



Metropolitan Airports Commission

TO: Planning, Development and Environment Committee

FROM: Bridget M. Rief, Vice President – Planning and Development (612-725-8371)

SUBJECT: **2022-2028 Capital Improvement Program Public Hearing -
Assessment of Environmental Effects**

DATE: October 27, 2021

Summary

The Assessment of Environmental Effects (AOEE) evaluates the cumulative environmental effects of the projects included in the 7-year Capital Improvement Program (CIP) at each of the Commission's airports.

Completing the required environmental review process for the MAC capital program allows projects to be bid publicly and constructed, which will further MAC's vision of providing the best airport experience for our travelers.

Information

At the September 2021 Commission meeting, a public hearing related to the Assessment of Environmental Effects (AOEE) for the 2022-2028 MAC CIP was authorized and the members of the Planning, Development and Environment Committee were appointed as the hearing officers. This hearing will take place at the November 1, 2021, Planning, Development and Environment Committee meeting.

The document has been made available on MAC's website for public review since October 12, 2021. The website page where it is located is:

<https://metroairports.org/airport-authority/metropolitan-airports-commission/administration/publications>

A copy of the AOEE is also included with the Committee packet.

Metropolitan Airports Commission



2022–2028 Capital Improvement Program Assessment of Environmental Effects (AOEE)

Date: Published October 12, 2021



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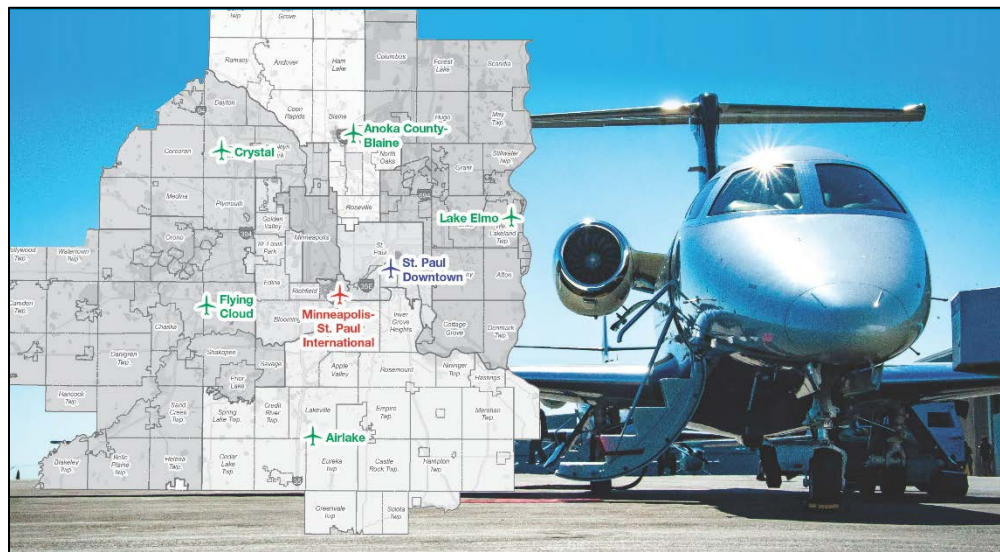
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1.0 INTRODUCTION

The Metropolitan Airports Commission (MAC) is a public corporation founded by the Minnesota Legislature in 1943 to promote aviation in Minnesota. The MAC oversees coordinated air service throughout the Twin Cities Metro Area through its system of seven airports, including the Minneapolis-St. Paul International Airport (MSP) and six reliever airports. MSP is a public use large hub international airport owned and operated by the MAC. MSP is located south of downtown Minneapolis near the confluence of the Minnesota and Mississippi Rivers and covers approximately 3,400 acres. Of the two terminals at MSP, Terminal 1 is larger and last year accounted for nearly 88% of passenger enplanements. The COVID downturn significantly impacted the number of passengers traveling through MSP, dropping from over 39 million down to 14,851,289. Total operations were down approximately 40% at MSP, from 406,100 in 2019 to 244,827 in 2020.



Like MSP, the MAC's system of six reliever airports play a vital role in both providing easy access to business and communities throughout the metropolitan area as well as offering an attractive alternative to MSP for private pilots. In 2020, operations at the Reliever Airports remained close to steady and even grew at Flying Cloud and Airlake when compared to 2019.

For more than 75 years, the MAC has worked to promote safe, efficient, environmentally responsible air transportation services for the Minneapolis – St. Paul metropolitan area. In the process, our airports have been key economic drivers for the area economy. According to MAC's 2016 economic study, the airports are generating nearly \$16 billion in total economic output and supporting approximately 87,000 jobs.

Each year, the MAC prepares a seven-year Capital Improvement Program (CIP). A preliminary version of the CIP is adopted by the Commission in September. The purpose for providing the Commission with a preview of the CIP is twofold. First, it gives the Commission an opportunity to consider the projects proposed by MAC staff in the upcoming years. Second, it provides a list of projects that the public may review as a part of this Assessment of Environmental Effects (AOEE) process.

Upon completion of this AOEE process, which includes a public hearing, the Commission will adopt a final version of the CIP in December.

On September 20, 2021, the MAC Commission adopted the Preliminary 2022–2028 CIP (shown in Appendix A). This AOEE report is prepared in accordance with the requirements of Minnesota Statutes Section 473.614, as amended in 1988 and 1996. It presents an assessment of the potential environmental effects of projects in the MAC preliminary seven-year CIP from 2022 to 2028 for each MAC-owned airport. Under Minnesota law, the MAC is required to “examine the cumulative environmental effects at each airport of projects at that airport (in the seven-year CIP), considered collectively.”



St. Paul Downtown Airport

Most of the projects in the CIP involve replacement and maintenance/upgrades of existing facilities and assets. Some projects involve primarily information technology (IT) upgrades, and others include rehabilitation and/or upgrades to tenant facilities. These projects will not affect use of the facilities and therefore, will not add to or subtract from, cumulative environmental effects.

Minnesota Statutes Section 473.614 also

requires the preparation of an Environmental Assessment Worksheet (EAW) 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 first CIP calendar year (2022 for this AOEE);
2. The project is located at MSP and is anticipated to cost \$5 million or more, or the project is located at one of the Reliever Airports an estimated to cost \$2 million or more;
3. The project involves the construction of:
 - a. A new or expanded structure for handling passengers, cargo, vehicles, or aircraft; or
 - b. A new runway or taxiway, or the extension of an existing runway or taxiway.

An EAW or Environmental Impact Statement (EIS) has been prepared for all projects scheduled to be implemented in 2021 that meet the above three conditions in Minnesota Statutes Section 473.614 for a mandatory EAW.

This AOEE report analyzes each airport in the order in which the projects are presented in the CIP. Appendix A lists all projects included in the preliminary seven-year CIP (2022–2028). The notes in the table explain the type of work for each proposed project and why the work may or may not have a potential effect on the environment. Appendix B provides a more detailed description for each project included in the first year (2022) of the preliminary CIP. Appendix C includes a draft description for projects in years 2023 through 2028 that meet the above three conditions in Minnesota Statutes Section 473.614 for a mandatory EAW.

2.0 MINNEAPOLIS-ST. PAUL INTERNATIONAL AIRPORT (MSP)

MSP is situated approximately seven miles south of downtown Minneapolis, Minnesota and seven miles southwest of downtown St. Paul, Minnesota. MSP is not part of any city but is surrounded by Minneapolis, St. Paul and the suburban cities of Bloomington, Eagan, Mendota Heights, and Richfield.

The MSP airfield consists of four runways. Runway 12L-30R and Runway 17-35 are both 8,000 feet long. Runway 12R-30L is 10,000 feet long. And the crosswind Runway 4-22 is 11,000 feet long. There are multiple instrument approaches and an air traffic control tower.

Passenger traffic at MSP dropped due to COVID in 2020. Many domestic destinations were paused, and for the most part, all international travel was halted. For the over 14 million passengers that did travel in 2020 (still a significant amount), approximately 71% of them utilized Terminal 1, with the remaining 29% using Terminal 2.

Through June 2021, passenger levels are increasing but still only 75% of what they were end of June 2019. Operations are also rising slowly, but not to the levels seen in 2019.



MSP New Silver Ramp – Access to Rental Cars and Multi-Modal Transit Hub
(shuttle, bus, LRT, bike, and walkway to hotel)

2.1 MSP LONG-TERM PLAN STATUS

The planning process for the 2020-2040 Long Term Plan (LTP) for MSP includes forecasting for passenger levels and aircraft operations, an airfield capacity study, a review of the facility inventory and identification of service gaps, development of alternatives to meet facility needs, and a robust stakeholder engagement program. By utilizing the latest operational procedures and modeling tools, MAC will gain a fresh perspective on airfield performance.

The planning process will evaluate when facility improvements are needed to accommodate projected demand in a manner that is safe, efficient, orderly, and cost-effective and in a way that maintains and enhances customer service. The LTP will not authorize construction or improvements to facilities. Nor does it serve as the basis for determining eligibility for noise mitigation programs. Rather, it helps the MAC better understand and plan for future facility needs.

MAC had started developing the 2020-2040 Long Term Plan (LTP) for MSP in 2019, but the process was paused due to COVID-19. MAC staff is resuming the planning process late in 2021, with the majority of work and public outreach anticipated in 2022.

The MAC website: <https://www.mspsairport.com/long-term-plan> contains the latest information related to the LTP process.

2.2 MSP ENVIRONMENTAL STUDIES

Under MEPA, an EAW or EIS must assess cumulative potential environmental effects. A cumulative potential effect under MEPA is a consequence on the environment that could result from the incremental potential effect from projects 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.

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

In March 2013, the FAA determined that the MSP 2020 Improvements EA/EAW was adequate under NEPA and issued a Finding of No Significant Impact (FONSI) and Record of Decision (ROD) for the projects analyzed in the document. In April 2013, the MAC concluded that the MSP 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 analyzed in the document.

Projects listed in the year 2022 that meet the criteria for the preparation of an EAW, as well as those that were included in the MSP 2020 Improvements EA/EAW review, are shown in Table 2-1 on Page 6.

2.3 MSP PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

Of all the projects listed for the year 2022 at MSP, there are only two listed in the Preliminary 2022-2028 CIP that meet the criteria in Minnesota Statutes Section 473.614 for the preparation of a mandatory EAW: the next phase of the Baggage Claim/Ticket Lobby Operational Improvements, and the Baggage Handling System project which was previously planned for 2021 but deferred to 2022. Each of these projects are scheduled for 2022, exceed \$5 million, and involve a new or expanded structure for handling passengers, cargo, vehicles, or aircraft. See Table 2-1. The MSP 2020 Improvements EA/EAW, which the MAC completed in 2013, analyzed both projects.

