



Assessment of Environmental Effects

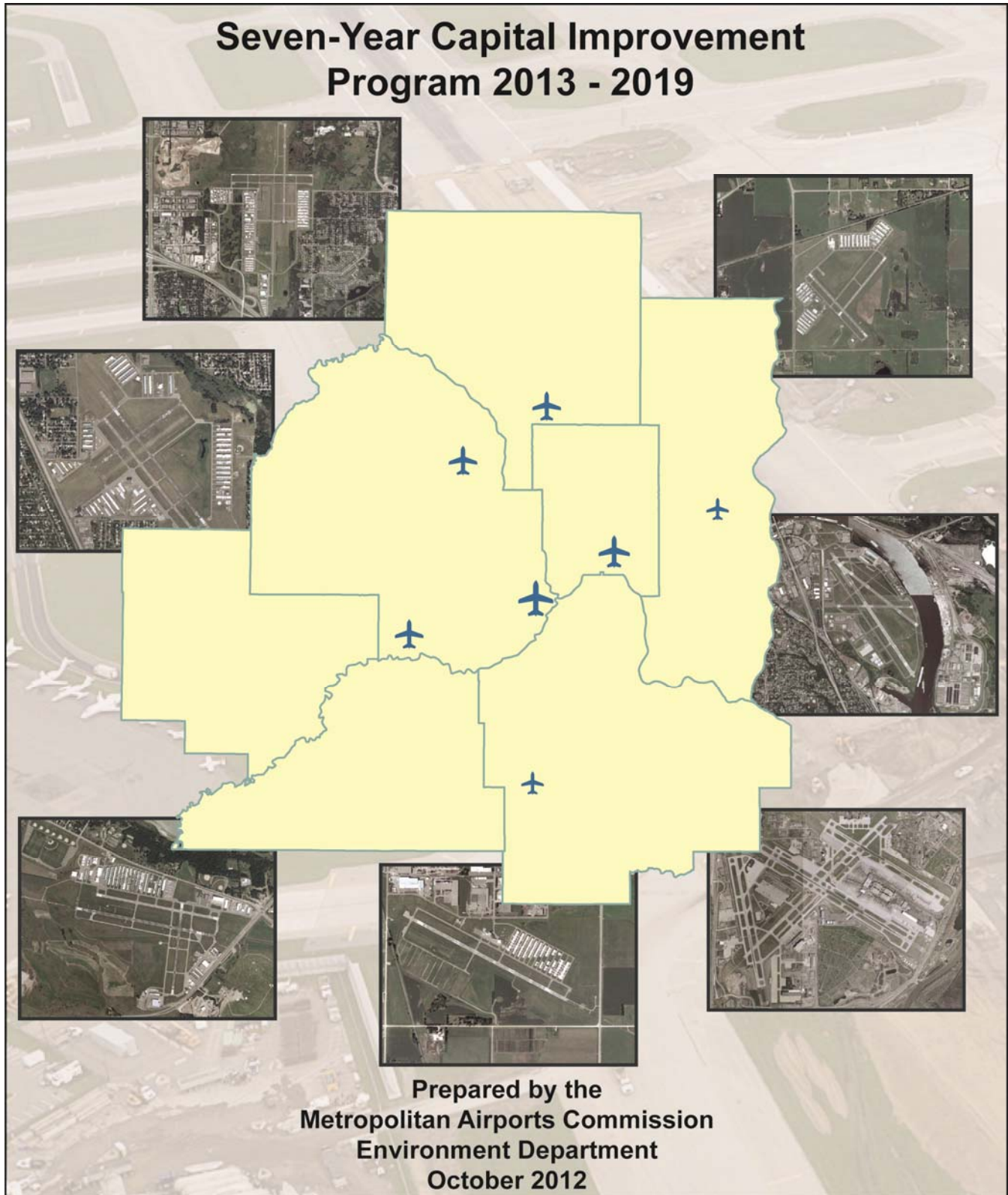


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This report is prepared in accordance with the requirements of Minnesota Statutes 1986, Chapter 473, as amended in 1988 and 1998. It presents an assessment of the environmental effects (AOEE) of projects in the Metropolitan Airports Commission's (MAC) Seven-Year Capital Improvement Program (CIP) from 2013 to 2019 for each MAC airport. Under Minnesota law, the MAC is required to "examine the cumulative environmental effects at each airport of the projects at that airport (in the seven-year CIP), considered collectively." Many of the projects in the CIP entail repair or rehabilitation of existing facilities. Such work will not affect use of the facilities and as such will not add to, or subtract from, cumulative environmental effects. The anticipated measurable effects during construction are discussed in Section 2.

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

1. The project is scheduled in the CIP for the succeeding calendar year (2013 in this CIP);
2. The project is scheduled to cost \$5 million or more at Minneapolis-St. Paul International Airport (MSP) or \$2 million or more at any other MAC airport; and
3. The project involves the construction of: (i) a new or expanded structure for handling passengers, cargo, vehicles or aircraft; or (ii) a new runway or taxiway or the extension of an existing runway or taxiway.

Table 1-1 lists all projects included in the Seven-Year Capital Improvement Program for the years 2013 through 2019. An Environmental Assessment Worksheet (EAW), Environmental Assessment (EA) or Environmental Impact Statement (EIS) has been prepared for all projects scheduled to be implemented in 2013 that meet the above three conditions in Minnesota Statutes 1986, Chapter 473 for a mandatory EAW. There are no projects in the 2013 CIP that meet the criteria as is presented in Table 1-2.

