

Metropolitan Airports Commission



2023–2029 Capital Improvement Program Assessment of Environmental Effects (AOEE)

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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. Recovery from the COVID downturn in 2021 is resulting in a higher number of passengers traveling through MSP than in 2020, with a total of 25,202,120. This is still well short of the 39 million passengers seen in 2019. Total operations at MSP also remained down in 2021, at 303,884 landings and takeoffs, which is nearly 75% of the number in 2019.



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. In 2021, Reliever Airport operations continued to grow, reaching a total 352,195 operations across the six airports.

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.

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 26, 2022, the MAC Commission adopted the Preliminary 2023–2029 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 2023 to 2029 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 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 (2023 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 2023 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 (2023–2029). 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 (2023) of the preliminary CIP. Appendix C includes a draft description for projects in years 2024 through 2029 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.

At any large airport, behind the scenes you'll find thousands of people working together to create an efficient and enjoyable airport experience. This includes our Field Maintenance and Airside Operations teams, who ensure roads and runways are clear of snow; our facility and parking operation teams, who provide clean buildings and available parking spaces; and our technology team, who provide real-time digital information throughout the airport terminals. It also includes the people who guide travelers through the security screening process, brew their morning coffee, answer questions, and keep flights on time.

At the MAC, we understand the importance of casting a vision, communicating with partners, and coordinating efforts so that every step of a traveler's journey is seamless. In 2021, we redoubled our commitment to building relationships, continuous improvement and innovation. In practice, this takes the form of regular dialogues and planning sessions with our airport partners focusing on everything from wait times, construction projects, parking operations, COVID-19 protection measures, snow removal operations and future airline bookings to ensure alignment between resources and passenger demand.

All these efforts and more helped make MSP the Best Airport in North America in its class in 2021.



MSP New Silver Ramp with Access to Public Parking, Rental Cars and the 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 is gaining a fresh perspective on airfield performance.

The planning process evaluates 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 anticipates publishing a draft 2020-2040 LTP in late 2022/early 2023. The MAC website: <https://www.msppairport.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.

Many projects that were included in the MSP 2020 Improvements EA/EAW review are now complete; some are programmed to begin construction in a year or two. They are noted in Table 2-1 on page 6, along with other projects listed in the 2023-2029 Preliminary CIP that meet the criteria for the preparation of an EAW.

Once the updated LTP is complete, MAC expects more projects that fulfill needs outlined in the LTP will make their way into the CIP. At this point, without an approved 2040 LTP, it is premature to include new expansion related projects in the CIP. Further, if any of those new expansion related projects require environmental review, MAC will complete those studies prior to their construction start.

2.3 MSP PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

Of all the projects listed for the year 2023 at MSP, there are only two listed in the Preliminary 2023-2029 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 a newly listed project for the Concourse G Infill – Pod 2-3 project. Both of these projects are scheduled for 2023, exceed \$5 million, and involve a new or expanded structure for handling passengers, cargo, vehicles, or aircraft. See Table 2-1.

Baggage Claim/Ticket Lobby Operational Improvements

The Terminal 1 Operational Improvements program, which began in 2016, will continue in 2023 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.

Concourse G Infill – Pod 2-3

The proposed Concourse G Infill Pods 2-3 project will improve utilization of Terminal 1 gates between G8 and G13 to enhance the customer experience, provide potential extension of federal traveler inspection spaces, and match new design and amenities that were recently incorporated into completed improvements between gates G17-G22.

The proposed project includes a modest expansion of the central corridor and seating areas for five existing gates by expanding the concourse footprint between two existing gate pods that extend out from the G Concourse. This redevelopment will include restroom upgrades, new moving walkways, new concession spaces, new lighting and flooring, as well as upgrades to various building systems.

Pending final design and approvals, the first phase of this project will begin in 2023 on utilities and foundation work. The second phase, planned for a 2024 construction start, will include the build out of the concourse structure to connect to the existing gate pods. Phase two will take 18-24 months to complete.



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	2023	Included in MSP 2020 Improvements EA/EAW
Concourse G Infill – Pod 2-3 Phase 1	2023	EAW in Process and Scheduled to be Complete in November 2022
T1 Baggage Claim/Ticket Lobby Operational Improvements	2024	Included in MSP 2020 Improvements EA/EAW
Concourse G Infill – Pod 2-3 Phase 2	2024	EAW in Process and Scheduled to be Complete in November 2022
Terminal 2 North Gate Expansion	2024	Included in MSP 2020 Improvements EA/EAW
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
Runway 30R Parallel Taxiway	2028	EAW Required

As noted in Table 2-1, many MSP projects/programs in the 2023-2029 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. One exception is the newly proposed Concourse G Infill – Pod 2-3 project. Concurrent with the preparation of this AOEE, an EAW is currently in process. Similar to the 2020 Concourse G Infill – Pod 5 project, MAC is completing an EAW because the project slightly enlarges the footprint of Terminal 1 and expands gate hold seating areas. One other 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 or replacements as an autonomous vehicle option. 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 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 2021, the STP Airport handled just over 39,196 operations, which equates to approximately 30% more than in 2020.

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 2023.



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 2023-2029 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 2023-2029 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 includes a small stand-alone office structure which would be a replacement facility for the operations currently taking place today. It will not significantly increase passenger processing capacity, and no EAW is required.

None of the proposed projects listed in the preliminary 2023-2029 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, one of them newly opened in 2022. Runway 14-32 is now 3,500 feet long, while Runway 4-22 measures 2,497 feet in length. There is no air traffic control tower.

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 its final phase of construction, includes construction of a new 3,500-foot primary runway that will be parallel to the existing Runway 14-32. Now that the new runway is complete, the existing runway will be decommissioned and become a parallel taxiway (this project is already bid and the majority of construction will occur in 2023). 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.



Runway 14-32 Relocation/Extension and Associated Improvements construction site.

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

No 21D projects in the 2023-2029 Preliminary CIP meet the criteria defined in Minnesota Statutes Section 473.614 for preparation of an EAW.

4.4 21D CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

Projects listed in the Preliminary CIP for Lake Elmo 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.

5.0 AIRLAKE AIRPORT (LVN)

The Airlake Airport has a single runway, at 4,098 feet long. 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.

To meet these goals, 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 already 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 2024. The MAC is currently in the early stages of the required environmental review process. It includes both a federal Environmental Assessment and a state Environmental Assessment Worksheet. 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 2024 that meets the criteria defined in Minnesota Statutes Section 473.614. See Table 5-1. As noted, that environmental review process is currently underway.

