxiway 'A',Intersection to RW 11-29	TA	03	6/5/2016	5,662													
Taxiway 'A', Radiuses to RW 11-29	TA	04	6/5/2016	1,692													
Taxiway 'A', Radiuses to RW 11-29	TA	05	8/7/2016	2,094													
Taxiway 'A',Intersection to RW 11-29	TA	06	6/5/2016	6,110													
Taxiway 'A', Radiuses to RW 11-29	TA	07	6/5/2016	2,589													
Taxiway 'A', RW 11-29 to Taxiway 'A1'	TA	08	6/5/2022	177,955													
Taxiway 'A', See Map	TA	09	6/5/2019	45,438													
Taxiway 'A1', See Map	TA1	01	6/5/2022	41,755													
Taxiway 'A1', See Map	TA1	02	6/5/2022	6,045													
Taxiway 'A2', See Map	TA2	01	6/5/2022	17,378													
Taxiway 'A2', See Map	TA2	02	6/30/2016	16,965													
Taxiway 'A3', See Map	TA3	02	6/5/2022	21,539													
Taxiway 'A3', See Map	TA3	03	9/18/2016	11,779													
Taxiway 'A4', See Map	TA4	02	6/5/2019	28,746													
Taxiway 'A4', See Map	TA4	03	9/17/2016	10,966													

Pavements (Refer to Inventory Map for Location)					Maintenance Activities (Indicate Type of Maintenance Performed, Crack Seal, Fog Seal, Striping, Patching)												
General Description	Branch ID	Section ID	Last Const. Date	True Area (SqFt)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Taxiway 'B', See Map	TB	01	6/29/2011	148,825													
Taxiway 'B', See Map	TB	02	8/18/2016	35,242													
Taxiway 'B', See Map	TB	03	9/18/2016	15,512													
Taxiway 'B', See Map	TB	04	9/18/1997	177,306													
South Side Connectors to RW 11-29	TB1	01	7/1/2018	34,902													
South Side Connectors to RW 11-29	TB2	01	7/1/2018	46,118													
South Side Connectors to RW 11-29	TB3	01	9/16/2018	44,039													
South Side Connectors to RW 11-29	TB4	01	9/16/2018	29,656													
Taxiway 'C', Below GA Apron	TC	01	8/30/2011	58,232													
Taxiway 'C', Apron to TW 'A'	TC	02	9/16/2011	59,831													
Taxiway 'C', Intersection with TW 'A', North	TC	03	6/5/2022	28,414													
Taxiway 'C', Intersection with TW 'A', South	TC	04A	6/5/2022	19,920													
Taxiway 'C', Intersection with RW 5-23	TC	04B	7/31/2016	23,500													
Taxiway 'C', RW 5-23 to Taxiway 'C4'	TC	05	8/7/2013	223,734													
North Side Connectors to RW 11-29	TC1	01	7/7/2018	47,550													
North Side Connectors to RW 11-29	TC2	01	7/31/2018	46,090													
North Side Connectors to RW 11-29	TC3	01	9/16/2018	39,172													
North Side Connectors to RW 11-29	TC4	01	9/16/2018	27,394													
Forest Service Taxiway	TD	01	4/30/2017	323,530													

Pavements (Refer to Inventory Map for Location)					Maintenance Activities (Indicate Type of Maintenance Performed, Crack Seal, Fog Seal, Striping, Patching)												
General Description	Branch ID	Section ID	Last Const. Date	True Area (SqFt)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Taxilane to ARFF	TFBO	01	6/2/2011	5,923													
Taxilane to ARFF	TFBO	02	8/31/2006	5,066													
Flight School Taxilane to Z2	TFBO	03	6/5/1981	9,597													
Taxiway 'R1'	TR1	01	6/5/2019	15,570													
Taxiway 'R2'	TR2	01	6/5/2022	18,255													
Taxilane from Z2 to Blue Hangar	TSGA	01	8/7/2005	11,266													
West GA Hangar Taxilanes	TWGA	01	7/10/2005	11,841													
West GA Hangar Taxilanes	TWGA	02	7/10/2005	21,259													
West GA Hangar Taxilanes	TWGA	03	7/10/2005	17,133													
West GA Hangar Taxilanes	TWGA	04	7/10/2005	7,435													
West GA Hangar Taxilanes	TWGA	05	7/10/2005	10,740													
Taxilane Z1	TZ1	01	6/30/2018	27,358													
Taxilane Z2- Intersection to TW B	TZ2	01	8/7/2011	7,233													
Taxilane Z2	TZ2	02	7/8/2004	23,245													
Flight School - Connector Taxilane	TZ3	01	8/7/2011	4,823													
Flight School - Connector Taxilane	TZ3	02	8/7/2011	4,600													

Appendix ‘D’ - Inspection Reports

MORRISON - MAIERLE

www.m-m.net



ATTACHMENT C

AIR CARRIER CONSULTATION INFORMATION

DRAFT

Redmond Municipal Airport

2522 SE Jesse Butler Circle, #17
Redmond, OR 97756
(541) 504-3499
rdm@flyrdm.com
www.flyrdm.com

October 5th , 2026

RE: Notice of Intent to Impose and Use PFC Revenue – Consultation Waiver

Section158.23(a)(4). DATE AND LOCATION OF MEETING TO PRESENT THE PROJECTS DESCRIBED WITHIN THIS NOTIFICATION

Date: Friday, November 6th, 2026

Time: 10:00 A.M. Pacific

Location: Virtual Meeting

Notice to Airlines:

The FAA allows air carriers to waive the meeting. If you wish to waive your right to a consultation meeting, written evidence of your waiver of the meeting must be submitted with the Notice of Intent to Impose and Use PFCs. You may waive the meeting by endorsement below.

Please indicate your preference for a meeting or for waiving the requirement for a meeting. **Please return the attach form via email to leif.anderson@flyrdm.com and ckesler@m-m.net.**

Please return your response by **Friday , November 6 , 2026.**

_____ I will attend the virtual meeting on **November 6th , 2026.**

_____ I waive my right to a consultation meeting on this Notice of Intent to Impose and Use Passenger Facility Charges.

_____

(Airline)

_____ _____

(Signature) (Date)

TABLE A

PROJECTS PROPOSED FOR FUNDING
BY IMPOSING AND USING PASSENGER FACILITY CHARGES
FOR DISCUSSION ON
NOVEMBER 6, 2026
AIR CARRIER MEETING
REDMOND MUNICIPAL AIRPORT
REDMOND, OREGON

PASSENGER FACILITY CHARGE AMOUNT OF $4.50

TOTAL PROPOSED PROJECTS: $182,842,028

1. **2025 Terminal Expansion – Bond Principal and Interest**
   Request to Impose and Use: **$182,842,028**
   PFC Level: $4.50

The Redmond Municipal Airport (RDM) is a small hub facility, owned and operated by the City of Redmond. It services Central Oregon and currently provides commercial service on Alaska, American, Breeze, Delta and United Airlines. Recent growth in and around the Central Oregon area has resulted in a significant increase in aircraft traffic since the completion of the most recent Master Plan in 2018. Prior to COVID, airport traffic was tracking much higher than the Master Plan forecasted. In 2019, the airport had 482,767 enplanements which was a level not anticipated until 2024. Even in recovery, the airport is exceeding the national average. Extrapolating both master plan and recent enplanement data, it is estimated that the airport could see over 830,000 enplanements by 2036.

The Airport has completed a Terminal Area Concept Plan (TACP) that has identified proposed improvements to the terminal building to meet the forecasted passenger demand. The overall program to meet the needs over the next 20 years is approximately $200 million of improvements to the terminal building. However, the scope of the overall terminal project has been reduced to approximately $180 million at this time unless additional funding can be secured for the project. This funding limitation will only address the most immediate needs of the terminal and defer the remaining elements of the project until funding can be secured.

This PFC application request is part of the overall funding strategy to construct the terminal expansion project for the Redmond Municipal Airport to meet the current and future growth in passengers using the airport. The project is currently under construction and the Construction Manager / General Contractor (CMGC) selected for the project has established a Guaranteed Maximum Price (GMP) for the expansion of the passenger terminal building. The proposed project will provide additional hold room space, ticketing space, baggage screening space, airline operations space, passenger boarding bridges, and associated building systems (HVAC) improvements. The anticipated overall project cost of this phase of the expansion is $180 Million.

The terminal expansion project will provide 7 passenger boarding bridge contact positions, expand the second-floor hold room space, expand the baggage makeup area, expand airline operations space, expand airport concessions space, along with other miscellaneous improvement to improve passenger circulation. The attached figures show the final layout of the terminal and the proposed expansion. The project is expected to be completed by late 2027.

ATTACHMENT C-1

NOTICE OF INTENT LETTER AND AIR CARRIER RESPONSES

- **Notice of Intent Letter**
- **Table A Projects**
- **Table B Cost Summary / Finacial Plan**
- **Eligiblity Calculation**
- **Project Figures**

DRAFT

Redmond Municipal Airport

2522 SE Jesse Butler Circle, #17
Redmond, OR 97756
(541) 504-3499
rdm@flyrdm.com
www.flyrdm.com

October 5, 2026

Airline Representative
XX Airlines
Title
Address

RE: Notice of Intent to Impose and Use PFC Revenue at Redmond Municipal Airport (RDM), Redmond, Oregon

Dear Airline Representative,

The City of Redmond, Oregon (the City) intends to submit a Passenger Facility Charge (PFC) Application to the Federal Aviation Administration (FAA) for authority to impose and use PFC revenue at the Redmond Municipal Airport (RDM) (the Airport).

NEW APPLICATION

As required under Section 158.23 of Federal Aviation Regulations (FAR) Part 158, Passenger Facility Charges, the City hereby providing written notice to all domestic and foreign air carriers having a significant business interest at the Airport that the City intends to submit an Application to the FAA to impose and use PFC collections for projects, which are described below.