Table 1-1

2013- 2019 Capital Improvement Program

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	Noise Mitigation - 2010 Program							
(1)	Noise Mitigation Settlement	\$800,000	\$900,000					
	Subtotal Noise Mitigation Program	\$800,000	\$900,000					
	10 - Terminal 1-Lindbergh							
	Safety/Security Projects							
(3)	Automated External Defibrillator Notification System			\$550,000				
(5)	Telecom Room Equipment Continuity and Security	\$1,000,000	\$3,300,000	\$2,500,000	\$3,500,000	\$3,000,000		
(5)	Fall Protection Program	\$100,000	\$100,000					
(5)	Baggage Claim Fire Protection System	\$4,000,000						
(5)	TSA West CBIS Equipment Upgrade	\$12,000,000						
(5)	Blast Mitigation				\$10,000,000	\$5,000,000	\$5,000,000	
	Subtotal Safety/Security Projects	\$17,100,000	\$3,400,000	\$3,050,000	\$13,500,000	\$8,000,000	\$5,000,000	\$0
	Facility Rehabilitation							
(2)	Electrical Infrastructure Rehabilitation Program	\$2,500,000	\$2,500,000	\$2,500,000	\$2,250,000	\$2,000,000	\$1,100,000	\$1,100,000
(3)	Terminal Miscellaneous Modifications	\$1,000,000	\$2,000,000	\$3,000,000	\$3,000,000	\$3,500,000	\$3,500,000	
(4)	Emergency Power Upgrades	\$1,250,000	\$2,300,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,000,000	\$1,500,000
(5)	Lower Level Roadway/GTC Water Infiltration Mitigation		\$2,500,000					
(2)	Restroom Upgrade Program	\$1,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$3,000,000
(4)	Air Handling Unit Replacement	\$1,000,000	\$1,500,000	\$2,500,000	\$2,500,000	\$3,000,000	\$3,000,000	
(4)	Conveyance System Upgrades	\$500,000		\$1,500,000	\$7,000,000	\$1,000,000	\$7,000,000	
(4)	Passenger Boarding Bridge Replacements							
(2)	Folded Plate Drain and Roof Repair	\$500,000	\$500,000	\$500,000				
(2)	Plumbing Infrastructure Upgrade Program							
(2)	Baggage Claim Operational Improvements				\$35,000,000	\$20,000,000	\$15,000,000	\$15,000,000
(2)	Ticket Lobby/Mezzanine Operational Improvements				\$20,000,000	\$15,000,000	\$34,000,000	
(4)	Folded Plate Roofing Replacement				\$1,600,000	\$1,600,000	\$1,600,000	
(4)	Way-Finding Sign Backlighting Replacement				\$300,000			
(2)	Conference Center Upgrades							
(2)	Terminal Curtainwall Repair	\$100,000	\$100,000					
(2)	Concourses C-G Connector Soffit Repair	\$200,000						
(2)	CBP Carpet Replacement		\$350,000					
(4)	Lighting Infrastructure Technology and Equipment	\$8,050,000	\$1,400,000	\$1,600,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000
	Subtotal Facility Rehabilitation	\$8,050,000	\$15,150,000	\$16,100,000	\$78,950,000	\$60,400,000	\$80,000,000	\$8,400,000
	Passenger Amenities							
(4)	Art in the Terminal	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
(2)	Meeter/Greeter/Freedom of Speech Booth Upgrades				\$225,000			
(2)	Concessions Revenue Development/Upgrades	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	
(5)	Terminal Seating Improvements			\$800,000				
(2)	Ticket Counter Upgrades to ADA				\$600,000			
(4)	Commission Chambers Telecoil Installation				\$200,000			
(4)	Way-Finding Signage Improvements	\$300,000		\$750,000				
(2)	Elevator Access to Observation Deck				\$1,000,000			
(2)	Concourse Service Center Upgrades	\$200,000		\$400,000	\$1,000,000			
(4)	Electronic Video Information Display Systems	\$100,000						
(4)	CBP Global Entry Program Enrollment Center							
	Subtotal Passenger Amenities	\$1,050,000	\$450,000	\$3,400,000	\$2,675,000	\$450,000	\$450,000	\$250,000

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	Operational Improvements							
(4)	Concourse C Elevator to D Street		\$450,000					
(4)	Open Architecture Building Automation (QABA)	\$1,250,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000		
(4)	Fiber Optic Cable Infrastructure Upgrade/Expansion	\$150,000	\$1,200,000	\$600,000	\$2,500,000	\$1,000,000		
(3)	Wireless Network Control System	\$450,000	\$500,000		\$1,000,000			
(4)	Southeast Mezzanine Office and Exit Stairs			\$1,600,000				
(6)	Landside Operations Offices Upgrades			\$500,000				
(1)	FIS Recheck Enhancements/Restrooms Relocation		\$5,600,000 *					
(2)	CBP Primary Expansion (G8-Hold Room)	\$12,000,000						
(1)	CBP Primary Relocation Gates G8-G9 Infill & Penthouse	\$450,000						
(3)	Facilities Monitoring System Software Update	\$1,500,000	\$3,000,000	\$3,000,000				\$51,000,000
(4)	MACNet Upgrade - Connectivity Elements	\$200,000						
(4)	Data Center Computer Hardware	\$16,000,000	\$12,450,000	\$7,300,000	\$6,200,000	\$2,700,000	\$0	\$51,000,000
	Subtotal Operational Improvements	\$16,000,000	\$12,450,000	\$7,300,000	\$6,200,000	\$2,700,000	\$0	\$51,000,000
				* Becomes a 2013 project upon receipt of 2020 Environmental Assessment Record Of Decision.				
				Unfunded Project				
	Concourse G Improvements							
(2)	Concourse G Roof Replacement	\$6,000,000			\$3,000,000			
(2)	Exterior Panel/Sealant Replacement				\$2,100,000	\$2,000,000	\$1,000,000	
	Subtotal Concourse G Improvements	\$6,000,000	\$0	\$0	\$5,100,000	\$2,000,000	\$1,000,000	\$0
	T1-Lindbergh Expansion/Remodeling							
	Terminal Remodeling							\$37,000,000
(6)	Concourse E Remodeling/Expansion				\$1,250,000			
(2)	MAC Operations Center	\$0	\$0	\$0	\$1,250,000	\$0	\$0	\$37,000,000
	Subtotal Terminal Remodeling	\$0	\$0	\$0	\$1,250,000	\$0	\$0	\$37,000,000
	Concourse G Expansion						\$50,000,000	
(1)	Concourse G Trim - Equipment Procurement						\$50,000,000	
(1)	Apron Improvements							\$17,000,000
(1)	C-G Tunnel Extension							\$20,000,000
	Subtotal Concourse G Expansion	\$0	\$0	\$0	\$0	\$0	\$50,000,000	\$37,000,000
	Roadway and Parking Expansion							
(1)	Lower Level Curbside Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$10,500,000
	Subtotal Roadway and Parking Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$10,500,000
	Subtotal T1-Lindbergh Expansion/Remodeling	\$0	\$0	\$0	\$1,250,000	\$0	\$50,000,000	\$84,500,000
	Subtotal Terminal 1-Lindbergh	\$48,200,000	\$31,450,000	\$23,850,000	\$107,675,000	\$73,550,000	\$136,450,000	\$144,150,000
	13 - Energy Management Center							
(4)	Energy Savings Projects	\$1,000,000	\$2,000,000	\$3,000,000	\$3,000,000	\$3,500,000	\$3,500,000	\$3,500,000
(4)	Alternative Energy Projects			\$1,000,000				
(4)	Modular Cooling Tower Installation				\$1,800,000			
	Subtotal Energy Management Center	\$1,000,000	\$2,000,000	\$4,000,000	\$4,800,000	\$3,500,000	\$3,500,000	\$3,500,000