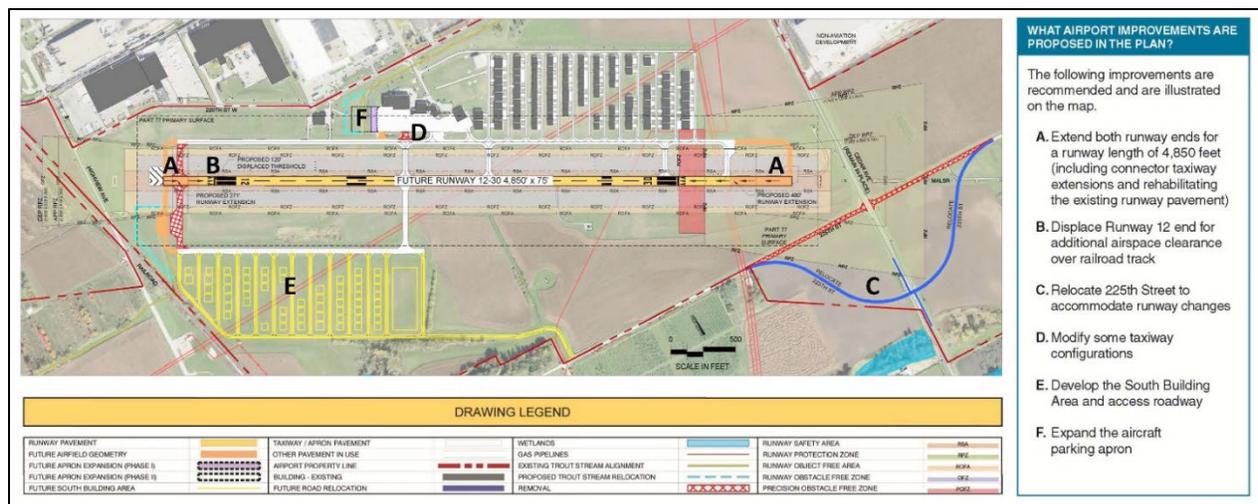
Table 5-1
Airlake Projects in the CIP that Require a Mandatory EAW

Project	CIP Year Proposed	EAW Status
Runway 12-30 Improvements	2024	EA/EAW in process

5.4 LVN CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

The only 2023 project at Airlake shown in the MAC 2023-2029 Preliminary CIP involves LED edge lighting for the airfield, however, it is likely this project will be deferred to coincide with the larger proposed runway project. Projects in other years include primarily pavement reconstruction, renovations for the MAC-owned maintenance building, 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.



Airlake Airport LTCP Preferred Alternative

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. In 2021, the airport saw 131,593 operations, which is nearly 6% more than 2020 where the 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 that LTCP Update.

MAC is currently preparing a 2040 long-term plan for Flying Cloud. MAC has held one public information meeting and planning another in late October 2022. The long-term plan update is scheduled for completion in 2023.



Flying Cloud Airport

6.2 FCM ENVIRONMENTAL STUDIES

The most recent environmental review for FCM was completed in the mid-2000's 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 2023-2029 Preliminary CIP at FCM meet the criteria defined in Minnesota Statutes Section 473.614.

6.4 FCM CUMULATIVE POTENTIAL ENVIRONMENTAL EFFECTS

In the 2023-2029 Preliminary CIP, the projects proposed at Flying Cloud do not include any major improvements. There are two projects specifically listed for 2023. One involves only payment to the City of Eden Prairie for improvements the City is including for the airport in one of their roadway reconstruction projects. The second involves a short extension to a taxiway on the south side of the airfield. The remaining projects in the CIP include primarily pavement reconstruction, as well as electrical vault modifications, security gate replacements, and new equipment for existing airfield lighting and utilities.

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 included 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 was reconstructed as a taxiway. All associated electrical runway and taxiway lighting work was included along with taxiway reconfiguration to simplify airfield geometry. All construction on these improvements is now 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 2023-2029 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 2023-2029 CIP at the Crystal Airport do not include any major improvements. Projects planned for 2023 include pavement reconstruction and LED lighting upgrades. Projects in out years include other 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 serving a diverse aircraft mix. 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 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.

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 2023-2029 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 to later years in the CIP.

8.3 ANE PROJECTS REQUIRING PREPARATION OF AN ENVIRONMENTAL ASSESSMENT WORKSHEET

No projects in the 2023-2029 Preliminary CIP at ANE meet the criteria defined in Minnesota Statutes Section 473.614, except for one. As noted above and shown in Table 8-1 on page 20, 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

Project currently proposed for 2023 include runway pavement reconstruction, replacement of the weather observation system, and construction of a new small equipment and storage building for the MAC. Other projects in the Preliminary CIP in the out years include pavement reconstruction, replacement of existing underground fuel tanks, and airfield lighting improvements.

The ANE West Perimeter Road project, currently proposed for 2024, 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. This project does not meet the criteria for a state EAW. 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 11, 2022 through November 10, 2022. 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. Please include “**MAC 2023-2029 AOEE**” in the email or letter header, and address the correspondence to:

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 7, 2022 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.

Please allow for ample time to arrive and get through security. 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 2023-2029 Capital Improvement Program (CIP) and present it to the full Commission for adoption during the month of December 2022. The December PD&E Committee meeting, scheduled for December 5, 2022, 10:30 a.m., will include a hearing officer's report and responses to any comments received during the AOEE public comment period.