Section 158.23 (a) (1), Description of Projects

A description of the projects being considered for funding with PFC collections in the new Application to be submitted to the FAA for the Airport is provided in enclosed **Table A.**

Section 158.23 (a) (2), PFC Level, Proposed Charge Effective Date, Estimated Charge Expiration Date, and Estimated Total PFC Revenue

PFC 08 Summary	
PFC Level	$4.50
Estimated New Application Charge Effective Date	January 2, 2027
Estimated Charge Expiration Date	January 2, 2052
Estimated Total PFC Revenue	$ 182,842,028

Section 158.23 (a) (3), Exclusion of Class or Classes of Carriers

Exemption #1.

1. **Exemption :**
   (1) Nonscheduled/on-demand air carriers that enplane less than 500 passengers per year at RDM; and

   (2) Commuters or small certificated air carriers that enplane less than 500 passengers per year at RDM.

2. **Names of carriers serving RDM in 2025 belonging to the exempted class:**

   Aviation Consultants, Inx (W9BA)

   Cobalt Air LLC (6CBA)

   The Flight Star Corp (BONA)

   Kenmore Air Harbor (M5#)

   Scott Aviation Industries (QX)

   Sierra Pacific Airlines, Inc (SI)

3. **Estimated number of passengers enplaned by exempted class:** In 2025 the number of passengers reported to the FAA and recorder on CY 2025 FAA ACAIS by the proposed exempt class was 131.

4. **Justification for class exemption:**
   The percentage of passengers represented by this class of carrier represents less than one percent of the total passenger traffic enplaned in 2025. We request this exception based on the complexity of record keeping, the cost of the implementation of collecting and monitoring the PFC program for small carriers, and again, the fact that air taxis and unscheduled air carriers account for such a small percentage of total enplanements. The management of Roberts Field – Redmond Municipal Airport will closely monitor the enplanement activity of the proposed exempt class for any apparent changes.

Section 158.23 (a) (4), Consultation Meeting

The City will hold an air carrier consultation virtual meeting on **Friday, November 6th, 2026 at 10:00 a.m.(Pacific**). A separate email will be sent with a link to the meeting. We look forward to discussing these projects with you or your representative at the meeting. Interested parties can find additional information on this PFC application #8, including additional information about the terminal expansion, at the Redmond Municipal Airport's Website, https://flyrdm.com , under "Doing Business". Additional Information regarding the terminal expansion can be found on the Redmond Municipal Airport website https://flyrdm.com/terminal-expansion/.

Sincerely,

Jason Neff

Interim Director Redmond Municipal Airport

cc: PFC Correspondence

This PFC Application will cover the cost of the bonds and repayment of the principal. The remainder of the debt will be repaid by airport general funds. The bond revenue is more fully described in the following paragraph and the attached spreadsheet.

AIRPORT IMPROVEMENT FULL FAITH AND CREDIT OBLIGATION BONDS: The airport will bond for approximately $95,955,000 to complete the estimated $180,000,000 cost of the project. Of the total bonded amount 98.69% is PFC eligible. The debt service is estimated to be $185,273,618 over the 25-year period. The airport would like to impose and use PFC revenue for approximately 25 years to assist with the debt service. Since RDM is currently collecting at a rate of $2,400,000 annually and projected to increase to $12,000,000 over the 25-year period, the estimated PFC contribution for this would be $182,842,028. Any shortfall in PFC collections to service the debt would be paid for under airport general funds.

PFC APPLICATION: The proposed total PFC application is estimated to be $182,842,028 to be collected over a 25-year period.

The proposed effective date of this application would be January 2, 2027.
The estimated expiration date of this application would be January 2, 2052.

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

Proration Calculation

Building Components	*Square Footage*			
	Total	*(A) Eligible*	*(B)Non-Eligible*	*(C) Prorated*
Basement - Level 0	-	-	-	-
Main Level - Level 1	**32,693**	25,502	2,887	4,304
Concourse - Level 2	**46,909**	33,444	6,695	6,770
TOTAL	**79,602**	**58,946**	**9,582**	**11,074**

PFC Eligible % =A/(A+B)	***86.0%***

Project Cost Calculation

Construction	Sq. Feet	$/sf	Cost	% Eligible	Eligible	Non-Eligible
Building Construction	79,602	$ 637.74	$ 50,765,711	86.0%	$43,658,511.46	$7,107,199.54
Utility Costs						
Mechanical Systems			$ 17,322,115	86.0%	$14,897,018.90	$2,425,096.10
Electrical Systems			$ 20,481,281	86.0%	$17,613,901.66	$2,867,379.34
Fire Protection			$ 1,269,295	86.0%	$1,091,593.70	$177,701.30
Site			$ 8,124,886	86.0%	$6,987,401.96	$1,137,484.04
Landscaping			$ 287,285	0.0%	$0.00	$287,285.00
Equipment /Furnishings						
Furnishings			$ 1,340,321	100%	$1,340,321.00	$0.00
PBB, Elevators, Escalators			$ 9,919,606	100%	$9,919,606.00	$0.00
Baggage & Secure Exit			$ 4,188,803	100%	$4,188,803.00	$0.00
Dock Leveler			$ 26,652	0%	$0.00	$26,652.00
PBB (Glass)			$ 106,274	0%	$0.00	$106,274.00
Allowances						
Owner Contingency			$ 9,193,555	0%	$0.00	$9,193,555.00
Misc Allowances (Eligible)			$ 808,303	86%	$695,140.58	$113,162.42
Misc Allowances (Non-Eligible)			$ 10,000	0%	$0.00	$10,000.00
Indirect						
Preconstruction Services			$ 631,101	86%	$542,746.86	$88,354.14
Insurance			$ 3,514,624	86%	$3,022,576.64	$492,047.36
GC			$ 10,864,472	86%	$9,343,445.92	$1,521,026.08
Bonds			$ 858,169	86%	$738,025.34	$120,143.66
FEE			$ 3,963,347	86%	$3,408,478.42	$554,868.58
Soft Costs						
Inspection & Construction Mgmt.			$ 8,848,833	86.0%	$7,609,996.38	$1,238,836.62
Permits & Fees			$ 2,645,076	86.0%	$2,274,765.64	$370,310.68
Other Owner Related Costs			$ 9,480,517	0.0%	$0.00	$9,480,517.00
Art Program			$ 1,000,000	0.0%	$0.00	$1,000,000.00
Kid's Play Area			$ 200,000	86.0%	$172,000.00	$28,000.00
Design & Engineering			$ 12,269,967	86.0%	$10,552,171.62	$1,717,795.38
Project Financing						
Capitalized Interest			$ 9,383,956	100.0%	$9,383,956.15	$0.00
		TOTAL	**$ 187,504,149**		**$147,440,461**	**$40,063,688**

TABLE 'B'

Redmond Municipal Airport Terminal Expansion
Project Costs Funding Summary

FUNDING						
Source	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
AIP 52 (ENT)	$2,261,101.00					$2,261,101.00
AIP 53 (IIJA)	$6,354,239.00					$6,354,239.00
AIP 54 (ATP)	$7,000,000.00					$7,000,000.00
AIP 55 (ENT)	$1,291,810.00					$1,291,810.00
AIP 56 (ENT) (FY2025)	$9,881,121.00					$9,881,121.00
AIP 57 (IIJA) (FY2025)	$8,388,743.00					$8,388,743.00
AIP 58 (ENT) (FY2026)	$3,511,498.00					$3,511,498.00
AIP 59 (IIJA) (FY2026)	$3,828,852.00					$3,828,852.00
AIP 60 (ENT) (FY2027)	$3,511,498.00					$3,511,498.00
AIP 61 (ENT) (FY2028)	$3,511,498.00					$3,511,498.00
Match to AIP (Local)					$3,204,445.05	$3,204,445.05
PFC Eligible Work (Pay as You Go)		$0.00				$0.00
CONNECT OREGON GRANT FOR NON-ELIGIBLE CONSTRUCTION				$10,000,000.00		$10,000,000.00
COAR Grants				$281,274.00		$281,274.00
LOCAL FUNDING FOR NON-ELIGIBLE CONSTRUCTION					$22,803,077.00	$22,803,077.00
LOCAL FUNDING TO BALANCE					$5,719,993.00	$5,719,993.00
LOCAL FUNDING (BONDS, NET OF ISSUANCE COSTS)			$95,955,000.00			$95,955,000.00
TOTAL CONSTRUCTION	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**
Debt Service	**AIP**	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Principle		$95,955,000.00				$95,955,000.00
Interest		$89,318,618.00				$89,318,618.00
Total Debt Service		**$185,273,618.00**				**$185,273,618.00**
	AIP	**PFC**	**BONDS**	**OTHER GRANTS**	**LOCAL**	**TOTAL**
Total Sources of Funds	**$49,540,360**	**$0**	**$95,955,000**	**$10,281,274**	**$31,727,515**	**$187,504,149**

Calculate Principal and Interest Eligible for PFC Debt Service	
Total PFC Eligible Costs	**$147,440,461.23**
Eligible Funding Received	
AIP/BIL/IIJA (AIP Grants)	$49,540,360.00
Match to AIP (Local)	$3,204,445.05
PFC Eligible Work (Pay as You Go)	$0.00
Subtotal	**$52,744,805.05**
Remaining Eligible Costs	***$94,695,656.17***
Bonded Amount	***$95,955,000.00***
% Eligible for PFC Debt Service Payment	**98.69%**
Eligible for PFC Debt Service Payment	**$94,695,656**
Bond Interest Eligible for Debt Service	**$88,146,372**
Amount Eligible for PFC Debt Service Payment	**$182,842,028**

Check Other Grants < Ineligible Amount		
Ineligible Amount	$40,063,688	
Other Grant Sources	$10,281,274	**TRUE**

BIL/PFC ELIGIBILITY

Eligibility Determination (per PFC ORDER, AIP Handbook):

A = Eligible Areas (AIP/PFC/BIL) funded)
B = Ineligible Areas (Locally Funded)
C = Prorated Utility Space (mech/elec/IT)
D = High Cost 100% Eligible (escalators, elevators, bridges, etc.)