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	21 - Field and Runway							
(2)	Airside Bituminous Rehabilitation/Electrical Construction	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
(2)	Pavement Joint Sealing/Repair	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000
(2)	Pavement Rehabilitation - Aprons	\$1,900,000			\$10,500,000			
(2)	Pavement Reconstruction - Taxiway Delta (W to S)						\$7,500,000	
(2)	Miscellaneous Airfield Construction	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
(5)	Baggage Quarantine Building				\$1,300,000			
(5)	SIDA Incursion Upgrades				\$650,000			
(4)	South Field Maintenance Building Wash Bay				\$1,300,000			
(2)	Runway 12R/30L Tunnel Rehabilitation	\$300,000						
	Mill and Overlay							
(2)	Sanitary Sewer Replacements				\$2,500,000			
(2)	USAF Apron				\$850,000			
(2)	USAF Campus				\$1,600,000			
(2)	Delta Buildings C and G				\$750,000			
(5)	Perimeter Gate Security Improvements							
	Subtotal Field and Runway	\$3,750,000	\$1,550,000	\$1,550,000	\$21,200,000	\$1,550,000	\$9,050,000	\$0
	26 - Terminal Roads/Landside							
(2)	Tunnel/Bridge Rehabilitation	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
(2)	Upper Level Roadway Rehabilitation				\$1,800,000			
(2)	Upper Level Roadway Electrical System Rehabilitation		\$450,000					
	Subtotal Terminal Roads/Landside	\$100,000	\$550,000	\$100,000	\$1,900,000	\$100,000	\$100,000	\$0
	31 - Parking							
(2)	T1/T2 Parking Structure Rehabilitation	\$2,500,000	\$2,500,000	\$3,000,000	\$3,000,000	\$3,500,000	\$3,500,000	\$3,500,000
(2)	T2-Humphrey GTC Core Building Modifications				\$850,000			
(2)	T1-Lindbergh Short Term Parking Redesignation				\$350,000			
(4)	T1-Lindbergh Valet/Commercial Entrance Lanes Mods			\$1,000,000				
(4)	T1-Lindbergh Intelligent Parking Guidance System				\$500,000			
	Subtotal Parking	\$2,500,000	\$2,500,000	\$4,000,000	\$4,700,000	\$3,500,000	\$3,500,000	\$3,500,000
	36 - Terminal 2-Humphrey							
	Safety/Security Projects							
(5)	Checked Baggage Inspection System (CBIS) Program	\$47,000,000						
	Subtotal Safety/Security Projects	\$47,000,000	\$0	\$0	\$0	\$0	\$0	\$0
	Passenger Amenities							
(6)	Skyway to LRT Flooring Installation				\$800,000			
(6)	Curbside Canopy Extension				\$1,500,000			
	Subtotal Passenger Amenities	\$0	\$0	\$0	\$2,300,000	\$0	\$0	\$0
	Operational Improvements							
(1)	RAC Customer Service Building		\$6,400,000 *					
(2)	RAC Ready/Return Expansion	\$12,600,000						
(1)	RAC Quick Turnaround (QTA) Facility		\$16,400,000					
(2)	Incident Response Friends & Relatives Fit-up	\$1,300,000						
	Subtotal Operational Improvements	\$12,600,000	\$28,100,000	\$0	\$0	\$0	\$0	\$0

* Becomes a 2013 project upon receipt of 2020 Environmental Assessment Record Of Decision.

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	Terminal 2-Humphrey North Expansion							
(1)	Apron/Fueling Expansion - North		\$15,300,000 *					
(1)	Gates 11 - 13		\$35,000,000 *					
(6)	Terminal Expansion Utility Relocation		\$1,000,000 *					
	Subtotal Terminal 2-Humphrey North Expansion	\$0	\$51,300,000	\$0	\$0	\$0	\$0	\$0
	Terminal 2-Humphrey South Expansion							
(1)	Apron/Fueling Expansion - South					\$18,000,000	\$22,000,000	\$18,000,000
(1)	Gates 14-27					\$65,000,000	\$100,000,000	
(6)	Terminal Utilities Relocation					\$5,000,000		
	Subtotal Terminal 2-Humphrey South Expansion	\$0	\$0	\$0	\$0	\$88,000,000	\$122,000,000	\$18,000,000
(1)	Purple Ramp South Expansion					\$6,000,000		\$50,000,000
(1)	Roadway Realignment							
	Subtotal Terminal 2-Humphrey	\$59,800,000	\$75,400,000	\$0	\$2,300,000	\$94,000,000	\$122,000,000	\$68,000,000
	39 - Public Areas/Roads							
(2)	Landside Pavement Rehabilitation	\$400,000	\$400,000	\$2,000,000	\$400,000	\$400,000	\$400,000	
(2)	Roadway Fixture Refurbishment	\$100,000	\$100,000					
(2)	Taxi Cab Break Room Expansion				\$500,000			
	I-494/34th Ave. Interchange Enhancements							
(1)	Diverging Diamond Interchange (DDI)	\$500,000	\$6,000,000 *	\$2,000,000	\$900,000	\$400,000	\$400,000	\$0
	Subtotal Public Areas/Roads	\$500,000	\$6,500,000	\$2,000,000	\$900,000	\$400,000	\$400,000	\$0
	46 - Hangars and other Buildings							
(2)	Roof Replacements	\$800,000			\$2,000,000			\$2,000,000
(2)	Impact Building Rehabilitation		\$600,000					
(2)	Drivers Training Facility Rehabilitation		\$650,000					
(2)	FAA Building Parking Lot Upgrades				\$1,050,000			
(6)	Zantop Hangar Demolition	\$900,000						
	Subtotal Hangars and other Buildings	\$1,700,000	\$1,150,000	\$0	\$3,050,000	\$0	\$2,000,000	\$0
	56 - Trades/Maintenance Buildings							
(4)	Trades Building Cooling System Improvements	\$600,000						
	Subtotal Trades/Maintenance Buildings	\$600,000	\$0	\$0	\$0	\$0	\$0	\$0
	63 - Police							
(6)	Public Safety Facility		\$500,000		\$17,000,000			
(6)	Perimeter Fence Intrusion Detection System				\$3,000,000			
(4)	IVSN (CCTV) Improvements	\$1,300,000	\$2,000,000	\$2,000,000	\$1,000,000	\$1,500,000	\$1,700,000	
	Subtotal Police	\$1,300,000	\$2,500,000	\$2,000,000	\$21,000,000	\$1,500,000	\$1,700,000	\$0
	66 - Fire							
(3)	MSP Campus Fire Alarm System Upgrade		\$850,000	\$850,000	\$850,000	\$850,000	\$850,000	\$0
	Subtotal Fire	\$0	\$0	\$850,000	\$850,000	\$850,000	\$850,000	\$0

* Becomes a 2013 project upon receipt of 2020 Environmental Assessment Record Of Decision.

Unfunded Project

* Becomes a 2013 project upon receipt of 2020 Environmental Assessment Record Of Decision.

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	76 - Environment							
	Environmental Improvements							
(2)	Storm Sewer Rehabilitation - Deicing Areas	\$500,000		\$550,000	\$650,000	\$500,000		
(2)	Mother Lake Stormwater Diversion				\$850,000			
(4)	Runway 12R/30L Glycol Forcemain				\$1,100,000			
(3)	MAC Multilateration System				\$1,300,000			
(6)	Concourses C/G Compactor Canopies		\$450,000					
(4)	Runway 30R Deicing Pad Subdrain	\$800,000						
(4)	Ground Service Equipment (GSE) Electrical Charging Stations				\$1,000,000			
	Subtotal Environment	\$1,300,000	\$450,000	\$550,000	\$4,900,000	\$500,000	\$0	\$0
	Reliever Airports							
	81 - St. Paul							
(6)	Holman Terminal Sub drain						\$100,000	\$600,000
(2)	Joint and Crack Repairs		\$100,000		\$100,000			
(5)	MAC Building Maintenance		\$250,000		\$200,000		\$200,000	
	Pavement Rehabilitation							
(2)	Runway 14/32			\$1,500,000		\$1,500,000		
(2)	Taxiway E							\$1,500,000
(2)	Taxiway B, C		\$500,000					
(2)	Parking Lot/Bayfield							\$500,000
(4)	Electrical Vault Improvements		\$800,000					
(2)	Airfield Signage/Wind Cone Upgrade				\$500,000			
(2)	Roof Repairs / Replacement					\$200,000		
(6)	Cold Equipment Storage Building	\$500,000					\$750,000	
(6)	Storm Sewer Improvements	\$500,000						
	Subtotal St. Paul	\$500,000	\$1,650,000	\$1,500,000	\$800,000	\$1,700,000	\$1,050,000	\$1,100,000
	82- Lake Elmo							
(2)	Pavement Rehabilitation	\$300,000						
(1)	East Building Area Development							\$2,800,000
(1)	East Side Parallel Taxiway							\$1,200,000
(1)	Runway 14/32 Replacement				\$5,000,000			
(2)	Alleyway Rehabilitation			\$900,000				
(7)	Airport Layout Plan (ALP)	\$200,000						
(6)	Materials Storage Building						\$600,000	
	Subtotal Lake Elmo	\$500,000	\$0	\$900,000	\$5,000,000	\$0	\$600,000	\$4,000,000
	83 - Airtake							
(2)	Pavement Rehabilitation	\$200,000			\$400,000			
(1)	South Building Area Development					\$2,700,000		
(1)	Runway 12/30 Extension							\$8,000,000
(6)	South Building Area Alleyway Development					\$1,000,000		
(2)	Maintenance Building Improvements		\$100,000					
(7)	Airport Layout Plan (ALP)	\$200,000						
(6)	Materials Storage Building	\$400,000	\$100,000	\$0	\$400,000	\$3,700,000	\$600,000	\$8,000,000
	Subtotal Airtake	\$400,000	\$100,000	\$0	\$400,000	\$3,700,000	\$600,000	\$8,000,000

