

MEMORANDUM

TO: Planning, Development and Environment Committee

FROM: Chad E. Leqve – Director of Environment (725.6326)

**SUBJECT: 2018-2024 CAPITAL IMPROVEMENT PROGRAM PUBLIC HEARING -
ASSESSMENT OF ENVIRONMENTAL EFFECTS**

DATE: October 27, 2017

At the September 2017 Commission meeting, a public hearing related to the Assessment of Environmental Effects (AOEE) for the 2018-2024 MAC Capital Improvement Program (CIP) was authorized and the members of the Planning, Development and Environment Committee were appointed as the hearing officers. This hearing will be held at the November 6, 2017, Planning, Development and Environment Committee meeting.

A copy of the AOEE document for the Commission's 2018-2024 CIP is included with the Committee package.

The AOEE evaluates the cumulative environmental effects of the projects included in the 7-year CIP at each of the Commission's airports.



Assessment of Environmental Effects Seven-Year Capital Improvement Program 2018 – 2024

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Section 1: Introduction

This report is prepared in accordance with the requirements of Minnesota Statutes 1986, Section 473.614, as amended in 1988 and 1998. It presents an assessment of the environmental effects (AOEE) of projects in the Metropolitan Airports Commission's (MAC) Seven-Year Capital Improvement Program (CIP) from 2018 to 2024 for each MAC airport. Under Minnesota law, the MAC is required to "examine the cumulative environmental effects at each airport of the projects at that airport (in the seven-year CIP), considered collectively." Many of the projects in the CIP entail replacement and maintenance/upgrades of existing facilities, Information Technology, and rehabilitation/upgrades of existing airport tenant facilities. Such work will not affect use of the facilities and as such will not add to, or subtract from, cumulative environmental effects. The anticipated measurable effects during construction are discussed in Section 2.

The amended 1986 law also requires the preparation of an Environmental Assessment Worksheet under the Minnesota Environmental Policy Act (MEPA) for projects that meet all of the following conditions:

1. The project is scheduled in the CIP for the succeeding calendar year (2018 in this CIP);
2. The project is scheduled to cost \$5 million or more at Minneapolis-St. Paul International Airport (MSP) or \$2 million or more at any other MAC airport; and
3. The project involves the construction of: (i) a new or expanded structure for handling passengers, cargo, vehicles or aircraft; or (ii) a new runway or taxiway or the extension of an existing runway or taxiway.

Table 1-1 lists all projects included in the Seven-Year Capital Improvement Program for the years 2018 through 2024. An Environmental Assessment Worksheet (EAW) or Environmental Impact Statement (EIS) has been prepared for all projects scheduled to be implemented in 2018 that meet the above three conditions in Minnesota Statutes 1986, Section 473.614, for a mandatory EAW. The projects that may have potential for significant environmental effects are presented in Table 1-2.

**Table 1-1
 2018 – 2024 Capital Improvement Program**

MSP End of Life/Replacement Projects		2018	2019	2020	2021	2022	2023	2024
Notes	Terminal 1-Lindbergh							
4	Passenger Boarding Bridge Replacements	4,000,000	4,000,000	4,000,000	5,000,000	4,000,000	4,000,000	4,000,000
2	Tram Systems Retrofit and Equipment	1,500,000	1,500,000					
4	Mezzanine HVAC/AHU Replacements & Penthouses	16,200,000						
5	Recarpeting Program						7,000,000	7,000,000
4	Terminal 1 Tug Doors Replacement		600,000					
	Energy Management Center							
3	VAV Box Replacement				750,000	750,000	750,000	750,000
	Field and Runway							
2	Taxiway S Reconstruction	10,000,000						
2	Taxiway D Reconstruction			10,000,000				
2	Sanitary Sewer Replacement 34th Avenue				2,150,000			
4	Snow Melter Upgrades/Modifications	250,000	750,000					
2	Sanitary Sewer Replacement Taxiway R			3,250,000				
	Terminal Roads/Landside							
2	Lower Level Roadway Rehabilitation				1,100,000			
2	Upper Level Roadway Rehabilitation				2,000,000			
2	Upper Level Roadway Electrical System Rehabilitation				750,000			
4	Variable Message Signs Replacement, phase 3			1,600,000				
2	28th Avenue Watermain Replacement		1,250,000					
5	34th Avenue Traffic Control	250,000						
	Terminal 2-Humphrey							
5	Public Walk Aisle Terrazzo Floor Installation		1,700,000					
5	Recarpeting Program				500,000	500,000	500,000	500,000
	Fire							
3	MSP Campus Fire Alarm System Upgrade/Transition	2,500,000	1,000,000	1,000,000				
6	ARFF #2	250,000		10,500,000				
	MSP End of Life/Replacement Subtotal	\$34,950,000	\$10,800,000	\$30,350,000	\$12,250,000	\$5,250,000	\$12,250,000	\$12,250,000
	MSP IT Projects	2018	2019	2020	2021	2022	2023	2024
Notes	Terminal 1-Lindbergh							
4	IT Miscellaneous Modifications	4,600,000	8,400,000	5,500,000	9,000,000	10,500,000	10,000,000	10,000,000
5	Telecom Room Equipment Continuity (TREC)	1,000,000	1,500,000	1,500,000	1,500,000	1,500,000		
4	Intelligent Monitoring and Control Systems (IMACS)	1,500,000	1,500,000	1,500,000	1,500,000			
4	EVIDs / MUFIDs Digital Signs	800,000						
	Police							
4	iViSN Program	3,700,000						
5	Card Access Modifications		2,000,000	3,500,000				
4	MSP IT Subtotal	\$11,600,000	\$13,400,000	\$12,000,000	\$12,000,000	\$12,000,000	\$10,000,000	\$10,000,000

**Table 1-1
 2018 – 2024 Capital Improvement Program**

MSP Long Term Comprehensive Plan Projects		2018	2019	2020	2021	2022	2023	2024
Terminal 1-Lindbergh								
1	D-Pod Outbound Baggage System					5,000,000		
1	FIS Recheck Operational Improvements			8,400,000				
7	MSP Long Term Comp Plan		1,500,000					
1	Baggage Claim/Ticket Lobby Operational Improvements		74,400,000	48,600,000	28,000,000			
4	Baggage Handling System	34,000,000		20,600,000				
1	South Security Exit and Façade Expansion	41,300,000						
2	East Curbside Check-in	2,400,000						
2	Checkpoint Expansion			4,500,000				11,000,000
1	Lower Level Curbside Expansion	200,000			12,000,000			
2	Armed Forces Service Center Relocation		1,100,000					
2	Automated Security Lanes (ASLs)	3,000,000	3,000,000	3,000,000				
5	Unstaffed Exit Lanes - North Exit							2,500,000
Field and Runway								
1	Taxiway C1 Construction		6,000,000					
Parking								
1	T1 Parking Ramp - Parking Ramp Modifications		5,000,000					
6	Orange Ramp Additional Elevators					2,000,000		
Terminal 2-Humphrey								
4	T2 FIS Baggage Claim Improvements			1,000,000				
2	T2 Automated Security Lanes (ASLs)		3,000,000	3,000,000				
7	T2 North Gate Expansion Design Fees						5,000,000	
MSP LTCP Projects Subtotal		\$80,900,000	\$94,000,000	\$89,100,000	\$40,000,000	\$7,000,000	\$5,000,000	\$13,500,000

**Table 1-1
2018 – 2024 Capital Improvement Program**

MSP Maintenance/Facility Upgrade Projects		2018	2019	2020	2021	2022	2023	2024
Notes	Terminal 1-Lindbergh							
1	Restroom Upgrade Program	8,600,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
4	Way-Finding Sign Backlighting Replacement	1,600,000	1,600,000		1,600,000			
2	Folded Plate Repairs			8,900,000	8,900,000	8,900,000	8,900,000	
4	G Concourse Moving Walks	5,000,000		2,500,000		2,500,000		
4	Lighting Infrastructure Technology and Equipment (LITE)		1,500,000	1,500,000	1,500,000	2,250,000	2,500,000	
5	T1 Public Walk Aisle Terrazzo Floor Installation				4,400,000	4,400,000	4,500,000	
9	Art Display Areas	250,000	500,000	250,000	250,000	250,000		
9	Arts Master Plan	305,000	870,000	1,152,500	5,000	1,005,000		
2	Observation Deck Improvements			1,600,000				
5	Airside Operations Center				1,250,000			
6	Employee Breakroom	250,000	250,000					
	Energy Management Center							
4	Energy Savings Program			2,000,000		2,000,000		2,000,000
4	Air Handling Unit Safety Upgrades			550,000				
4	Indoor Air Quality Monitoring			660,000				
4	Victaulic Piping Replacement			1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
4	Concourse G Energy Efficiency Projects	2,000,000		2,000,000				
4	LED Lighting Conversion in Valet			500,000				
	Field and Runway							
5	AOA Gate Improvements			3,000,000				
2	Establish Taxiway J		150,000					
4	Runway LED Lighting Upgrade			1,000,000	1,500,000	1,700,000	2,650,000	
4	Runway 4-22 In-Pavement Guard Lights		500,000					
4	Taxiways Bravo & Quebec Centerline Lights		6,400,000					
5	Perimeter Gate Security Improvements				1,500,000	5,500,000		
	Parking							
2	Parking Ramp Railing Refinishing			1,000,000	1,000,000			
	Terminal 2-Humphrey							
5	T2 Skyway to LRT Flooring Installation					800,000		
6	Employee Breakroom			200,000				
6	T2 Shuttle Waiting Area Expansion				200,000			
	Hangars and Other Buildings							
6	MAC Storage Facility		9,000,000					
	Trades/Maintenance Buildings							
6	South Field Maintenance Building Wash Bay			1,300,000				
	Police							
6	Safety and Operations Center	250,000		35,000,000				
5	Perimeter Fence Intrusion Detection System			1,000,000	1,000,000	1,000,000		
	Fire							
5	Campus Fire Protection	500,000	500,000		500,000		500,000	500,000
	General Office/Administration							
5	GO Building Improvements	500,000		500,000				
	Environment							
4	Runway 12R-30L Glycol Forcemain Environmental Improvements			1,400,000				
2	Storm Sewer Rehabilitation	1,500,000	1,800,000					
2	T2 Remote Ramp Lot/Drainage Improvements					2,000,000		
4	Ground Service Equipment (GSE) Electrical Charging Stations				2,700,000		3,000,000	
4	Lift Station at Ponds 1 and 2			800,000				
	MSP Maintenance/Facility Upgrades Subtotal	\$20,755,000	\$25,070,000	\$69,812,500	\$29,305,000	\$35,305,000	\$25,050,000	\$5,500,000

**Table 1-1
2018 – 2024 Capital Improvement Program**

MSP Ongoing Maintenance Programs		2018	2019	2020	2021	2022	2023	2024
Notes	Terminal 1-Lindbergh							
4	Electrical Infrastructure Program (EIP)	1,500,000	1,500,000	2,000,000	2,000,000	2,500,000	2,500,000	
4	Emergency Power Upgrades	1,000,000	1,500,000	2,000,000	2,000,000	2,500,000	2,500,000	
4	Electrical Substation Replacement				1,400,000	1,400,000	1,400,000	1,400,000
4	Terminal Miscellaneous Modifications	2,400,000	2,400,000	2,400,000	2,400,000	2,500,000	2,500,000	2,500,000
4	Air Handling Unit Replacement		2,500,000	2,500,000	3,000,000	3,000,000	3,000,000	3,000,000
4	Conveyance System Upgrades		3,000,000		3,000,000			3,000,000
4	Plumbing Infrastructure Upgrade Program	500,000	500,000	500,000	600,000	600,000	600,000	700,000
5	Terminal Building Remediation Program	2,000,000	2,000,000	2,000,000	2,000,000	3,000,000	3,000,000	3,000,000
4	Concourse G Rehabilitation	4,000,000	4,000,000	4,000,000	4,000,000	5,000,000	5,000,000	5,000,000
4	Baggage System Upgrades	500,000	500,000	500,000	500,000	500,000	500,000	500,000
	Energy Management Center							
4	EMC Plant Upgrades (T1 & T2)	500,000	1,500,000	1,500,000	1,500,000	1,300,000		
	Field and Runway							
2	Airside Bituminous Rehabilitation/Electrical Construction			1,100,000	4,000,000	2,300,000	2,500,000	
2	Pavement Joint Sealing/Repair	650,000	650,000	650,000	650,000	650,000	650,000	650,000
2	Miscellaneous Airfield Construction		800,000		900,000			1,000,000
	Terminal Roads/Landside							
2	Tunnel/Bridge Rehabilitation	100,000	100,000	100,000	100,000	100,000	100,000	100,000
	Parking							
2	T1/T2 Parking Structure Rehabilitation	2,500,000	2,500,000	2,500,000	3,000,000	3,000,000	3,000,000	3,000,000
	Public Areas/Roads							
2	Landside Pavement Rehabilitation	400,000	400,000	400,000	500,000	500,000	500,000	500,000
2	Roadway Fixture Refurbishment	150,000	150,000	150,000	150,000	150,000	150,000	
	Hangars and Other Buildings							
2	MSP Campus Building Roof Replacements	500,000	500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
5	Campus Building Rehab Program			500,000	1,500,000	1,500,000	1,500,000	1,500,000
2	Campus Parking Lot Reconstructions					650,000	650,000	
10	End of Life Campus Building Demolition		200,000	200,000		375,000		
	MSP Ongoing Maintenance Subtotal	\$16,700,000	\$24,700,000	\$24,000,000	\$34,200,000	\$32,525,000	\$31,050,000	\$26,850,000
	MSP Noise Mitigation Projects							
8	Noise Mitigation Consent Decree Amendment	6,500,000	9,600,000	7,500,000				
	MSP Other Subtotal	\$6,500,000	\$9,600,000	\$7,500,000	\$0	\$0	\$0	\$0
	MSP Tenant Projects							
	Terminal 1-Lindbergh							
2	Concessions Rebids	4,500,000	3,200,000					
1	Main Mall Food Court Expansion	12,500,000						
2	Concessions Upgrades/Revenue Development	200,000	200,000	200,000	200,000	200,000	200,000	200,000
2	Delta Gatehold Seating	3,000,000	3,000,000	3,000,000				
	Hangars and Other Buildings							
1	Freight Building Remodel for DHL	5,250,000						
6	Consolidated Loading Dock Facility	10,000,000						
2	TSA Warehouse Space	1,800,000						
	MSP Tenant Subtotal	\$37,250,000	\$6,400,000	\$3,200,000	\$200,000	\$200,000	\$200,000	\$200,000