Step 1: Determine eligible proration

Proration % = A / (A+B)

		Level-00	Level-01	Level-02	*Total*
(A)	Eligible Area =	0	25,502	33,444	*58,946*
(B)	Ineligible Area =	0	2,887	6,695	*9,582*
(C')	Prorated Area =	0	4,304	6,770	*11,074*
	Total Area =	*0*	*32,693*	*46,908*	*79,601*

Step 2 - Proration % = 86.0%

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 0

LEVEL-00 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

LEVEL-00 (BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
B024	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

LEVEL-00 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
	#N/A	#N/A	#N/A	#N/A
	SUBTOTAL	#N/A		

TOTAL LEVEL-00 **#N/A**

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 1

LEVEL-01 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G155	ATO EXPANSION SHELL	2246	PFC Order Par. 4-6 d (2)	Counter
G157	MANUAL SCREENING	535	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G214	SECURE EXITING	412	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G145A	ELEVATOR	78	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G164	STAFF RESTROOM	64	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G165	STAFF RESTROOM	64	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G212	EXIT VESTIBULE	141	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G213	RAMP	1057	Eligible per AIP	Directly Related to Moving Passengers and Baggage
G219	EGRESS HALL	66	Eligible per AIP	and Baggage
G220b	NEW BAGGAGE MAKE-UP	15034	PFC Order Par. 4-6 d (1)	Directly Related to Moving Baggage
G222	STORAGE	199	PFC Order Par. 4-6 d (2)	Directly Related to other PFC eligible Space
G160	OPS HALL	2362	PFC Order Par. 4-6 d (2)	Directly Related to other PFC eligible Space
G167	VESTIBULE	220	Eligible per AIP	Required for ADA
G170	ACCESS HALLWAY	1627	Eligible per AIP	Required for ADA
EL2B	ELEVATOR	75	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES1B	EGRESS STAIR #1	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES2B	EGRESS STAIR #2	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES3B	EGRESS STAIR #3	326	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES4B	EGRESS STAIR #4	338	Eligible per AIP	Directly Related to Moving Passengers and Baggage
	SUBTOTAL	25,502		

LEVEL-01 (BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G011	FIRE RISER	353	Prorated Per AIP	Prorated Support Space
G156	FIRE RISER	13	Prorated Per AIP	Prorated Support Space
G159	MDF	203	Prorated Per AIP	Prorated Support Space
G162	ELECTRICAL	77	Prorated Per AIP	Prorated Support Space
G166	MECHANICAL	2571	Prorated Per AIP	Prorated Support Space
G171	ELECTRICAL	774	Prorated Per AIP	Prorated Support Space
G172	IT	313	Prorated Per AIP	Prorated Support Space
	SUBTOTAL	4,304		

LEVEL-01 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G161	LOADING DOCK	870	Not Eligible	Non Public
G163	JANITOR	83	Not Eligible	Non Public / Non Airline Space
G168	STAGING AREA	345	Not Eligible	Non Public
G169	STORAGE	306	Not Eligible	Non Public
G173	STORAGE	150	Not Eligible	Non Public
G174	AIRPORT STORAGE	432	Not Eligible	Non Public
G080	STORAGE	701	Not Eligible	Non Public
	SUBTOTAL	2,887		

TOTAL LEVEL-00 32,693

PFC/BIL ELIGIBILITY BREAKDOWN - LEVEL 2

LEVEL-02 (BIL ELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
EL2	ELEVATOR	75	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES1	EGRESS STAIR #1	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES2	EGRESS STAIR #2	329	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES3	EGRESS STAIR #3	326	Eligible per AIP	Directly Related to Moving Passengers and Baggage
ES4	EGRESS STAIR #4	338	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S001	CONCOURSE CIRCULATION	9562	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S010	BOH HALL	108.5	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S012	PET RELIEF	108	Eligible per AIP	Required for ADA
S013	MOTHERS' ROOM	112	Eligible per AIP	Public Restroom
S015	WOMEN'S RESTROOM	1362	Eligible per AIP	Public Restroom
S016	COMPANION CARE RESTROOM	114	Eligible per AIP	Public Restroom
S018	MEN'S RESTROOM	1317	Eligible per AIP	Public Restroom
S019	FAMILY RESTROOM	77	Eligible per AIP	Public Restroom
S020	FAMILY RESTROOM	77	Eligible per AIP	Public Restroom
S025	VESTIBULE	129	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S230	GATE 8 HOLDROOM	2352	Eligible per AIP	Public Holdroom
S232	GATE 7 HOLDROOM	2414	Eligible per AIP	Public Holdroom
S234	FUTURE PLAY AREA	617	Eligible per AIP	Directly Related to Moving Passengers and Baggage
S235	GATES 9,10, 11	8256	Eligible per AIP	Public Holdroom
S236	GATE 6 HOLDROOM	2300	Eligible per AIP	Public Holdroom
S237	GATE 5 HOLDROOM	3062	Eligible per AIP	Public Holdroom
g145B	ELEVATOR	79	Eligible per AIP	and Baggage
	SUBTOTAL	33,444		

LEVEL-02(BIL PRORATED AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
G241	CHASE	500	Prorated Per AIP	Prorated Support Space
S007	MECHANICAL	5041	Prorated Per AIP	Prorated Support Space
S008	ELEC	510	Prorated Per AIP	Prorated Support Space
S009	IDF	208	Prorated Per AIP	Prorated Support Space
S014	CHASE	113	Prorated Per AIP	Prorated Support Space
S021	CHASE	103	Prorated Per AIP	Prorated Support Space
S024	MECH SUPPLY	112	Prorated Per AIP	Prorated Support Space
S026	MECH RETURN	93	Prorated Per AIP	Prorated Support Space
S027	MECH INTAKE	90	Prorated Per AIP	Prorated Support Space
	SUBTOTAL	6,770		

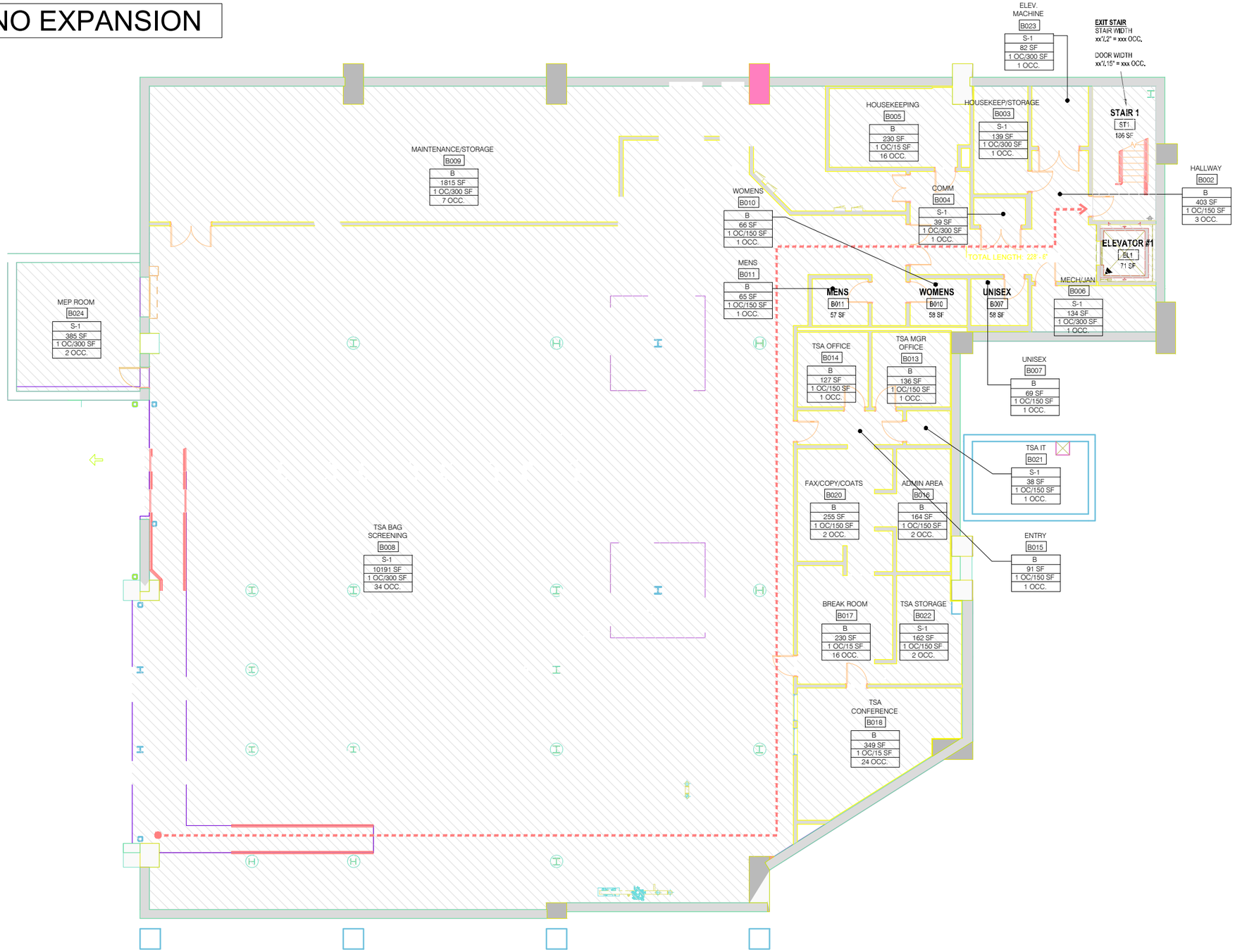
LEVEL-02 (INELIGIBLE AREAS)

ROOM	ROOM DESCRIPTION	AREA	BIL REF	NOTES
S011	STORAGE	149	Not Eligible	Non Public
S017	JANITOR	335	Not Eligible	Non Public / Non Airline Space
S023	CONCESSION	4304	Not Eligible	Revenue Generating
S233	CONCESSIONS	1798	Not Eligible	Revenue Generating
S010	BOH HALL	108.5	Eligible per AIP	and Baggage
	SUBTOTAL	6,695		