Notes	Projects	2013	2014	2015	2016	2017	2018	2019
	84 - Flying Cloud							
	Pavement Rehabilitation							
(2)	Taxiway A - Phase 1			\$800,000				
(2)	Taxiway A - Phase 2				\$900,000		\$600,000	\$600,000
(2)	Taxiway D&E Mill/Overlay							
(1)	Runway 18/36 Safety Improvements	\$1,900,000						
(2)	East/West Perimeter Road	\$250,000		\$600,000				
(6)	South Building Area Development						\$100,000	
(2)	Roof Repairs / Replacement		\$200,000					
(6)	Commercial Development - All Relievers					\$2,500,000		
(6)	Equipment Storage Building		\$200,000			\$2,500,000		
	Subtotal Flying Cloud	\$2,150,000	\$200,000	\$1,400,000	\$900,000	\$2,500,000	\$700,000	\$600,000
	85 - Crystal							
(2)	Alleyway Rehabilitation						\$550,000	
(4)	Obstruction Removals				\$300,000			
(2)	Pavement Rehabilitation		\$700,000					
(1)	Runway 14R/32L Modifications			\$1,000,000				
(7)	Airport Layout Plan (ALP)	\$200,000						
(2)	Roof Repairs / Replacement		\$250,000					
(6)	Materials Storage Building					\$600,000		
	Subtotal Crystal	\$200,000	\$950,000	\$1,000,000	\$300,000	\$600,000	\$550,000	\$0
	86 - Anoka County - Blaine							
	Pavement Rehabilitation							
(2)	Alleyways	\$850,000						\$2,400,000
(1)	Building Area Development - East Annex						\$1,000,000	
(1)	Building Area Development - Xylite St. Relocation					\$850,000		
(1)	Building Area Development - West Annex			\$900,000				
(6)	Taxiway Charlie - A2/C2 Extension					\$600,000		
(6)	Materials Storage Building				\$250,000			
(2)	Roof Repairs / Replacement			\$500,000				
(2)	Airfield Signage/Electrical Improvements		\$0	\$1,400,000	\$250,000	\$1,450,000	\$1,000,000	\$2,400,000
	Subtotal Anoka County - Blaine	\$850,000	\$0	\$1,400,000	\$250,000	\$1,450,000	\$1,000,000	\$2,400,000
	Subtotal Reliever Airports	\$4,600,000	\$2,900,000	\$6,200,000	\$7,650,000	\$9,950,000	\$4,500,000	\$16,100,000
	Total 2013-2019 CIP	\$125,950,000	\$127,850,000	\$51,100,000	\$180,925,000	\$188,550,000	\$283,200,000	\$235,250,000
	Unfunded Portion =	\$12,000	\$36,000,000					

NOTES:

- (1) A project that has potential substantive environmental effects.
- (2) A repair, rehabilitation or reconstruction project that does not physically alter the original size (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (3) An electrical or mechanical device that monitors, indicates or controls existing conditions (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (4) A structural, mechanical or electrical device and/or modification of an existing system or structure that does not significantly increase size or passenger capacity (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (5) A project that consists of safety or security enhancements, facility maintenance or upgrades (the project will not have substantive environmental effects; an EAW or EIS is not required).
- (6) A new, replacement or expansion project that does not have substantive environmental effects; an EAW or EIS is not required.
- (7) Design, planning or environmental review fees.

Table 1-2
 Summary Environmental Assessment of 2013 Projects in the MAC 2013-2019 Capital Improvement Program that require an EAW or EIS

Project Description	Are the Effects of the Project Addressed in an Approved EAW, EA or EIS?	Environmental Categories Affected by the Project													
		Air Quality	Compatible Land Use	Fish, Wildlife and Plants	Floodplains and Floodways	Hazardous Materials, Pollution Prevention and Solid Waste	Historical, Architectural, Archaeological and Cultural Resources	Light Emissions and Visual Effects	Parks, Recreation Areas and Trails	Noise	Water Quality (Storm Waste and Ground Water)	Wetlands	Infrastructure and Public Services	Farmland	Erosion and Sedimentation
MSP PROJECTS THERE ARE NO PROJECTS SCHEDULED FOR 2013 IN THE MAC 2013-2019 CAPITAL IMPROVEMENT PROGRAM (CIP) THAT REQUIRE AN EAW OR EIS.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Section

2

Projects with Potential Environmental Effects and Effects During Construction

Projects with Potential Environmental Effects

As is detailed in Table 1-2, there are no Capital Improvement Program (CIP) projects scheduled in 2013 that require the preparation of an Environmental Assessment Worksheet. Table 1-1 identifies those projects in the CIP that do not have a potential substantive effect on the environment (such as the repair, reconstruction or rehabilitation of pavement and buildings, and replacement of existing facilities). The notes in Table 1-1 offer further explanation of the type of work that each project entails and why this work will not affect the environment. Appendix A provides a description of each project in the CIP to be implemented in the years 2013 and 2014, and of only those projects to be implemented in 2015 through 2019 that have potential substantive environmental effects. The descriptions of projects scheduled to be implemented in 2015 through 2019 are preliminary and subject to change.

Effects during Construction

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

An Environmental Assessment Worksheet (EAW), Environmental Assessment (EA) or Environmental Impact Statement (EIS) requires an assessment of cumulative effects. A cumulative effect is the effect on the environment that results from the incremental effect of a project in addition to other past, present and reasonably foreseeable future projects regardless of what entity or person undertakes the other projects. Cumulative effects may result from individually minor but collectively significant projects taking place over a period of time.

2010 MSP Projects

With the exception of the Residential Noise Mitigation Program, all projects related to the MSP 2010 Program and the Dual Track Airport Planning Process Final Environmental Impact Statement (Dual Track FEIS) have been completed. In the case of the Residential Noise Mitigation Program the environmental effects are of a positive nature, providing enhanced environmental circumstances that do not require completion of an EAW, EA or EIS.