**Table 1-1
 2018 – 2024 Capital Improvement Program**

Reliever Airports Long Term Comprehensive Plan Projects		2018	2019	2020	2021	2022	2023	2024
Notes	St. Paul							
7	Long Term Comp Plan	100,000						
	Lake Elmo							
7	Long Term Comp Plan							100,000
1	Runway 14-32 Replacement		3,000,000	2,000,000	2,000,000			
1	Airfield Modifications			3,000,000				
	Airlake							
7	Long Term Comp Plan							100,000
1	Runway 12-30 Improvements					3,500,000		
1	South Building Area Development - Phase 1		1,500,000					
	Flying Cloud							
7	Long Term Comp Plan	100,000						
	Crystal							
7	Long Term Comp Plan							100,000
1	Runway 14R-32L & Taxiway E Modifications		3,800,000					
	Anoka County - Blaine							
7	Long Term Comp Plan	100,000						
1	Building Area Development - Xylite St. Relocation							1,000,000
	Reliever LTCP Projects Subtotal	\$300,000	\$8,300,000	\$5,000,000	\$2,000,000	\$3,500,000	\$0	\$1,300,000

**Table 1-1
2018 – 2024 Capital Improvement Program**

Reliever Airports Maintenance/Facility Upgrade Projects		2018	2019	2020	2021	2022	2023	2024
Notes	St. Paul							
2	Joint and Crack Repairs	100,000		100,000		100,000		100,000
5	MAC Building Improvements		2,300,000		1,000,000	200,000		200,000
2	St. Paul Runway 13-31 Pavement Reconstruction					5,000,000		
2	Storm Sewer Improvements Phase 2		1,500,000					
5	Maintenance Building Improvements	200,000						
6	Cold Equipment Storage Building						750,000	
4	LED Edge Lighting Upgrades				1,500,000	1,000,000		
2	Runway 14-32 Reconstruction							5,000,000
6	Airport Perimeter Roads	400,000		400,000				500,000
5	Obstructions Removal	250,000						
2	Taxiway B Rehabilitation							800,000
	Lake Elmo							
2	Parallel Taxiways Reconstruction		600,000			600,000		
2	Runway 04-22 Pavement Rehabilitation				4,000,000			
2	Alleyways - South Building Area Pavement Rehab		900,000					
5	MAC Building Improvements		400,000					
6	Materials Storage Building	200,000						
2	North Building Area Pavement Rehabilitation						900,000	
	Airlake							
2	Existing Runway 12-30 Reconstruction					3,500,000		
2	Joint and Crack Repairs				150,000			
5	MAC Building Improvements		400,000					
6	Public Restroom Facility		300,000					
6	Plane Wash Pad		150,000					
6	Materials Storage Building	200,000						
4	LED Edge Lighting			500,000		200,000		
	Flying Cloud							
2	Taxiway D Pavement Rehabilitation		600,000					
2	Taxiway E Pavement Rehabilitation		600,000					
2	Taxiways A1, A3, F Pavement Rehabilitation			300,000				
5	MAC Building Improvements				520,000			
2	Roof Repairs / Replacement	100,000						
2	Runway 10L-28R Modifications	2,000,000						
	Crystal							
2	Alleyways Pavement Rehabilitation	550,000		550,000				
2	Taxiways Pavement Rehabilitation		700,000					
5	MAC Building Improvements			500,000			500,000	
4	LED Edge Lighting Upgrade				\$400,000	400,000		
	Anoka County - Blaine							
2	Taxiway Pavement Reconstruction	600,000						
2	Alleyways Pavement Reconstruction		750,000	750,000	\$750,000			
2	South Service Road & East Landside Road Pavement Reconstruction		1,000,000					
4	Obstructions Removal		100,000					
5	Air Traffic Control Tower Equipment Upgrades			100,000				
5	MAC Building Improvements	700,000				700,000		
4	LED Edge Lighting Upgrade			800,000		1,700,000		
6	West Perimeter Road						700,000	
4	Electrical Vault Improvements							750,000
	Reliever Maintenance/Facility Upgrade Subtotal	\$5,300,000	\$10,300,000	\$4,000,000	\$8,320,000	\$13,400,000	\$2,850,000	\$7,350,000

**Table 1-1
2018 – 2024 Capital Improvement Program**

	2018	2019	2020	2021	2022	2023	2024
MSP Subtotal	\$208,655,000	\$183,970,000	\$235,962,500	\$127,955,000	\$92,280,000	\$83,550,000	\$68,300,000
Reliever Subtotal	\$5,600,000	\$18,600,000	\$9,000,000	\$10,320,000	\$16,900,000	\$2,850,000	\$8,650,000
Total	\$214,255,000	\$202,570,000	\$244,962,500	\$138,275,000	\$109,180,000	\$86,400,000	\$76,950,000

Notes

- 1 A project that has potential substantive environmental effects.
- 2 A repair, rehabilitation, reconstruction, or replacement project that does not physically alter the original size (the project does not have substantive environmental effects; an EAW or EIS is not required).
- 3 An electrical or mechanical device that monitors, indicates or controls existing conditions (the project does not have substantive environmental effects; an EAW or EIS is not required).
- 4 A structural, mechanical or electrical device and/or modification of an existing system or structure that does not significantly increase size or passenger capacity (the project does not have substantive environmental effects; an EAW or EIS is not required).
- 5 A project that consists of safety or security enhancements, facility maintenance or upgrades (the project will not have substantive environmental effects; an EAW or EIS is not required).
- 6 A new, replacement or expansion project that does not have substantive environmental effects; an EAW or EIS is not required.
- 7 Design, planning or environmental review fees.
- 8 Residential Noise Mitigation Program efforts are designed to mitigate the impact of aircraft noise and do not require an EAW or EIS.
- 9 Art Programs; an EAW or EIS is not required.
- 10 Building demolition; an EAW or EIS is not required.

**Table 1-2
Summary Environmental Assessment of 2018 Projects in the MAC 2018 – 2024 Capital Improvement Program that Require an EAW or EIS**

Project Description	Are the Effects of the Project Addressed in an Approved EAW or EIS?	Environmental Categories Affected by the Project													
		Air Quality	Compatible Land Use	Fish, Wildlife and Plants	Floodplains and Floodways	Hazardous Materials, Pollution Prevention and Solid Waste	Historical, Architectural, Archaeological and Cultural Resources	Light Emissions and Visual Effects	Parks, Recreation Areas and Trails	Noise	Water Resources (Surface, Storm, Waste and Ground Water)	Wetlands	Infrastructure and Public Services	Farmland	Erosion and Sedimentation
South Security Exit and Façade Expansion	Yes 2020 Improvements Final Environmental Assessment / Environmental Assessment Worksheet January 2013	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects
Main Mall Food Court Expansion	Yes MSP Terminal 1 – Lindbergh 2018 Passenger Service and Cargo Handling Enhancements EAW June 2017	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects
Freight Building Remodel for DHL	Yes MSP Terminal 1 – Lindbergh 2018 Passenger Service and Cargo Handling Enhancements EAW June 2017	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects
Restroom Upgrade Program	Yes MSP Terminal 1 – Lindbergh 2018 Passenger Service and Cargo Handling Enhancements EAW June 2017	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects	No potential significant environmental effects

Section 2: Projects with Potential Environmental Effects and Effects During Construction

Projects with Potential Environmental Effects

As is detailed in Table 1-2, there are three Capital Improvement Program (CIP) projects scheduled in 2018 that were evaluated in the Minneapolis-St. Paul International Airport (MSP) Terminal 1 – Lindbergh 2018 Passenger Service and Cargo Handling Enhancements EAW completed in June 2017. Additionally, one project planned for 2018 was evaluated during the 2020 Improvements EA/EAW completed in January 2013.

For informational purposes, Table 1-1 identifies those projects in the CIP that do not have a potential substantive effect on the environment (such as the repair, reconstruction or rehabilitation of pavement and buildings, replacement of existing facilities and IT projects). The notes in Table 1-1 offer further explanation of the type of work that each project entails and why this work will not have a substantive effect on the environment. Appendix A provides a description of each project in the CIP currently scheduled to be implemented in the years 2018 and 2019, as well as those projects currently scheduled to be implemented in 2020 through 2024 that may have potential substantive environmental effects. The descriptions of projects scheduled to be implemented in 2020 through 2024 are preliminary and subject to change.

Effects during Construction

Typical mitigation measures will be used during construction to minimize potential adverse environmental effects, such as noise, dust, and erosion caused by the construction process. The environmental effects of construction are temporary and do not constitute long-term cumulative potential effects. As a result, the environmental effects from the construction of projects in the CIP are not discussed in Section 3 of this document, which describes cumulative potential environmental effects.

Section 3: Cumulative Potential Environmental Effects

Under the Minnesota Environmental Policy Act (MEPA), an Environmental Assessment Worksheet (EAW) or Environmental Impact Statement (EIS) must assess cumulative potential environmental effects. A cumulative potential effect under MEPA is an effect on the environment that results from the incremental effects of the project under review in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources. In other words, the cumulative potential effects analysis examines whether the incremental effects of a proposed project, combined with other projects in the same geographic area and taking place over the same time period, will have a significant effect on the same environmental resources.

Noise Mitigation

The 2018 – 2024 CIP includes a number of projects from the 2020 Improvements EA/EAW, as well as additional Residential Noise Mitigation based on actual noise contours for the preceding year. On September 25, 2013 the First Amendment to Consent Decree (Amendment) was adopted in City of Minneapolis, et al. v. Metropolitan Airports Commission, File No. 27-CV-05-005474 (Hennepin County District Court). The Amendment is designed to mitigate the impact of additional aircraft noise until the year 2024 and does not require completion of an EAW or EIS.

Minneapolis-St. Paul International Airport Projects

The Capital Improvement Program (CIP) includes projects focusing on infrastructure replacement and maintenance/upgrades, information technology (IT), and tenant improvements at Minneapolis-St. Paul International Airport (MSP) and the MAC's system of reliever airports. Additionally, the CIP includes projects consistent with the Long-Term Comprehensive Plans (LTCPs) for the respective airports. In the case of MSP, these planned projects flow from the Metropolitan Airports Commission's (MAC) MSP 2030 Long-Term Comprehensive Plan Update that was published in July 2010.

In September 2010, the MAC and the Federal Aviation Administration (FAA) began preparation of the 2020 Improvements EA/EAW, a joint document satisfying both MEPA and the National Environmental Policy Act (NEPA) requirements for projects the MAC may implement at MSP through the year 2020.

In March 2013, the FAA determined that the 2020 Improvements EA/EAW was adequate under NEPA, and issued a Finding of No Significant Impact and Record of Decision for the projects discussed in the 2020 Improvements EA/EAW. In April 2013, the MAC determined that the 2020 Improvements EA/EAW was adequate under MEPA, and issued an Adequacy Determination and Negative Declaration on the need for an EIS for the projects discussed in the 2020 Improvements EA/EAW.