Baggage Claim/Ticket Lobby Operational Improvements

The Terminal 1 Operational Improvements program, which began in 2016, will continue in 2022 with additional ticket counter consolidations, airline ticket offices, unclaimed baggage storage, baggage service offices, concessions (food & beverage and retail), improved lighting and sight lines, and curbside lighting.

Baggage Handling System

This project includes baggage handling system (BHS) work associated with the south half of Terminal 1 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, oversized bag screening and tub returns.



Terminal 1 Arrivals Level



MSP T1 Ticket Lobby

Table 2-1
 MSP Projects in the CIP that Require a Mandatory EAW

Project	CIP Year Proposed	EAW Status
T1 Baggage Claim/Ticket Lobby Operational Improvements	2022	MSP 2020 Improvements EA/EAW Completed in 2013
T1 Baggage Handling System	2022	MSP 2020 Improvements EA/EAW Completed in 2013
T1 Baggage Claim/Ticket Lobby Operational Improvements	2023	Included in MSP 2020 Improvements EA/EAW
T1 Baggage Claim/Ticket Lobby Operational Improvements	2024	Included in MSP 2020 Improvements EA/EAW
Terminal 2 North Gate Expansion	2024	Included in MSP 2020 Improvements EA/EAW
T1 Expand and Remodel International Arrivals Facility	2025	Included in MSP 2020 Improvements EA/EAW
Runway 30R Parallel Taxiway	2025	EAW Required
Runway 30R Parallel Taxiway	2026	EAW Required
T1 D-Pod Outbound Baggage System	2027	Included in MSP 2020 Improvements EA/EAW
Runway 30R Parallel Taxiway	2027	EAW Required

With one exception, all MSP projects/programs in the 2022-2028 CIP that meet the requirements in Minnesota Statutes Section 473.614 for preparation of a mandatory EAW were analyzed in the MSP 2020 Improvements EA/EAW, which MAC completed in 2013. The one exception is the proposed Runway 30R Parallel Taxiway. MAC is still determining the feasibility of this project; however, if it does proceed, an EAW will be necessary as it would involve the construction of a new taxiway and will exceed the EAW criteria dollar amount. This project is proposed to be constructed in phases, but only one EAW would be prepared for the entire scope of the project.

Of additional note, a two-year end-of-life project is listed in the CIP in 2026 and 2027 for tram replacement at MSP. The scope for this project is not yet finalized. MAC will be reviewing alternatives that include replacing the existing tram systems with a similar type of tram system as well as autonomous vehicle options. Depending on the scope, the project may meet the criteria for a mandatory EAW. If the MSP LTP or other future study reveals a preferred alternative that involves major modifications or different alignments for the tram systems, the need for environmental review would be determined at that time.



Locations for Terminal 1 Projects listed in Table 2-1

2.4 MSP CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

Under Minnesota Statutes Section 473.614, the MAC must examine the cumulative environmental effects of projects at each airport in the proposed CIP, considered collectively. Aside from those listed in Table 2-1, all other MSP projects listed in the CIP involve end-of-life replacement and maintenance/upgrades of existing MAC facilities and assets, security enhancements, information technology (IT) upgrades, residential noise mitigation, or rehabilitation of tenant facilities. While many MSP projects in the capital program exceed the \$5 million threshold, only those listed in Table 2-1 meet the criteria for preparation of a mandatory EAW under Minnesota Statutes Section 473.614.

Although some of the MSP projects may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at MSP.

The EAW documents that have been completed for MSP projects indicate that the potential for adverse cumulative effects from the projects when considered in conjunction with past, present and future projects is insignificant; or, that no single impact even when considered with past, present and future projects represents a substantial impact that cannot be mitigated and therefore, none of the proposed projects would result in significant cumulative impacts.

Location for Terminal 2 Project listed in Table 2-1



3.0 ST. PAUL DOWNTOWN AIRPORT (STP)

St. Paul Downtown Airport is the only reliever airport in the MAC system with a runway longer than 5,000-feet. As such, the airport is a popular draw for larger corporate jet aircraft. Of the airport's three runways, Runway 14-32 is the longest at 6,491 feet. Nestled along the Mississippi River with scenic limestone bluffs along one side and downtown St. Paul on the other, the airport offers easy access to many local businesses and amenities. The FAA operates an air traffic control tower on the airfield. In 2020, the STP Airport handled just over 30,100 operations, which equates to approximately 75% of the 2019 total operations.

3.1 STP LONG-TERM COMPREHENSIVE PLAN STATUS

The last Long-Term Comprehensive Plan (LTCP) for STP was adopted by MAC in June 2010 and covered the 2010-2030 timeframe. No major projects or improvements have been planned for STP aside from pavement reconstruction and upgrades to existing MAC-owned buildings. MAC is currently planning to initiate the next update to the LTCP in one to two years.



The MAC completed the first phase of a visioning study for the three largest Reliever Airports – St. Paul Downtown, Flying Cloud and Anoka County-Blaine Airport. The study reviewed the airports as a system and focused on obtaining information from airport users to define reasons why airports are selected for use, what facility needs are observed, and where gaps may exist in airport services. MAC has chosen to update individual airport long term plans in lieu of proceeding with a second phase of a visioning study because the two planning efforts would contain too much overlap.

3.2 STP ENVIRONMENTAL STUDIES

No environmental reviews have been required for projects at the St. Paul Downtown Airport since 2005 when the federal EA was completed for the airfield subdrain project that preceded the construction of the airport floodwall. Prior to that, in 2003, an EAW was completed for the floodwall.

3.3 STP PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

No STP projects in the 2022-2028 Preliminary CIP meet the criteria defined in Minnesota Statutes Section 473.614 for preparation of an EAW.

3.4 STP CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

Projects identified at STP in the preliminary 2022-2028 CIP include on-going improvements to the MAC-owned terminal building, numerous pavement reconstruction projects, floodwall repairs, and storm sewer repairs. Edge lighting upgrades to LED and connections to MAC's monitoring and control (IMACS) system are planned. Also, MAC is planning to replace the aircraft Engineered Material Arresting System (EMAS) beds located at each end of Runway 14-32.

It is also envisioned that a Customs and Border Protection facility will be constructed – currently planned for 2024. The project could include an internal build-out/remodel within the existing terminal building or be built as a small stand-alone office structure. In either case, the project will not significantly increase passenger processing capacity, and no EAW would be required. However, as this project takes shape and a scope is fully determined, the need for environmental review will be re-evaluated.

None of the proposed projects listed in the preliminary 2022-2028 CIP meet the threshold in Minnesota Statutes Section 473.614 for an EAW. Although some of the STP projects may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at STP.



St. Paul Downtown Airport

4.0 LAKE ELMO AIRPORT (21D)

Located in the east metro, the Lake Elmo Airport ranks third in MAC airports system for based aircraft. The airport is served by a fixed base operator and an aircraft maintenance provider. A short drive from the St. Paul business district and scenic destinations along the St. Croix River, Lake Elmo Airport is conveniently located for both business and leisure travelers. Lake Elmo Airport has two runways. Runway 14-32 is 2,849 feet long, while Runway 4-22 measures 2,497 feet in length. In late 2022, the new replacement Runway 14-32 is scheduled to open at a length of 3,500 feet. There is no air traffic control tower but there are two non-precision instrument approaches to the airport.

4.1 21D LONG-TERM COMPREHENSIVE PLAN STATUS

In September 2016, the MAC adopted the 2035 LTCP. Like previous plans, the LTCP objectives include improving runway safety in compliance with FAA guidelines, providing appropriate facilities for the aircraft types currently utilizing the airport, and delineating the future footprint of the airfield pavements.

The proposed project, currently in construction, includes construction of a new 3,500-foot primary runway that will be parallel to the existing Runway 14-32. The existing runway will then be decommissioned and become a parallel taxiway. Other airfield modifications will be made for connection to the new runway, along with an extension of crosswind Runway 4-22 to 2,750 feet. Realignment of 30th Street North was also completed as part of the project.



Lake Elmo Airport

4.2 21D ENVIRONMENTAL STUDIES

The projects outlined in the 2035 LTCP required environmental review. A federal Environmental Assessment (EA)/state Environmental Assessment Worksheet (EAW) document was prepared in accordance with the Federal Aviation Administration (FAA) policies and procedures detailed in FAA Order 1050.1F under the National Environmental Policy Act (NEPA). In addition to addressing federal environmental review requirements, the document addresses state requirements under the Minnesota Environmental Policy Act (MEPA). The FAA issued a Finding of No Significant Impact (FONSI) and Record of Decision (ROD) for the project on August 31, 2018, finding the federal EA satisfies NEPA. As the Responsible Government Unit (RGU) for the project under MEPA, the MAC accepted the EAW and adopted the Findings of Fact and Hearing Officers Report at its full Commission meeting in October 2018.

4.3 21D PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

As noted, construction of the Runway 14-32 Relocation/Extension and Associated Improvements project is underway. Projects associated with the Runway 14-32 work are the only ones in the MAC 2022-2028 CIP that meet all three criteria for preparation of a mandatory EAW under Minnesota Statutes Section 473.614. Therefore, only the remaining components of the proposed project are outlined in Table 4-1.

Table 4-1
 Lake Elmo (21D) Projects in the CIP that Require a Mandatory EAW

Project	CIP Year Proposed	EAW Status
Runway 14-32 Replacement	2022	Included in the Lake Elmo Runway 14-32 Relocation/Extension and Associated Projects EA/EAW Completed in 2018

4.4 21D CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

Under Minnesota Statutes Section 473.614, the MAC must examine the cumulative environmental effects of projects at each airport in the proposed CIP, considered collectively. Aside from the project listed in Table 4-1, for which an EA/EAW has been completed, all other Lake Elmo projects listed in the CIP involve pavement replacement or rehabilitation, construction of a cold materials storage building, and connection of lighting circuits to MAC’s monitoring and control system. None of these meet all three criteria for preparation of a mandatory EAW under Minnesota Statutes Section 473.614.

Although some of the Lake Elmo projects may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at Lake Elmo. The minimal impacts identified in the EA/EAW for the road and runway projects will be defined in detail in the permitting process and mitigated as part of the construction projects.



Current 2021 photo showing the Runway 14-32 Relocation/Extension and Associated Improvements construction site.