Post 2010 MSP Projects

Beyond the 2013 projects discussed in Section 2, the Capital Improvement Program (CIP) also includes projects for Minneapolis-St. Paul International Airport (MSP) that were not included in the Dual Track FEIS but that have the potential for substantive environmental effects. These planned projects flow from the Metropolitan Airports Commission's (MAC) MSP 2030 Long-Term Comprehensive Plan Update that was finalized in July 2010.

In September 2010 the MAC initiated the Environmental Assessment (EA)/Environmental Assessment Worksheet (EAW) process for Phases 1 and 2 of the MSP 2030 Long-Term Comprehensive Plan. This is a comprehensive and detailed environmental analysis of the direct and cumulative environmental effects related to the projects planned for implementation through the year 2020.

The EA/EAW process will be completed in late 2012. Table 1-1 details a number of projects that are currently scheduled to occur in 2014 that may be considered for construction in 2013 in the event of a Finding of No Significant Impact by the Federal Aviation Administration (FAA) on the EA and completion of the EAW process by the MAC. These projects include the following:

- Terminal 1–Lindbergh FIS Recheck Enhancements and Restroom Relocation
- Terminal 2–Humphrey RAC Customer Service Building
- Terminal 2–Humphrey North Apron and Fueling Expansion
- Terminal 2–Humphrey Development of Gates 11-13 (currently this is an unfunded project)
- Terminal 2–Humphrey Expansion Utility Relocation (currently this is an unfunded project)

- I-494 and 34th Avenue Interchange Enhancements/Diverging Diamond interchange (DDI)

At the September 4, 2012 MAC Planning, Development and Environment Committee meeting adjustments were made to the Draft 2013-2019 CIP moving the Terminal 1 FIS Recheck Enhancements and Restroom Relocation, Terminal 2 RAC Customer Service Building, and the Terminal 2 RAC Quick Turnaround (QTA) Facility projects to 2014. If it is determined at a later date that the Terminal 2 RAC Quick Turnaround (QTA) Facility must be accelerated in consideration of the other related RAC project elements, an EAW will be completed prior to construction.

Anoka County – Blaine Reliever Airport Projects

The MAC completed updating the Anoka County Blaine Airport Long-Term Comprehensive Plan (LTCP) in June 2010. The plan includes a taxiway extension, general pavement rehabilitation and identifies long-term needs for additional hangar space.

The MAC and the Federal Aviation Administration (FAA) prepared and approved a Final Environmental Impact Statement (EIS) for the Anoka County-Blaine reliever airport in January 2003. The Final EIS included the East and West Annex Building Area projects and the proposed Xylite Street Relocation Project that are a part of the CIP. These projects may affect water quality and wetlands by increasing impervious surface area, which will result in increased storm water runoff. To protect wetland areas, storm water detention ponds or ditches will accommodate the increased runoff. Wetlands impacted by construction will be mitigated according to watershed district and/or Minnesota DNR requirements.

The Taxiway Charlie work, West Annex, Xylite Street Relocation and the East Annex projects are planned to begin in 2015 and be completed in a timeframe that extends out to the year 2018.

The only 2013 project at the airport provides minor alleyway rehabilitation work. No additional environmental review is required for these activities.

Airlake Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan for Airlake Airport in December 2008. The recommendation in the plan includes completing the final phase of the South Building Area alleyway development and the extension of Runway 12/30 from 4,098 feet to 5,000 feet. The MAC prepared an EAW for the Airlake Airport South Building Area Development project in January 1999. The EAW addressed the storm water runoff and designated trout stream impacts. In 2001, the initial grading for the building area was completed with the construction of a storm water detention pond to capture runoff before it enters the designated trout stream. The trout stream was also relocated under a permit by the Minnesota DNR as part of the project. The final phase of construction is scheduled for completion in 2017 and will involve the placement of aggregate base and asphalt material for hangar area taxilanes and the installation of sanitary sewer and water services. All of this work was also evaluated in the 1999 EAW.

The Long-Term Comprehensive Plan for the airport details the extension of Runway 12/30 to 5,000 feet and the realignment of Cedar Avenue. This project is currently planned for 2019. The MAC published the Final Scoping Decision Document and the Final EAW in March 2011 and is planning to initiate an EIS for the project when a solid project implementation timeline is determined. The MAC will have to identify funding sources for implementation of the proposed runway extension and will not proceed with the runway extension project until the necessary environmental review is completed.

The only 2013 projects at the airport provide minor pavement rehabilitation work and Airport Layout Plan (ALP) development. No additional environmental review is required for these activities.

Lake Elmo Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan (LTCP) for Lake Elmo Airport in December 2008. The recommendation in the plan includes the construction of the East Building Area and extension of Runway 4/22 from 2,499 feet to 3,200 feet. The MAC prepared an EAW for the East Building Area development in October 2001. The document identified increased storm water runoff, the conversion of approximately 32 acres of farmland on MAC property, and an impact of 0.016 acres to a 3.30 acre Type 3 (small, shallow) wetland. As with past airport projects, the MAC will design the project to accommodate the storm water runoff on-site and will obtain all environmental permits necessary to implement the project.

Although the LTCP originally envisioned an extension would occur on the crosswind Runway 4/22, the MAC is considering accommodating the 3,200-foot length as part of a Runway 14/32 replacement project in 2016, in which a new, longer runway would be constructed parallel to the existing Runway 14/32. The existing runway would then become a taxiway. All LTCP updates and environmental study would be completed prior to the proposed construction of the replacement runway. The replacement runway project would involve grading, paving, storm sewer management, lighting and pavement marking. Since there are wetlands on the airport property, an evaluation would be completed to review any potential impacts as part of the documentation listed above. No land acquisition would be required.

The only 2013 projects at the airport provide minor pavement rehabilitation work and Airport Layout Plan (ALP) development. No additional environmental review is required for these activities.

Crystal Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan for Crystal Airport in December 2008. The recommendation in that plan is to close two of the airport's four runways. The MAC is in the process of determining the best course of action for implementing the long-term plan. The FAA must approve the proposed runway closures.

The CIP includes the Runway 14R/32L modifications project, scheduled for 2015. This project involves the reconstruction and conversion of the existing runway pavement into a taxiway. This project will not be implemented until the necessary approvals and environmental study associated with the runway closure are completed.

The only 2013 project is Airport Layout Plan (ALP) development. No additional environmental review is required for these activities.

Flying Cloud Reliever Airport Projects

In June 2004, the MAC prepared and approved a Final EIS that included the Runway 10R/28L Widening/Extension and South Building Area Development projects at Flying Cloud Airport (FCM). In 2009 the runway extension was completed along with grading and paving of the South Building Area alleyways and service road.

The MAC updated the FCM Long-Term Comprehensive Plan in October 2010. The plan proposes a shift of Runway 18/36 to the north by 58 feet, to bring the runway into required FAA safety area

compliance, with an additional extension to the north of 109 feet, increasing the overall runway length to 2,800 feet. Additionally, an east-west perimeter road will be constructed through the Runway 18 approach area along Pioneer Trail.

The 2013 projects include the Runway 18/36 safety improvements and east-west perimeter road projects. The environmental work for these categorically excluded projects has been completed.

St. Paul Downtown Reliever Airport Projects

The MAC completed updating the St. Paul Downtown Airport Long-Term Comprehensive Plan in June 2010. The plan does not propose any substantive expansion or enhancement of the facilities at the airport.

The only 2013 project is storm sewer improvements. No additional environmental review is required for these activities. Future CIP projects at St. Paul Downtown Airport are largely maintenance activities with no additional environmental review required.