In June 2017, the MAC published the Minneapolis-St. Paul International Airport (MSP) Terminal 1 – Lindbergh 2018 Passenger Service and Cargo Handling Enhancements Environmental Assessment Worksheet (EAW) This project was not evaluated in the MSP 2020 Improvements EA/EAW and therefore required an EAW per Minnesota Statutes 1986, Section 473.614. The EAW evaluated the passenger and cargo enhancement project planned in 2018 that includes restroom upgrades in Concourse F, expansion of the main mall food court, and expansion of the freight building on Cargo Road with consolidation of DHL functions from the existing DHL facility to the expanded freight building. Consistent with the requirements under the Minnesota Environmental Policy Act (MEPA), the EAW assessed cumulative potential environmental effects. On August 21, 2017, the MAC adopted the Hearing Officer's Report and the Findings of Fact Conclusions of Law and Order finding that the project does not

have the potential for significant environmental effects and that an Environmental Impact Statement is not needed.

St. Paul Downtown Airport Projects (Reliever)

The MAC completed an update to the St. Paul Downtown Airport (STP) Long-Term Comprehensive Plan (LTCP) in June 2010 and plans to begin another STP LTCP update in 2018. The 2010 plan does not propose any substantive expansion or enhancement of the facilities at STP. MAC anticipates the 2018 STP LTCP update will endorse these same recommendations.

Projects in 2018 at STP include joint and crack repairs (planned for 2018, 2020, 2022 and 2024), maintenance building improvements, airport perimeter road maintenance and obstructions removal.

Future CIP projects beyond 2018 at STP include MAC building improvements (2019, 2021, 2022 and 2024), storm sewer improvements (2019), LED edge lighting upgrades (2021 and 2022), Runway 13-31 pavement reconstruction (2022), cold equipment storage building (2023), Runway 14-32 pavement reconstruction (2024) and Taxiway B rehabilitation (2024). None of these projects meets the threshold in Minn. Stat. 473.614 for an EAW, so none will require additional environmental review. Other than temporary construction effects, none of the projects constitute long-term cumulative potential effects when combined with other projects at STP.

Lake Elmo Airport Projects (Reliever)

In 2016, the MAC completed the Long-Term Comprehensive Plan (LTCP) for Lake Elmo Airport (21D). The 2035 Lake Elmo Airport LTCP proposes construction of a new 3,500-foot primary runway that would be parallel to the existing Runway 14-32. The existing runway would then become part of a parallel taxiway and other airfield modifications would be made to support the new runway location including the rerouting of 30th Street North located on the south side of the airport. Additionally, a small extension is proposed for the crosswind Runway 4-22. Construction for these projects is currently planned for 2019-2021. Construction projects would involve grading, subgrade improvements, bituminous pavement installation, storm sewer management, and lighting and pavement marking.

In 2017, the MAC began developing an Environmental Assessment (EA) / Environmental Assessment Worksheet (EAW) document for these projects. The environmental review process will be completed prior to construction. The EA/EAW document will be developed in accordance with the Federal Aviation Administration (FAA) policies and procedures detailed in FAA Order 1050.1F (and related documents) for compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations. In addition to addressing federal environmental review requirements, the documentation will address state review requirements in compliance with the Minnesota Environmental Policy Act (MEPA) and related Environmental Quality Board (EQB) guidance.

Projects in 2018 include the construction of a MAC storage building for the containment of airfield maintenance products such as salt, sand, and topsoil to comply with Minnesota Pollution Control Agency requirements. Future CIP projects beyond 2018 at 21D include reconstruction of parallel taxiways (2019 and 2022), pavement rehabilitation in alleyways in the South Building Area (2019), MAC building improvements (2019), pavement rehabilitation on Runway 4-22 (2021), and pavement rehabilitation in the North Building Area (2023). The proposed projects mentioned in this paragraph do not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review. Other than temporary construction effects, none of the projects in this

paragraph constitute long-term cumulative potential effects when combined with other projects at 21D.

Airlake Airport Projects (Reliever)

In 2017, the MAC drafted an update to the Long-Term Comprehensive Plan (LTCP) for Airlake Airport (LVN). The draft LVN LTCP update proposes the completion of the final phase of the South Building Area alleyway and associated utility development (2019), as well as the extension of Runway 12-30 (2022) and rehabilitation of the existing runway pavement (2022). The MAC prepared an EAW for the Airlake Airport South Building Area Development project in January 1999. The EAW addressed the storm water runoff and designated trout stream impacts. In 2001, the initial grading for the building area was completed with the construction of a storm water detention pond to capture runoff before it enters the designated trout stream. The trout stream was also relocated under a permit issued by the Minnesota Department of Natural Resources (DNR) as part of the project. The next phase of the south building area development is planned for 2019 with the final phase of construction extending beyond this seven-year CIP. This will involve the placement of aggregate base and asphalt material for hangar area taxi lanes and the installation of sanitary sewer and water services. All of this work was evaluated in the 1999 EAW.

The proposed extension of Runway 12-30 and the rehabilitation of the existing portion of the runway is currently planned for 2022. The MAC will have to identify funding sources for implementation of the proposed runway extension and will not proceed with the runway extension project until the necessary environmental review is completed.

The sole 2018 CIP project at LVN is construction of a new materials storage building. No environmental review is required for this project, because it is a new, replacement or expansion project that does not have substantive environmental effects.

Other future CIP projects beyond 2018 at LVN include MAC building improvements, construction of a public restroom facility and plane wash pad (2019); installation of LED edge lighting (2020 and 2022); and joint and crack repairs (2021). The proposed projects mentioned in this paragraph do not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review. Other than temporary construction effects, none of the projects constitute long-term cumulative potential effects when combined with other projects at LVN.

Flying Cloud Airport Projects (Reliever)

The MAC updated the Flying Cloud Airport (FCM) Long-Term Comprehensive Plan (LTCP) in October 2010. It is anticipated the FCM LTCP update will begin in 2018.

Projects at FCM in 2018 include roof repairs and/or replacement at various MAC-owned buildings and Runway 10L-28R modifications. During this project, the MAC will designate the Runway 10L-28R as a utility runway. This new designation will relocate existing runway hold signs, hold markings and runway guard lights. Additionally, the pavements will be reconstructed with a reclaim and overlay. No additional environmental review is required for projects, because they are either a repair, rehabilitation, reconstruction or replacement project that does not physically alter the original size.

Other future CIP projects beyond 2018 at FCM include Taxiways D and E pavement rehabilitation (2019); Taxiway A1, A3 and F pavement rehabilitation (2020); and MAC building improvements

(2021). The proposed projects mentioned in this paragraph do not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review. Other than temporary construction effects, none of the projects constitute long-term cumulative potential effects when combined with other projects at FCM.

Crystal Airport Projects (Reliever)

In October 2017, the MAC plans to complete an update to the Long-Term Comprehensive Plan (LTCP) for Crystal Airport (MIC). The Final 2035 Crystal Airport LTCP proposes decommissioning Runway 14R-32L and converting it into a taxiway and rehabilitating portions of Taxiway E. The project also includes electrical vault improvements triggered by associated runway lighting modifications. In addition, the plan proposes to convert a portion of the existing blast pad pavement on each end of Runway 14L-32R (the primary runway) into useable runway length. Other changes contemplated in the plan include shortening the turf runway to reduce the number of designated runway crossing points, and taxiway configuration changes to further simplify airfield geometry. These projects are planned to begin in 2019.

In 2017, the MAC will initiate an environmental review for the projects in the LTCP in accordance with the FAA policies and procedures detailed in FAA Order 1050.1F (and related documents) for compliance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) regulations. In addition to addressing federal environmental review requirements, the environmental review will also comply with the Minnesota Environmental Policy Act (MEPA) and related Environmental Quality Board (EQB) guidance. The environmental review process will be completed prior to construction.

The only 2018 CIP project at MIC is to rehabilitate alleyway pavement (2018 and 2020). This project does not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review.

Other future CIP projects beyond 2018 for MIC include pavement rehabilitation for the taxiways (2019); MAC building improvements (planned for 2020 and 2023); and LED edge lighting upgrade (planned for 2021 and 2022). The projects mentioned in this paragraph do not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review. Other than temporary construction effects, none of the projects constitute long-term cumulative potential effects when combined with other projects at MIC.

Anoka County – Blaine Airport Projects (Reliever)

The MAC and the Federal Aviation Administration (FAA) prepared and approved a Final Environmental Impact Statement (FEIS) for the Anoka County-Blaine Airport (ANE) in January 2003. All projects included in the FEIS are now complete, except for one. The FEIS included the proposed Xylite Street Relocation Project, which is currently shown in year 2024. As noted in the FEIS, this project may affect water quality and wetlands. To protect wetland areas, ditches will accommodate runoff. Minor wetlands impacted by construction will be mitigated according to watershed district and Minnesota DNR requirements.

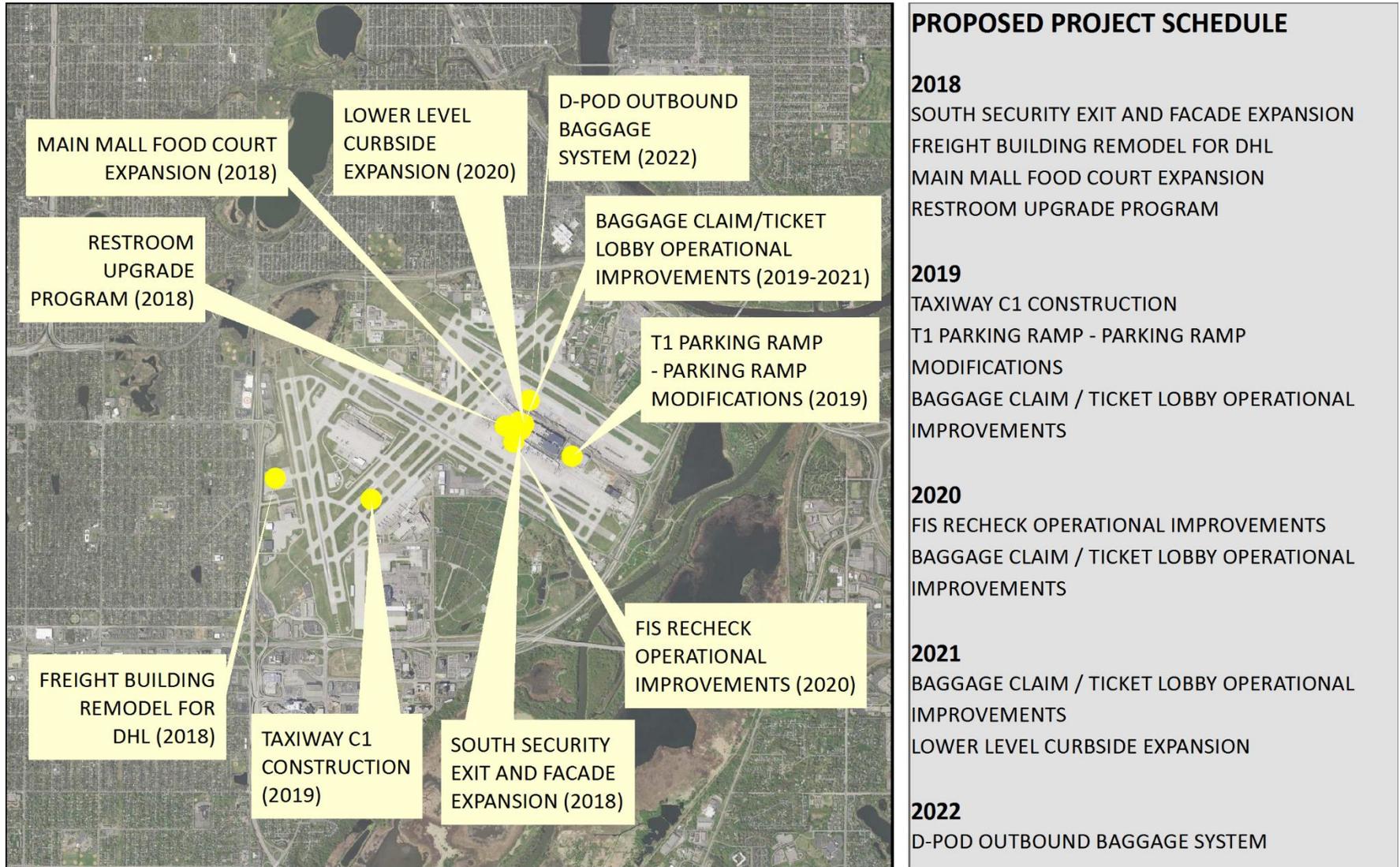
The MAC anticipates beginning an update to the ANE Long Term Comprehensive Plan (LTCP) in 2018. Upon finalization of the ANE LTCP update, environmental review, if needed, will be completed as part of the planning and related CIP processes.