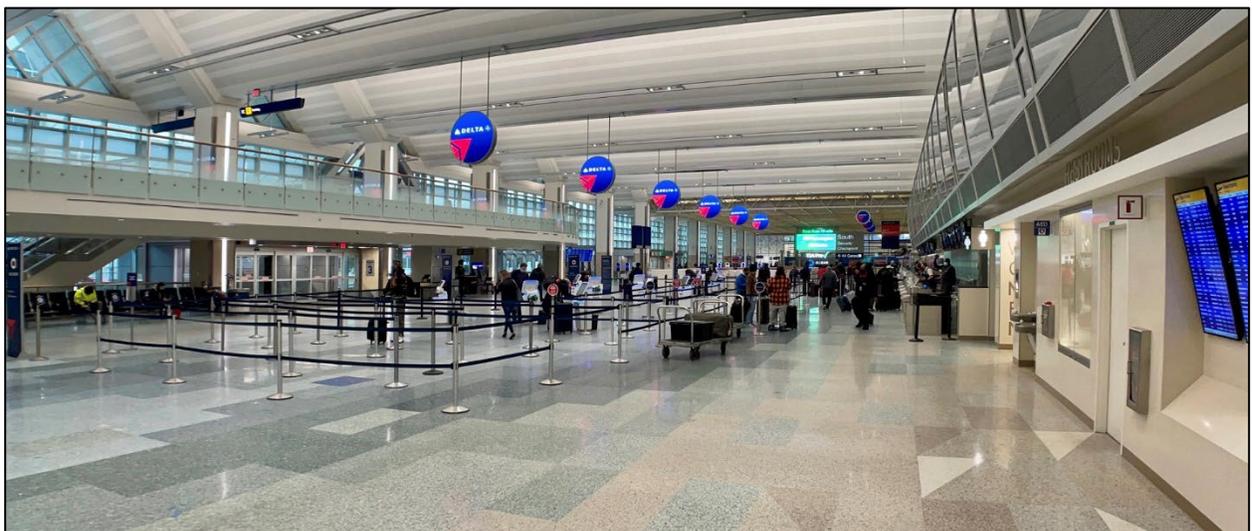
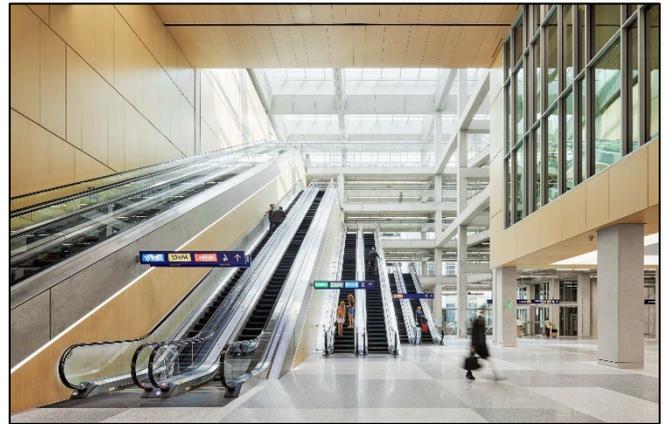
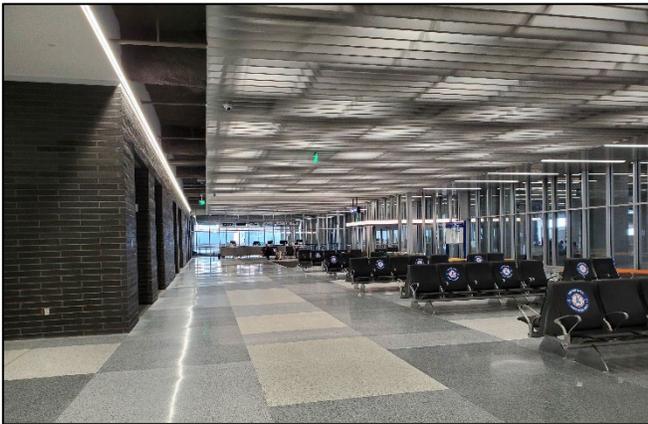
10.0 APPENDICES

10.1 APPENDIX A – MAC PRELIMINARY 2023-2029 CIP LISTING

10.2 APPENDIX B – DESCRIPTIONS FOR 2023 PROPOSED PROJECTS

10.3 APPENDIX C – DRAFT DESCRIPTIONS FOR 2024-2029 PROJECTS THAT MEET CRITERIA DEFINED IN MINNESOTA STATUTE SECTION 473.614

Please note that the project names, scopes, dollar amounts, and construction years scheduled are shown in the Appendices just as they are included in the MAC Preliminary 2023-2029 CIP. These are subject to change in the Final version of the 2023-2029 CIP or other future CIP documents.



Images from Minneapolis-St. Paul International Airport

10.1 APPENDIX A – MAC Preliminary 2023-2029 Capital Improvement Program (CIP) Listing

NOTES	MSP End of Life/Replacement Projects	2023	2024	2025	2026	2027	2028	2029
	10 - Terminal 1							
2	Concourse and Hub Tram Replacement	\$500,000			\$300,000,000	\$300,000,000		
3	Cooling Unit Replacement		\$1,125,000					
4	Passenger Boarding Bridge Replacements	\$10,000,000	\$4,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
5	Recarpeting Program			\$2,000,000				
5	Terminal 1 Outbound Baggage Handling System Replacement						\$250,000,000	
	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	Variable Air Volume (VAV) Box Replacement	\$950,000	\$950,000	\$950,000				
	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	\$2,000,000	\$2,000,000	
2	Bituminous Shoulder Reconstruction	\$7,000,000	\$7,500,000	\$7,000,000	\$7,000,000	\$7,000,000		
2	Concourse G Apron Pavement Reconstruction	\$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	\$4,000,000		\$4,000,000		\$4,000,000		
	26 - Terminal Roads/Landside							
2	Terminal 1 Access Roadway Bridge Rehabilitation	\$4,750,000						
2	UPS Loop Pavement Reconstruction		\$1,800,000					
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				
	36 - Terminal 2							
4	Terminal 2 Pre-conditioned Air (PCA)	\$2,300,000						
5	Terminal 2 Recarpeting Program	\$800,000	\$1,300,000	\$150,000				
4	Terminal 2 Ticket Counter/Insert Replacement			\$730,000				

NOTES:

1. A project that has the potential for substantial environmental effects.
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5. A project that consists of safety or security enhancements, facility maintenance, or facility upgrades (an EAW or EIS is not required).
6. A new, replacement or expansion project that does not have substantial effect (an EAW or EIS is not required).
7. Consultant fees only for planning, design, or environmental work.
8. Residential noise mitigation efforts that are designed to alleviate the impact of aircraft noise (an EAW or EIS is not required).
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).

10.1 APPENDIX A – MAC Preliminary 2023-2029 Capital Improvement Program (CIP) Listing

NOTES	MSP End of Life/Replacement Projects Continued	2023	2024	2025	2026	2027	2028	2029
	39 – Public Areas/Roads							
2	East 62nd Street Reconstruction					\$3,900,000		
2	East 70th Street Reconstruction		\$2,400,000					
2	Post Road Reconstruction Project				\$5,000,000			
	56 – Trades/Maintenance Buildings							
6	MSP Liquid Deicer Storage Facility	\$11,200,000						
	66 – Fire							
5	Fire Alarm System Transition	\$1,500,000	\$2,000,000	\$1,200,000	\$1,000,000	\$1,200,000		
	70 – General Office/Administration							
3	GO Building Variable Air Volume (VAV) Replacement and Upgrade			\$2,000,000				
	MSP End of Life/Replacement Projects Subtotal	\$66,355,000	\$57,775,000	\$50,480,000	\$360,300,000	\$344,600,000	\$270,500,000	\$10,000,000
	MSP IT Projects							
	10 - Terminal 1							
4	Concourse C and G Digital Directory Replacement		\$200,000					
4	Customs and Border Protection Camera System Upgrade	\$850,000					\$1,000,000	
4	MAC Technology Upgrades	\$10,000,000	\$10,000,000	\$10,000,000	\$11,000,000	\$11,000,000	\$11,000,000	\$11,000,000
5	Telecom Room Equipment Continuity (TREC)		\$1,510,000					
	63 - Police							
5	Card Access Modifications		\$2,500,000		\$2,800,000		\$2,500,000	
	MSP IT Projects Subtotal	\$10,850,000	\$14,210,000	\$10,000,000	\$13,800,000	\$11,000,000	\$14,500,000	\$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	2023	2024	2025	2026	2027	2028	2029
	10 - Terminal 1							
1	Baggage Claim/Ticket Lobby Operational Improvements	\$47,675,000	\$15,000,000					
6	Checkpoint Expansion							\$11,000,000
1	Concourse G Infill – Pod 2-3	\$23,500,000	\$351,500,000					
7	Design and Construction Standards Update	\$350,000						
1	D-Pod Outbound Baggage System					\$15,000,000		
7	MSP Airport Layout Plan			\$1,000,000				
7	MSP Environmental Review			\$2,000,000				
7	MSP Long Term Plan							\$3,000,000
5	MSP Obstruction Removals				\$1,000,000		\$1,000,000	
	21 - Field and Runway							
7	NAVAIDs Study for North Campus Development	\$350,000						
1	Runway 30R Parallel Taxiway				\$12,000,000	\$10,000,000	\$14,000,000	
	36 - Terminal 2							
7	Long Term Plan Projects (fees)		\$1,000,000					
1	Terminal 2 North Gate Expansion		\$195,000,000					
	MSP Long Term Comprehensive Plan Projects Subtotal	\$71,875,000	\$562,500,000	\$3,000,000	\$13,000,000	\$25,000,000	\$15,000,000	\$14,000,000