Appendix A

Description of Projects in the 2013 – 2019 Capital Improvement Program

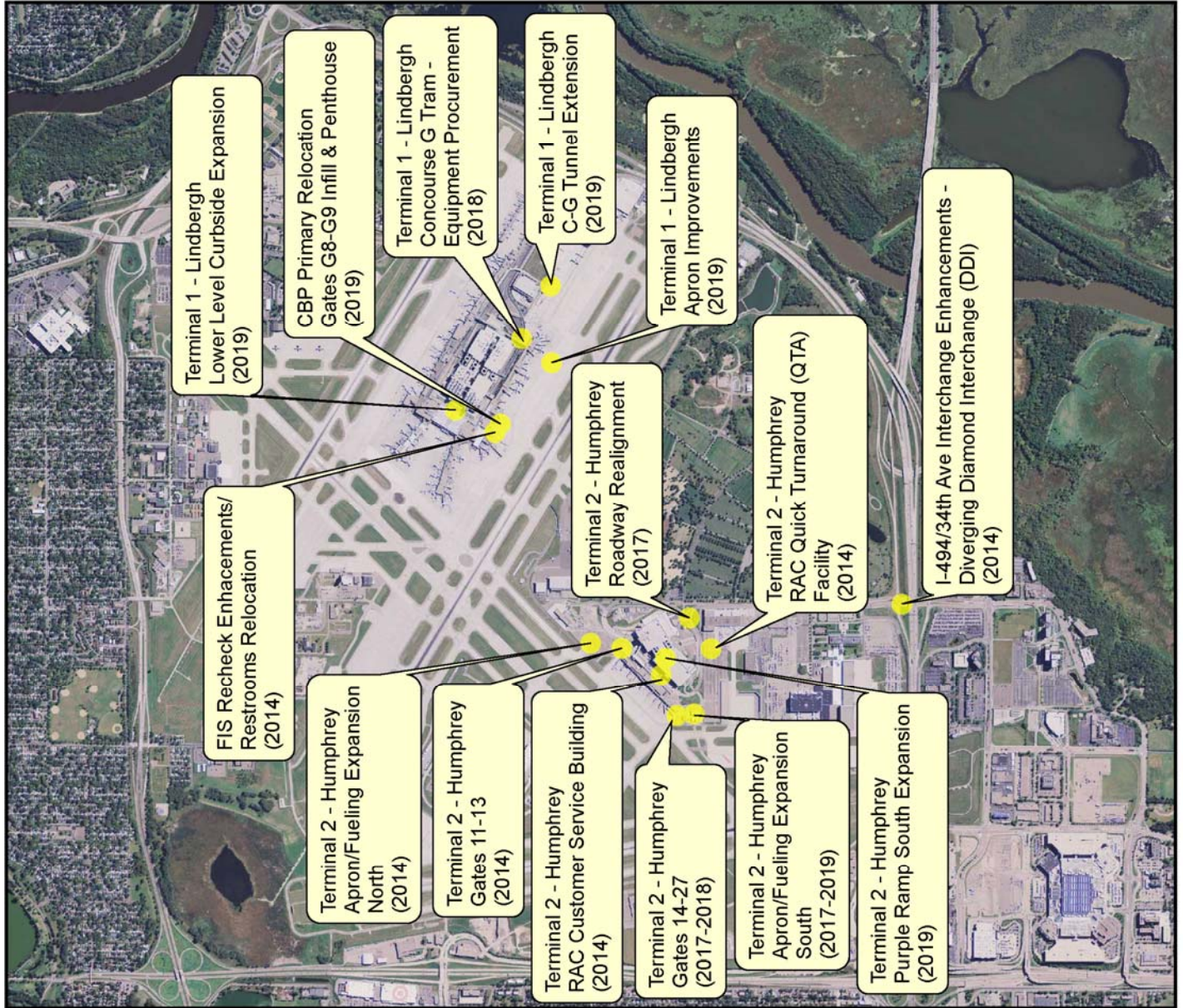
Figure A-1 Capital Improvement Projects with Potential Environmental Effects

Minneapolis - St. Paul International Airport
2013-2019

Proposed Project Schedule

2013	Noise Mitigation Settlement
2014	Terminal 2 - Humphrey Apron/Fueling Expansion - North Terminal 2 - Humphrey Gates 11-13 I-494/34th Ave Interchange Enhancements - Diverging Diamond Interchange (DDI) Terminal 2 - Humphrey RAC Customer Service Building Terminal 2 - Humphrey RAC Quick Turnaround (QTA) Facility FIS Recheck Enhancements/Restrooms Relocation
2015	Noise Mitigation Settlement
2016	
2017	Terminal 2 - Humphrey Apron/Fueling Expansion - South Terminal 2 - Humphrey Gates 14-27 Terminal 2 - Humphrey Roadway Realignment
2018	Terminal 2 - Humphrey Apron/Fueling Expansion - South Terminal 2 - Humphrey Gates 14-27 Terminal 1 - Lindbergh Concourse G Tram - Equipment Procurement
2019	Terminal 2 - Humphrey Apron/Fueling Expansion - South CBP Primary Relocation Gates G8-G9 Infill & Penthouse Terminal 1 - Lindbergh Apron Improvements Terminal 1 - Lindbergh C-G Tunnel Extension Terminal 1 - Lindbergh Lower Level Curbside Expansion Terminal 2 - Humphrey Purple Ramp South Expansion

Projects in italics are not shown on map



2013 Capital Improvement Program

Noise Mitigation – 2010 Program

Noise Mitigation Settlement \$800,000

This project is a continuation of the implementation of the noise mitigation program based on the Noise Exposure Map contained in the court-ordered Consent Decree, including the construction and administrative costs associated with noise mitigation in the 2007 60-62 DNL contours. The 2013 project budget will reimburse homeowners in the 2005 60-64 DNL contours for approved noise mitigation work (Phase 3).

Terminal 1- Lindbergh

Safety/Security Projects

Telecommunications Room Equipment Continuity and Security \$1,000,000

The MAC network (MACNet) carries credit card data from the Landside Parking Revenue Control System. The credit card industry has created security standards that merchants, like the MAC, are required to meet to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally the network equipment itself must have added security features to prevent unauthorized network access. This program will address these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus. This program is being coordinated with the iVISON and Fiber Optic Cable Infrastructure Upgrade/Expansion programs to avoid duplication of effort and cost. This will be a multi-year program.

Fall Protection Program \$100,000

The Occupational Safety and Health Administration (OSHA) requires that employers protect their employees that work on roof tops, next to roof edges, and other locations where there could be the potential for injuries due to falls. Options range from warning signage and spotters to guardrail and tie-off systems. A Roof Fall Protection Committee has been reviewing roof areas around the MSP campus to determine potential hazards and mitigation options. This program is being implemented to address those roof areas deemed to present an imminent fall hazard that are not being addressed in other roof repair projects.

Baggage Claim Fire Protection System \$4,000,000

As required by the MAC Building Official and Fire Marshal, this project will install fire suppression and visual and auditory (voice evacuation) notification systems in the Baggage Claim area to meet current codes.