The 2018 projects at ANE include taxiway pavement reconstruction and MAC building improvements (2018 and 2022). No additional environmental review is required for these two projects, because they are repair, rehabilitation, reconstruction or replacement projects that do not physically alter the original size of any structures or are projects consisting of safety or security enhancements, facility maintenance or upgrades. Because the projects will not have substantive environmental effects, an EAW or EIS is not required.

Other future CIP projects beyond 2018 at ANE include pavement reconstruction for alleyways (2019-2021); pavement reconstruction for the south service road and east landside road (2019); obstructions removal (2019); Air Traffic Control Tower equipment upgrades (2020); LED edge lighting upgrade (2020 and 2022); west perimeter road reconstruction (2023); and electrical vault improvements (2024). The projects mentioned in this paragraph do not meet the threshold in Minn. Stat. 473.614 for an EAW, and therefore will not require additional environmental review. Other than temporary construction effects, none of the projects constitute long-term cumulative potential effects when combined with other projects at ANE.

**Appendix A – Description of Projects in the 2018-2024
Capital Improvement Program**

**Figure A-1
 Capital Improvement Projects with Potential Environmental Effects
 Minneapolis – St. Paul International Airport**



PROPOSED PROJECT SCHEDULE	
2018	SOUTH SECURITY EXIT AND FACADE EXPANSION FREIGHT BUILDING REMODEL FOR DHL MAIN MALL FOOD COURT EXPANSION RESTROOM UPGRADE PROGRAM
2019	TAXIWAY C1 CONSTRUCTION T1 PARKING RAMP - PARKING RAMP MODIFICATIONS BAGGAGE CLAIM / TICKET LOBBY OPERATIONAL IMPROVEMENTS
2020	FIS RECHECK OPERATIONAL IMPROVEMENTS BAGGAGE CLAIM / TICKET LOBBY OPERATIONAL IMPROVEMENTS
2021	BAGGAGE CLAIM / TICKET LOBBY OPERATIONAL IMPROVEMENTS LOWER LEVEL CURBSIDE EXPANSION
2022	D-POD OUTBOUND BAGGAGE SYSTEM

2018 Capital Improvement Program

MSP End of Life/Replacement Projects

Terminal 1- Lindbergh

Passenger Boarding Bridge Replacements \$4,000,000

This project provides for the replacement of jet bridges at Terminal 1-Lindbergh. The bridges at gates F8 and G19 will be replaced as determined based on a condition assessment and input from the airlines. Aircraft parking positions will be optimized at the impacted gates and fuel pits adjusted as necessary. Podiums and door openings may also be adjusted to optimize gate hold area. It is assumed fixed walkways may need to be replaced or added to meet ADA slope requirements and all gate hold areas will be upgraded with security doors, card readers, and cameras.

T1 Tram Systems Retrofit and Equipment \$1,500,000

The MAC Hub and Concourse Tram systems were originally placed into public service in 2001 and 2004, respectively. As part of the installation, the automatic train control system utilized multiple components provided by GE Intelligent Platforms. In late 2011, GE indicated they would discontinue support of selected components prior to the year 2020. This program will replace and upgrade the radio communication system and GE components to Tram Control Systems on both the Hub and Concourse Trams over the course of a five-year program from 2015 to 2019.

Mezzanine HVAC/AHU Replacements & Penthouses \$16,200,000

The existing air handling equipment in the East and Center Mezzanine mechanical rooms have reached end of life and are overdue for replacement. In order to provide new equipment, increase energy efficiency, and meet the goals of the Operational Improvements program, this project will replace the equipment in relocated penthouses to be constructed on the north end of the Terminal 1-Lindbergh center mezzanine.

Field and Runway

Taxiway S Reconstruction \$10,000,000

This project provides for reconstruction of a 2,600-foot length of Taxiway S between Taxiway D and the Delta Airlines Building C. The existing concrete pavement was constructed in 1967. Major items of work include pavement removals, excavation and backfill, concrete taxiway pavement, bituminous shoulder pavement, airfield lighting and signage.

Snow Melter Upgrades/Modifications \$250,000

This project is the first of a two-year program that provides for the evaluation, maintenance, miscellaneous modifications, and replacement of existing airfield snow melters located around the MSP campus.

Terminal Roads / Landside

34th Avenue Traffic Control \$250,000

This project will replace traffic signal cabinets and controllers along 34th Avenue South at 73rd Street, 75th Street, and Airport Lane.

Fire

MSP Campus Fire Alarm System Upgrade/Transition \$2,500,000

In an effort to improve monitoring reliability and eliminate the existing single point of failure configuration, this multi-year project will include database redundant systems, device controller upgrades and the decentralization of the fire alarm master control equipment.

ARFF #2 \$250,000

This project covers fees for conceptual design of a building to replace Aircraft Rescue and Fire Fighting station number two. Many systems within the building cannot be upgraded and, structurally, the building needs to be replaced.

MSP IT Projects

Terminal 1- Lindbergh

IT Miscellaneous Modifications \$4,600,000

Each year, there are a number of IT projects that are beyond the resources of MAC's staff and operating budget to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Work may include MACNet maintenance and upgrades, Wireless System enhancements, and MAC Public Address System maintenance and upgrades. The list of potential projects will be compiled and prioritized in early 2018.

Telecommunications Room Equipment Continuity (TREC) \$1,000,000

The MAC network (MACNet) carries, along with other information, credit card data collected from the landside parking revenue control system. Merchants like the MAC are required to meet credit card security standards created to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally, the network equipment itself must have added security features to prevent unauthorized network access. This multi-year program addresses these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus.

Intelligent Monitoring and Control Systems (IMACS) \$1,500,000

This is a continuation of a multi-year program to upgrade all MAC building automation systems to an open architecture protocol so that MAC can bid maintenance and construction contracts more competitively. This project will replace sole-source controllers such as Siemens and Legacy Honeywell with controllers from Honeywell, Circon, Distech, and TAC systems that are LonMark certified products.

EVIDSs/MUFIDs Digital Signs \$800,000

This project is a continuation of the 2017 project and will include new and replacement digital toppers, digital food courts signs, digital directories and brochure holders.

Police

iViSN Program \$3,700,000

This project is the continuation of the program to systematically replace and integrate existing cameras into the new iViSN system and to expand the camera coverage within the terminals.

MSP Long Term Comprehensive Plan Projects

Terminal 1- Lindbergh

Baggage Handling System

\$34,000,000

This project includes baggage handling system (BHS) work associated with the south half of Terminal 1- Lindbergh related to several phases of operational improvements between the baggage claim and ticket lobby levels. Improvements to the inbound BHS include new baggage claim devices and conveyors. The outbound BHS improvements include self-service bag drop devices, related conveyors, oversize bag screening and tub returns.

South Security Exit and Façade Expansion

\$41,300,000

This project, which is part of the Operational Improvements program, will replace the existing curtain wall system with a new system to match the north end of the building, including additional queue area for the South Security Checkpoint, and includes a relocation of the existing security exit at the south end of the main mall to a new location on Concourse G. The project also includes unstaffed exit technologies, elevators, and escalators associated with the new exit location. (See Figures A-2 and A-3)

East Curbside Check-in

\$2,400,000

This project will provide additional baggage handling conveyors and bag drop devices for check-in at the East Curbside building in order to keep Delta's operations complete during Operational Improvements construction.

Lower Level Curbside Expansion

\$200,000

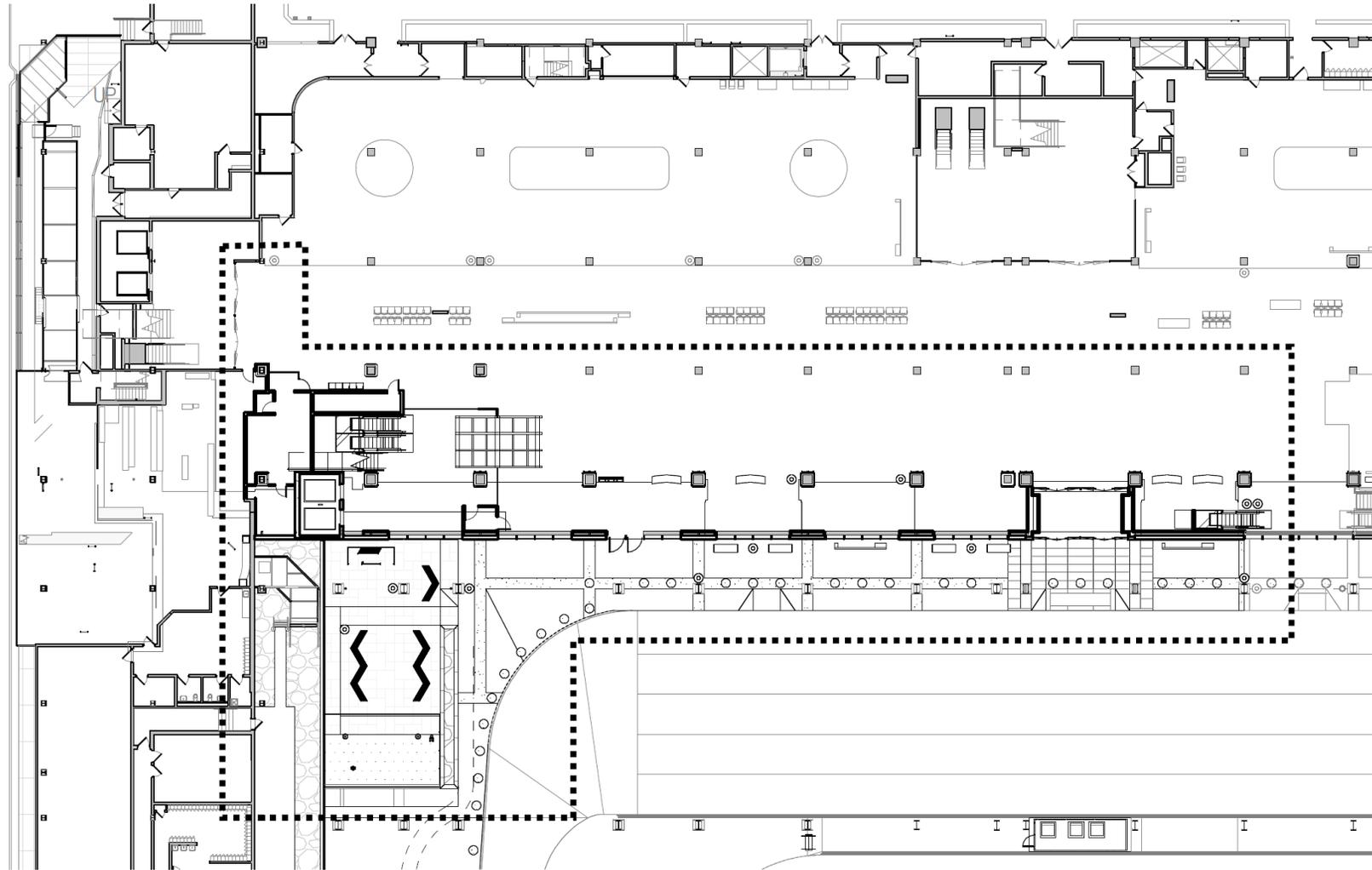
This project evaluates options to relieve lower level curbside congestion and vehicle recirculation rates.

Automated Security Lanes (ASLs)

\$3,000,000

This second phase of a four-year program will provide funding for procurement and installation of TSA-approved Automated Security Lanes at the North Security Checkpoint to enhance throughput by 20-40% per lane, without the loss of the existing quantity of lanes. The replacement conveyor equipment provides bin returns to the divesture area managed by TSA staff, suspect bin isolation for searches, analytics for improved reporting and training, and improved x-ray image display, storage, and monitoring. Additional work required to support the installation will include power and data additions for new and replacement equipment and for equipment network requirements.