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10.1 APPENDIX A – MAC Preliminary 2023-2029 Capital Improvement Program (CIP) Listing

NOTES	MSP Maintenance/Facility Upgrade Projects	2023	2024	2025	2026	2027	2028	2029
	10 - Terminal 1							
5	ADO Office Expansion		\$4,000,000					
9	Art Display Areas	\$200,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
9	Arts Master Plan	\$665,000	\$1,240,000	\$1,565,000	\$565,000	\$600,000	\$600,000	
4	C/G Connector Lighting Improvements			\$1,000,000				
4	Concourse A Heating System Upgrade		\$11,000,000					
4	Concourse G Moving Walks			\$6,000,000				
5	Delivery Node Redevelopment	\$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			\$43,400,000				
5	Lavatory Buildings Rehabilitation		\$4,400,000					
4	Lighting Infrastructure Technology and Equipment (LITE)	\$2,300,000	\$1,500,000	\$2,550,000	\$1,500,000	\$2,550,000	\$1,500,000	\$2,200,000
5	LRT Station Updates			\$1,600,000				
5	Restroom Upgrade Program	\$2,050,000	\$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 Information Booth Replacements			\$850,000				
4	Terminal 1 Curbside Canopy Repairs and Lighting Upgrades		\$350,000					
6	Terminal 1 Employee Breakroom			\$450,000				
5	Terminal 1 Mechanical Room C-1043	\$9,800,000						
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	Way-Finding Sign Backlighting Replacement	\$2,000,000	\$1,000,000	\$3,000,000		\$2,000,000		\$2,000,000
	13 - Energy Management Center							
4	Chiller Plant Optimization		\$3,000,000					
4	Energy Savings Program	\$2,000,000		\$2,000,000		\$2,000,000		
4	Indoor Air Quality Monitoring System	\$1,500,000	\$1,000,000					
4	MAC Automation Infrastructure Program	\$2,300,000	\$2,300,000	\$2,300,000	\$2,400,000	\$2,400,000	\$2,400,000	\$2,400,000
6	Material Storage Building - Boiler Room Addition	\$1,830,000						
3	Steam Trap Monitoring System				\$3,000,000			
4	Terminal 2 Penthouse Chiller Plant Infrastructure Upgrades		\$5,500,000					
4	Victaulic Piping Replacement		\$4,000,000	\$4,000,000	\$4,000,000	\$2,200,000	\$2,300,000	\$2,350,000

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6. A new, replacement or expansion project that does not have substantial effect (an EAW or EIS is not required).
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10.1 APPENDIX A – MAC Preliminary 2023-2029 Capital Improvement Program (CIP) Listing

NOTES	MSP Maintenance/Facility Upgrade Projects, continued	2023	2024	2025	2026	2027	2028	2029
	21 – Field and Runway							
7	Airfield Security Screening Facility (Study)	\$250,000						
5	Anti-Climb Fencing and Lighting	\$275,000						
4	Apron Lighting LED Upgrade		\$5,000,000	\$1,000,000	\$3,000,000	\$1,000,000	\$1,000,000	
6	Field Maintenance Building Efficiency Program			\$53,000,000		\$105,000,000		\$46,000,000
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						
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	
	26 – Terminal Roads/Landside							
2	Tunnel Approaches Reconstruction	\$2,600,000						
	31 – Parking							
3	Parking Guidance System			\$6,500,000				
2	Parking Ramp Railing Refinishing		\$1,000,000		\$1,000,000		\$1,000,000	
2	Red/Blue Parking Levels 2 & 3			\$9,200,000				
4	Rental Car EV Charging Infrastructure	\$1,500,000						
	36 - Terminal 2							
5	Ramp Information Display System (RIDS)			\$3,600,000				
5	Terminal 2 Baggage Handling System			\$410,000				
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				
7	Terminal 2 Lobby Passenger Flow Program		\$1,000,000					
2	Terminal 2 MUFIDS/EVIDS Millwork Upgrades			\$350,000				
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	2023	2024	2025	2026	2027	2028	2029
	39 - Public Areas/Roads							
2	34 th Avenue Bus Area Reconstruction		\$800,000					
2	34 th Avenue Reconstruction				\$7,800,000	\$7,800,000		
2	34 th Avenue Sanitary Sewer Replacement				\$2,200,000			
3	34 th Avenue Traffic Control Improvements		\$200,000					
2	Diverging Diamond Intersection Rehabilitation					\$380,000		
4	Highway 494 Terminal and Airline Signs	\$300,000						
2	Taxi Cab Holding Lot Rehabilitation for Cell Phone Lot				\$650,000			
2	Terminal 1 Ground Transportation Modifications	\$1,140,000						
2	Terminal 1 Inbound Roadway Median Improvements			\$3,300,000				
4	Tunnel Fan Replacement		\$4,700,000	\$6,800,000				
	46 - Hangars and Other Buildings							
6	MAC Storage Facility		\$30,000,000					
6	Safety and Security Center		\$150,000,000					
	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		\$6,500,000	\$6,500,000				
5	Police Department Improvements at Terminals 1 & 2						\$1,500,000	
5	Public Safety Modifications	\$1,000,000		\$1,000,000		\$850,000		\$850,000
2	Squad Parking Modifications				\$140,000			
	66 - Fire							
5	Campus Fire Protection		\$2,400,000		\$3,400,000		\$1,900,000	\$3,500,000
	76 - Environment							
4	Glycol Sewer & Storm Sewer Inspection/Rehabilitation		\$1,700,000	\$600,000				
4	Ground Service Equipment (GSE) Electrical Charging Stations	\$3,000,000						
4	Infield Fueling Facility Secondary Containment			\$400,000				
4	Lift Station at Ponds 1 and 2			\$2,300,000				
5	MSP Pond 3 / 494 Pond Sediment Removal and Repairs			\$5,500,000				
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	\$45,110,000	\$263,490,000	\$186,675,000	\$45,155,000	\$138,750,000	\$22,300,000	\$61,600,000