TSA West CBIS Equipment Upgrade \$12,000,000

In 2005 the Commission approved construction of the West Checked Baggage Inspection System (CBIS), which included a TSA contribution of seven CTX devices, supporting technologies and equipment, and staff. Subsequently, the CTX devices have begun to approach end-of-life status based on current required maintenance cost, as determined by the TSA. The TSA has offered for

negotiation a 100% funded (no MAC cost) "Other Transaction Agreement" (OTA) for design and construction services for device replacement and other required upgrades to accommodate the new technology. The OTA for the design phase has been approved and executed by both the MAC and the TSA. A second OTA for the construction phase will be negotiated in 2013. This project will provide for the design and installation of TSA-furnished devices and other required equipment at no cost to the MAC.

Facilities Rehabilitation

Electrical Infrastructure Rehabilitation Program \$2,500,000

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

Terminal Miscellaneous Modifications \$1,000,000

Each year, there is a list of "maintenance" projects that are beyond the capability of the MAC's maintenance staff and trades to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. The list of potential projects will be compiled and prioritized in early 2013.

Summarized below are the categories of the projects that are included in the Terminal Miscellaneous Modifications program:

Building Exterior Rehabilitation *

A continuation of the program to rehabilitate the exterior of the terminals and other MAC buildings, including roof and curtainwall rehabilitation.

Terminal Electrical Modifications *

An ongoing program to address electrical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Mechanical Modifications *

An ongoing program to address mechanical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Miscellaneous Modifications *

An ongoing program to update and remodel areas within the terminals to keep abreast with changing requirements. This may be accomplished through a series of small individual projects to meet the requirements of the various tenants or may be consolidated into a single project.

MSP Campus Modifications *

An ongoing program to modify or remodel areas within other facilities around the MSP Campus to meet the needs of the various tenants/general public/MAC departments utilizing the facilities.

Emergency Power Upgrades \$1,250,000

Studies and surveys of Terminal 1-Lindbergh transfer switches and emergency lighting were completed in 2008. This year's project will continue the design and implementation of emergency power and lighting corrective work identified in the studies.

Restroom Upgrade Program \$1,000,000

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

Air Handling Unit Replacement \$1,000,000

There are existing air handling units serving Terminal 1-Lindbergh that were installed with the original terminal construction in 1958-60 and are over 40 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 to provide for the replacement of the units that have been identified as needing replacement will be implemented. The project costs include modifications to building walls to facilitate the removal of existing equipment and installation of the new units, upgraded electrical and temperature controls, and asbestos abatement.

Conveyance System Upgrades \$500,000

A study of the MSP campus conveyance systems including elevators, escalators, moving walks, dumbwaiters, and material lifts was completed by the Facilities Department's conveyance consultant. The study evaluated the useful life of each system including the availability of replacement parts and technical support of the equipment. Many of the systems are being operated by outdated technology that is generally less efficient than modern control equipment. Some of the systems do not include safety devices or features that are commonly installed on modern equipment. A multi-year program was implemented in 2010 to modernize and replace outdated elements of the conveyance systems.

Plumbing Infrastructure Upgrade Program \$500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer functional, and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. The focus of the 2013 project will be to survey and upgrade the sump pumps and controls that remove ground water from the APM Tram tunnel.

Terminal Curtainwall Repair \$100,000

The rubber gaskets that are integral to sealing the perimeter curtainwall system from air infiltration heating and cooling loss and water intrusion have been failing and require replacement in many locations. The gasket failures result in increased heating and cooling costs and repair costs resulting from water damage to the building wall assembly. This multi-year program, which was implemented in 2012, will provide for the replacement of failing gaskets and related repairs to the curtainwall system.

Concourses C-G Connector Soffit Repair \$200,000

The soffit under the Concourse C-G connector is constructed of individual insulated panels fastened to the connector structure. A number of these panels have been damaged by high winds over the years. Additional panels have been damaged by leaking oil pans related to the moving walkway belts. This project would remove and replace the damaged panels as well as provide an opportunity for the inspection of the structure supporting the panels to determine if additional repair is required.

Passenger Amenities

Art in the Terminal \$250,000

This project is a continuation of the partnership with the Airport Foundation to provide opportunities for the display of permanent and temporary/rotating art exhibits.

Concessions Revenue Development/Upgrades \$200,000

This is an annual program to fund miscellaneous upgrades such as finishes, furniture, condiment stations, signage, and/or modified connections to utilities for the Concession Programs at Terminal 1-Lindbergh.

Way-Finding Signage Improvements \$300,000

Since the change in terminal designation from Lindbergh Terminal to Terminal1-Lindbergh, there is a need to update additional interior and exterior signage. In addition, there is also a need to add Light Rail Transit (LRT) signage to improve access/visibility to the public, add elevator signs, and modify overhead illuminated and non-illuminated signage to improve passenger way-finding.

Electronic Video Information Display Systems \$200,000

The installation of Electronic Video Information Display Systems (EVIDS) including Multi-User Flight Information Display (MUFIDS) throughout Terminal 1-Lindbergh and Terminal 2-Humphrey has been so successful that there have been requests for the installation of these electronic information tools in other areas. These areas include the Custom Border Patrol (CBP)/Federal Inspection Services (FIS) areas in both terminals and the Terminal 2-Humphrey baggage claim area. This project would also provide for the replacement of monitors that were installed in 2009 with newer LED backlit technology.

CBP Global Entry Program Enrollment Center \$100,000

This project will provide for an office in Terminal 1-Lindbergh that Custom Border Patrol (CBP) staff can use to conduct interviews with applicants for acceptance into the Global Entry Program. Global Entry is a registered traveler program that allows approved program participants to use kiosks in the FIS and special lanes at check points. Enrollment in this program allows for faster processing of passengers who frequently travel internationally.

Operational Improvements

Open Architecture Building Automation (OABA) \$1,250,000

This is a continuation of a multi-year program to upgrade all MAC building automation systems to the LonMark open architecture protocol so that the MAC can bid maintenance and construction contracts more competitively. This project will replace sole-source controllers such as Siemens

and Legacy Honeywell with LonMark controllers from Honeywell, Circon, Distech, or TAC systems that are all LonMark certified product lines.

Fiber Optic Cable Infrastructure Upgrade/Expansion \$150,000

Fiber optic cable infrastructure is the basic vehicle that allows for broader use of both new and existing communications and computer-based technologies. The cable infrastructure requires ongoing upgrade, replacement, and expansion. This multi-year project will provide for the expansion of cabling infrastructure including replacing materials that don't meet current MAC standards and adding capacity between locations where existing capacity has been used up.

Wireless Network Control System \$450,000

This project will provide a campus-wide wireless network to be implemented over a multi-year period. This system will allow remote wireless access to the MAC Facilities Intelligent Monitoring and Control System (IMACS). The system will allow access to data and drawings from the MAC network as well as from remote vehicles on the airfield.

Custom Border Patrol (CBP) Primary Expansion (G8 Hold Room) \$12,000,000

In addition to the FIS Recheck Project, a second project to improve the operation and level of service of the FIS facility is being recommended. This project will relocate and expand the primary check-in and queue area by displacing the Gate 8 gate lobby and existing concession and commissary, for expanded international baggage claim. The two existing claim devices would be lengthened to 300 feet, providing adequate accommodation of the existing fleet mix and scheduled arrivals.