Figure A-2



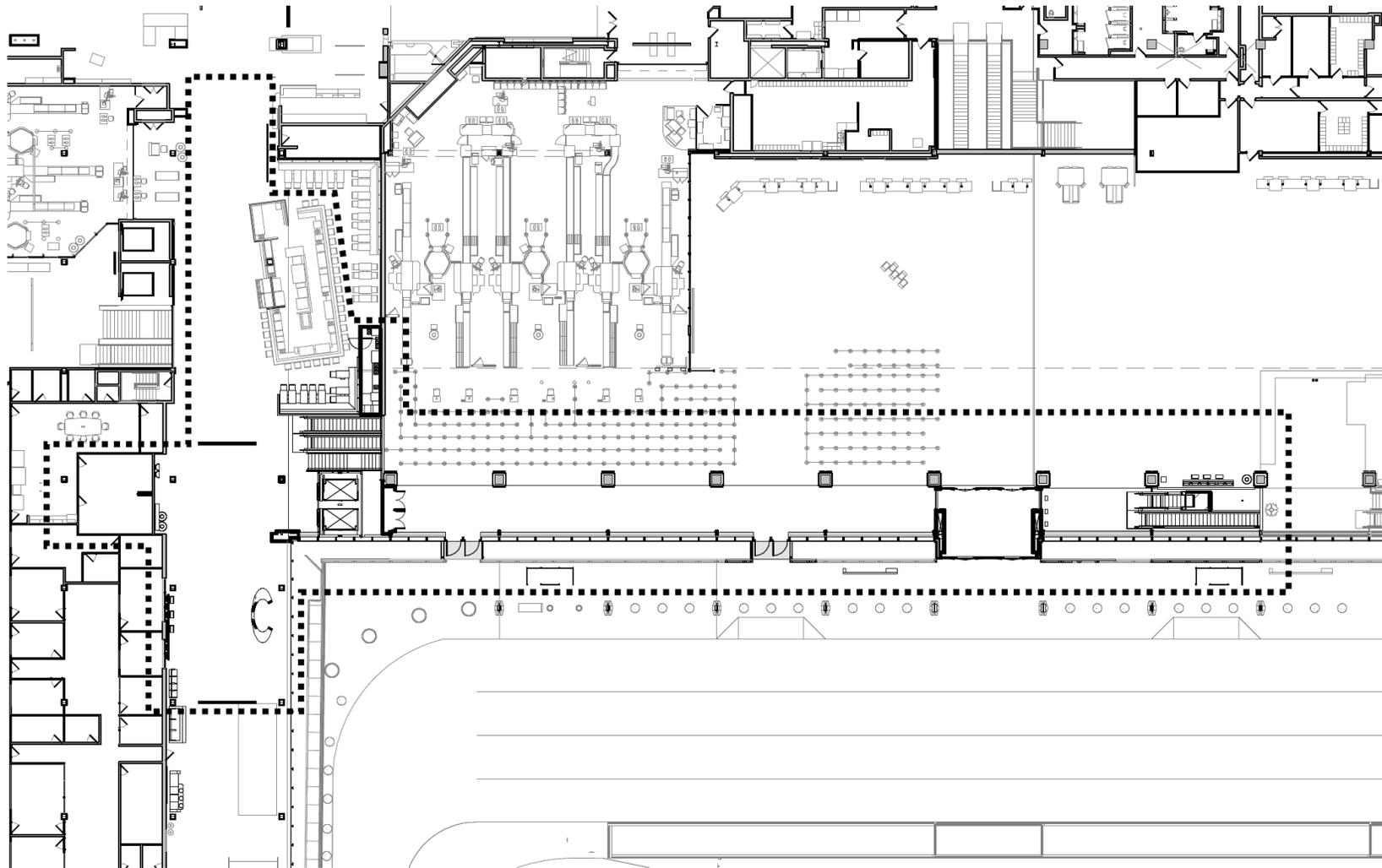
2018 South Security Exit and Facade Expansion
Arrivals Level Plan

Comm. No. 2015041-02 MAC Contract No. 106-2-771 19 Sept, 2017



ALLIANCE

Figure A-3



2018 South Security Exit and Facade Expansion
Departures Level Plan

Comm. No. 2015041-02 MAC Contract No. 106-2-771 19 Sept, 2017



ALLIANCE

MSP Maintenance/Facility Upgrade Projects

Terminal 1- Lindbergh

Restroom Upgrade Program **\$8,600,000**

A study of all restrooms in Terminal 1-Lindbergh was completed in 2010 and a program developed to upgrade/modernize the restrooms at Terminal 1-Lindbergh. From this study, each restroom was prioritized based on its condition. This program will provide for the phased modernization of the T1-Lindbergh restrooms to include upgraded finishes, lighting, air quality, energy saving upgrades, and ADA compliance. This year's project will construct the second of two new restrooms on Concourse F, which was delayed to better coincide with the Concessions Rebid program. Costs include an addition to the building to provide adequate space for the required number of fixtures and associated leasable space below. (See Figure A-4)

Way-Finding Sign Backlighting Replacement **\$1,600,000**

LED lighting will replace the existing cold-cathode lamps in the lighted sign boxes at both terminals. Many lamps from the 2008 retrofit have failed and the long-term energy costs recovery from the LEDs fits into MAC's energy reduction model.

Concourse G Moving Walks **\$5,000,000**

This is the first project of a multi-year program to replace the near end-of-life moving walks on the G Concourse. This year's project will replace the western moving walk, nearest the main mall. The walk will also be shortened to accommodate the South Security Exit project of the Operational Improvements program.

Art Display Areas **\$250,000**

This program is a continuation of the existing program, in partnership with the MSP Foundation, to provide opportunities and space build out for the display of permanent and temporary/rotating art exhibits. This year's project will provide music cabinets, IT upgrades to concourse art cases, and additional art exhibit space at Terminal 2-Humphrey near Gates H1-H5.

Arts Master Plan **\$305,000**

This program supports procurement of commissioned art and rotating exhibits as part of the Percent for Arts program master plan.

Employee Breakroom **\$250,000**

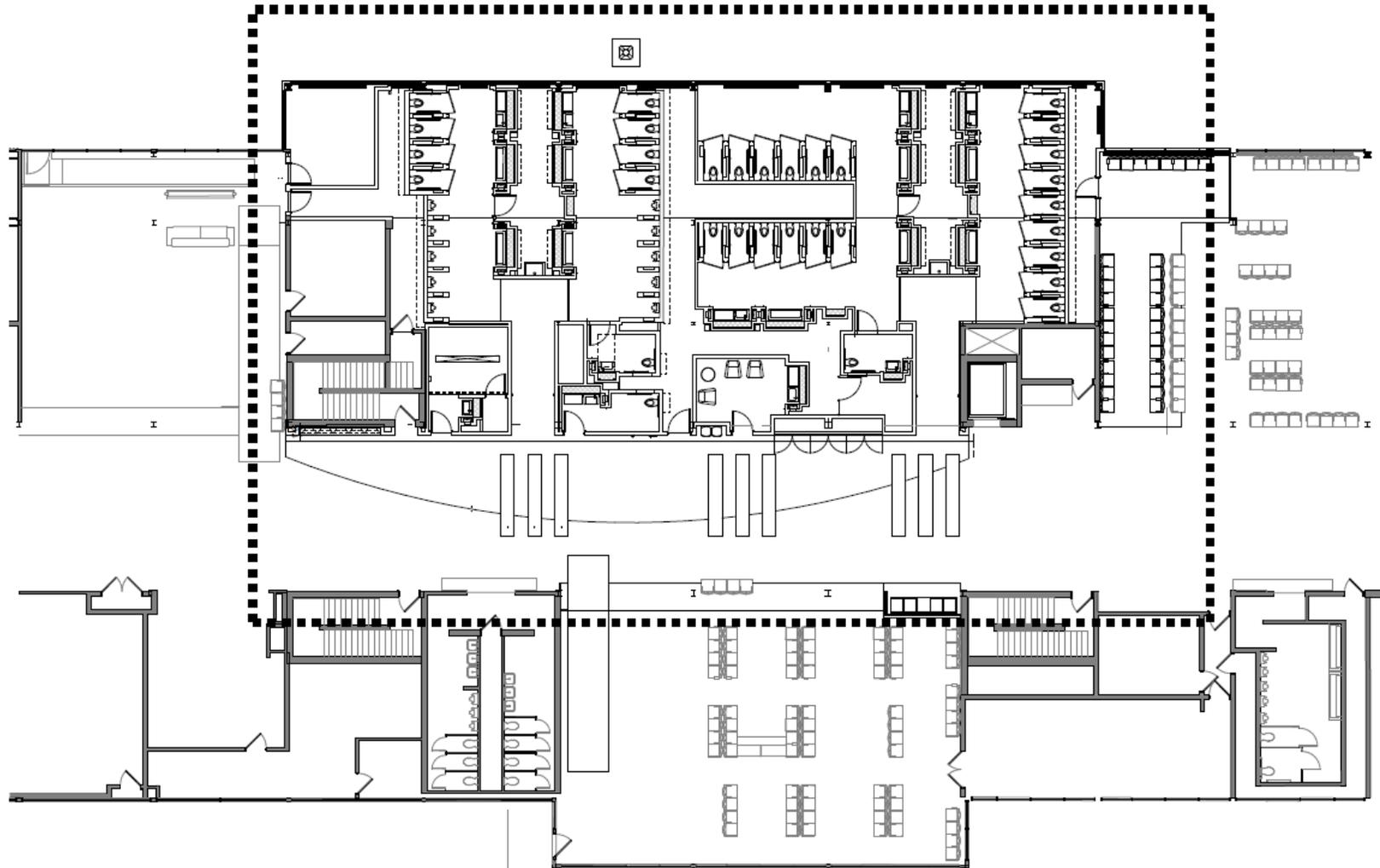
This project will provide a second MSP employee break room that will have a quiet area for employees who work multiple shifts on the campus to eat, read, etc. By providing this quality work support area, front line and other employees will be able to rest and eat out of view of the public.

Energy Management Center

Concourse G Energy Efficiency Projects **\$2,000,000**

This project will focus on improving the energy efficiency of mechanical and electrical systems in the G Concourse.

Figure A-4



2018 RUP - F Concourse Restroom - Main Level

Commission No. 2017063
19 September 2017

Police

Safety and Operations Center

\$250,000

This project covers fees for conceptual design of a new operations center for Airport Police staff. The project will consolidate more than a dozen areas across the campus currently occupied by APD staff and/or storage, and will significantly improve emergency response capabilities by housing critical equipment and staff in a location outside the terminal buildings.

Fire

Campus Fire Protection

\$500,000

This project is part of a new multi-year program to upgrade fire protection systems in various MAC-owned buildings on the MSP campus.

General Office/Administration

G.O. Building Improvements

\$500,000

Continual maintenance of MAC buildings is necessary for comfort and safety as well as sustainability of the MAC asset. Age and weather contribute to building deterioration, mold and other health issues. The General Office Building, built in the 1960's, has recently experienced a number of window and building issues that need to be corrected, including window sealing and replacements, curtain wall sealing and roof repairs.

Environment

Storm Sewer Rehabilitation

\$1,500,000

This is the first of a two-year program that supports and complies with the 2017 MAC/MPCA Memorandum of Understanding concerning the MSP Glycol Collection Program. This project provides for cleaning, inspection, and rehabilitation of storm sewers and glycol sewers at various locations where aircraft deicing occurs, to enhance collection and storage of glycol-impacted storm water resulting from deicing operations.

MSP Ongoing Maintenance Projects

Terminal 1- Lindbergh

Electrical Infrastructure Program

\$1,500,000

There are 53 electrical substations that serve the Terminal 1-Lindbergh complex. It is imperative that these substations be inspected, cleaned, and upgraded in order to ensure their continued performance. This is a continuation of a multi-year program that began in 2009.

Emergency Power Upgrades

\$1,000,000

A study and survey of Terminal 1-Lindbergh transfer switches and emergency lighting was completed in 2008. This year's project is part of a multi-year program that will continue the design and implementation of emergency power and lighting corrective work identified in this study.

Terminal Miscellaneous Modifications

\$2,400,000

Each year, there is a list of maintenance projects that are beyond the resources of MAC's maintenance and trades staff to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Typical work includes door replacements, emergency upgrades to mechanical, electrical, plumbing or HVAC systems, loading dock work, etc. The list of potential projects will be compiled and prioritized in early 2018.

Plumbing Infrastructure Upgrades

\$500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer functional, and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. This ongoing program was implemented in 2012 to upgrade the plumbing infrastructure system to meet current code requirements and MAC standards. The focus of the 2018 project is to continue the replacement of aging plumbing systems.

Terminal Building Remediation

\$2,000,000

Continual maintenance of the terminal buildings is imperative to passenger comfort and safety as well as sustainability of the MAC asset. Age and weather contribute to building deterioration, mold and other health issues. Building and concourse envelope issues include curtain wall systems, glazing, sealant repair/replacement, louver repair/replacement, metal panel repair/replacement, and soffit repair/replacement and insulation systems.

Concourse G Rehabilitation

\$4,000,000

This multi-year program will provide operational improvements to the existing concourse over time, including replacing elevators, modifying and replacing structural, electrical and mechanical systems.

Baggage System Upgrades

\$500,000

This multi-year program will provide necessary upgrades to the inbound and outbound baggage system not covered by general system maintenance.

Energy Management Center

EMC Plant Upgrades (T1 & T2)

\$500,000

This six-year program provides upgrades to the MAC's Energy Management Center (EMC) Boiler and Chiller Plants at both Terminal 1-Lindbergh and Terminal 2-Humphrey. The work includes upgrades to the aging Chilled Water and Heating Water systems throughout both terminals. The pumping and piping systems on both the heating and cooling systems are aging and in need of repair work beyond regular maintenance.