5.0 AIRLAKE AIRPORT (LVN)

The Airlake Airport has a single runway, at 4,098 feet. Runway 12-30 has a full-length parallel taxiway on the north side as well as a partial parallel taxiway on the south. The airport offers a precision instrument approach to Runway 30 and a non-precision approach to Runway 12. The airport has no air traffic control tower. It is located south of the Twin Cities near Lakeville, Farmington, and Eureka Township, Minnesota.

The Airlake Airport is located near one of Minnesota's largest industrial parks, which continues to expand, making it ideally suited for business-related aviation needs as well as recreational use.

5.1 LVN LONG-TERM COMPREHENSIVE PLAN STATUS

In April 2018, the MAC adopted the Airlake Airport 2035 Long-Term Comprehensive Plan (LTCP). The goals of the plan included better accommodating business aircraft need by maximizing the airfield's operational capabilities and existing property footprint; maintaining or improving the Runway Protection Zone (RPZ) land use compatibility; mitigating existing issues with airspace penetrations to the extent practical; and updating the taxiway layout to reflect current industry best practices and enhance safety.

The Airlake 2035 LTCP proposed completion of the final phase of the south building area alleyways, access road and associated utilities, as well as an extension to Runway 12-30. Paving of associated taxilanes and the south airport entrance road is complete, along with installation of sanitary sewer and water mains, and new utility services to the south building area. Private tenants are already constructing hangars in the new building area.



Airlake Airport

5.2 LVN ENVIRONMENTAL STUDIES

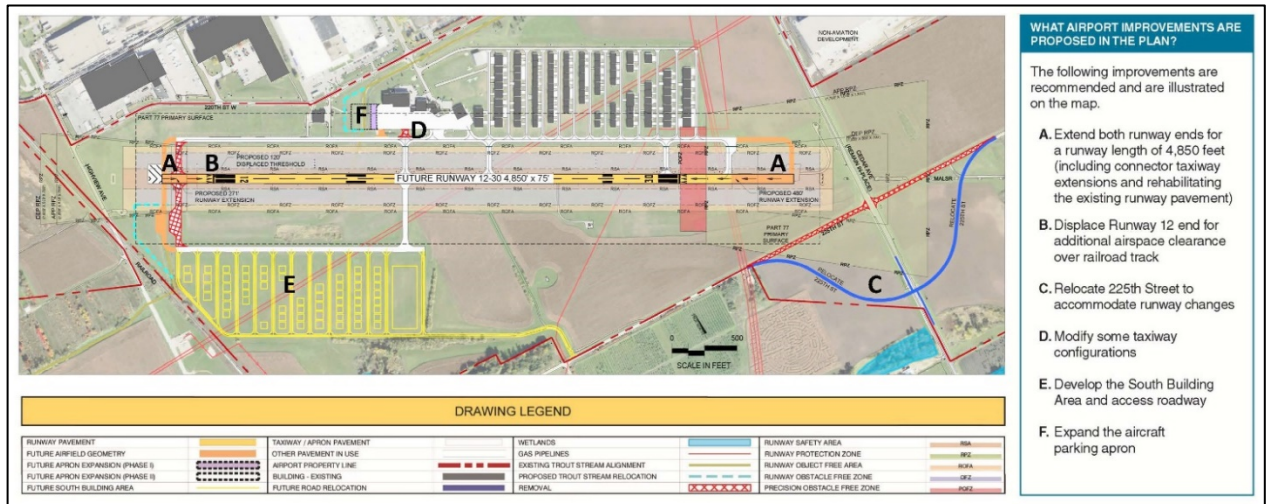
The proposed extension of Runway 12-30 and any rehabilitation needed for the existing portion of the runway pavement is currently programmed for 2023. The MAC is in the process of selecting a consulting firm to assist with the required environmental review. Construction will not begin until all environmental review is completed.

5.3 LVN PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

There is one project currently shown in 2023 that may that meet the criteria defined in Minnesota Statutes Section 473.614. See Table 5-1. While the project meets the requirements for a state EAW, MAC and the FAA will jointly determine the scope of federal environmental review necessary before approving the project. MAC is currently in the process of selecting a consultant to assist with the discussions and environmental review process. The environmental review process will be completed prior to project construction.

Table 5-1
 Airlake Projects in the CIP that Require a Mandatory EAW

Project	CIP Year Proposed	EAW Status
Runway 12-30 Improvements	2023	EAW process anticipated to occur in 2022



Airlake Airport LTCP Preferred Alternative

5.4 LVN CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

There are currently no 2022 projects at Airlake shown in the MAC 2022-2028 Preliminary CIP. Projects in other years include primarily pavement reconstruction, renovations for the MAC-owned maintenance building, LED edge lighting for the airfield, and connection of lighting to MAC’s monitoring and control system.

The proposed projects mentioned in this section do not meet the threshold in Minnesota Statutes Section 473.614 for an EAW. Although some of the projects may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at Airlake Airport.

6.0 FLYING CLOUD AIRPORT (FCM)

The Flying Cloud Airport is situated in the southwestern corner of the Twin Cities metropolitan area, in the community of Eden Prairie. Popular as a home base for corporate business jets and turboprops, Flying Cloud has a strong reputation for serving the needs of busy corporate executives and their flight crews.

Flying Cloud is the busiest general aviation airport in the MAC reliever system. During 2020, this airport logged 124,382 takeoffs and landings; more than any other year in the previous decade.

6.1 FCM LONG-TERM COMPREHENSIVE PLAN STATUS

In October 2010, the MAC adopted the Flying Cloud Airport Long-Term Comprehensive Plan Update. Based on the forecasts and existing airfield configuration, no airside or landside expansions were proposed in the LTCP Update.

In late 2021, MAC is starting the 2040 long-term planning process for Flying Cloud with an anticipated schedule for completion at the end of 2022.



Flying Cloud Airport

6.2 FCM ENVIRONMENTAL STUDIES

The most recent environmental review for FCM was completed for the extension to the south parallel runway from 3,900 feet to 5,000, extension of the north parallel runway from 3,600 feet to 3,900 feet, and construction of a new south building area. No projects since that time have met the criteria for environmental review.

6.3 FCM PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

No projects in the 2022-2028 Preliminary CIP at FCM meet the criteria defined in Minnesota Statutes Section 473.614.

6.4 FCM CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

In the 2022-2028 Preliminary CIP 2022-2028 Preliminary CIP, the projects proposed at Flying Cloud do not include any major improvements, and no projects are specifically listed for 2022. Although some of the projects in the outer years at FCM may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at FCM.



Flying Cloud Airport

7.0 CRYSTAL AIRPORT (MIC)

Named after one of the cities in which it is located, Crystal Airport also overlaps boundaries with Brooklyn Park and Brooklyn Center. The airport had two paved runways and one turf runway. Runway 14L-32R is 3,750 feet long and Runway 6L-24R is 2,500 feet long. Closed during the winter months, the turf Runway 6R-24L is 1,669 feet long. The airport also has a FAA-operated air traffic control tower.

7.1 MIC LONG-TERM COMPREHENSIVE PLAN STATUS

In October 2017, the MAC adopted the 2035 Crystal Airport Long-Term Comprehensive Plan (LTCP). The proposed project includes converting a portion of existing blast pad pavement on each end of Runway 14L-32R to usable runway length, bringing the total length from 3,267 feet to 3,750 feet, as noted above. The parallel Runway 14R-32L has been decommissioned and is being reconstructed as a taxiway. All associated electrical runway and taxiway lighting work will be included along with taxiway reconfiguration to simplify airfield geometry. All construction on these improvements is substantially complete.



Photo of the Crystal Airport Runway 14R-32L and Taxiway E Modifications project construction.

7.2 MIC ENVIRONMENTAL STUDIES

Based on the recommendations in the 2035 LTCP, the MAC completed a federal Environmental Assessment (EA) / state Environmental Assessment Worksheet (EAW) for the proposed improvements. The EA/EAW is a joint document prepared in accordance with the FAA policies and procedures detailed in FAA Order 1050.1F for compliance with NEPA. In addition to addressing federal environmental review requirements, the document addresses state review requirements in compliance with MEPA.

On July 31, 2019, the FAA issued a Finding of No Significant Impact (FONSI) and Record of Decision (ROD) for the proposed Runway 14-32 Modifications project, finding the federal EA satisfies NEPA. As the Responsible Government Unit (RGU) for the project under MEPA, the MAC accepted the EAW and adopted the Findings of Fact and Hearing Officers Report at its full Commission meeting in August 2019.

7.3 MIC PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

There are no projects in the preliminary 2022-2028 CIP at the Crystal Airport that meet the criteria for environmental review as defined in Minnesota Statutes Section 473.614.

7.4 MIC CUMULATIVE POTENTIAL FOR ENVIRONMENTAL EFFECTS

Projects in the preliminary 2022-2028 CIP at the Crystal Airport do not include any major improvements. Projects planned for 2022 include taxiway pavement reconstruction and minor extensions to the existing sanitary sewer and water lines to the north building area for tenant connection. Projects in out years include pavement reconstruction, replacement of MAC-owned underground fuel tanks, obstruction removals and connection of lighting circuits to MAC's monitoring and control systems. Although some of the projects at MIC may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at MIC.



8.0 ANOKA COUNTY–BLAINE AIRPORT (ANE)

Situated in the north metro in the City of Blaine, the Anoka County-Blaine Airport is an 1,800-acre airport that serves the most diverse aircraft mix in the MAC reliever system. Runway 9-27 is 5,000 feet long with an instrument landing system (ILS), and Runway 18-36 is 4,855 feet long. The airport has and multiple hangar areas and the most based aircraft in MAC’s system. The airport has a MAC-owned, non-federal air traffic control tower.

8.1 ANE LONG-TERM COMPREHENSIVE PLAN STATUS

In June 2010, the Commission adopted the Anoka County-Blaine Airport Long-Term Comprehensive Plan Update. Based on the forecasts and existing airfield configuration, the MAC did not propose any airside or landside expansions in the LTCP Update.

The MAC anticipates the next update to the LTCP will be initiated in the next two to three years.

The MAC completed the first phase of a visioning study for the three largest Reliever Airports – St. Paul Downtown, Flying Cloud and Anoka County-Blaine Airport. The study reviewed the airports as a system and focused on obtaining information from airport users to define reasons why airports are selected for use, what facility needs are observed, and where gaps may exist in airport services. MAC has chosen to update individual airport long term plans in lieu of proceeding with a second phase of a visioning study because the two planning efforts would contain too much overlap.