TOTAL LEVEL-00 46,908

PFC ELIGIBILITY

NO EXPANSION



BASEMENT LEVEL

LEGEND

NEW REMODEL

- PFC ELIGIBLE
- PFC NON ELIGIBLE
- PFC PRORATE
- EXISTING SPACE

KEY NOTES

1. NONE

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www.rsandh.com
Oregon Registration No. 0871AF

Morrison Maierle
engineers • surveyors • planners • scientists
MM PN:4867008

PROJECT TITLE:
REDMOND MUNICIPAL AIRPORT
REDMOND TERMINAL EXPANSION

PROJECT ADDRESS:
2522 JESSE BUTLER CIRCLE
REDMOND, OREGON 97756

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: 02/2023
REVIEWED BY:
DRAWN BY:
DESIGNED BY:
PROJECT NUMBER: 20241955001

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SEAL:

SHEET TITLE:
TERMINAL PFC ELIGIBILITY

BASEMENT LEVEL

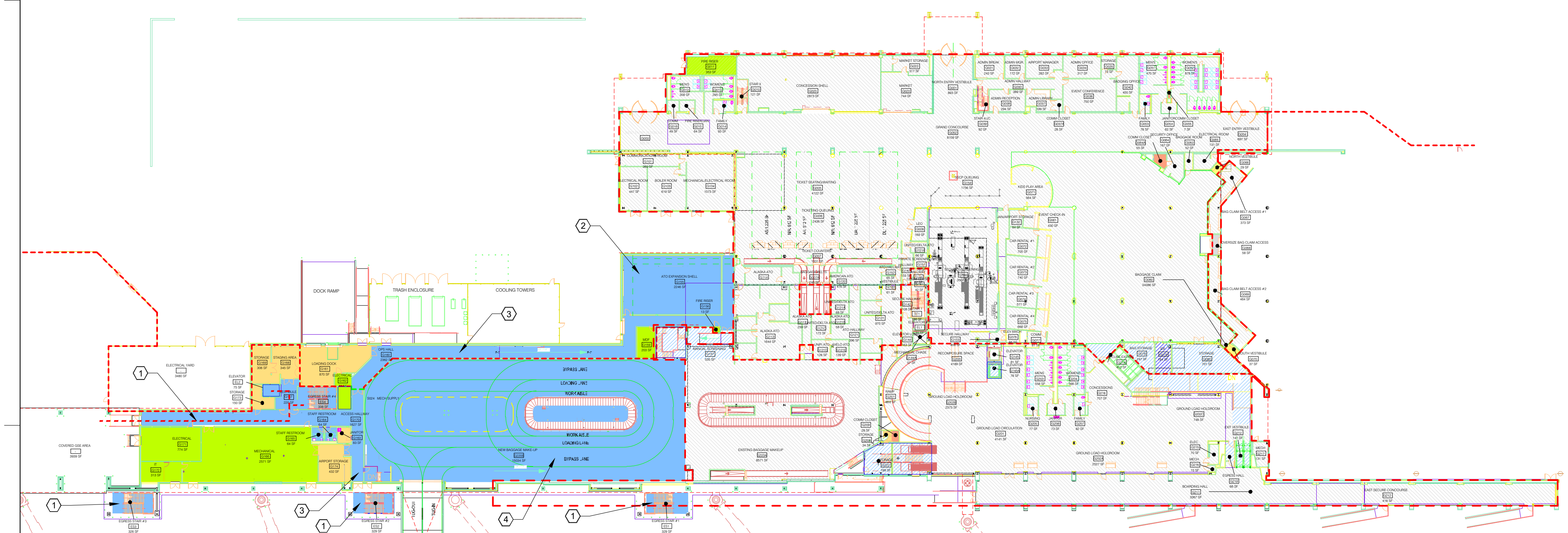
SHEET ID:
FIG 1

PROJECT STATUS:
SCHEMATIC DESIGN

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PFC ELIGIBILITY



FIRST FLOOR OVERVIEW

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

[redacted]

KEYMAP

KEY NOTES

1. REQUIRED FOR EMERGENCY EGRESS.
2. ATO SPACE IS ELIGIBLE SINCE IT IS DIRECTLY ADJACENT TO TICKET COUNTERS.
3. AIRLINE CIRCULATION / ACCESS DIRECTLY UNDER HOLD ROOM
4. AIRLINE OPERATIONAL SPACE DIRECTLY UNDER HOLD ROOM.

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Fly REDMOND

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MAIN LEVEL

SHEET ID:

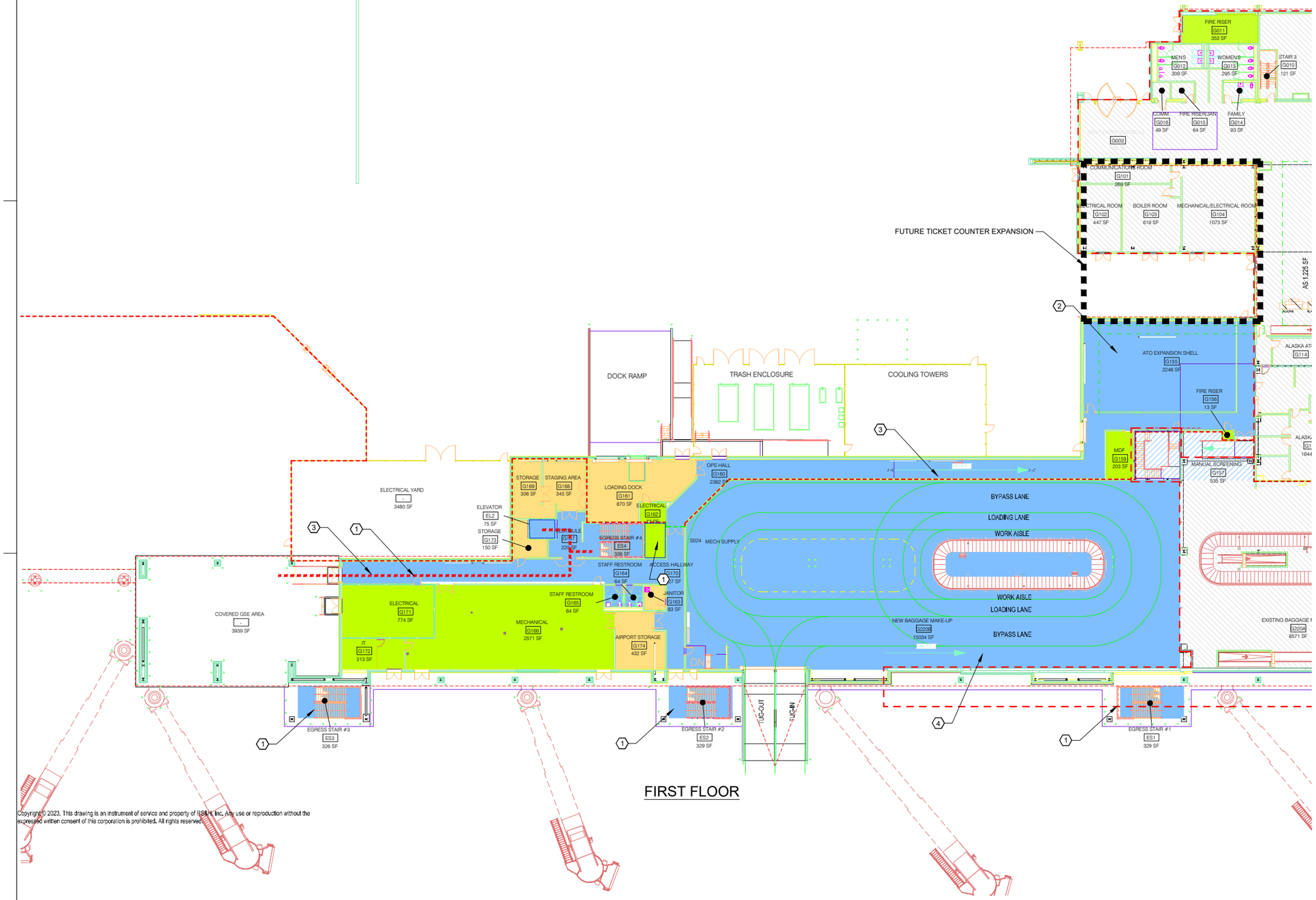
FIG 2

PROJECT STATUS:
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PFC ELIGIBILITY



FIRST FLOOR

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LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

KEYMAP

KEY NOTES

1. REQUIRED FOR EMERGENCY EGRESS.
2. ATO SPACE IS ELIGIBLE SINCE IT IS DIRECTLY ADJACENT TO TICKET COUNTERS.
3. AIRLINE CIRCULATION / ACCESS DIRECTLY UNDER HOLD ROOM
4. AIRLINE OPERATIONAL SPACE DIRECTLY UNDER HOLD ROOM.