Field and Runway

Pavement Joint Sealing/Repair

\$650,000

This is an ongoing program to provide for the resealing of joints, sealing of cracks, and limited surface repairs on existing concrete pavements. The areas scheduled for sealing will be as defined in the overall joint sealing program or as identified by staff inspection in the early spring of each year.

Terminal Roads/Landside

Tunnel/Bridge Rehabilitation

\$100,000

The MSP Campus has MAC-owned bridges and tunnels. Bridge and tunnel inspections are conducted each year to identify maintenance and repairs which are then implemented in a timely fashion.

Parking

T1/T2 Parking Structure Rehabilitation

\$2,500,000

This is an annual program to maintain the integrity of the airport's multi-level parking structures. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and lighting improvements.

Public Areas/Roads

Landside Pavement Rehabilitation \$400,000

This is an ongoing program to construct or reconstruct bituminous pavements outside of the Air Operations Area (AOA). Inspection of pavements and appurtenances determines what areas are to be prioritized for rehabilitation under each year's project.

Roadway Fixture Refurbishment \$150,000

Many of the light poles, clearance restriction boards, sign units, fence sections, and canopies on the airport roadways are in need of repainting and maintenance. This project provides for refurbishment of these fixtures.

Hangars and Other Buildings

MSP Campus Building Roof Replacements \$500,000

A report has been developed within the MAC that evaluates one-half of the roofs every other year. This ongoing program allows these roofs that have been evaluated to be prioritized and programmed for repair. Emergency repairs may also be needed on some roofs; this program will provide dollars for such instances.

MSP Noise Mitigation Projects

Noise Mitigation Consent Decree Amendment \$6,500,000

The Consent Decree First Amendment Program is a residential noise mitigation program that began in March 2014 under the terms of an amended legal agreement (Consent Decree) between the Metropolitan Airports Commission (MAC) and the cities of Richfield, Minneapolis, and Eagan, and approved by the Hennepin County District Court (effective until December 31, 2024). Under this program, eligibility of single-family and multi-family homes will be determined annually, based upon actual noise contours that are developed for the preceding calendar year, beginning in March 2014. This project will provide noise mitigation for those single family and multifamily homes meeting the eligibility requirements of the program.

MSP Tenant Projects

Terminal 1- Lindbergh

Concessions Rebids \$4,500,000

This program provides support for required infrastructure to be brought to lease-lines, shell-space for new build-outs, and for other major changes required to implement the concessions rebid programs at Terminal 1-Lindbergh.

Main Mall Food Court Expansion \$12,500,000

This project provides a one-and-a-half story expansion over the existing rooftop space west of the food court, and an expansion north above the existing loading dock. The expansion will provide shell space for an additional concept, two expanded concept spaces, and a remodeled layout of the food court to be implemented through the 2017 Concessions Rebid program. (See Figure A-5)

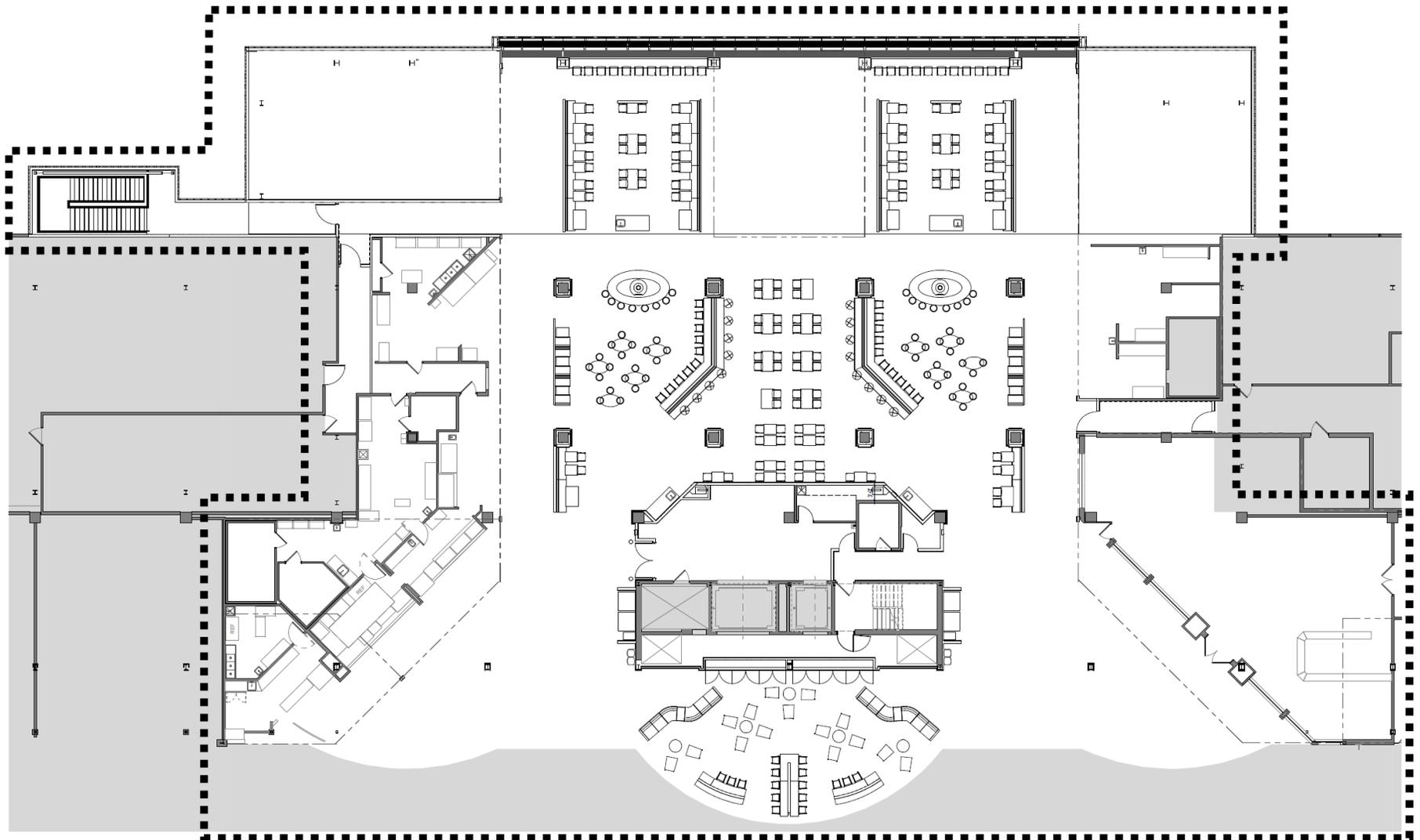
Concessions Upgrades/Revenue Development \$200,000

This is an annual program to fund miscellaneous upgrades such as finishes, furniture, signage, and/or modified connections to utilities for the concession programs or other revenue generating programs at the airport.

Delta Gatehold Seating \$3,000,000

This project is the first of a three-year program to replace seating in Delta's leased gatehold areas.

Figure A-5



2018 FCE - Food Court Expansion - Main Level

Hangars and Other Buildings

Freight Building Remodel for DHL

\$5,250,000

This project includes remodel and expansion of the DHL air freight facility located on Cargo Road to accommodate a package processing facility. The air freight facility sits adjacent to the West Cargo Ramp where DHL currently has airside access for their daily aircraft arrivals. The cost of remodel and expansion will be paid through a lease agreement with DHL. (See Figure A-6)

Consolidated Loading Dock Facility

\$10,000,000

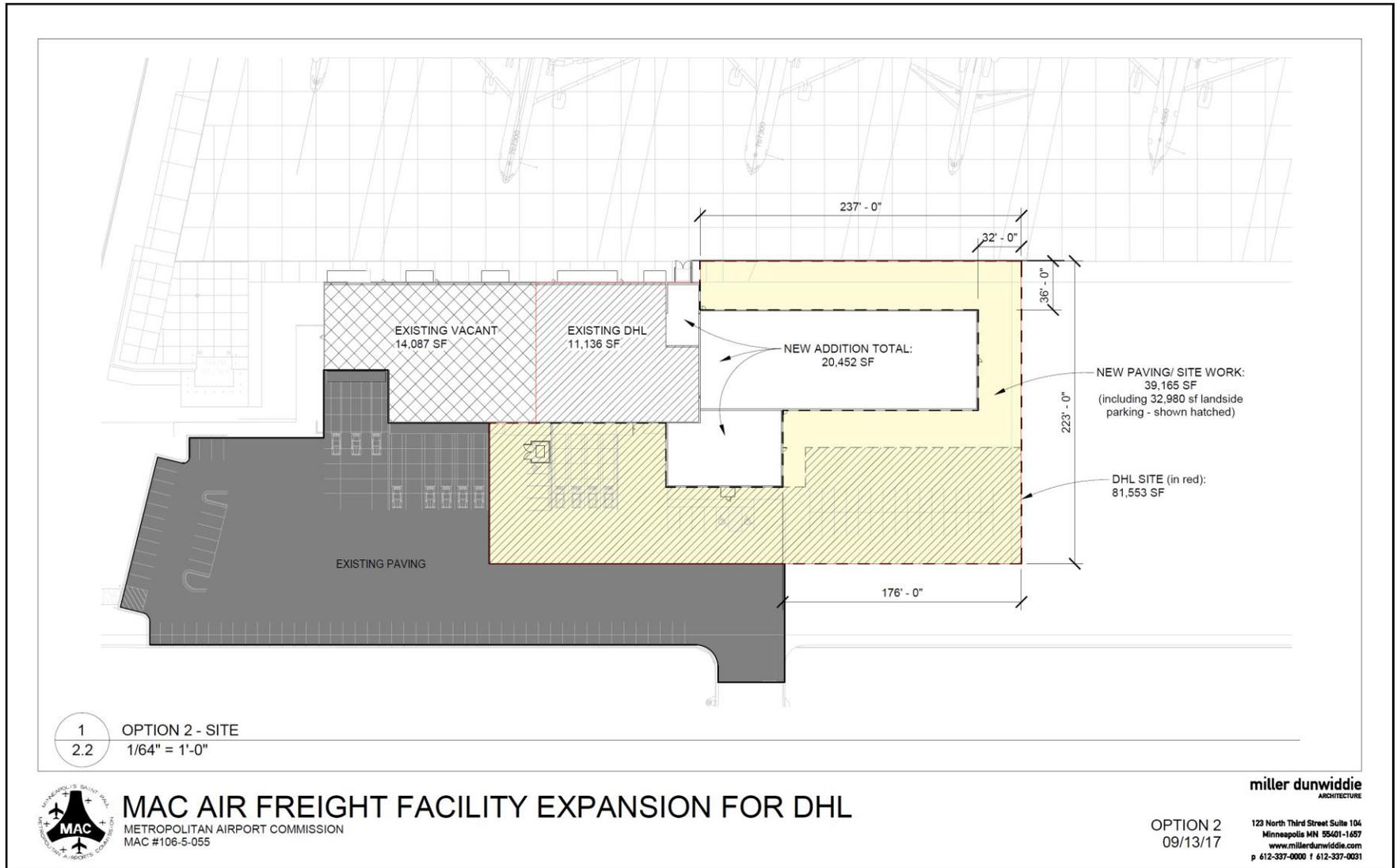
As the concessions program and its food choices continue to expand, the existing Concourse C loading dock space is being stressed beyond capacity. This new facility will house centralized receiving operations with security screening capability and distribution to buildings throughout the MSP campus. The existing loading dock will remain as a significant delivery node.

TSA Warehouse Space

\$1,800,000

This project will make modifications to Building I to improve the condition of the building envelope, HVAC systems and ADA compliance and to prepare the space to be leased by TSA for their dog teams and other warehouse needs.

Figure A-6



Reliever Airports Long Term Comprehensive Plan Projects

St. Paul

Long Term Comp Plan **\$100,000**

This project includes updates to the most recent long term comprehensive plan.

Flying Cloud

Long Term Comp Plan **\$100,000**

This project includes updates to the most recent long term comprehensive plan.

Anoka County - Blaine

Long Term Comp Plan **\$100,000**

This project includes updates to the most recent long term comprehensive plan.

Reliever Airports Maintenance/Facility Upgrade Projects

St. Paul

Joint and Crack Repairs **\$ 100,000**

Given the extremely poor subgrade materials at this airport, the need for crack repair and joint sealing is critical to maintain pavement strength and pavement life. An inspection of the pavement will be completed to determine the area most in need of repair.

Maintenance Building Improvements **\$200,000**

This project provides for facility maintenance to ensure continued efficient operation of MAC buildings, specifically the main airport maintenance building.