Anoka County-Blaine Airport

8.2 ANE ENVIRONMENTAL STUDIES

Prior to the 2006 extension of Runway 9-27 to 5,000 feet, MAC and the FAA completed a joint environmental review document combining a federal environmental assessment (EA) and a state environmental impact statement (EIS). The EA/EIS included review for the extension of Runway 9-27 and its corresponding taxiway from 4,000 to 5,000 feet, installation of an instrument approach system, construction of two building areas (northwest and east expansion), relocation of Xylite Street, and construction of the National Youth Golf Center.

All of these improvements are complete except for the Xylite Street relocation and the east building area expansion. The Xylite Street Relocation is currently listed in year 2025 in the preliminary 2022-2028 CIP. As a demand-driven project that ultimately supports an expansion of the east hangar area, it is possible the project could continue to be pushed out in the CIP.

8.3 ANE PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

No projects in the 2022-2028 Preliminary CIP at ANE meet the criteria defined in Minnesota Statutes Section 473.614, except for one. As noted above, the Xylite Street Relocation project was included in the environmental review already completed. While this project does not meet the criteria for a mandatory EAW as defined, it was included in the EA/EIS environmental review document as a component of the larger runway and hangar area program for which a Finding of No Significant Impact (FONSI) was issued in 2003.

Table 8-1
 Anoka County-Blaine Projects in the CIP that Require a Mandatory EAW

Project	CIP Year Proposed	EAW
Xylite Street Relocation	2025	Included in the Federal EA/State EIS Document Completed in 2003 for Proposed Improvements at ANE

8.4 ANE CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

Only one project is currently proposed for 2022 for the demolition of a MAC-owned stand-alone hangar structure. Other projects in the Preliminary CIP in the out years include pavement reconstruction, replacement of existing underground fuel tanks, construction of a small equipment and storage building, and airfield lighting improvements. The ANE West Perimeter Road project, currently proposed for 2023, involves the construction of a connector road between hangar areas. It is likely there will be minor wetland impacts associated with this project, for which the appropriate permitting will be completed. If MAC decides to utilize federal funds for the project, the appropriate level of federal environmental review will be completed for the project.

Although some of the projects at ANE may have temporary impacts during construction, the MAC will use mitigation measures during construction to minimize potential adverse effects such as noise, dust, and erosion. The environmental effects of construction are temporary, will be minimized using conventional mitigation measures and best management practices, and do not constitute long-term cumulative potential effects when combined with other projects at ANE.



Corporate Hangar at Anoka County-Blaine Airport

9.0 NEXT STEPS

This report is being made available to the public for a 30-day review and comment period. The comment period will run from October 12, 2021 through November 12, 2021. Comments may be submitted either in writing or as part of the formal Public Hearing.

During the public comment period, comments may be submitted in writing addressed to (please include "MAC 2022-2028 AOEE" in the email or letter header):

Ms. Jenn Felger
Planning and Environment Coordinator
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450
Jenn.felger@mspmac.org

A public hearing for this AOEE is scheduled as part of the regular meeting of the MAC Planning Development and Environment (PD&E) Committee on November 1, 2021 at 10:30 a.m. This committee meeting will be held on the secure side of Minneapolis-St. Paul International Airport's Terminal 1. Be sure to give yourself time to park and enter through security screening prior to the meeting.

Follow these instructions to attend the MAC Public Hearing:

- Park in Hourly Parking at Terminal 1. Please pull a ticket and bring it with you to have it validated at the meeting to avoid parking fees.
- Present a government-issued photo ID (driver's license) to the personnel at the Information Booth on Level T. They will prepare a security pass for you and direct you to the Ticketing Level and Security Checkpoint.
- At the security checkpoint, you will be asked to show your ID and security pass at that time.
- Once through security, proceed into the airport mall area. Once inside the airport mall, look for the staircase/elevator to the left of the entrance to Concourse F near the Stone Arch restaurant.

The board meetings take place at the MSP Airport Conference Center on the Mezzanine Level above the Delta Air Lines Sky Club. Use the stairs or elevator to go up one level. For more information, call 612-726-5555.

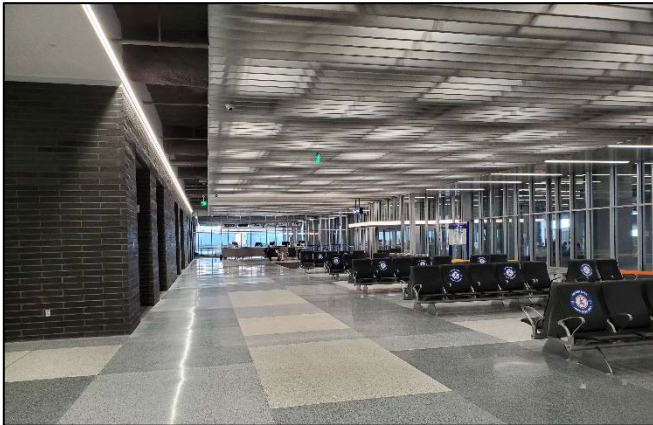
Upon completion of the AOEE process, MAC staff will finalize the 2022-2028 Capital Improvement Program (CIP) and present it to the full Commission for adoption during the month of December 2020. The December PD&E Committee meeting, scheduled for December 6, 2021, 10:30 a.m., will include a hearing officer's report and responses to any comments received during the AOEE public comment period.

10.0 APPENDICES

10.1 APPENDIX A – MAC PRELIMINARY 2022-2028 CIP LISTING

10.2 APPENDIX B – DESCRIPTIONS FOR 2022 PROPOSED PROJECTS

10.3 APPENDIX C – DRAFT DESCRIPTIONS FOR 2023-2028 PROJECTS THAT MEET CRITERIA DEFINED IN MINNESOTA STATUTE SECTION 473.614



Images from Minneapolis-St. Paul International Airport

NOTES	MSP End of Life/Replacement Projects	2022	2023	2024	2025	2026	2027	2028
	10 - Terminal 1							
2	Concourse and Hub Tram Replacement		\$500,000			\$300,000,000	\$300,000,000	
4	LRT Ground Water Drainage Infrastructure Upgrades	\$3,500,000						
4	Passenger Boarding Bridge Replacements	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000
5	Recarpeting Program			\$7,000,000	\$7,000,000	\$7,000,000		
5	TSA Recapitalization	\$22,500,000						
	13 - Energy Management Center							
5	Concourse E and F Bridge Heating and Cooling System Replacement		\$2,100,000	\$2,200,000	\$1,800,000			
7	EMC Boiler and Chiller Replacement Study		\$155,000					
3	GTC Dual-temperature Pump Improvements		\$1,800,000					
3	Heating Pump Upgrades	\$900,000						
3	Variable Air Volume (VAV) Box Replacement	\$935,000	\$935,000	\$935,000	\$935,000			
	21 - Field and Runway							
2	30L Deicing Pad Reconstruction		\$10,000,000		\$10,000,000	\$10,000,000		
5	30L EMAS Replacement					\$19,000,000		
2	Airfield Snow Melter Replacement/Upgrades	\$1,800,000	\$1,800,000	\$1,800,000	\$1,800,000	\$1,800,000	\$2,000,000	\$2,000,000
2	Bituminous Shoulder Reconstruction	\$1,500,000		\$7,500,000	\$7,000,000	\$7,000,000	\$7,000,000	
2	Concourse G Apron Pavement Reconstruction	\$11,000,000	\$7,500,000	\$18,750,000	\$7,500,000		\$7,000,000	
2	Runway 12L-30R and 4-22 Intersection Reconstruction			\$11,000,000				
2	Taxiway A Pavement Reconstruction					\$6,500,000	\$9,500,000	\$8,500,000
2	Taxiway B Pavement Reconstruction	\$6,125,000	\$4,000,000		\$4,000,000		\$4,000,000	
2	Taxiway P Pavement Reconstruction	\$9,000,000						
	26 - Terminal Roads/Landside							
2	Lower Level Roadway Rehabilitation			\$1,100,000				
2	Upper Level Roadway Electrical System Rehabilitation			\$1,000,000				
2	Upper Level Roadway Rehabilitation			\$2,000,000				
2	UPS Loop Pavement Reconstruction			\$1,600,000				
4	Variable Message Signs Replacement, Phase 3			\$1,600,000				
	31 - Parking							
5	Parking Ramp Snow Melter Replacement/Upgrades			\$1,350,000	\$1,350,000			

NOTES:

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7. Consultant fees only for planning, design, or environmental work.
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9. Projects associated with the Airport Foundation art program (an EAW or EIS is not required).
10. Projects involving the demolition of existing buildings (an EAW or EIS is not required).

NOTES	MSP End of Life/Replacement Projects Continued	2022	2023	2024	2025	2026	2027	2028
	36 - Terminal 2							
4	Terminal 2 Pre-conditioned Air (PCA)		\$2,000,000					
5	Terminal 2 Recarpeting Program	\$500,000	\$500,000	\$500,000	\$500,000			
	39 - Public Areas/Roads							
2	East 62nd Street Reconstruction						\$3,500,000	
2	East 70th Street Reconstruction			\$2,300,000				
2	Post Road Reconstruction Project					\$4,500,000		
	56 - Trades/Maintenance Buildings							
6	MSP Liquid Deicer Storage Facility		\$7,300,000					
	70 - General Office/Administration							
3	GO Building Variable Air Volume (VAV) Replacement and Upgrade				\$2,000,000			
	MSP End of Life/Replacement Projects Subtotal	\$61,760,000	\$42,590,000	\$64,635,000	\$47,885,000	\$359,800,000	\$337,000,000	\$14,500,000
	MSP IT Projects							
	10 - Terminal 1							
4	Concourse C and G Digital Directory Replacement			\$200,000				
4	Customs and Border Protection Camera System Upgrade	\$1,800,000	\$850,000					\$1,000,000
4	Intelligent Monitoring and Control Systems (IMACS)	\$1,750,000						
4	MAC Technology Upgrades	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
5	Telecom Room Equipment Continuity (TREC)	\$1,510,000		\$1,510,000				
	63 - Police							
5	Card Access Modifications	\$1,300,000		\$500,000	\$1,000,000			
6	Radio DAS Coverage Deficiency Resolution	\$2,000,000						
	66 - Fire							
5	Fire Alarm System Transition	\$1,400,000	\$1,500,000	\$2,000,000	\$1,200,000	\$1,000,000	\$1,200,000	
	MSP IT Projects Subtotal	\$19,760,000	\$12,350,000	\$14,210,000	\$12,200,000	\$11,000,000	\$11,200,000	\$11,000,000

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10. Projects involving the demolition of existing buildings (an EAW or EIS is not required).