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FLY REDMOND

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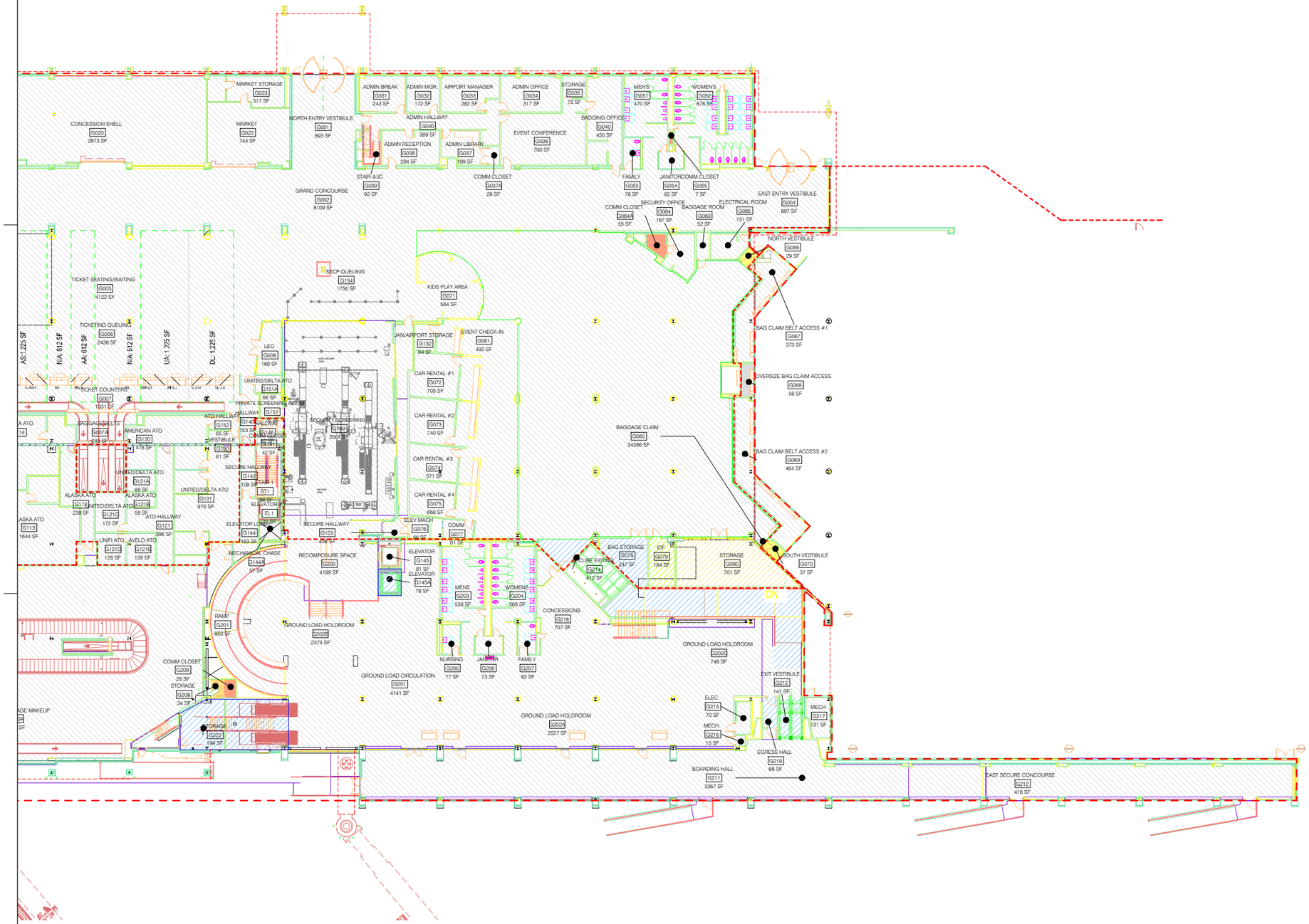
SHEET TITLE:
TERMINAL PFC ELIGIBILITY

MAIN LEVEL

SHEET ID:
FIG 2A

PROJECT STATUS:
SCHEMATIC DESIGN

PFC ELIGIBILITY



FIRST FLOOR

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

KEYMAP

KEY NOTES

1. NONE.

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MAIN LEVEL

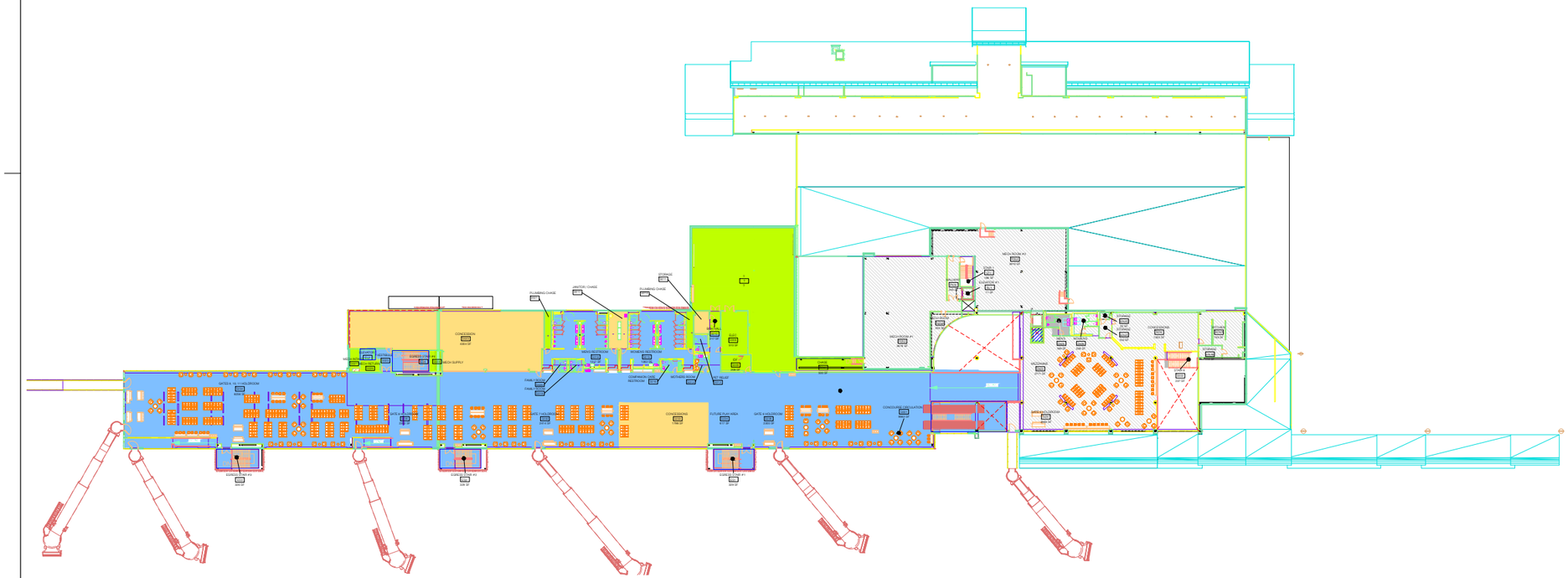
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FIG 2B

PROJECT STATUS:
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PFC ELIGIBILITY



SECOND FLOOR - OVERVIEW

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE



KEYMAP

KEY NOTES

1. NONE

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SHEET TITLE:
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2ND LEVEL

SHEET ID:

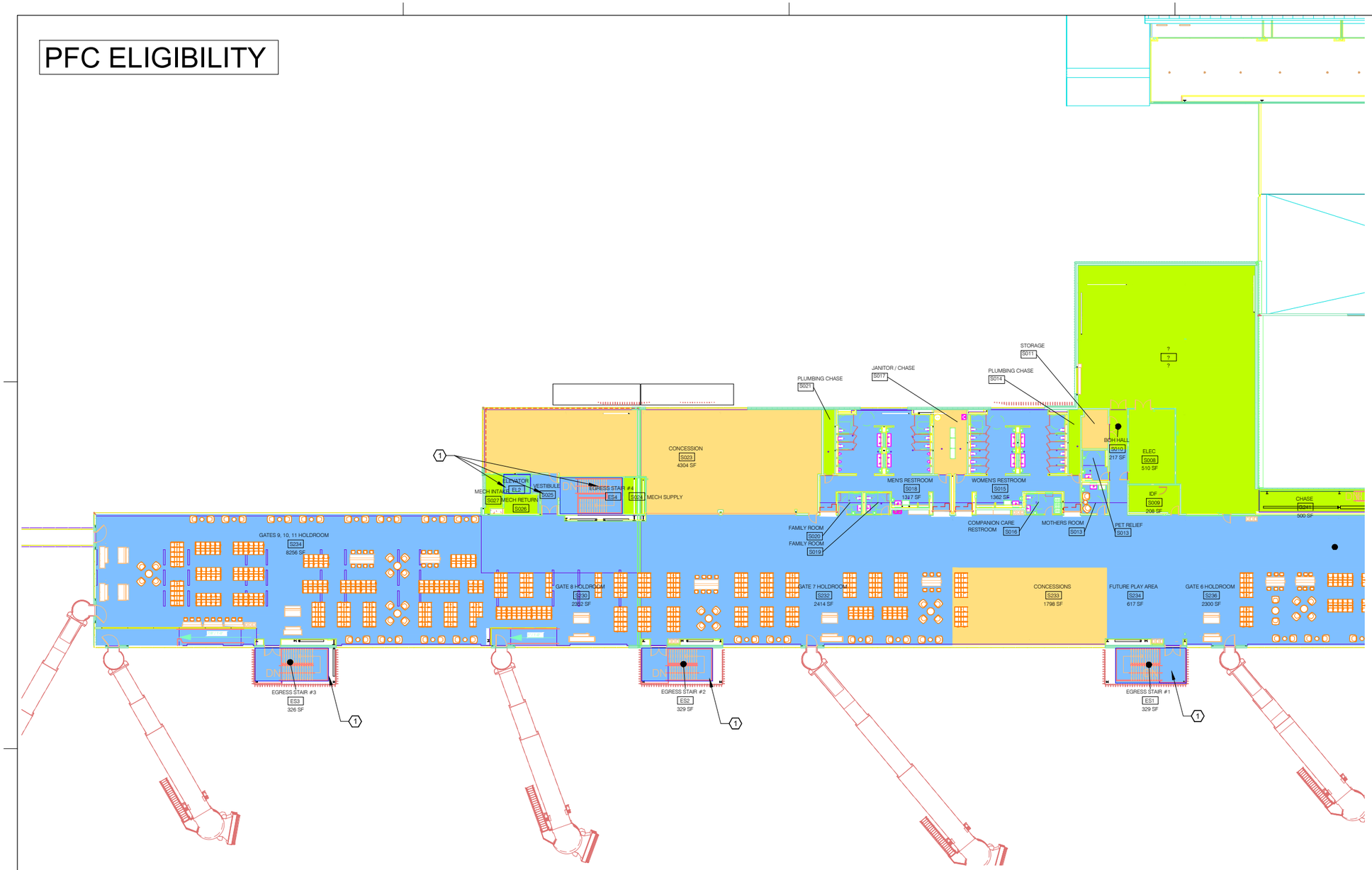
FIG 3

PROJECT STATUS:
SCHEMATIC DESIGN

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PFC ELIGIBILITY



SECOND FLOOR

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE

KEYMAP

KEY NOTES

1. REQUIRED FOR EMERGENCY EGRESS.

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SHEET TITLE:
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2ND LEVEL