Airport Perimeter Roads **\$400,000**

This is part of an ongoing effort to rehabilitate airport pavements through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes the rehabilitation of the airport perimeter road near the intersection of Bayfield Street and Airport Road.

Obstructions Removal **\$250,000**

This project will address identification and removal of obstructions to the runway approach surfaces.

Lake Elmo

Materials Storage Building **\$200,000**

This project includes the construction of a MAC storage building for the containment of airfield maintenance products such as salt, sand, and topsoil to comply with MPCA requirements.

Airlake

Materials Storage Building **\$200,000**

This project includes the construction of a MAC storage building for the containment of airfield maintenance products such as salt, sand, and topsoil to comply with MPCA requirements.

Flying Cloud

Roof Repairs/Replacement \$100,000

This project provides for repair, and in some cases replacement, of the roof structures on MAC-owned buildings. This project accounts for identification of the exact type of roof deficiencies as well as completion of the most cost-effective repairs or replacements.

Runway 10L-28R Modifications \$2,000,000

This project has been identified in cooperation with the FAA as a Runway Incursion Mitigation (RIM) project. The scope includes designating Runway 10L-28R as utility designation, which involves relocating the existing hold signs, hold markings, and runway guard lights. This project will also include reconstruction of the runway pavement with the reclaim and overlay of Runway 10L-28R. New REILs will also be included.

Crystal

Alleyways Pavement Rehabilitation \$550,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes the full-depth rehabilitation of alleyways in the North Building Area.

Anoka County – Blaine

Taxiway Pavement Reconstruction \$600,000

This is an ongoing program to reconstruct aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes the full-depth rehabilitation of Taxiway Foxtrot.

MAC Building Improvements \$700,000

This is an ongoing program to provide for facility modifications to ensure continued efficient operation of MAC buildings. This year's project includes improvements to the MAC Maintenance Building, Air Traffic Control Tower Building, restroom buildings, and other MAC-owned hangars.

2019 Capital Improvement Program

MSP End of Life/Replacement Projects

10 – Terminal 1- Lindbergh

Passenger Boarding Bridge Replacements **\$4,000,000**

This project provides for the replacement of jet bridges at Terminal 1 - Lindbergh. Bridges to be replaced will be determined based on a condition assessment and input from the airlines. Aircraft parking positions will be optimized at the impacted gates and fuel pits adjusted as necessary. Podiums and door openings may also be adjusted to optimize gate hold area. It is assumed fixed walkways may need to be replaced or added to meet ADA slope requirements and all gate hold areas will be upgraded with security doors, card readers, and cameras.

T1 Tram Systems Retrofit and Equipment **\$1,500,000**

The MAC Hub and Concourse Tram systems were originally placed into public service in 2001 and 2004, respectively. As part of the installation, the automatic train control system utilized multiple components provided by GE Intelligent Platforms. In late 2011, GE indicated they would discontinue support of selected components prior to the year 2020. This program will replace and upgrade the radio communication system and GE components to Tram Control Systems on both the Hub and Concourse Trams over the course of a five-year program from 2015 to 2019.

Terminal 1 Tug Doors Replacement **\$600,000**

This project will replace the 15-year-old tug doors at Terminal 1-Lindbergh as they have reached the end of their useful life.

Field and Runway

Snow Melter Upgrades/Modifications **\$750,000**

This project is the second of a two-year program that provides for the evaluation, maintenance, miscellaneous modifications, and replacement of existing airfield snow melters located around the MSP campus.

Terminal Roads/Landside

28th Avenue Watermain Replacement **\$1,250,000**

This project provides for reconstruction of approximately 2,600 linear feet of 18-inch watermain along 28th Avenue. Major items of work include miscellaneous removals, removal and reconstruction of ductile iron watermain, valves, hydrants, aggregate base, bituminous pavement, curb, concrete walk, fencing, and restoration of turf and landscaping.

Terminal 2-Humphrey

Public Walk Aisle Terrazzo Floor Installation **\$1,700,000**

This project will remove carpet and install terrazzo in the baggage claim area and the walk aisle at Gates H1-H7 to match the terrazzo installed in the Gate Expansion that opened in 2016 as well as install terrazzo between the ticket lobby and Checkpoint 1.

Fire

MSP Campus Fire Alarm System Upgrade/Transition

\$1,000,000

In an effort to improve monitoring reliability and eliminate the existing single point of failure configuration, this multi-year project will include database redundant systems, device controller upgrades and the decentralization of the fire alarm master control equipment.

MSP IT Projects

Terminal 1- Lindbergh

IT Miscellaneous Modifications

\$8,400,000

Each year, there are a number of IT projects that are beyond the resources of MAC's staff and operating budget to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Work may include MACNet maintenance and upgrades, EVIDs/MUFIDs digital signs, Wireless System enhancements, and MAC Public Address System maintenance and upgrades. The list of potential projects will be compiled and prioritized in early 2019.

Telecommunications Room Equipment Continuity (TREC)

\$1,500,000

The MAC network (MACNet) carries, along with other information, credit card data collected from the landside parking revenue control system. Merchants like the MAC are required to meet credit card security standards created to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally, the network equipment itself must have added security features to prevent unauthorized network access. This multi-year program addresses these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus.

Intelligent Monitoring and Control Systems (IMACS)

\$1,500,000

This is a continuation of a multi-year program to upgrade all MAC building automation systems to an open architecture protocol so that MAC can bid maintenance and construction contracts more competitively. This project will replace sole-source controllers such as Siemens and Legacy Honeywell with controllers from Honeywell, Circon, Distech, and TAC systems that are LonMark certified products.

Card Access Modifications

\$2,000,000

This program will add card access controls at passenger boarding bridge doors for improved security at a pace faster than only adding the controls as bridges are replaced.

MSP Long Term Comprehensive Plan Projects

Terminal 1- Lindbergh

MSP Long Term Comp Plan

\$1,500,000

The MSP 2030 Long Term Comprehensive Plan (LTCP), previously completed in April 2010, is scheduled to be updated in 2020. While some efforts have already started with checkpoint modeling and parking analyses, the work in 2018 will continue the forecasting efforts and include preparation of the LTCP document for public review and Commission approval.

Baggage Claim/Ticket Lobby Operational Improvements

\$74,400,000

This is the first of three projects in a program that will provide the level of service requirements for short- and medium-term growth of the O&D passengers, including walkways that meet required codes, public seating areas, centralized meet and greet space, unclaimed baggage storage, baggage service offices, concessions (food & beverage and retail), improved lighting, fire protection throughout the space, structural enhancements, improved sight lines, curbside lighting and access, and other operational improvements in the Arrivals Hall. In the Departures Hall, this program addresses, with the Vertical Circulation Improvements Program, issues of congestion and functionality in the Terminal 1-Lindbergh Ticket Lobby. It will provide walkways that meet required codes, ticket counter consolidations, airline ticket offices, centralized meet and greet areas, improved vestibules and access, east mezzanine removal/reduction, structural enhancements, curtain wall replacement, and other operational improvements. On both levels, the 2019 project constructs new restrooms in order to allow future phases to demolish the existing old and outdated restrooms.

Armed Forces Service Center Relocation

\$1,100,000

The AFSC location is being displaced by the Operational Improvements program. This project will relocate the center to a desired location behind the security line in the terminal.

Automated Security Lanes (ASLs)

\$3,000,000

This third phase of a four-year project will provide funding for procurement and installation of additional TSA-approved Automated Security Lanes to enhance throughput by 20-40% per lane, without the loss of the existing quantity of lanes. The replacement conveyor equipment provides bin returns to the divesture area managed by TSA staff, suspect bin isolation for searches, analytics for improved reporting and training, and improved x-ray image display, storage, and monitoring. Additional work required to support the installation will include power and data additions for new and replacement equipment and for equipment network requirements.

Field and Runway

Taxiway C1 Construction

\$6,000,000

This project provides for the construction of Taxiway C1 located abeam to Gates H5/H6 between Taxiway D and Taxiway M. Major items of work include excavation and backfill, concrete taxiway pavement, bituminous shoulder pavement, pavement markings, and airfield lighting and signing.

Parking

T1 Parking Ramp – Parking Ramp Modifications

\$5,000,000

This project will modify the red/blue parking levels vacated by Rental Car agencies when they move to the new parking ramp. This project will prepare the areas to accommodate public parking.

Terminal 2- Humphrey

T2 Automated Security Lanes (ASLs)

\$3,000,000

This first phase of a two-year project will provide funding for procurement and installation of TSA-approved Automated Security Lanes at the Terminal 2-Humphrey's Security Checkpoint No. 1 to enhance throughput by 20-40% per lane, without the loss of the existing quantity of lanes. The replacement conveyor equipment provides bin returns to the divesture area managed by TSA staff, suspect bin isolation for searches, analytics for improved reporting and training, and improved x-ray image display, storage, and monitoring. Additional work required to support the installation will include power and data additions for new and replacement equipment and for equipment network requirements.

MSP Maintenance/Facility Upgrade Projects

Terminal 1- Lindbergh

Restroom Upgrade Program **\$2,000,000**

A study of all restrooms in Terminal 1-Lindbergh was completed in 2010 and a program developed to upgrade/modernize the restrooms at Terminal 1-Lindbergh. From this study, each restroom was prioritized based on its condition. This program will provide for the phased modernization of the T1-Lindbergh restrooms to include upgraded finishes, lighting, air quality, energy saving upgrades, and ADA compliance. The 2020 project is anticipated to upgrade restrooms in the valet parking lobby, install water bottle fillers in a number of locations, and provide civilized waiting areas at some of the new restrooms blocks.

Way-Finding Sign Backlighting Replacement **\$1,600,000**

LED lighting will replace the existing cold-cathode lamps in the lighted sign boxes at both terminals. Many lamps from the 2008 retrofit have failed and the long-term energy costs recovery from the LEDs fits into MAC's energy reduction model.

Lighting Infrastructure Technology and Equipment (LITE) **\$1,500,000**

This is a multi-year program that will analyze, assemble, and organize lighting system upgrade recommendations for the MSP campus. Annual investment in lighting infrastructure is necessary to ensure its safe operation, reduce energy and maintenance costs, and to implement technology upgrades to improve lighting quality. Light fixtures age and degrade due to time, heat or exterior elements. Lighting technologies also change and upgrades will provide for more energy efficient lighting systems.

Art Display Areas **\$500,000**

This program is a continuation of the existing program, in partnership with the MSP Foundation, to provide opportunities and space build out for the display of permanent and temporary/rotating art exhibits. This year's project will support an outdoor Art Park adjacent to the Hotel for permanent and rotating exhibits with public access for travelers and hotel guests.

Arts Master Plan **\$870,000**

This program supports procurement of commissioned art and rotating exhibits as part of the Percent for Arts program.

Employee Breakroom **\$250,000**

This project will provide a third MSP employee break room that will have a quiet area for employees who work multiple shifts on the campus to eat, read, etc. By providing this quality work support area, front line and other employees will be able to rest and eat out of view of the public.

Field and Runway

Establish Taxiway J **\$150,000**

This project provides for installing pavement marking, taxiway edge lights, and taxiway signs on existing pavement between Taxiway M and Taxiway Q, adjacent to Fire Station No. 2 in order to utilize as a restricted taxiway.

Runway 4-22 In-Pavement Guard Lights **\$500,000**

This project provides for the installation of in-pavement runway guard lights on Runway 4-22 at the intersections with both Runway 12R-30L and Runway 12L-30R.

Taxiways Bravo & Quebec Centerline Lights **\$6,400,000**

This project provides for the construction of taxiway centerline lighting systems for taxiways Bravo and Quebec, located adjacent to the Terminal 1-Lindbergh aprons through the intersections with taxiway Delta. Work includes

removal of existing taxiway centerline reflectors, installation of taxiway centerline lights and conductors, and modifications at the airfield lighting control building.

Hangars and Other Buildings

MAC Storage Facility

\$9,000,000

This project will construct a new building to provide storage and associated workspace to replace storage spread around the campus in buildings that can no longer provide adequate protection from the elements and pests.

Fire

Campus Fire Protection

\$500,000

This project is part of a new multi-year program to upgrade fire protection systems in various MAC-owned buildings on the MSP campus.

Environment

Storm Sewer Rehabilitation

\$1,800,000

This is the second of a two-year program that supports and complies with the 2017 MAC/MPCA Memorandum of Understanding concerning the MSP Glycol Collection Program. This project provides for cleaning, inspection, and rehabilitation of storm sewers and glycol sewers at various locations where aircraft deicing occurs, to enhance collection and storage of glycol-impacted stormwater resulting from deicing operations.

MSP Ongoing Maintenance Projects

Terminal 1- Lindbergh

Electrical Infrastructure Program

\$1,500,000

There are 53 electrical substations that serve the Terminal 1-Lindbergh complex. It is imperative that these substations be inspected, cleaned, and upgraded in order to ensure their continued performance. This is a continuation of a multi-year program that began in 2009.