NOTES	MSP Long Term Comprehensive Plan Projects	2022	2023	2024	2025	2026	2027	2028
	10 - Terminal 1							
1	Baggage Claim/Ticket Lobby Operational Improvements	\$42,100,000	\$45,425,000	\$15,000,000				
1	Baggage Handling System	\$42,650,000						
6	Checkpoint Expansion				\$11,000,000			
1	D-Pod Outbound Baggage System						\$5,000,000	
1	Expand and Remodel International Arrivals Facility				\$5,000,000			
7	MSP Airport Layout Plan	\$800,000			\$1,000,000			
7	MSP Long Term Plan	\$750,000						
5	Unstaffed Exit Lanes				\$2,500,000			
	21 - Field and Runway							
1	Runway 30R Parallel Taxiway				\$12,000,000	\$10,000,000	\$14,000,000	
	36 - Terminal 2							
1	Terminal 2 North Gate Expansion			\$195,000,000				
	MSP Long Term Comprehensive Plan Projects Subtotal	\$86,300,000	\$45,425,000	\$210,000,000	\$31,500,000	\$10,000,000	\$19,000,000	\$0

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NOTES	MSP Maintenance/Facility Upgrade Projects	2022	2023	2024	2025	2026	2027	2028
	10 - Terminal 1							
5	ADO Office Expansion			\$4,000,000				
9	Art Display Areas	\$150,000	\$200,000	\$250,000				
9	Arts Master Plan	\$1,050,000	\$1,680,000	\$830,000	\$580,000	\$500,000	\$600,000	\$600,000
4	C/G Connector Lighting Improvements			\$1,000,000				
4	Concourse A Heating System Upgrade			\$4,900,000				
4	Concourse G Moving Walks				\$6,000,000			
5	Delivery Node Redevelopment	\$500,000	\$2,700,000	\$2,300,000	\$2,700,000	\$7,800,000	\$4,320,000	\$5,000,000
5	F/G Connector & Skyclub Repairs and Improvements				\$1,100,000			
2	Folded Plate Repairs	\$8,900,000		\$8,900,000		\$8,900,000		\$8,900,000
4	Lavatory Building Overhead Door Upgrades			\$200,000				
4	Lighting Infrastructure Technology and Equipment (LITE)		\$2,300,000		\$2,550,000		\$2,550,000	
2	Red/Blue Parking Levels 2 & 3 Internal Ramp Modifications				\$8,000,000			
5	Restroom Upgrade Program		\$2,050,000	\$2,050,000	\$2,050,000	\$2,050,000	\$2,050,000	\$2,050,000
4	Steam System Upgrade Program			\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000
4	Terminal 1 Curbside Canopy Repairs and Lighting Upgrades			\$350,000				
6	Terminal 1 Employee Breakroom		\$350,000					
5	Terminal 1 Mechanical Room C-1043		\$9,800,000					
5	Terminal 1 Public Walk Aisle Terrazzo Floor Installation				\$4,400,000	\$4,400,000	\$4,500,000	\$4,500,000
2	Terminal 1 Tug Door Replacement	\$555,000						
2	Terminal 1 Tug Drive Heater Replacement		\$1,500,000	\$2,000,000				
5	Terminal 1 Tug Drive Waterproofing			\$2,900,000	\$2,900,000	\$2,900,000	\$2,900,000	
4	Tug Door 9 Improvements			\$375,000				
4	Way-Finding Sign Backlighting Replacement	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000
	13 - Energy Management Center							
4	Chiller Plant Optimization			\$3,000,000				
4	Concourse B Heating System Upgrades	\$4,900,000						
6	EMC Roof Replacement and Break Room Remodel	\$8,300,000						
4	Energy Savings Program		\$2,000,000		\$2,000,000		\$2,000,000	
4	Indoor Air Quality Monitoring System	\$2,250,000						
4	MAC Automation Infrastructure Program		\$2,300,000	\$2,300,000	\$2,300,000	\$2,400,000	\$2,400,000	\$2,400,000
6	Material Storage Building - Boiler Room Addition		\$1,830,000					
4	PowerNet Server Decommissioning and Electrical Meter Replacement	\$900,000						

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NOTES	MSP Maintenance/Facility Upgrade Projects, continued	2022	2023	2024	2025	2026	2027	2028
	13 – Energy Management Center Continued							
3	Steam Trap Monitoring System					\$3,000,000		
4	Terminal 2 Penthouse Chiller Plant Infrastructure Upgrades			\$5,500,000				
4	Victaulic Piping Replacement			\$2,000,000		\$2,000,000		
	21 – Field and Runway							
4	Apron Lighting LED Upgrade			\$5,000,000	\$1,000,000	\$3,000,000	\$1,000,000	
4	Localizer Array Upgrade		\$2,000,000					
4	Runway LED Lighting Upgrade		\$1,500,000	\$1,700,000	\$2,700,000			
4	Taxiways B & Q Islands	\$700,000						
4	Taxiway T Centerline Lights	\$1,000,000						
2	Terminal 2 Glycol Lift Station/Forcemain			\$1,100,000				
4	Tunnel Lighting LED Upgrade			\$1,100,000	\$1,000,000	\$900,000	\$400,000	\$1,200,000
	31 – Parking							
2	Orange Ramp Metal Panel Replacement	\$500,000						
3	Parking Guidance System				\$6,500,000			
2	Parking Ramp Railing Refinishing	\$1,000,000		\$1,000,000		\$1,000,000		\$1,000,000
	36 - Terminal 2							
6	Terminal 2 Employee Breakroom	\$350,000						
2	Terminal 2 Gate Area Passenger Amenities				\$1,000,000			
2	Terminal 2 Gate Desk/Podium Replacement						\$450,000	
6	Terminal 2 Ground Transportation Waiting Area Expansion				\$400,000			
2	Terminal 2 MUFIDS/EVIDS Millwork Upgrades				\$350,000			
6	Terminal 2 Rentable Space Build-out	\$700,000						
5	Terminal 2 Skyway to LRT Flooring Installation				\$800,000			
5	Terminal Door Locks and Emergency Egress Upgrades			\$400,000				

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NOTES	MSP Maintenance/Facility Upgrade Projects, continued	2022	2023	2024	2025	2026	2027	2028
	39 - Public Areas/Roads							
3	34th Avenue Traffic Control Improvements			\$200,000				
2	Diverging Diamond Intersection Rehabilitation						\$340,000	
2	Terminal 1 Ground Transportation Modifications		\$750,000					
2	Terminal 1 Inbound Roadway Median Improvements					\$3,000,000		
4	Tunnel Fan Replacement			\$4,700,000	\$6,800,000			
	46 - Hangars and Other Buildings							
6	MAC Storage Facility		\$10,000,000					
6	Safety and Security Center			\$100,600,000				
	56 - Trades/Maintenance Buildings							
6	South Field Maintenance Building Wash Bay			\$3,500,000				
	63 - Police							
5	Perimeter Fence Intrusion Detection System					\$1,000,000		
5	Perimeter Gate Security Improvements	\$8,200,000		\$6,500,000	\$6,500,000			
5	Public Safety Modifications		\$1,000,000		\$1,000,000			
5	RAC Terminal 1 QTA Security Enhancements	\$1,350,000						
6	Terminal 1 APD Locker Room Expansion	\$1,200,000						
	66 - Fire							
5	Campus Fire Protection	\$2,800,000		\$2,400,000		\$3,400,000		1,900,000
	70 - General Office/Administration							
5	GO Building Improvements	\$500,000						
	76 - Environment							
4	Glycol Sewer & Storm Sewer Inspection/Rehabilitation				\$1,400,000	\$500,000		
4	Ground Service Equipment (GSE) Electrical Charging Stations			\$3,000,000				
4	Lift Station at Ponds 1 and 2		\$1,400,000					
4	Runway 12R-30L Glycol Forcemain Environmental Improvements		\$2,000,000					
2	Terminal 2 Remote Ramp Lot/Drainage Improvements			\$2,000,000				
	MSP Maintenance/Facility Upgrade Projects Subtotal	\$47,005,000	\$46,560,000	\$178,855,000	\$70,830,000	\$45,550,000	\$26,310,000	\$30,350,000
	MSP Noise Mitigation Consent Decree Amendment							
8	MSP Noise Mitigation Consent Decree Amendment	\$500,000	\$500,000	\$1,000,000				

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NOTES	MSP Ongoing Maintenance Programs	2022	2023	2024	2025	2026	2027	2028
	10 - Terminal 1							
4	Air Handling Unit Replacement	\$6,500,000	\$6,500,000	\$6,500,000	\$6,500,000	\$6,500,000	\$3,000,000	\$3,000,000
4	Baggage System Upgrades	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
4	Concourse G Rehabilitation	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	
4	Conveyance System Upgrades	\$3,000,000			\$3,000,000			
4	Electrical Infrastructure Program (EIP)	\$2,000,000	\$2,500,000	\$2,500,000		\$2,500,000	\$2,500,000	\$2,500,000
4	Electrical Substation Replacement	\$2,500,000	\$2,500,000	\$2,500,000	\$1,300,000	\$1,300,000		
4	Emergency Power Upgrades		\$6,600,000	\$2,500,000		\$2,500,000	\$2,500,000	\$2,500,000
4	Plumbing Infrastructure Upgrade Program	\$600,000	\$600,000	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000
5	Terminal Building Remediation Program	\$2,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
4	Terminal Miscellaneous Modifications	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$3,000,000
	13 - Energy Management Center							
4	EMC Life Safety Infrastructure Program			\$1,900,000	\$1,900,000	\$1,900,000	\$1,900,000	\$1,900,000
4	EMC Plant Upgrades (T1 & T2)	\$2,000,000	\$1,800,000			\$1,500,000		
	21 - Field and Runway							
2	Airside Electrical Construction	\$2,000,000	\$2,000,000	\$2,500,000	\$4,500,000			
2	Airside Roadway Pavement Restoration	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000
2	Glycol Tank Repairs	\$800,000						
2	Miscellaneous Airfield Construction	\$3,500,000	\$1,500,000	\$1,500,000				
2	Pavement Joint Sealing/Repair	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
	26 - Terminal Roads/Landside							
2	Tunnel Approaches Reconstruction		\$2,370,000					
2	Tunnel/Bridge Inspections	\$100,000	\$100,000	\$120,000	\$120,000	\$120,000	\$120,000	\$150,000
5	Tunnel-Bridge Miscellaneous Modifications				\$1,000,000		\$1,000,000	
	31 - Parking							
2	Parking Structure Rehabilitation	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000