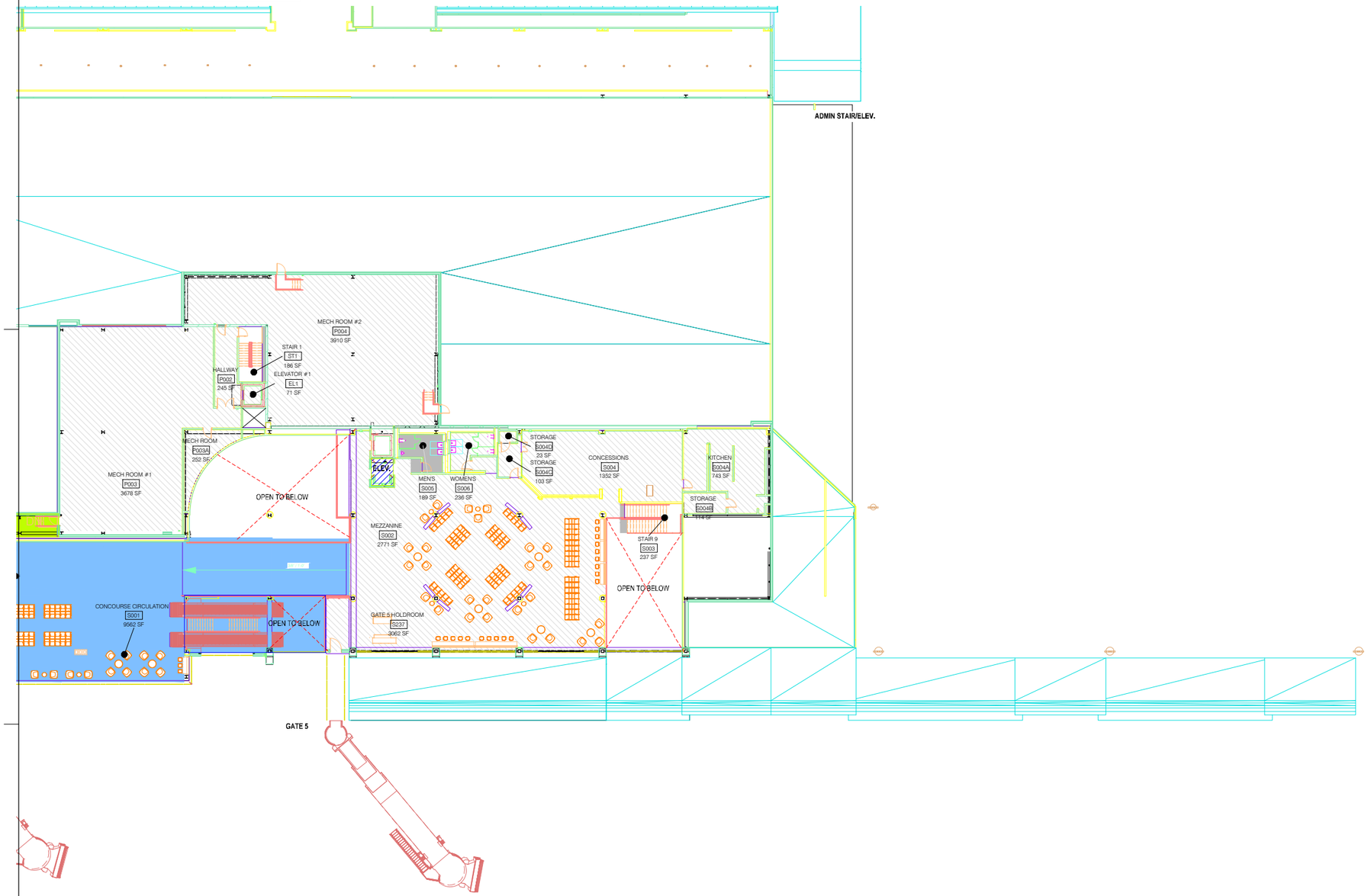
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FIG 3A

PROJECT STATUS:
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PFC ELIGIBILITY



SECOND FLOOR

LEGEND

NEW	REMODEL	
		PFC ELIGIBLE
		PFC NON ELIGIBLE
		PFC PRORATE
		EXISTING SPACE



KEYMAP

KEY NOTES

1. NONE

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SHEET TITLE:
TERMINAL PFC ELIGIBILITY
2ND LEVEL

SHEET ID:
FIG 3B

PROJECT STATUS:
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ATTACHMENT C-2

AIR CARRIER ATTENDANCE LIST
AND
CONSULTATION MEETING SUMMARY

- **Air Carrier Consultation Attendance List**
- **Meeting Minutes**

DRAFT

ATTACHEMENT C-2
AIR CARRIER CONSULTATION INFORMATION

AIR CARRIER CONSULTATION INFORMATION					
AIR CARRIERS OPERATING AT RDM	**CONTACT INFORMATION**	**AIR CARRIERS NOTIFIED ON 10/5/2026**	**AIR CARRIERS RESPONDING TO NOTICE**	**AIR CARRIERS ATTENDING CONSULTATION MEETING ON 11/6/2026**	**AIR CARRIERS RESPONDING AFTER CONSULTATION**
Alaska Airlines	Amy Fuller-Lyman Airport Affairs Portfolio Mgr 19300 International Blvd - SEAPZ Seattle, WA 98188 206-910-2832 amy.fuller.lyman@alaskaair.com				
Horizon Airlines	Amy Fuller-Lyman Airport Affairs Portfolio Mgr 19300 International Blvd - SEAPZ Seattle, WA 98188 206-910-2832 amy.fuller.lyman@alaskaair.com				
Delta Airlines	Tim DeBord Regional Director, Corporate Real Estate Delta Air Lines Department 877 P.O. Box 20706 Atlanta, GA 30320-6001 612-406-8000 timothy.debord@delta.com				

AIR CARRIER CONSULTATION INFORMATION					
AIR CARRIERS OPERATING AT RDM	**CONTACT INFORMATION**	**AIR CARRIERS NOTIFIED ON 10/5/2026**	**AIR CARRIERS RESPONDING TO NOTICE**	**AIR CARRIERS ATTENDING CONSULTATION MEETING ON 11/6/2026**	**AIR CARRIERS RESPONDING AFTER CONSULTATION**
American Airlines	Staci Ell Manager – Corporate Real Estate 1 Skyview Dr Ft Worth TX 76155 480-693-3893 Office 480-217-4070 Mobile Staci.Ell@aa.com				
Envoy Airlines	Staci Ell Manager – Corporate Real Estate 1 Skyview Dr Ft Worth TX 76155 480-693-3893 Office 480-217-4070 Mobile Staci.Ell@aa.com				
Avelo Airlines	Nathaniel Glover Manager, Airport Relations 12 Greenway Plaza, Suite 400 Huston, TX 77046 840.250.8956 nglover@aveloair.com				
United Airlines	Verene Burgin Manager Airport Affairs 233 S. Wacker Drive Chicago, IL 60606 (847) 863-3271 verene.burgin@united.com				

AIR CARRIER CONSULTATION INFORMATION					
AIR CARRIERS OPERATING AT RDM	**CONTACT INFORMATION**	**AIR CARRIERS NOTIFIED ON 10/5/2026**	**AIR CARRIERS RESPONDING TO NOTICE**	**AIR CARRIERS ATTENDING CONSULTATION MEETING ON 11/6/2026**	**AIR CARRIERS RESPONDING AFTER CONSULTATION**
SkyWest Airlines	Kelly Lane Manager Finance 444 S River Rd St. George, UT 84790 435-634-3265 klane@skywest.com				
Breeze Airlines	Marene Cline Manager, Government and Airport Affairs Breeze Airways 6340 South 3000 East, Suite 400 Cottonwood Heights, UT 84121 801-918-0763 maren.cline@flybreeze.com				

Summary of Discussion During
PFC Consultation Meeting of
Airline Representatives
November 6, 2026

The PFC Consultation Meeting of Airline Representatives was conducted Friday, November 6th, 2026, at 11:00 a.m. via virtual meeting. The PFC Project List and Notice of Intent Letter were emailed on October 2nd, 2026 to Airline Representative at Alaska Airlines/Horizon Air, Delta Airlines, American Airlines, Envoy Airlines, United Airlines, Skywest Airlines, Avelo Airlines, and Breeze Airlines in advance of the Virtual Meeting.

ATTENDEES/PARTICIPANTS:

Airline Representatives participating via virtual meeting:

- TBD

Remond Municipal Airport and City of Redmond Staff persent at the meeting were:

- TBD

Morrison-Maierle, Inc.:

- Cory Kesler, Senior Airport Engineer

RS&H:

Fred LeLacheur, Owners Representative

Agenda

1. Intoduction
2. Project Overview
3. Project Funding / Financing
4. Questions

General Discussion Items

TBD

ATTACHMENT C-3

AIR CARRIER CERTIFICATION OF AGREEMENT/DISAGREEMENT

- **Summary of Airline Comments**

DRAFT

ATTACHMENT C-3

AIR CARRIER CERTIFICATION OF AGREEMENT/DISAGREEMENT

On **November 6th , 2026**, the Redmond Municipal Airport held a Consultation meeting for the Airport's proposed submittal of its eighth Passenger Facility Charge (PFC) Application.