Emergency Power Upgrades

\$1,500,000

A study and survey of Terminal 1-Lindbergh transfer switches and emergency lighting was completed in 2008. This year's project is part of a multi-year program that will continue the design and implementation of emergency power and lighting corrective work identified in this study.

Terminal Miscellaneous Modifications

\$2,400,000

Each year, there is a list of maintenance projects that are beyond the resources of MAC's maintenance and trades staff to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Typical work includes door replacements, emergency upgrades to mechanical, electrical, plumbing or HVAC systems, loading dock work, etc. The list of potential projects will be compiled and prioritized in early 2019.

Air Handling Unit Replacement

\$2,500,000

There are existing air handling units serving Terminal 1-Lindbergh that were installed with the original terminal construction in 1958-60 and are over 50 years old. A study of these units has been completed that evaluated each unit's age, condition, and its ability to adequately heat or cool the spaces it serves. A multi-year program has been implemented to provide for the replacement of the units that have been identified as needing replacement. The project costs include modifications to building walls to facilitate the removal of existing equipment and installation of the new units, upgraded electrical and temperature controls, and asbestos abatement.

Conveyance System Upgrades

\$3,000,000

A study of the MSP campus conveyance systems including elevators, escalators, moving walks, dumbwaiters, and material lifts was completed by the Facilities Department's conveyance consultant. The study evaluated the useful life of each system including the availability of replacement parts and technical support of the equipment. Many of the systems are being operated by outdated technology that is generally less efficient than modern control equipment. Some of the systems do not include safety devices or features that are commonly installed on modern equipment. This multi-year program modernizes and replaces elements of the conveyance systems and installs new conveyance systems if needed.

Plumbing Infrastructure Upgrades

\$500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer functional, and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. This ongoing program was implemented in 2012 to upgrade the plumbing infrastructure system to meet current code requirements and MAC standards. The focus of the 2019 project is to continue the replacement of aging plumbing systems.

Terminal Building Remediation

\$2,000,000

Continual maintenance of the terminal buildings is imperative to passenger comfort and safety as well as sustainability of the MAC asset. Age and weather contribute to building deterioration, mold and other health issues. Building and concourse envelope issues include curtain wall systems, glazing, sealant repair/replacement, louver repair/replacement, metal panel repair/replacement, and soffit repair/replacement and insulation systems.

Concourse G Rehabilitation

\$4,000,000

This multi-year program will provide operational improvements to the existing concourse over time, including replacing elevators, modifying and replacing structural, electrical and mechanical systems.

Baggage System Upgrades

\$500,000

This multi-year program will provide necessary upgrades to the inbound and outbound baggage system not covered by general system maintenance.

Energy Management Center

EMC Plant Upgrades (T1 & T2)

\$1,500,000

This multi-year program provides upgrades to the MAC's Energy Management Center (EMC) Boiler and Chiller Plants at both Terminal 1-Lindbergh and Terminal 2-Humphrey. The work includes upgrades to the aging Chilled Water and Heating Water systems throughout both terminals. The pumping and piping systems on both the heating and cooling systems are aging and in need of repair work beyond regular maintenance.

Field and Runway

Pavement Joint Sealing/Repair

\$650,000

This is an ongoing program to provide for the resealing of joints, sealing of cracks, and limited surface repairs on existing concrete pavements. The areas scheduled for sealing will be as defined in the overall joint sealing program or as identified by staff inspection in the early spring of each year.

Miscellaneous Airfield Construction

\$800,000

This is an ongoing program to consolidate various items beyond the capabilities of the maintenance personnel, projects too small to be accomplished independently, or to handle airside problems requiring repair which come up unexpectedly.

Terminal Roads/Landside

Tunnel/Bridge Rehabilitation

\$100,000

The MSP Campus has MAC-owned bridges and tunnels. Bridge and tunnel inspections are conducted each year to identify maintenance and repairs which are then implemented in a timely fashion.

Parking

T1/T2 Parking Structure Rehabilitation

\$2,500,000

This is an annual program to maintain the integrity of the airport's multi-level parking structures. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and lighting improvements.

Public Areas/Roads

Landside Pavement Rehabilitation

\$400,000

This is an ongoing program to construct or reconstruct bituminous pavements outside of the Air Operations Area (AOA). Inspection of pavements and appurtenances determines what areas are to be prioritized for rehabilitation under each year's project.

Roadway Fixture Refurbishment

\$150,000

Many of the light poles, clearance restriction boards, sign units, fence sections, and canopies on the airport roadways are in need of repainting and maintenance. This project provides for refurbishment of these fixtures.

Hangars and Other Buildings

MSP Campus Building Roof Replacements

\$500,000

A report has been developed within the MAC that evaluates one-half of the roofs every other year. This ongoing program allows these roofs that have been evaluated to be prioritized and programmed for repair. Emergency repairs may also be needed on some roofs; this program will provide dollars for such instances.

End of Life Campus Building Demolition

\$200,000

This is the first of multiple years of demolition of buildings to be replaced by the MAC Storage Facility described above.

MSP Noise Mitigation Projects

Noise Mitigation Consent Decree Amendment

\$9,600,000

The Consent Decree First Amendment Program is a residential noise mitigation program that began in March 2014 under the terms of an amended legal agreement (Consent Decree) between the Metropolitan Airports Commission (MAC) and the cities of Richfield, Minneapolis, and Eagan, and approved by the Hennepin County District Court (effective until December 31, 2024). Under this program, eligibility of single-family and multi-family homes will be determined annually, based upon actual noise contours that are developed for the preceding calendar year, beginning in March 2014. This project will provide noise mitigation for those single family and multifamily homes meeting the eligibility requirements of the program.

MSP Tenant Projects

Terminal 1- Lindbergh

Concessions Rebids **\$3,200,000**

This program provides support for required infrastructure to be brought to lease-lines, shell-space for new build-outs, and for other major changes required to implement the concessions rebid programs at Terminal 1-Lindbergh.

Concessions Upgrades/Revenue Development **\$200,000**

This is an annual program to fund miscellaneous upgrades such as finishes, furniture, signage, and/or modified connections to utilities for the concession programs or other revenue generating programs at the airport.

Delta Gatehold Seating **\$3,000,000**

This project is the second of a three-year program to replace seating in Delta's leased gatehold areas.

Reliever Airports Long Term Comprehensive Plan Projects

Lake Elmo

Runway 14-32 Replacement **\$3,000,000**

The updated long term comprehensive plan for this airport proposes relocating and extending the primary runway northeast of its current alignment. This year's scope includes the first phase of construction for this project, which primarily focuses on roadway realignment to make way for runway construction.

Airlake

South Building Area Development – Phase 1 **\$ 1,500,000**

This project includes phase 1 construction of sanitary sewer and water mains and lot services to the south building area. Phase 1 also includes construction of associated taxilanes and the south entrance road.

Crystal

Runway 14R-32L & Taxiway E Modifications **\$3,800,000**

The updated long term comprehensive plan for this airport proposes "right-sizing" the airport infrastructure, including decommissioning Runway 14R-32L. This project includes converting Runway 14R-32L into a parallel taxiway and rehabilitating portions of Taxiway Echo. The project also includes electrical vault improvements triggered by associated runway lighting modifications. The project budget also includes the required environmental review studies.

Reliever Airports Maintenance/Facility Upgrade Projects

81 – St. Paul

MAC Building Improvements **\$2,300,000**

This is an ongoing program to provide for facility modifications to ensure continued efficient operation of MAC buildings or modifications necessary to meet the requirements of the tenants. This year's project will include improvements to the Administration Building, Equipment Storage Building, Maintenance Building, and both Cold Storage Buildings.

Storm Sewer Improvements Phase 2 **\$1,500,000**

This project includes improvements to the existing storm sewer systems in the West Building Area and infield area between Taxiways Delta and Lima, to improve storm water removal and to address soil and pavement distress in the vicinity of deficient storm sewer structures. The project will also evaluate the potential for improvements to the flood pump stations to maximize efficient removal of storm water from the airfield during flood events

Lake Elmo

Parallel Taxiways Reconstruction **\$600,000**

This project is part of an ongoing effort to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. The Lake Elmo Airport suffers from poor subgrade materials, which contribute to the overall deterioration of pavements. This project includes the full-depth reconstruction of the oldest portions of Taxiway Alpha and Bravo not included in previous projects.

Alleyways – South Building Area Pavement Rehab **\$900,000**

This project is part of an ongoing effort to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of alleyways in the South Building Area.

MAC Building Improvements **\$400,000**

This is an ongoing program to provide for facility modifications to ensure continued efficient operation of MAC buildings. This year's project will include improvements to the MAC Maintenance Building.

Airlake

MAC Building Improvements **\$400,000**

This is an ongoing program to provide for facility modifications to ensure continued efficient operation of MAC buildings. This year's project will include improvements to the MAC Maintenance Building.

Public Restroom Facility **\$300,000**

This project includes the construction of a public restroom facility on the north side of the airport.

Plane Wash Pad **\$150,000**

This project includes the construction of a designated airplane wash pad.

Flying Cloud

Taxiway D Pavement Rehabilitation \$600,000

This project is part of an ongoing effort to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of Taxiway Delta.

Taxiway E Pavement Rehabilitation \$600,000

This project is part of an ongoing effort to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of Taxiway Echo.

Crystal

Taxiways Pavement Rehabilitation \$700,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes the rehabilitation of the taxiway or portions of taxiways in most need of repair. The pavement condition index report as well as an inspection of the pavement will be completed to determine the area most in need of repair.

Anoka County - Blaine

Alleyways Pavement Reconstruction \$750,000

This is an ongoing program to reconstruct aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of alleyways in the West Building Area.

South Service Road & East Landside Road Pavement Reconstruction \$1,000,000

This is an ongoing effort to rehabilitate airport pavements through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes the rehabilitation of the airport service road connecting the east and west building areas.

Obstructions Removal \$100,000

This project will address identification and removal of obstructions to the runway approach surfaces.

2020 – 2024 Capital Improvement Program

MSP Long Term Comprehensive Plan Projects

Terminal 1 – Lindbergh

D-Pod Outbound Baggage System \$5,000,000

This project will provide an expansion of the existing outbound baggage handling system in the lower level of the Concourse D-Pod area.

FIS Recheck Operational Improvements \$8,400,000

This project would relocate existing restrooms to new buildout space adjacent to gate G1 to allow for expansion of the airline baggage recheck operations and create the required queue space and wayfinding for the checkpoint.

Baggage Claim / Ticket Lobby Operational Improvements \$76,600,000 (2020-2021 cumulative)

This program addresses issues of congestion and functionality in the Baggage Claim and Ticket Lobby. It will provide new baggage claim devices (carousels) to meet the level of service requirements for short- and medium-term growth of the origination and destination passengers, including walkways that meet required codes, public seating areas, centralized meet and greet space, unclaimed baggage storage, baggage service offices, concessions, improved lighting, fire protection throughout the space, structural enhancements, improved sight lines, curbside lighting and access, ticket counter consolidations, airline ticket offices, improved vestibules and access, east mezzanine removal/reduction, structural enhancements, curtain wall replacement, and other operational improvements.

Lower Level Curbside Expansion \$12,000,000

This project includes the reconfiguration of the arrivals curb at Terminal 1-Lindbergh to address congestion issues. In addition to potential roadway modifications, the program would include additional seating, vestibules, restrooms, curbside waiting areas, lighting and other functions.

Reliever Airports Long Term Comprehensive Plan Projects

Lake Elmo

Runway 14-32 Replacement \$4,000,000 (2020-2021 cumulative)

The updated long term comprehensive plan for this airport proposes relocating and extending the primary runway northeast of its current alignment. This project includes all wetland mitigation, earthwork grading, subgrade improvements, electrical lighting system and bituminous pavement installation.

Airfield Modifications \$3,000,000

This project includes all necessary airfield modifications in conjunction with the replacement of Runway 14-32. Specifically, this project includes the construction of taxiway systems to serve the new runway, conversion of the existing Runway 14-32 to a parallel taxiway, and relocation of 30th Street North (a Township Road) to accommodate the new runway construction and provide FAA-compliant Runway Protection Zones.

Airlake

Runway 12-30 Improvements

\$3,500,000

This project will provide for the extension of Runway 12-30 from 4,098 feet to the maximum feasible length (approximately 4,850 feet) that can be provided without having to relocate Cedar Avenue, which lies directly east of the airfield. Project details are currently being evaluated in the process to update the airport's Long Term Comprehensive Plan.

Anoka County – Blaine

Building Area Development – Xylite St. Relocation

\$1,000,000

This project provides for the relocation of Xylite Street including the installation of curb and gutter and construction of a berm and landscaping.