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NOTES	MSP Ongoing Maintenance Programs, continued	2022	2023	2024	2025	2026	2027	2028
	39 - Public Areas/Roads							
2	34th Ave Sanitary Sewer Replacement					\$2,200,000		
2	34th Avenue Bus Area Reconstruction			\$700,000				
2	34th Avenue Reconstruction					\$7,000,000	\$7,000,000	
2	Concrete Joint Repair	\$400,000	\$900,000	\$1,000,000	\$300,000	\$400,000	\$1,200,000	\$2,900,000
2	Landside Pavement Rehabilitation	\$500,000	\$500,000	\$500,000	\$500,000		\$500,000	\$600,000
2	Landside Utility Rehabilitation	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000		
2	Roadway Fixture Refurbishment	\$150,000	\$150,000	\$150,000				
	46 - Hangars and Other Buildings							
5	Campus Building Rehabilitation Program	\$500,000	\$1,500,000	\$1,500,000	\$1,500,000		\$1,500,000	
2	Campus Parking Lot Reconstructions		\$650,000	\$650,000				\$700,000
10	End of Life Campus Building Demolition		\$400,000	\$400,000		\$3,300,000		
2	MSP Campus Building Roof Replacements	\$1,100,000	\$9,600,000	\$18,000,000	\$2,300,000	\$10,200,000	\$1,000,000	\$1,000,000
	56 - Trades/Maintenance Buildings							
4	Sump Pump Controls			\$4,000,000	\$4,000,000	\$3,500,000		
	MSP Ongoing Maintenance Programs Subtotal	\$40,400,000	\$56,920,000	\$64,370,000	\$44,370,000	\$60,370,000	\$38,920,000	\$27,450,000
	MSP Tenant Projects							
	10 - Terminal 1							
2	Concessions Upgrades/Revenue Development	\$100,000	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
2	Delta Re-booking Station		\$200,000					
6	Elevator and Concourse Improvements - Relocated United Club		\$200,000					\$1,000,000
2	Terminal 1 FIS Gate Common Use Additions	\$1,000,000	\$1,000,000					
4	Terminal 1 Pre-Conditioned Air (PCA)	\$2,000,000		\$2,500,000				
	36 - Terminal 2							
6	Terminal 2 Concessions Development		\$2,800,000					
	46 - Hangars and Other Buildings							
4	Delta Building B Tunnel Water Mitigation	\$1,000,000						
7, 6	Ground Service Equipment (GSE) Maintenance Facility		\$200,000					\$2,000,000
	MSP Tenant Projects Subtotal	\$4,100,000	\$4,500,000	\$2,700,000	\$200,000	\$200,000	\$200,000	\$3,200,000

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NOTES	Reliever Airports Long Term Comprehensive Plan (LTCP) Projects	2022	2023	2024	2025	2026	2027	2028
	81 - St. Paul							
7	STP Airport Layout Plan		\$400,000					
7	STP Long Term Comprehensive Plan		\$400,000					
	82 - Lake Elmo							
7	21D Long Term Comp Plan				\$100,000			
1	21D Runway 14-32 Replacement	\$4,000,000						
	83 - Airlake							
7	LVN Long Term Comp Plan				\$100,000			
1	LVN Runway 12-30 Improvements		\$3,500,000					
	84 - Flying Cloud							
7	FCM Airport Layout Plan	\$300,000						
7	FCM Long Term Comprehensive Plan	\$250,000						
10	FCM Purchase and Demolition of Hangars		\$1,300,000					
6	FCM South Building Area Utilities					\$600,000		
	85 - Crystal							
7	MIC Long Term Comp Plan				\$100,000			
	86 - Anoka County - Blaine							
7	ANE Airport Layout Plan	\$400,000						
6	ANE Building Area Development - Xylite St. Relocation				\$1,000,000			
7	ANE Long Term Comprehensive Plan Update			\$400,000				
	Reliever Airports LTCP Projects Subtotal	\$4,950,000	\$5,600,000	\$400,000	\$1,300,000	\$600,000	\$0	\$0

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects	2022	2023	2024	2025	2026	2027	2028
	80 - Reliever Airports							
4	Relievers Building Miscellaneous Modifications	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
5	Relievers Obstruction Removal		\$300,000		\$300,000		\$300,000	
2	Relievers Pavement Rehabilitation Miscellaneous Modifications	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
	81 - St. Paul							
6	STP Airport Perimeter Roads				\$500,000			
2	STP Airport Road and Eaton Street Retaining Wall							\$700,000
6	STP Cold Equipment Storage Building					\$750,000		
6	STP Customs and Border Protection General Aviation Facility			\$2,000,000				
2	STP Floodwall Inspection and Repairs		\$200,000					
3	STP Intelligent Monitoring and Control System (IMACS) Expansion			\$2,250,000				
4	STP LED Edge Lighting Upgrades		\$500,000	\$1,500,000				
5	STP MAC Building Improvements		\$200,000		\$200,000		\$200,000	
2	STP Pavement Rehabilitation-Taxilanes/Tower Road					\$500,000		
2	STP Runway 13-31 Pavement Reconstruction				\$5,000,000			
4	STP Runway 14-32 Lighting Replacement	\$700,000						
5	STP Runway 14-32 EMAS Replacement							\$10,000,000
2	STP Runway 14-32 Reconstruction				\$5,000,000	\$5,000,000		
2	STP Storm Sewer Improvements			\$1,500,000				
2	STP Taxiway B Rehabilitation				\$800,000			
2	STP Taxiway Lima Rehabilitation						\$200,000	
5	STP Vehicle Gate Replacement		\$500,000					
	82 - Lake Elmo							
3	21D Intelligent Monitoring and Control System (IMACS)				\$1,150,000			
6	21D Materials Storage Building			\$500,000				
2	21D North Building Area Pavement Rehabilitation			\$900,000				
2	21D North Service Roads Rehabilitation				\$500,000			
2	21D Northside Taxiway Reconstruction				\$600,000			
2	21D Runway 04-22 Pavement Rehabilitation			\$4,000,000				

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects	2022	2023	2024	2025	2026	2027	2028
	83 – Airlake							
2	LVN Existing Runway 12-30 Reconstruction		\$3,500,000					
3	LVN Intelligent Monitoring and Control System (IMACS)					\$1,150,000		
4	LVN LED Edge Lighting		\$200,000					
5	LVN Maintenance Building Renovation				\$750,000			
2	LVN North Service Road Pavement Rehabilitation						\$400,000	
2	LVN North Taxilanes Pavement Rehabilitation						\$1,000,000	
6	LVN South Building Area Utilities and Taxilanes			\$1,300,000				
	84 – Flying Cloud							
2	FCM Airport Access Roads and Tango Lane					\$500,000		
2	FCM Airport Access Roads Pavement Rehabilitation						\$500,000	\$500,000
6	FCM Electrical Vault Modifications					\$500,000		
5	FCM Gate Replacements				\$500,000			
3	FCM Intelligent Monitoring and Control System (IMACS)			\$2,250,000				
5	FCM MAC Building Improvements					\$600,000		
2	FCM Runway 10R-28L Pavement Rehabilitation			\$2,450,000				
2	FCM Underground Fuel Storage Tank Replacement			\$400,000				

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects, continued	2022	2023	2024	2025	2026	2027	2028
	85 - Crystal							
4	MIC Existing Hangar Revitalization					\$800,000		
3	MIC Intelligent Monitoring and Control System (IMACS)					\$1,150,000		
3	MIC LED Edge Lighting Upgrade		\$400,000					
6	MIC North Building Area Sewer/Water for Future Hangars	\$200,000						
2	MIC Runway 6L-24R Pavement Rehabilitation						\$2,000,000	
2	MIC Service Roads		\$1,200,000					
2	MIC Taxiways Pavement Rehabilitation	\$550,000	\$750,000		\$600,000		\$600,000	
2	MIC Underground Fuel Storage Tank Replacement			\$400,000				
	86 - Anoka County - Blaine							
10	ANE Building Demolition	\$200,000						
4	ANE Electrical Vault Improvements				\$750,000			
6	ANE Equipment Storage and Maintenance Building		\$700,000					
5	ANE Gate Controller Upgrades					\$400,000		
3	ANE Intelligent Monitoring and Control System (IMACS)				\$1,150,000			
2	ANE Pavement Rehabilitation - Taxiway A and Edge Lights		\$1,800,000					
2	ANE Runway 18-36 Pavement Rehabilitation						\$2,500,000	
2	ANE Underground Fuel Storage Tank Replacement			\$400,000				
6	ANE West Perimeter Road			\$1,500,000				
	Reliever Airports Maintenance/Facility Upgrade Projects Subtotal	\$2,350,000	\$10,950,000	\$22,050,000	\$18,500,000	\$12,050,000	\$18,400,000	\$1,900,000
	MSP Subtotal	\$259,825,000	\$208,845,000	\$535,770,000	\$206,985,000	\$486,920,000	\$432,630,000	\$86,500,000
	Reliever Subtotal	\$7,300,000	\$16,550,000	\$22,450,000	\$19,800,000	\$12,650,000	\$18,400,000	\$1,900,000
	Total	\$267,125,000	\$225,395,000	\$558,220,000	\$226,785,000	\$499,570,000	\$451,030,000	\$88,400,000

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2022 Capital Improvement Program Narratives

MSP END OF LIFE/REPLACEMENT PROJECTS

10 – Terminal 1

LRT Ground Water Drainage Infrastructure Upgrades **\$3,500,000**

This project will replace the piping in LRT Station platform that drains ground water in the interstitial space above the Terminal 1 LRT station ceiling. Over time the piping has become filled with mineral deposits and is completely blocked, rendering the drains in the interstitial space unusable. In addition to replacing the piping, this project will provide an automated bulk chemical feed system with piping routed in the interstitial space to each floor drain to prevent the new drainage piping from plugging up with mineral deposits. The project will also waterproof the flooring above the LRT electrical rooms to prevent any further damage from water entering the electrical rooms below.

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

This project provides for the replacement of jet bridges at Terminal 1. 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.

TSA Recapitalization **\$22,500,000**

In 2005 the Commission approved construction of the West Checked Baggage Inspection System (CBIS), which included a TSA contribution of seven CTX devices, supporting technologies and equipment, and staff. Subsequently, the CTX devices have begun to approach end-of-life status based on current required maintenance cost, as determined by the TSA. The TSA has offered a 100% funded (no MAC cost) "Other Transaction Agreement" (OTA) for design and construction services for device replacement and other required upgrades to accommodate the new technology. This project will provide for the design and installation of TSA furnished devices and other required equipment at no cost to the MAC.