Below are the comments that were received from the Airlines:

AIR CARRIER CONSULTATION INFORMATION		
AIR CARRIERS OPERATING AT RDM	**CONTACT INFORMATION**	**Comments**
Alaska Airlines	Amy Fuller-Lyman Airport Affairs Portfolio Mgr 19300 International Blvd - SEAPZ Seattle, WA 98188 206-910-2832 amy.fuller.lyman@alaskaair.com	TBD
Horizon Airlines	Amy Fuller-Lyman Airport Affairs Portfolio Mgr 19300 International Blvd - SEAPZ Seattle, WA 98188 206-910-2832 amy.fuller.lyman@alaskaair.com	TBD
Delta Airlines	Tim DeBord Regional Director, Corporate Real Estate Delta Air Lines Department 877 P.O. Box 20706 Atlanta, GA 30320-6001 612-406-8000 timothy.debord@delta.com	TBD
American Airlines	Staci Ell Manager – Corporate Real Estate 1 Skyview Dr Ft Worth TX 76155 480-693-3893 Office 480-217-4070 Mobile Staci.Ell@aa.com	TBD

AIR CARRIER CONSULTATION INFORMATION		
AIR CARRIERS OPERATING AT RDM	**CONTACT INFORMATION**	**Comments**
Envoy Airlines	Staci Ell Manager – Corporate Real Estate 1 Skyview Dr Ft Worth TX 76155 480-693-3893 Office 480-217-4070 Mobile Staci.Ell@aa.com	TBD
Avelo Airlines	Nathaniel Glover Manager, Airport Relations 12 Greenway Plaza, Suite 400 Huston, TX 77046 840.250.8956 nglover@aveloair.com	TBD
United Airlines	Verene Burgin Manager Airport Affairs 233 S. Wacker Drive Chicago, IL 60606 (847) 863-3271 verene.burgin@united.com	TBD
SkyWest Airlines	Kelly Lane Manager Finance 444 S River Rd St. George, UT 84790 435-634-3265 klane@skywest.com	TBD
Breeze Airlines	Marene Cline Manager, Government and Airport Affairs Breeze Airways 6340 South 3000 East, Suite 400 Cottonwood Heights, UT 84121 801-918-0763 maren.cline@flybreeze.com	TBD

The Redmond Municipal Airport therefore considers the any non-response from the airlines to be a Certification of Agreement for the proposed PFC Projects.

ATTACHMENT C-4

NOTICE AND OPPORTUNITY FOR PUBLIC COMMENT

- **Copy of Public Notice**
- **Diagrams showing links to PFC application.**

DRAFT

Public Notice and Opportunity for Public Comment
Intent to Impose and Use a New Passenger Facility Charge
Redmond Municipal Airport
Redmond, Oregon

Date: **October 5th, 2026**

Mail comments to: Airport Director
Remond Municipal Airport
2522 SE Jesse Butler Circle, #17
Redmond, Oregon 97756

Deadline: **November 6th, 2026**

The City of Redmond, Redmond Municipal Airport intends to file an application with the Federal Aviation Administration (FAA), to impose and use a new Passenger Facility Charge Application #8 for improvement projects at Redmond Municipal Airport, Redmond, Oregon. As required under Section 158.23 of Part 158 – Passenger Facility Charges, the Airport is hereby providing written notice to all known air carriers operating at the Airport and the public.

Background
In 1993 the FAA approved the City's first PFC Application. Since that time, the FAA has approved application #2 through #7 as well as various amendments to these Applications. For applications #1 though #7 plus amendments and closeouts the FAA approved the authorization to collect the current amount $39,781,050 at a level of $4.50 per eligible passenger.

New Application
The following paragraphs provide information required under Section 158.23 of Part 158 for the notice to air carriers serving the Redmond Municipal Airport of the City of Redmond's intent to file the aforementioned Notice of Intent to impose and use PFC Revenues.

Proposed Charge Effective Date:	**1/2/2027**
Proposed Charge Expiration Date:	**1/2/2052**
Total PFC Revenue:	**$182,842,028**

SECTION 158.23(a)(1). DESCRIPTION OF PROJECTS

The Redmond Municipal Airport will file a Notice of Intent with the FAA to impose and use PFCs for the following projects. The projects listed are necessary to maintain the Airport in safe condition for the operation of aircraft and for the safety of traveling public.

2025 Terminal Expansion – Bond Principal and Interest

Request to Impose and Use: $182,842,028
PFC Level: $4.50

The Redmond Municipal Airport (Roberts Field) is a small hub facility, owned and operated by the City of Redmond. It services Central Oregon and currently provides commercial service on Alaska, American, Breeze, Delta and United Airlines. Recent growth in and around the Central Oregon area has resulted in a significant increase in aircraft traffic since the completion of the most recent Master Plan in 2018. Prior to COVID, airport traffic was tracking much higher than

the Master Plan forecasted. In 2019, the airport had 482,767 enplanements which was a level not anticipated until 2024. Even in recovery, the airport is exceeding the national average. Extrapolating both master plan and recent enplanement data, it is estimated that the airport could see over 830,000 enplanements by 2036.

The Airport has completed a Terminal Area Concept Plan (TACP) that has identified proposed improvements to the terminal building to meet the forecasted passenger demand. The overall program to meet the needs over the next 20 years is approximately $200 million of improvements to the terminal building. However, the scope of the overall terminal project has been reduced to approximately $180 million at this time unless additional funding can be secured for the project. This funding limitation will only address the most immediate needs of the terminal and defer the remaining elements of the project until funding can be secured.

This PFC application request is part of the overall funding strategy to construct the terminal expansion project for the Redmond Municipal Airport to meet the current and future growth in passengers using the airport. The project is currently in the early construction process and the CMGC selected for the project has established a GMP for the expansion of the passenger terminal building. The proposed project will provide additional hold room space, ticketing space, baggage screening space, airline operations space, passenger boarding bridges, and associated building systems (HVAC) improvements. The anticipated overall project cost of this phase of the expansion is $180 Million.

The terminal expansion project will provide 7 passenger boarding bridge contact positions, expand the second-floor hold room space, expand the baggage makeup area, expand airline operations space, expand airport concessions space, along with other miscellaneous improvement to improve passenger circulation. The attached figures show the terminal expansion developed currently under construction in the summer of 2025 through the winter of 2027.

This PFC Application will be for the repayment of bond capital and interest to construct the terminal not covered by other resources for the Terminal Expansion Project at Roberts Field – Redmond Municipal Airport. The Application will cover the cost of the bonds and repayment of the principal. The remainder of the debt will be repaid by airport general funds. The bond revenue is more fully described in the following paragraph and the attached spreadsheet.

AIRPORT IMPROVEMENT FULL FAITH AND CREDIT OBLIGATION BONDS: The airport will bond for approximately $95,955,000 to complete the estimated $180,000,000 cost of the project.

Of the total bonded amount 98.69% is PFC eligible. The debt service is estimated to be $185,273,618 over the 25-year period. The airport would like to impose and use PFC revenue for approximately 25 years to assist with the debt service. Since RDM is currently collecting at a rate of $2,400,000 annually and projected to increase to $12,000,000 over the 25-year period, the estimated PFC contribution for this would be $182,842,028. Any shortfall in PFC collections to service the debt would be paid for under airport general funds.

PFC APPLICATION: The proposed total PFC application is estimated to be $182,842,028 to be collected over a 25-year period.

The proposed effective date of this application would be January 2, 2027.

The estimated expiration date of this application would be January 2, 2052.

PFC - Application #8 - Project Summary					
Charge Effective Date		**1/2/2027**			
Charge Expiration Date		**1/2/2052**			
PFC PROJECT #	**PFC Level**	**Project Title**	**Project Year**	**Allocated Project Cost**	**Total PFC**
8-01	$4.50	Terminal Expansion - Bond Capital and Interest	2026	$182,842,028	**$182,842,028**
			TOTALS	**$182,842,028**	**$182,842,028**

Interested parties can find additional information on this PFC application #8, including additional information about the terminal expansion, at the Redmond Municipal Airport's Website, https://flyrdm.com, under "Doing Business". For additional information contact Mr. Steve Juba, Finance and Administration Manager, by email at steven.juba@flyrdm.com, or by phone at 541. 504.3097. Public Comments will be accepted through July 17, 2026 and can be emailed to Mr. Juba, or sent to:

Airport Director
Remond Municipal Airport
2522 SE Jesse Butler Circle, #17
Redmond, Oregon 97756

Posted 5th day of October, 2026

Jason Neff

Interim Airport Director

Redmond Municipal Airport

ATTACHMENT G

AIRPORT LAYOUT PLAN (ALP), AIRSPACE, AND ENVIRONMENTAL FINDINGS

DRAFT

OMB Control Number: 2120-0557
Expiration Date: 02/29/2028

Paperwork Reduction Act Statement
A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0557. Public reporting for this collection of information is estimated to be approximately 25 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are required to obtain FAA approval of authority to collect PFC revenue (49 U.S.C. 40117(h)). Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

FORM 5500-1, ATTACHMENT G
AIRPORT LAYOUT PLAN (ALP), AIRSPACE, AND ENVIRONMENTAL FINDINGS

ALL PROJECTS FOR WHICH IMPOSE AND USE OR USE AUTHORITY IS REQUESTED IN THE APPLICATION MUST BE LISTED UNDER EACH TYPE OF FINDING BELOW.