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NOTES	MSP Noise Mitigation Consent Decree Amendment	2023	2024	2025	2026	2027	2028	2029
8	MSP Noise Mitigation Consent Decree Amendment	\$500,000	\$1,000,000	\$500,000				
	MSP Ongoing Maintenance Programs							
	10 - Terminal 1							
4	Air Handling Unit Replacement	\$6,500,000	\$6,500,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000
4	Baggage System Upgrades	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
4	Concourse G Rehabilitation		\$10,000,000					
4	Conveyance System Upgrades			\$3,000,000				
4	Electrical Infrastructure Program (EIP)	\$2,500,000	\$2,500,000		\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000
4	Electrical Substation Replacement	\$7,500,000	\$3,300,000	\$1,500,000	\$10,000,000	\$10,000,000		
4	Emergency Power Upgrades	\$6,600,000	\$2,500,000		\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000
4	Plumbing Infrastructure Upgrade Program	\$600,000	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000
5	Terminal Building Remediation Program	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
4	Terminal Miscellaneous Modifications	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$3,100,000	\$3,100,000
	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	\$1,900,000
4	EMC Plant Upgrades (T1 & T2)	\$2,000,000	\$2,100,000	\$2,150,000	\$2,200,000	\$2,300,000	\$2,400,000	\$2,500,000
	21 - Field and Runway							
2	Airside Electrical Construction	\$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	Miscellaneous Airfield Construction	\$3,500,000	\$1,500,000					
2	Pavement Joint Sealing/Repair	\$800,000	\$800,000	\$800,000	\$800,000	\$1,000,000	\$1,000,000	\$1,000,000
	26 - Terminal Roads/Landside							
2	Tunnel/Bridge Inspections	\$100,000	\$120,000	\$120,000	\$120,000	\$120,000	\$150,000	\$150,000
5	Tunnel-Bridge Miscellaneous Modifications			\$1,000,000		\$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	2023	2024	2025	2026	2027	2028	2029
	39 - Public Areas/Roads							
2	Concrete Joint Repair	\$900,000	\$1,000,000	\$300,000	\$400,000	\$1,200,000	\$2,900,000	\$750,000
2	Landside Pavement Rehabilitation	\$500,000	\$500,000	\$500,000		\$500,000	\$600,000	\$600,000
2	Landside Utility Rehabilitation	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
2	Roadway Fixture Refurbishment	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
	46 - Hangars and Other Buildings							
5	Campus Building Rehabilitation Program	\$1,500,000	\$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	\$3,700,000			
2	MSP Campus Building Roof Replacements	\$8,300,000	\$6,100,000	\$12,500,000	\$10,200,000	\$1,000,000	\$1,000,000	\$1,000,000
	56 – Trades/Maintenance Buildings							
4	Sump Pump Controls		\$4,000,000	\$4,000,000	\$3,500,000			
	70 – General Office/Administration							
5	GO Building Improvements		\$500,000		\$500,000		\$500,000	
	MSP Ongoing Maintenance Programs Subtotal	\$55,150,000	\$59,870,000	\$59,070,000	\$63,220,000	\$50,420,000	\$41,550,000	\$40,800,000
	MSP Tenant Projects							
	10 - Terminal 1							
2	Concessions Upgrades/Revenue Development	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
5	Concourse and Gatehold Modernization	\$23,800,000	\$85,600,000	\$73,100,000				
2	Delta Re-booking Station		\$350,000					
6	Elevator and Concourse Improvements - Relocated United Club	\$200,000					\$1,000,000	
2	Terminal 1 FIS Gate Common Use Additions	\$1,500,000		\$5,000,000				
4	Terminal 1 Pre-Conditioned Air (PCA)		\$2,500,000					
	36 – Terminal 2							
6	Terminal 2 Concessions Development	\$2,800,000						
	39 – Public Areas / Roads							
2	Tenant Parking Lot Reconstruction				\$2,900,000			
	46 - Hangars and Other Buildings							
7, 6	Ground Service Equipment (GSE) Maintenance Facility	\$200,000					\$2,000,000	
	MSP Tenant Projects Subtotal	\$28,600,000	\$88,650,000	\$81,200,000	\$200,000	\$200,000	\$3,200,000	\$200,000

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NOTES	Reliever Airports Long Term Comprehensive Plan (LTCP) Projects	2023	2024	2025	2026	2027	2028	2029
	81 - St. Paul							
7	STP Airport Layout Plan	\$500,000						
7	STP Environmental Review			\$800,000				
7	STP Long Term Comprehensive Plan	\$800,000						
	82 - Lake Elmo							
7	21D Airport Layout Plan		\$100,000					
7	21D Long Term Comp Plan							\$500,000
	83 - Airlake							
7	LVN Airport Layout Plan			\$100,000				
7	LVN Long Term Comp Plan							\$500,000
1	LVN Runway 12-30 Improvements		\$4,400,000					
	84 - Flying Cloud							
7	FCM Environmental Review		\$800,000					
10	FCM Purchase and Demolition of Hangars	\$1,300,000						
6	FCM South Building Area Utilities				\$800,000			
	85 - Crystal							
7	MIC Long Term Comp Plan						\$500,000	
	86 - Anoka County - Blaine							
7	ANE Airport Layout Plan		\$500,000					
6	ANE Building Area Development - Xylite St. Relocation			\$1,000,000				
7	ANE Long Term Comprehensive Plan Update		\$800,000					
	Reliever Airports LTCP Projects Subtotal	\$2,600,000	\$6,600,000	\$1,900,000	\$800,000	\$0	\$500,000	\$1,000,000

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects	2023	2024	2025	2026	2027	2028	2029
	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 Removals	\$300,000		\$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
6	Relievers Used Oil Sheds a& Tanks			\$550,000				
	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		\$4,500,000					
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		\$200,000
2	STP Pavement Rehabilitation-Taxilanes/Tower Road				\$750,000			
2	STP Runway 13-31 Pavement Reconstruction			\$5,000,000				
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 AWOS Replacement			\$100,000				
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				\$600,000
2	21D Runway 04-22 Pavement Rehabilitation			\$4,000,000				