13 – Energy Management Center

Heating Pump Upgrades **\$900,000**

Elastomeric fittings have a life expectancy of 15-20 years. The proposed project includes removal and replacement of over 100 fittings of this type that are at or past the end of their useful life. The project would replace the fittings with piping where possible and steel braided fittings in other locations. When these pipes and fittings fail it is typically a small pin hole leak versus a major failure, like the one that occurred in July 2018.

Variable Air Volume (VAV) Box Replacement **\$935,000**

This program will replace Variable Air Volume (VAV) boxes throughout Terminal 1 with more efficient equipment connected to the IMACS system and located for maintenance accessibility.

21 – Field and Runway

Airfield Snow Melter Replacement/Upgrades **\$1,800,000**

This project will replace, modify and/or upgrade snow melters on the airfield that are beyond their useful life.

Bituminous Shoulder Reconstruction **\$1,500,000**

This project provides for the reconstruction of full depth bituminous shoulder at the end of Runway 30R from Taxiway P1 to Taxiway P3. Work will include removals, crushed aggregate base, bituminous pavement, pavement marking, and electrical construction.

Concourse G Apron Pavement Reconstruction **\$11,000,000**

This project will reconstruct a portion of the apron area adjacent to Concourse G. Work will include removals, excavation, granular material, crushed aggregate base, concrete pavement, fuel pits, and pavement marking.

Taxiway B Pavement Reconstruction **\$6,125,000**

This project will reconstruct a portion of Taxiway B. Work will include removals, excavation, granular material, crushed aggregate base, concrete pavement, bituminous shoulders, pavement marking, and taxiway centerline lights.

Taxiway P Pavement Reconstruction **\$9,000,000**

This project provides for the reconstruction of concrete pavement along Taxiway P between Taxiway M and Taxiway P10 and from Taxiway P1 to Taxiway P3. Work will include removals, concrete pavement, pavement markings and electrical construction.

36 – Terminal 2

Terminal 2 Recarpeting Program **\$500,000**

This multi-year program will replace end of life carpeting throughout Terminal 2.

MSP IT PROJECTS

10 – Terminal 1

Customs and Border Protection Camera System Upgrade **\$1,800,000**

The Customs and Border Protection's security camera system has reached the end of its functional and repairable life. The agency requires a standalone camera system rather than one integrated with the MAC IVISN system. The 2022 project includes audio recording in interview rooms and processing podiums at Terminal 1, exterior gate camera coverage, FIS corridor, and main terminal G Concourse seating areas, as well as the entirety of Terminal 2's processing FIS, baggage, corridors, exterior gates. Future projects will complete gaps in coverage, additional cameras to support CBP operational needs, and life cycle upgrade of the system.

Intelligent Monitoring and Control Systems (IMACS) **\$1,750,000**

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.

MAC Technology Upgrades **\$10,000,000**

Each year, there are several 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 Fiber Optic Cable Upgrades, 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 2022.

Telecommunications Room Equipment Continuity (TREC) **\$1,510,000**

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.

63 – Police

Card Access Modifications **\$1,300,000**

This is a multi-year program to refresh the inventory of card access security readers as they get to end of life, add outdoor biometric readers, add mobile card readers, add other readers as needed throughout the campus, and align card access control with other surveillance technology including IVISN.

Radio DAS Coverage Deficiency Resolution **\$2,000,000**

This project will continue past efforts to improve the public safety radio signal coverage on the MSP campus by expanding the Distributed Antenna System (DAS).

66 – Fire

Fire Alarm System Transition **\$1,400,000**

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 LONG TERM COMPREHENSIVE PLAN PROJECTS

10 – Terminal 1

Baggage Claim/Ticket Lobby Operational Improvements **\$42,100,000**

This is continuation of a program that will provide the level of service requirements for short- and medium-term growth of the Origin & Destination (O&D) passengers, addressing issues of congestion and functionality in the Terminal 1 Arrivals and Departures areas. This program will complete the expansion of the east terminal façade, including walkways that meet required codes, public seating areas, curtain wall replacement, improved lighting and sight lines, east mezzanine removal/reduction, structural enhancements, improved vestibules, and curbside. In the Departures Hall this program will increase the depth of the check-in area and include airline check-in facilities, ticket offices, and TSA space. The Center Mezzanine will be expanded with a cantilevered corridor, allowing security observation, and facilitating future remodeling. On the Arrivals Level, baggage claim device capacity will be increased.

Baggage Handling System **\$42,650,000**

This project includes baggage handling system (BHS) work associated with the north half of Terminal 1 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.

MSP Airport Layout Plan **\$800,000**

This project will prepare a new Airport Layout Plan (ALP) and Exhibit A Property Map using updated AGIS survey data.

MSP Long Term Plan **\$750,000**

The MSP 2030 Long Term Comprehensive Plan (LTCP), previously completed in April 2010, was scheduled to be updated in 2020. While work that had already started with forecasting and gap analyses was paused early in 2020, efforts to continue work on the LTCP document started later in 2021, will continue in 2022.

MSP MAINTENANCE/FACILITY UPGRADE PROJECTS

10 – Terminal 1

Art Display Areas **\$150,000**

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.

Arts Master Plan **\$1,050,000**

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

Delivery Node Redevelopment **\$500,000**

MAC's existing node delivery and storage system requires long-term improvements at Terminal 2, and Terminal 1 (Concourses A, C, E, F, and G) to provide for safe and efficient delivery, by the logistics company, to MAC and airport tenants. This program will improve or replace existing nodes with more centralized locations that should include loading docks, elevators where needed, adjacent storage, trash and recycling, etc. The existing main dock at Terminal 1, replaced by the MAC Receiving and Distribution Center, will also be studied to find highest use, including the possibility of D-Street becoming SIDA access. This phase will study needs and opportunities to refine the budgets for future construction phases.

Folded Plate Repairs **\$8,900,000**

This is the first of four phases to repair and replace the roof assembly on the folded plate roof at Terminal 1.

Terminal 1 Tug Door Replacement **\$555,000**

This project includes the removal and replacement of high-speed rolling doors at Terminal 1-Lindbergh in the Main Tug Drive Area and in Concourse D. Included with the door replacement is the addition of new door controls, sensors, and ground loops. Also included in this project is the installation of new bollards, guardrails, speedbumps, and miscellaneous signage. Several existing high-speed rolling doors will be connected to IMACS monitoring as part of this work.

Way-Finding Sign Backlighting Replacement **\$1,200,000**

Wayfinding is a critical customer service piece of our passenger's experience at MSP. Based on multiple data sources including comment cards, passenger surveys, and staff experiences we know that as a passenger and visitor finding their way around the airport is critical to travel experience success. Helpful wayfinding reduces stress on the passenger and enhances our one journey goal and being the most accessible airport.

Existing wayfinding signs are outdated, provide information no longer relevant, or are no longer illuminated. This program replaces the failed cold-cathode illumination with LED backlit signs as it has not been practical or cost effective to repair them. This program updates sign information, locations, and provide new illuminated signs and/or digital signs where needed at Terminal 1 and Terminal 2 and supports repair that exceeds routine maintenance budgets.

13 – Energy Management Center

Concourse B Heating System Upgrades \$4,900,000

This project will upgrade Concourse B's fin tube radiation and variable air volume boxes as they are inefficient, expensive to operate and at the end of their expected life.

EMC Roof Replacement and Break Room Remodel \$8,300,000

This project will upgrade and rebuild portions of the EMC including replacing the entire roof, replacing narrow curtain wall system at the north exit, and building an addition to house new locker room facilities and a new workshop.

Indoor Air Quality Monitoring System \$2,250,000

This project continues efforts begun in 2021 to add CO2 and NO2 sensors where required and tie new and existing sensors to the IMACS system for remote monitoring and automatic safety ventilation. It will provide the Energy Management Center with advanced modular Indoor Air Quality sensors to install temporarily at any location with IMACS connectivity. The project will also upgrade controls wiring for the post fire smoke evacuation systems.

PowerNet Server Decommissioning and Electrical Meter Replacement \$900,000

This project will replace an end-of-life server's operating system and the 13 Electrical Power Quality Meters it supports around campus. These meters assist the MAC with billing, troubleshooting, planning and the day-to-day operation of the MSP Electrical System.

21 – Field and Runway

Taxiways B and Q Islands \$700,000

This project will construct taxiway islands created by Taxiways A and B, C and D, and P and Q.

Taxiway T Centerline Lights \$1,000,000

This project provides for the construction of taxiway centerline lighting systems for Taxiway T through the infield apron between the connectors from Taxiway M and Taxiway Y. Work includes installation of taxiway centerline lights and conductors, and modifications at the ALEC North building.

31 – Parking

Orange Ramp Metal Panel Replacement \$500,000

This project will provide a permanent installation to replace the temporary repair completed immediately following damage done by a high wind event in December 2017.

Parking Ramp Railing Refinishing \$1,000,000

This multi-year project will address the parking ramp metal railings that have weathered and degraded over time. The paint has chipped and peeled away, which caused the exposed metal rail to rust and corrode. If not repaired, the degraded metal railings could become at risk for detachment. The rust has stained the concrete walls and concrete slabs creating an unsightly appearance for airport customers and resulting in concrete repair work in the surrounding areas.

36 – Terminal 2

Terminal 2 Employee Breakroom \$350,000

This project will provide an 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.

Terminal 2 Rentable Space Build-out **\$700,000**
This project will build out previously vacant and unfinished rentable spaces in the terminal to support additional airline accommodations as well as existing tenant growth.

63 – Police
Perimeter Gate Security Improvements **\$8,200,000**
This project provides for the reconstruction of Gate 269 with a full crash beam gate, updated electrical controls, and a new guard booth.

RAC Terminal 1 QTA Security Enhancements **\$1,350,000**
This project provides for construction of additional security enhancements at the Terminal 1 RAC QTA on the ground level of the Red and Blue Parking Ramps. Improvements include security doors in fence line, slide gates on spine road, additional perimeter fencing, improvements to emergency egress routes, additional security cameras, and a crash/security gate located on the southwest corner of the Red Ramp.

Terminal 1 APD Locker Room Expansion **\$1,200,000**
This project will reconfigure spaces in the Airport Police Department administration space to expand the locker rooms, consolidating those facilities that have been distributed along the mezzanine hallway in found spaces as the staff count grew.