*****FOR FAA USE**********
PFC Application Number:
****

I. ALP Findings

1. Current ALP approval date: **7/29/2019**
   List proposed project(s) shown on this ALP: **Terminal Expansion – Phase 1**

2. List proposed project(s) not required to be shown on an ALP:

*****FOR FAA USE**********
Public agency information confirmed? YES [ ] PARTIALLY [ ] NO [ ]
For each project which the ADO/RO disagrees with the public agency's finding, discuss the reason(s) for the FAA's nonconcurrance below.
****

II. Airspace Findings

1. FAA Airspace finding date**: 08/19/2023** (repeat as necessary)
   List proposed project(s) covered by this finding**: Terminal Expansion-Phase 1**

2. List proposed project(s) not required to have an airspace determination

   NA

*****FOR FAA USE**********
Public agency information confirmed? YES [ ] PARTIALLY [ ] NO [ ]
For each project which the ADO/RO disagrees with the public agency's finding, discuss the reason(s) for the FAA's nonconcurrance below.
****

III. Environmental Findings

1. List proposed project(s) which are categorically excluded from the requirement for formal environmental review: **Terminal Expansion Approved 12/8/2021**

2. Date of FAA Finding of No Significant Impact: ___NA_____
(repeat as necessary)
List proposed project(s) covered by this finding:

3. Date of FAA environmental record of decision: __NA_____
(repeat as necessary)
List proposed project(s) covered by this finding:

*****FOR FAA USE**********
Public agency information confirmed? YES [ ] PARTIALLY [ ] NO [ ]
For each project which the ADO/RO disagrees with the public agency's finding, discuss the reason(s) for the FAA's nonconcurrance below.
****

Application Reviewed by:

_____	_____	_____
Name	Routing Symbol	Date

ATTACHMENT D

REQUEST TO EXCLUDE CLASS OF CARRIERS

DRAFT

Exhibit 'D'

SECTION 158.23(a)(3). REQUEST THAT A CLASS OF CARRIER NOT BE REQUIRED TO COLLECT PFCs

Section 158.23 (a) (3), Exclusion of Class or Classes of Carriers

Exemption #1.

1. **Exemption :**
   (1) Nonscheduled/on-demand air carriers that enplane less than 500 passengers per year at RDM; and

   (2) Commuters or small certificated air carriers that enplane less than 500 passengers per year at RDM.

2. **Names of carriers serving RDM in 2025 belonging to the exempted class:**

   Aviation Consultants, Inx (W9BA)
   Cobalt Air LLC (6CBA)
   The Flight Star Corp (BONA)
   Kenmore Air Harbor (M5#)
   Scott Aviation Industries (QX)
   Sierra Pacific Airlines, Inc (SI)

3. **Estimated number of passengers enplaned by exempted class:** In 2025 the number of passengers reported to the FAA and recorder on CY 2025 FAA ACAIS by the proposed exempt class was 131.

4. **Justification for class exemption:**
   The percentage of passengers represented by this class of carriers represents less than one percent of the total passenger traffic enplaned in 2025. We request this exception based on the complexity of record keeping, the cost of the implementation of collecting and monitoring the PFC program for small carriers, and again, the fact that air taxis and unscheduled air carriers account for such a small percentage of total enplanements. The management of Roberts Field – Redmond Municipal Airport will closely monitor the enplanement activity of the proposed exempt class for any apparent changes.

ATTACHMENT H
FORM 5500-1

DRAFT

Form 5500-1, Attachment H Project Information

Break projects into major components and fill in related unlocked (unshaded) areas and "Choose" drop-downs.

Public Agency:	City of Redmond
Impose Airport	RDM
Location:	Redmond, Oregon
Application Number:	Completed by FAA

Prj. No.	Project Title	PFC Level	Use Arpt.	PFC Revenue Requested (Whole Dollars)				Detailed Cost Needed?	FAA Federal Financial Grants	Other Revenue (Dollars)	Total Project Cost (Dollars)	Project Type	PFC Objective
				Pay-as-you-go	Bond Capital	Financing	Total PFC						
1	Terminal Expansion (Debt Service)	4.5	RDM		95,955,000	89,318,618	$ 185,273,618	Yes	$ -	-	$185,273,618	Concurrent	Enhance Capacity
2							$ -	No	$ -	-	$ -	Choose	Choose
3							$ -	No	$ -	-	$ -	Choose	Choose
4							$ -	No	$ -	-	$ -	Choose	Choose
5							$ -	No	$ -	-	$ -	Choose	Choose
6							$ -	No	$ -	-	$ -	Choose	Choose
7							$ -	No	$ -	-	$ -	Choose	Choose
8							$ -	No	$ -	-	$ -	Choose	Choose
9							$ -	No	$ -	-	$ -	Choose	Choose
10							$ -	No	$ -	-	$ -	Choose	Choose
11							$ -	No	$ -	-	$ -	Choose	Choose
12							$ -	No	$ -	-	$ -	Choose	Choose
13							$ -	No	$ -	-	$ -	Choose	Choose
14							$ -	No	$ -	-	$ -	Choose	Choose
15							$ -	No	$ -	-	$ -	Choose	Choose
16							$ -	No	$ -	-	$ -	Choose	Choose
17							$ -	No	$ -	-	$ -	Choose	Choose
18							$ -	No	$ -	-	$ -	Choose	Choose
19							$ -	No	$ -	-	$ -	Choose	Choose
20							$ -	No	$ -	-	$ -	Choose	Choose
	Notice Total:				**$95,955,000**	**$89,318,618**	**$ 185,273,618**	NA	NA	NA	NA		

Proposed Excluded Class(es) of Carrier:
ATCO-Nonscheduled/On-Demand Air Carriers, filing FAA Form 1800-31.

Form 5500-1, Attachment H Project Information

Page 2: Fill in unlocked (unshaded) areas

Prj. No.	Project Title	Public Agency No.	Detailed Project Description	Physical Dates		Terminal Information					
				Project Start	Project End	Pre-PFC Action			Post-PFC Action		
						Tkt Cntr	Gates	Bag Fac.	Tkt Cntr	Gates	Bag Fac.
1	Terminal Expansion (Debt Service)		Debt Service for Bond for the terminal expansion to for PFC eligible project costs not covered by other funding sources.	6/1/2025	5/30/2052	20	6	2	20	11	2
2											
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20											

Submit this worksheet with FAA Form 5500.1

If you have any questions about this worksheet, please contact your local Airports District Office.

Form 5500-1, Attachment H Project Information

Page 3: Fill in unlocked (unshaded) areas and "Choose" drop-downs.

Prj. No.	Project Title	Any Disagree	Describe Disagreement and Source	Public Agency Reason For Proceeding
1	Terminal Expansion (Debt Service)	No	No Disagreement Received from the Airlines	NA
2		Choose		
3		Choose		
4		Choose		
5		Choose		
6		Choose		
7		Choose		
8		Choose		
9		Choose		
10		Choose		
11		Choose		
12		Choose		
13		Choose		
14		Choose		
15		Choose		
16		Choose		
17		Choose		
18		Choose		
19		Choose		
20		Choose		

Submit this worksheet with FAA Form 5500.1
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Form 5500-1, Attachment H Project Information

Page 4: Fill in unlocked (unshaded) areas

Grant Data by Grant Type and other funding

Prj. No.	Grant 1			Grant 2			Grant 3			Other Funds 1		Other Funds 2		Other Funds 3		Specify	FAA Federal Financial Grants Total	Other Funds Total
	Grant Amount	Grant Number	Grant Type	Grant Amount	Grant Number	Grant Type	Grant Amount	Grant Number	Grant Type	Amount	Other type	Amount	Other type	Amount	Other type			
1			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
2			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
3			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
4			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
5			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
6			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
7			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
8			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
9			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
10			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
11			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
12			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
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17			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
18			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
19			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -
20			Choose			Choose			Choose		Choose		Choose		Choose		$ -	$ -

Form 5500-1, Attachment H Project Information

Page 5: Fill in unlocked (unshaded) areas and "Choose" drop-downs.

Prj. No.	Project Title	Project Justification	NEPA Approval	Approval Date	Airspace Finding	Airspace Case Number	Finding Date	ALP Approval	Approval Date
1	Terminal Expansion (Debt Service)	The Redmond Municipal Airport Master Plan was completed in 2018. The master plan identified terminal expansion as one of the proposed projects to start in 2021. In the masterplan, the FAA approved forecast projected 3.7% annual growth in enplanements from 298,322 in 2016 to 680,750 in 2036. Prior to the pandemic the airport passenger growth was outpacing the projections with placements in 2019 exceeding those that were anticipated sometime after 2024. After the pandemic the airport recovered to pre-pandemic levels in 2023. Growth since the pandemic has continued on the pre-pandemic trajectory. It is anticipated that RDM will exceed 650,000 enplanements for 2025, nearly surpassing the projections in the masterplan for 2036. Due to the accelerated growth at the Redmond Municipal Airport, the airport developed a Terminal Area Concept Plan (TCAP) to take a fresh look at the proposed terminal development. The TCAP consisted of a review of the existing terminal building, validation of enplanement forecasts, provided recommendations, to accommodate the proposed growth. The TCAP was completed in November of 2021	Cat-X	12/8/2021	Yes	2023-ANM-4517-NRA	8/19/2023	Yes	7/29/2019
2			Choose		Choose			Choose	
3			Choose		Choose			Choose	
4			Choose		Choose			Choose	
5			Choose		Choose			Choose	
6			Choose		Choose			Choose	
7			Choose		Choose			Choose	
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Submit this worksheet with FAA Form 5500.1
If you have any questions about this worksheet, please contact your local Airports District Office.

For FAA Use Only

Form 5500-1, Attachment H Project Information

Public Agency: City of Redmond
Impose Airport RDM
Location: Redmond, Oregon
Application Number: Completed by FAA
Use Airport(s): RDM

Prj. No.	Project Title	PFC Level	Meets 158.17(a)(3)	Each project requested with a charge level above $3 meets 14 CFR 158.17(a)(3)	Other FAA Comments
1	Terminal Expansion (Debt Service)	4.50	Choose		
2		-	Choose		
3		-	Choose		
4		-	Choose		
5		-	Choose		
6		-	Choose		
7		-	Choose		
8		-	Choose		
9		-	Choose		
10		-	Choose		
11		-	Choose		
12		-	Choose		
13		-	Choose		
14		-	Choose		
15		-	Choose		
16		-	Choose		
17		-	Choose		
18		-	Choose		
19		-	Choose		
20		-	Choose		