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects	2023	2024	2025	2026	2027	2028	2029
	83 – Airlake							
3	LVN AWOS Replacement			\$100,000				
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					\$500,000		
2	LVN North Taxilanes Pavement Rehabilitation					\$1,250,000		
6	LVN South Building Area Utilities and Taxilanes		\$1,300,000					
2	LVN Taxiway Bravo Pavement Rehabilitation		\$600,000					
	84 – Flying Cloud							
2	FCM Airport Access Roads and Tango Lane				\$500,000			
2	FCM Airport Access Roads Pavement Rehabilitation					\$500,000	\$500,000	\$500,000
6	FCM Electrical Vault Modifications				\$500,000			
2	FCM Executive Aviation/MAC Maintenance Apron				\$600,000			
5	FCM Gate Replacements			\$500,000				
3	FCM Intelligent Monitoring and Control System (IMACS)		\$2,250,000					
5	FCM MAC Building Improvements				\$600,000			
6	FCM Parcel 7 Sanitary Sewer and Water	\$300,000						
2	FCM Runway 10R-28L Pavement Rehabilitation		\$2,700,000					
2	FCM Runway 18-36 Pavement Rehabilitation							\$700,000
6	FCM Spring Lane Extension and Taxilane Connector	\$600,000						
5	FCM Tower Equipment for Airfield Lighting and Utilities			\$1,000,000				
2	FCM Underground Fuel Storage Tank Replacement		\$500,000					

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NOTES	Reliever Airports Maintenance/Facility Upgrade Projects, continued	2023	2024	2025	2026	2027	2028	2029
	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						
2	MIC Runway 6L-24R Pavement Rehabilitation					\$2,500,000		
2	MIC Service Roads	\$1,200,000						
2	MIC Taxilanes Pavement Rehabilitation	\$750,000		\$600,000		\$600,000		
2	MIC Taxiway Alpha Pavement Reconstruction							\$1,200,000
2	MIC Tower Parking Lot Reconstruction			\$675,000				
2	MIC Underground Fuel Storage Tank Replacement			\$500,000				
	86 - Anoka County - Blaine							
3	ANE AWOS Replacement	\$100,000						
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					\$3,000,000		
2	ANE Runway 9-27 Pavement Rehabilitation						\$3,750,000	
2	ANE Taxiway B Pavement Rehabilitation							\$1,400,000
2	ANE Underground Fuel Storage Tank Replacement			\$500,000				
6	ANE West Perimeter Road			\$1,800,000				
	Reliever Airports Maintenance/Facility Upgrade Projects Subtotal	\$8,450,000	\$30,175,000	\$20,250,000	\$12,900,000	\$19,750,000	\$5,650,000	\$5,600,000
	MSP Subtotal	\$278,440,000	\$1,047,495,000	\$390,925,000	\$495,675,000	\$569,970,000	\$367,050,000	\$137,600,000
	Reliever Subtotal	\$11,050,000	\$36,775,000	\$22,150,000	\$13,700,000	\$19,750,000	\$6,150,000	\$6,600,000
	Total	\$289,490,000	\$1,084,270,000	\$413,075,000	\$509,375,000	\$589,720,000	\$373,200,000	\$144,200,000

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10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

2023 Capital Improvement Program Narratives

MSP END OF LIFE/REPLACEMENT PROJECTS

End of Life/Replacement projects include systems, components, and pavements that can no longer be economically or feasibly maintained and must be replaced.

10 – Terminal 1

Concourse and Hub Tram Replacement

\$500,000

This project funds a study to evaluate equipment and procurement options for the replacement of the Hub Core and Concourse C Trams which are nearing the end of their useful life.

Passenger Boarding Bridge Replacements

\$10,000,000

This program replaces 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.

13 – Energy Management Center

Concourse E and F Bridge Heating and Cooling System Replacement

\$2,100,000

This is the first of three phases of work to replace and improve the heating and cooling systems on the bridges to Concourses E and F. In this phase, the original chilled water piping will be replaced and located in an accessible soffit. A redundant cooling loop will be added as well to minimize impacts to the concourses during disruptions and construction relocations.

EMC Boiler and Chiller Replacement Study

\$155,000

This is a study to review the Terminal 1 boilers and chillers for replacement. The study will look at replacement equipment with a more efficient design, as well as building impacts to remove the old equipment and bring the new equipment into the building.

GTC Dual-temperature Pump Improvements

\$1,800,000

This project will replace end of life pumps and supporting infrastructure.

Variable Air Volume (VAV) Box Replacement

\$950,000

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

30L Deicing Pad Reconstruction

\$10,000,000

This is the first of three phases to reconstruct the deicing pad concrete pavement at Runway 30L.

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.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

Bituminous Shoulder Reconstruction **\$7,000,000**

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 **\$7,500,000**

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 **\$4,000,000**

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.

26 – Terminal Roads/Landside

Terminal 1 Access Roadway Bridge Rehabilitation **\$4,750,000**

This project will repair the bridge deck, replace expansion joints, paint to protect the steel beams, and complete other repairs as needed.

36– Terminal 2

Terminal 2 Pre-conditioned Air (PCA) **\$2,300,000**

This project will replace outdated pre-conditioned air (PCA) units at Gates H1-H10 at Terminal 2 with new units that meet the MAC standard.

Terminal 2 Recarpeting Program **\$800,000**

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

56– Trades/Maintenance Buildings

MSP Liquid Deicer Storage Facility **\$11,200,000**

This project includes construction of a new airfield runway deicer storage and off-loading facility with additional offload ports, upload ports, and increased liquid capacity for airfield runway deicing chemicals.

66 – Fire

Fire Alarm System Transition **\$1,500,000**

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

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

MSP IT PROJECTS

MSP IT Projects include those that have a significant amount, if not all, technology-related enhancements, maintenance, or restructuring.

10 – Terminal 1

Customs and Border Protection Camera System Upgrade **\$850,000**

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 2023 project will complete gaps in coverage and additional cameras to support CBP operational needs.

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.

MSP LONG TERM COMPREHENSIVE PLAN PROJECTS

MSP Long Term Comp Plan projects include projects that enhance or expand the airport facilities in order to meet existing or forecasted passenger needs.

10 – Terminal 1

2023 Baggage Claim / Ticket Lobby Operational Improvements **\$47,675,000**

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.

2023 Concourse G Infill – Pod 2-3 **\$23,500,000**

This project includes an expansion/redevelopment of Concourse G. The expansion includes an infill between the existing Pods 2 and 3, which will provide enlarged gate hold areas. The redevelopment will include new and upgraded restrooms, new moving walkways, new mechanical rooms and air handling equipment, redevelopment of concessions space and miscellaneous relocations of tenant space within the project footprint. Work in 2023 represents Phase 1 and includes footings, foundations, and major utility work.

Design and Construction Standards Update **\$350,000**

This project will fund consultant support of updating the MAC’s Design and Construction Standards to improve consistency and clarity for project teams, including those for tenant construction projects.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

21 – Field and Runway

NAVAIDS Study for North Campus Development **\$350,000**

This project funds a one-time study of navigational aids related to development on the MSP campus in conjunction with the airport long term plan efforts. This study is needed for analysis of north field development potential.

MSP MAINTENANCE/FACILITY UPGRADE PROJECTS

MSP Maintenance/Facility Upgrade projects include those that provide improvements to individual buildings or systems across the campus on a one-time or short-term basis.

10 – Terminal 1

Art Display Areas **\$200,000**

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 **\$665,000**

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

Delivery Node Redevelopment **\$2,700,000**

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 2023 project is planned to redevelop the former main dock under Concourse C at Terminal 1, replaced by the MAC Receiving and Distribution Center, to achieve highest use.