66 – Fire
Campus Fire Protection **\$2,800,000**
This program addresses deficiencies in water-based fire protection systems and firefighting water supplies. It will provide for needed compliance with the MN State Fire and Building Codes, the MAC Design and Construction Standards. It will ensure continued capability for the Airport Fire Department to respond to fire emergencies, and to fight fires and mitigate hazards effectively and efficiently. In 2022, the project scope will address issues both in the terminals and throughout the MSP campus.

70 – General Office/Administration
GO 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 experienced a number of window and building issues that need to be corrected including window sealing and replacements, curtain wall sealing, roof repairs, and valve replacements. This program will also address replacement of end-of-life finishes as required.

MSP NOISE MITIGATION PROJECTS

Noise Mitigation Consent Decree Amendment **\$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 ONGOING MAINTENANCE PROJECTS

10 – Terminal 1

Air Handling Unit Replacement \$6,500,000

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.

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.

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.

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.

Electrical Infrastructure Program (EIP) \$2,000,000

There are 53 electrical substations that serve the Terminal 1 complex. It is imperative that these substations be routinely inspected, cleaned, and upgraded to ensure their continued performance.

Electrical Substation Replacement \$2,500,000

This is a multi-year program to replace electrical substations which are at or very near end of life. This program will also improve redundancy.

Plumbing Infrastructure Upgrades \$600,000

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 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 2021 project is to continue the replacement of aging plumbing systems.

Terminal Building Remediation Program **\$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.

Terminal Miscellaneous Modifications **\$2,500,000**

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 2022.

13 – Energy Management Center

EMC Plant Upgrades (T1 & T2) **\$2,000,000**

This multi-year program provides upgrades to the MAC's Energy Management Center (EMC) Boiler and Chiller Plants at both Terminal 1 and Terminal 2. 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.

21 – Field and Runway

Airside Electrical Construction **\$2,000,000**

This program provides for the removal and replacement of airfield lighting and signage with LED technology, and lighting control upgrades.

Airside Roadway Pavement Restoration **\$1,200,000**

This is an ongoing program to rehabilitate roadways on the airfield 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 pavement condition index report as well as an inspection of the pavement will be completed to determine the areas most in need of repair on an annual basis.

Glycol Tank Repairs **\$800,000**

This project provides for repair of leaking construction joints and cracks in concrete walls and floors of the glycol tanks located at the MSP Glycol Management Facility. The 2022 project will include liner repairs to all three tanks as well as regrading and restoration of the turf area west of the tanks.

Miscellaneous Airfield Construction **\$3,500,000**

This program supports Part 139 Airport Certification through grading and drainage improvements within runway safety areas, airfield pavement marking modifications, and other miscellaneous airside projects that are too small to accomplish independently or arise unexpectedly.

Pavement Joint Sealing/Repair **\$800,000**

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.

26 – Terminal Roads/Landside

Tunnel/Bridge Inspections \$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.

31 – Parking

Parking Structure Rehabilitation \$3,000,000

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.

39 – Public Areas/Roads

Concrete Joint Repair \$400,000

This project is to complete landside pavement joint repair on MSP campus roadways as a preventative maintenance activity to prolong the existing pavement from reconstruction.

Landside Pavement Rehabilitation \$500,000

This is an ongoing program of preventative maintenance activities such as crack sealing, surface treatments, and resurfacing on roadways located outside of the Air Operations Area (AOA). This program effectively slows deterioration rates, extends service life and delays need for total reconstruction of bituminous and concrete pavements. Inspection of pavements and appurtenances determines what areas are to be prioritized for rehabilitation under each year's project.

Landside Utility Rehabilitation \$750,000

Each year there are numerous landside utility projects that are beyond the resources of MAC's staff and operating budget to accomplish. These projects are prioritized annually and completed with either a series of contracts or purchase orders. Electric power, sanitary sewer, storm sewer and watermain improvements will be addressed with this program. Also, a study will be conducted as part of the first year's project to identify future potential projects. The study will be updated annually reflect current priorities.

Roadway Fixture Refurbishment \$150,000

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

46 – Hangars and Other Buildings

Campus Building Rehab Program \$500,000

Continual maintenance of MAC non-terminal buildings is imperative in providing a stable infrastructure and meeting the MAC's sustainability goals. Age and weather contribute to building deterioration, mold and other health issues. Building envelope issues include curtain wall systems, glazing, sealant repair/replacement, louver repair/replacement, metal panel replacement and/or painting/tuck-pointing, structural repair and insulation systems. This program will also include repair/replacement related to interior issues. This is part of an on-going program to maintain MAC buildings as assets.

MSP Campus Building Roof Replacement \$1,100,000

A report has been developed within the MAC that evaluates one-half of the roofs every other year. This on-going program allows these roofs that have been evaluated to be prioritized and programmed for repair. The focus of the 2022 project will be on roof drain repairs at Terminal 2 and replacement of portions of the South Field Maintenance Building roof. Emergency repairs may also be needed on some other roofs; this program will provide dollars for such instances.

MSP TENANT PROJECTS

10 – Terminal 1

Concessions Upgrades/Revenue Development \$100,000

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.

Terminal 1 FIS Gate Common Use Additions \$1,000,000

Install two common use podiums, backwalls, and boarding pass reader podiums, along with all associated IT equipment for two Concourse G gates connected to the Terminal 1 FIS facility. Two additional gates are planned to be addressed in 2023.

Terminal 1 Pre-Conditioned Air (PCA) \$2,000,000

This program will provide and/or replace PCA units serving passenger boarding bridges to eliminate the use of idling airplane engines to heat and cool the ambient air. This program will reduce emissions on the campus.

46 – Hangars and Other Buildings

Delta Building B Tunnel Water Mitigation \$1,000,000

This project will install a permanent lift station and directionally bored piping at the end of the existing drain tile to pump water to the sanitary sewer to keep the tunnel dry.

RELIEVER AIRPORTS LONG TERM COMPREHENSIVE PLAN PROJECTS

82 – Lake Elmo

21D Runway 14-32 Replacement \$4,000,000

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 fourth phase of construction for this project which focuses on converting the old Runway 14-32 to a taxiway.

84 – Flying Cloud

FCM Airport Layout Plan \$300,000

The new ALP will show current conditions and any development proposed in the 2040 Long-Term Comprehensive Plan (LTCP). A portion of the budget will be used to acquire new AGIS base mapping to create a new Airport Layout Plan (ALP) set that complies with current FAA guidelines and criteria.

FCM Long Term Comprehensive Plan \$250,000

This project continues the 2021 effort to review current airport facilities, identify service gaps, and better facilitate the safe movement of aircraft at Flying Cloud Airport, which is part of the MAC's system of reliever airports designated by the FAA to reduce congestion at the Minneapolis-St. Paul International Airport and to provide improved general aviation facilities in the overall community.

86 – Anoka County-Blaine

ANE Airport Layout Plan \$400,000

The new ALP will show current conditions and any development proposed in the 2040 Long-Term Comprehensive Plan (LTCP). A portion of the budget will be used to acquire new AGIS base mapping to create a new Airport Layout Plan (ALP) set that complies with current FAA guidelines and criteria.

RELIEVER AIRPORTS MAINTENANCE/FACILITY UPGRADE PROJECTS

80 – Reliever Airports

Reliever Building Miscellaneous Modifications \$400,000

This program will address ongoing needs for repairs and modifications of MAC-owned buildings at the five of the reliever airports, excluding St. Paul. These items may include crew rest areas, heating, air conditioning, structural repairs, and aesthetic updates. The list of potential projects will be compiled and prioritized in early 2021.

Reliever Pavement Rehabilitation Miscellaneous Modifications \$300,000

This program will address ongoing needs for crack sealing, joint repairs, pavement rejuvenation, and pavement repairs at the six reliever airports. The list of potential projects will be compiled and prioritized in early 2021.

81 – St. Paul

STP Runway 14-32 Lighting Replacement \$700,000

This project will replace the lights, conduit, wires, and some signs for runway 14-32. MAC electricians have been monitoring this circuit and it continues to expend more power than it is using during their quarterly testing. This scope of work would typically be done during the runway reconstruction planned in 2025 and 2026, but due to the poor condition of this circuit, it must be addressed now.

85 – Crystal

MIC North Building Area Sewer/Water for Future Hangars \$200,000

This project is planned to provide sewer and water availability for new hangar construction in the new north building area at the Crystal Airport.

MIC Taxilanes 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. 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.

86 – Anoka County - Blaine

ANE Building Demolition \$200,000

This project will demolish the former Anoka Technical College building, which is owned by the MAC. This will facilitate future lease potential for a tenant construction project.

MSP LONG TERM COMPREHENSIVE PLAN PROJECTS

10 – Terminal 1

2023 Baggage Claim / Ticket Lobby Operational Improvements \$45,425,000

This program addresses issues of congestion and functionality in the Baggage Claim and Ticket Lobby. It will provide the level of service requirements for short and medium-term growth of the origin 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.

2024 Baggage Claim / Ticket Lobby Operational Improvements \$15,000,000

Please see the 2023 description.

2025 Expand and Remodel International Arrivals Facility (IAF) \$5,000,000

This project will include expansion and remodel of the MSP Terminal 1 IAF to accommodate additional passengers, along with lengthened queue area at the expanded Security Checkpoint 07, and relocation of the existing restrooms at gate G6 to accommodate the expansion.

2027 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 and may require an expansion to the building footprint.

21 – Field and Runway

2025 Runway 30R Parallel Taxiway Construction \$12,000,000

This project involves the construction of a new taxiway on the north side of Runway 30R. The first phase is envisioned to include construction at the approach end of Runway 30R, with a 600-foot section of new taxiway and two new taxiway feeder connections. Future phases will extend the taxiway to connect with Taxiway G.

2026 Runway 30R Parallel Taxiway Construction \$10,000,000

Please see the 2025 description.

2027 Runway 30R Parallel Taxiway Construction \$14,000,000

Please see the 2025 description.

36 – Terminal 2

2024 Terminal 2 North Gate Expansion \$195,000,000

This project includes the addition of two gates at Terminal 2, along with HVAC improvements, loading dock changes and other terminal-related improvements.

RELIEVER AIRPORTS LONG TERM COMPREHENSIVE PLAN PROJECTS

83 – Airlake

2023 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 by using declared distances without having to physically relocate Cedar Avenue, which lies directly east of the airfield. The project will also include taxiway and roadway modifications, and electrical lighting upgrades. MAC and the FAA will determine what level of environmental review is needed as the project timeline approaches.