Lighting Infrastructure Technology and Equipment (LITE) **\$2,300,000**

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

Restroom Upgrade Program **\$2,050,000**

A study of all restrooms in Terminal 1 was completed in 2010 and a program developed to upgrade/modernize the restrooms at Terminal 1. From this study, each restroom was prioritized based on its condition. This program will provide for the phased modernization of the Terminal 1 restrooms to include upgraded finishes, lighting, air quality, energy saving upgrades, and ADA compliance.

Terminal 1 Mechanical Room C-1043 **\$9,800,000**

Concourse C Mechanical Room C-1043 is a mechanical room that houses a very large aging high pressure steam reducing station, an aging domestic water main meter assembly, aging HVAC pumps, fire protection valves, electrical conduits etc. This project will expand and separate portions of the system into unused rooms and replace systems which will be safer, more efficient, meet current code requirements and be reliable.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

Terminal 1 Tug Drive Heater Replacement **\$1,500,000**

This project will replace all existing Terminal 1 tug drive steam unit heaters with hot water unit heaters.

Way-Finding Sign Backlighting Replacement **\$2,000,000**

Wayfinding is a critical customer service piece of our passenger’s experience at MSP. 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 is not practical or cost effective to repair them. This program updates sign information, locations, and provides 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

Energy Savings Program **\$2,000,000**

The scope of this year’s project involves work at both Terminal 1 and Terminal 2 and in general includes the replacement of valves, boilers, lighting controls, and motors with high efficiency models.

Indoor Air Quality Monitoring System **\$1,500,000**

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.

MAC Automation Infrastructure Program **\$2,300,000**

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.

Material Storage Building – Boiler Room Addition **\$1,830,000**

This project will replace the corrosion damaged boiler equipment and install it in a new boiler room. The equipment to be replaced is dangerous to maintain due to the corrosion and has already begun to fail and has caused safety concerns. This CIP would build a new boiler room, new boilers, pumps, piping, controls, electrical power and VFD’s, unit heater and remove existing boiler equipment in existing mechanical spaces.

21 – Field and Runway

Airfield Security Screening Facility Study **\$250,000**

This study will assist MAC staff to determine location, type, and number of staffed field gates or midfield inspection areas to maximize the number of badge holders screened on the airfield. A subsequent project to execute the study’s recommendations will be proposed to enhance both airfield and terminal security.

Anti-Climb Fencing and Lighting **\$275,000**

Fencing, CCTV cameras, and lighting will be added between Gate 124 and the Terminal 1 inbound roadway rock wall.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

Localizer Array Upgrade **\$2,000,000**

This project will upgrade the parallel runways' localizer arrays to improve instrument approaches signal clarity.

Runway LED Lighting Upgrade **\$1,500,000**

This project will replace lighting on Runway 12R-30L with LED lighting.

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.

26 – Terminal Roads/Landside

Tunnel Approaches Reconstruction **\$2,600,000**

This project will provide for the reconstruction of the approaches to Tunnel Y-3 and 17-35 Tunnel. These tunnels were constructed in the early 2000's and have had periodic maintenance activities to date. The existing concrete tunnel approaches for Tunnel Y-3 are in need of reconstruction as the pavement has been repaired but the repairs require yearly maintenance efforts that provide a temporary solution. A permanent solution is to reconstruct the approaches to correct the panel movements and other ongoing issues of the approach sections. The tunnel approaches to the 17-35 Tunnel is similar to Tunnel Y-3 on maintenance with less panel and other issues such that rehabilitation and/or reconstruction should be reviewed.

31 – Parking

Rental Car EV Charging Infrastructure **\$1,500,000**

This project will install electrical infrastructure on levels 2-5 of the Silver Parking Ramp at Terminal 1 for the rental car agencies to support the agencies' installation of electric vehicle (EV) charging stations as they add EVs to their fleets.

39 – Public Areas/Roads

Highway 494 Terminal and Airline Signs **\$300,000**

This project will fund replacement of overhead signage on Interstate Highway 494 and Minnesota Highway 5 to accommodate eight airline names per sign instead of the existing signs' limit of six.

Terminal 1 Ground Transportation Modifications **\$1,140,000**

This project will relocate the Taxi, Transportation Network Companies (TNCs), and other transportation services at the Terminal 1 Ground Transportation Center. Configuration of existing east and west commercial areas will be revised. Anticipated work includes variable message sign relocation, pavement marking, signage, and other related items.

63 – Police

Public Safety Modifications **\$1,000,000**

This program enhances the safety of the MSP campus through door hardware, signage, security controls, and other equipment to provide for egress requirements, code compliance, security conformity, and emergency responder access.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

76 – Environment

Ground Service Equipment (GSE) Electrical Charging Stations **\$3,000,000**

This project will purchase and install charging stations for airline electric ground support equipment (GSE). These fast, energy-efficient charging stations allow for simultaneous charging, adjustable charging rates, and automatic shut-off when the GSE are fully charged.

Runway 12R-30L Glycol Forcemain Environmental Improvements **\$2,000,000**

This project provides for construction of glycol pumping stations and forcemains to convey glycol-impacted stormwater from the Runway 30R and 30L deicing pads to the existing glycol sewers west of Runway 4-22 and the glycol management facility.

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

MSP On-Going Maintenance projects include buildings, systems, pavements, and other infrastructure that require improvements on an annual basis in order to maintain the facilities and manage MAC assets.

10 – Terminal 1

Air Handling Unit Replacement **\$6,500,000**

There are existing air handling units serving Terminal 1 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.

Electrical Infrastructure Program **\$2,500,000**

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.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

Electrical Substation Replacement **\$7,500,000**

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.

Emergency Power Upgrades **\$6,600,000**

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

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 2023 project is to continue the replacement of aging plumbing systems.

Terminal Building Remediation Program **\$3,000,000**

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 **\$2,600,000**

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 2023.

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.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

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.

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 **\$900,000**

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.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

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 **\$1,500,000**
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.

Campus Parking Lot Reconstruction **\$650,000**
This is an ongoing program of preventative maintenance activities such as crack sealing, surface treatments and resurfacing of parking lots. This program effectively slows, deterioration rates, extends service life and delays need for total reconstruction of parking lot pavements is required. Inspection of pavements and appurtenances determines what areas are to be prioritized for rehabilitation under each year’s project. The 2023 project is planned to reconstruct the pavement around the MAC Field Maintenance facility.

MSP Campus Building Roof Replacement **\$8,300,000**
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 2023 project is anticipated to be on replacement of portions of the South Field Maintenance, North Field Maintenance, and Cold Storage buildings’ roofs. Emergency repairs may also be needed on some other roofs; this program will provide dollars for such instances.

MSP Tenant Projects
MSP Tenant projects include those that enhance or expand tenant or leasehold facilities that MAC supports, with the tenants reimbursing the costs to MAC for work within leasehold spaces.

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.

2023 Concourse and Gatehold Modernization **\$23,800,000**
This is the first phase of the Concourse and Gatehold Modernization program and will complete work in Concourses D and F. Through a reimbursable agreement, Delta Air Lines will complete MAC-funded work including ceiling and lighting improvements, window tint, wainscoting, column wraps (excluding branding), paint (excluding branding), wayfinding information displays (“WIDS”), and flooring in the public area concourse corridors (including terrazzo, tile, and carpet where applicable). The program budget will also support MAC consultant fees for design collaboration and project oversight.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

Elevator and Concourse Improvements Related to Relocated United Club **\$200,000**

This project allocates fees to study the feasibility of relocating the United Club to the area above Concourse E that will be vacated by Airside Operations when the Safety and Security Center Phase 2 is complete.

Terminal 1 FIS Gate Common Use Additions **\$1,500,000**

This project will install two common use podiums, backwalls, and boarding pass reader podiums, along with all associated IT equipment for two existing Concourse G gates to be connected to the Terminal 1 FIS facility.

36-Terminal 2

Terminal 2 Concessions Development **\$2,800,000**

This project relates to the restaurants and news stores in the middle of Terminal 2. The Terminal 2 concessions program is expiring in the next 3-5 years. It needs to be redeveloped to include a much needed back of house corridor for the delivery of products to the concessions, expanded seating areas, vending alcoves, and mobile ordering kiosks to assist with the relief of long que lines. The CIP budget will go to right sizing concessions and positioning them to maximum efficiency.

46-Hangars and Other Buildings

Ground Service Equipment (GSE) Maintenance Facility **\$200,000**

This project allocates fees to study the programmatic needs for a Ground Service Equipment (GSE) Maintenance Facility and identify a site on campus for the stand-alone facility.

RELIEVER AIRPORTS LONG TERM COMPREHENSIVE PLAN PROJECTS

Reliever Airport Long Term Comp Plan projects include projects that enhance or expand the airport facilities in order to meet existing or forecasted operational needs.

81 – St. Paul

STP Airport Layout Plan **\$500,000**

The new ALP will show current conditions and any development proposed in the 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.

STP Long Term Comprehensive Plan **\$800,000**

This project will review current airport facilities, identify service gaps, and better facilitate the safe movement of aircraft at St. Paul Downtown 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.

84 – Flying Cloud

FCM Purchase and Demolition of Hangars **\$1,300,000**

This will purchase and demo all or portions of five hangars within the object free area of Flying Cloud's Taxiway Alpha.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

RELIEVER AIRPORTS MAINTENANCE/FACILITY UPGRADE PROJECTS

Reliever Airport Maintenance / Facility Upgrade projects include improvements to buildings, systems, pavements and other infrastructure across the Reliever Airport system on a one-time or short-term basis.

80 – Reliever Airports

Relievers 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 2023.

Relievers Obstruction Removal

\$300,000

This program will address ongoing needs for obstruction removals at the six reliever airports. The list of potential projects will be compiled and prioritized in early 2023.

Relievers 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 2023.

81 – St. Paul

STP Floodwall Inspection and Repairs

\$200,000

This will include a complete inspection of all floodwall components and repairs to these components as identified during the inspection. This project will save time when the wall is put up by ensuring all components are functioning properly.

STP LED Edge Lighting Upgrades

\$500,000

This project will replace taxiway edge lighting and signage with LED lighting.

STP MAC Building Improvements

\$200,000

This is an ongoing program to provide for facility modifications to ensure continued efficient operation of MAC buildings or modifications necessary to meet the requirements of the tenants. This year's project priorities will be set early in 2023.

STP Vehicle Gate Replacement

\$500,000

There are several gates that are aging at the airport. Many of these gates have ongoing maintenance issues and are in need of replacement. This project would replace the gates that are in the worst shape and provide the highest level of vehicles accessing the airport.

LVN LED Edge Lighting

\$200,000

This project will replace edge lighting and signs with new LED lighting.

10.2 APPENDIX B – Descriptions for 2023 Proposed Projects

84 – Flying Cloud
FCM Parcel 7 Sewer and Water **\$300,000**

These funds will reimburse the City of Eden Prairie for installing water and sanitary sewer connections to the MAC non-aeronautical development parcels adjacent to Pioneer Trail as part of a City street reconstruction project.

FCM Spring Lane Extension and Taxilane Connector **\$600,000**

This project will extend Spring Lane Taxilane to the east and provide a connector to Taxiway B. The project is operationally necessary for the development of a site near the south building area for a flight school.

85 – Crystal
MIC LED Edge Lighting Upgrade **\$400,000**

This project will replace edge lighting and signs with new LED lighting.

MIC Service Roads **\$1,200,000**

This project will develop three new service roads which were identified in the LTCP to improve safety on the airport.

MIC Taxilanes Pavement Rehabilitation **\$750,000**

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 AWOS Replacement **\$100,000**

This project will cover the civil work associated with a MnDOT Aeronautics project to replace the existing Automated Weather Observing System (AWOS) with a new system. The new system will be placed adjacent to the existing system.

ANE Equipment Storage and Maintenance Building **\$700,000**

This project will construct a new equipment storage and maintenance building for the Anoka County-Blaine airport to replace airport staff’s use of a leasable hangar to support this function.

ANE Pavement Rehabilitation – Taxiway A and Edge Lights **\$1,800,000**

This project will rehabilitate the taxiway and add edge lighting. The work begins at taxiway A1 and ends at the north end of taxiway A.

10.3 APPENDIX C – Draft Descriptions for 2024-2029 Projects that Meet Criteria Defined in Minnesota Statute Section 473.614

MSP LONG TERM COMPREHENSIVE PLAN PROJECTS

10 – Terminal 1

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

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 Concourse G Infill – Pod 2-3 **\$351,500,000**

This project represents Phase 2 of a two-phase program that includes an expansion/redevelopment of Concourse G. The expansion includes an infill between the existing Pods 2 and 3, which will provide enlarged gate hold areas. The redevelopment will include new and upgraded restrooms, new moving walkways, new mechanical rooms and air handling equipment, redevelopment of concessions space and miscellaneous relocations of tenant space within the project footprint.

2027 D-Pod Outbound Baggage System **\$15,000,000**

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

2026 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.

2027 Runway 30R Parallel Taxiway Construction **\$10,000,000**

Please see the 2026 description.

2028 Runway 30R Parallel Taxiway Construction **\$14,000,000**

Please see the 2026 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.

10.3 APPENDIX C – Draft Descriptions for 2024-2029 Projects that Meet Criteria Defined in Minnesota Statute Section 473.614

RELIEVER AIRPORTS LONG TERM COMPREHENSIVE PLAN PROJECTS

83 – Airlake

2024 Runway 12-30 Improvements

\$4,400,000

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.