Facilities Monitoring System Software Update \$450,000

The Facilities Monitoring System (FMS) monitors equipment including automated doors, moving walkways, escalators, elevators, power systems, MUFIDS, baggage systems, and soon-to-be added passenger boarding bridges and restrooms. This system ensures quick response times when equipment malfunctions. The existing software platform that powers the FMS is outdated and in need of upgrading. This project will provide for the migration of the FMS to a new software platform.

MACNet Upgrade – Connectivity Elements \$1,500,000

The MACNet provides the critical and required infrastructure to support all of the current and future MAC voice, data, and video systems. This includes systems supporting mission critical applications and systems that are used by airside and landside operations, public safety, airport planning and development, environment and noise, finance and accounting, human resources, and overall MAC administration. This system has been modified over time to support the current systems in place as well as new systems, business, and operational requirements as they have been identified. The current version of MACNet, however, has reached its operational capacity and is not capable of supporting future growth. The upgraded MACNet will be implemented over a number of years to provide the necessary infrastructure to support all next generation systems and applications to be implemented in upcoming years.

Data Center Computer Hardware \$200,000

This project will provide for purchasing computer hardware required to equip the new Data Center facility scheduled for completion in 2013. Computer equipment includes servers, switches, and networked storage. All equipment is available via State of Minnesota contracts.

Concourse G Improvements

Concourse G Roof Replacement \$6,000,000

An inspection of the Concourse G roof by the MAC's roofing consultant indicates that a complete re-roofing of the concourse, with the exception of the roof over the FIS facility, is required. The project would include upgrading the insulation to MAC energy standards and the repair/replacement of the clerstory curtain wall system that is failing. Required drains, roof hatch guardrails, and removal and reattachment of roof top units would also be included. Delta Air Lines is responsible for maintaining Concourse G and has requested the MAC undertake this project with reimbursement to be made to the MAC in accordance with the agreements that have been negotiated as part of the Delta Air Lines/OTG concessions upgrade project. This will be a multi-year project.

Energy Management Center

Energy Savings Projects \$1,000,000

A program was initiated in 2002 to provide for the implementation of projects that would save the Commission energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the Commission additional energy costs. In order to qualify, projects must provide a five-year pay back.

Field and Runway

Airside Bituminous Rehabilitation/Electrical Construction \$500,000

This is an ongoing program to construct or reconstruct bituminous pavements and airfield electrical or lighting within the Air Operations Area (AOA). Inspection of taxiway pavements, lighting, and electrical circuits determines what areas are to be prioritized for rehabilitation under each year's project. In addition to the rehabilitation work, this project will include the installation of radio frequency signs at the end of each runway as a part of the ongoing effort to reduce runway incursions at the airport.

Pavement Joint Sealing/Repair \$650,000

This is an ongoing program to provide for the resealing of joints in existing concrete pavements. The areas scheduled for sealing will be defined in the overall joint sealing program. This project will also provide for limited crack and surface repairs.

Pavement Rehabilitation – Aprons \$1,900,000

This is an ongoing program to replace sections of concrete pavement in the aircraft operational areas that have deteriorated to a point where routine maintenance is no longer a viable option. This year's project will replace approximately 6,000 square yards of concrete apron located adjacent to Concourse C between Gates C7 and C9.

Miscellaneous Airfield Construction \$400,000

This is an ongoing program to consolidate various incidental repairs beyond the work load capabilities of the Field Maintenance personnel, or to handle airfield problems requiring repair that come up unexpectedly.

Runway 12R/30L Tunnel Rehabilitation – Mill and Overlay \$300,000

This project includes the mill and overlay of the tunnel approach pavements as well as the section of pavement within the south parallel Runway 12R/30L tunnel.

Terminal Roads/Landside

Tunnel/Bridge Rehabilitation \$100,000

The MSP campus has MAC-owned bridges and tunnels. Bridge and tunnel inspections are conducted each year and maintenance repairs are then implemented.

Parking

T1/T2 Parking Structure Rehabilitation \$2,500,000

This is an annual program to maintain the integrity of the airport's multi-level parking structures. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and lighting improvements. This project will implement recommendations made in the "Condition Assessment and Management Program Report" completed in 2007 and updated annually.

Terminal 2 – Humphrey

Safety/Security Projects

Checked Baggage Inspection System (CBIS) Program \$47,000,000

In 2004, the MAC began planning and design efforts for an automated, in-line Explosives Detection System (EDS) baggage screening system for Terminal 2-Humphrey, based upon plans to expand the terminal to accommodate additional airline capacity. The original concepts and plans have been redesigned to meet the new TSA-furnished high-speed screening equipment with the TSA funding 90 percent of the eligible design efforts through an Other Transaction Agreement (OTA) for Design Services. The MAC has now received an OTA to provide funding for 90% of the eligible construction costs. Once this project is complete, the existing screening process located in the ticketing lobby will be moved behind the scenes. The removal of the EDS equipment from the lobby will provide additional customer queuing space and area to install additional ticket counters as required. This project will also expand the baggage make-up area and upgrade the existing paging system at Terminal 2-Humphrey to comply with current codes for emergency evacuation.

Operational Improvements

RAC Ready/Return Expansion \$12,600,000

RAC ready/return demand at Terminal 2-Humphrey has been increasing. Previous needs for additional RAC ready/return space have been met by expanding operations on the ground level of the Purple Ramp. This project will expand RAC ready/return operations at Terminal 2-Humphrey to include the mezzanine level of the Purple Ramp while maintaining ready/return operations on the ground level. The RAC operations on the mezzanine level will require additional pedestrian vertical circulation between the ground and mezzanine levels. This project includes the addition of an expanded interior vertical circulation core that will include two new elevators and escalators. A canopy will also be constructed over the south area of the Purple Ramp on the mezzanine level.

The expansion of the ready/return operations will also require roadway modifications to the entrance/exit and ground level of the Purple Ramp.

Public Areas/Roads

Landside Pavement Rehabilitation \$400,000

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

Roadway Fixture Refurbishment \$100,000

Many of the light poles, clearance restriction bars, sign units, fence sections, and canopies on the airport roadways are in need of repainting and maintenance. This is a multi-year program that provides for refurbishment of these fixtures utilizing both MAC staff and temporary seasonal staff as available.

Hangars and other Buildings

Roof Replacements \$800,000

The MAC's roofing consultant has completed a study that assessed the condition of the roof systems of the buildings on the MAC campus and developed a roof management program. The roof on Concourse F requires replacement in 2013.

Zantop Hangar Demolition \$900,000

A study was completed in 2012 that identified older buildings on the airport that were either being used for auxiliary storage or are owned by the MAC and being leased/partially leased. The Zantop Hangar was included in the study. The hangar is a two-story precast structure built in the late 1950s that is located near the air traffic control tower. There is 22,770 square feet of area on the hangar floor level and 3,000 square feet in an office area on the west end. The MAC has used this facility over the years for seasonal (winter) storage. The facility's aging infrastructure contains asbestos and mold and the facility will need a complete roof replacement in the near future. Currently, the cost to maintain the hangar is approximately \$72,000 while a new roof would cost \$400,000. This building is no longer required for seasonal storage and the recommendation is that the hangar be demolished.

Trades/Maintenance Buildings

Trades Building Cooling System Improvements \$600,000

The Trades building was constructed in 1997 and included an air-cooled chiller that provides cooling to the administrative offices area. The existing chiller has been subject to frequent service and repair due to short cycling of the two reciprocating compressors. This short cycling wastes energy and accelerates wear on the compressors. Options to improve the cooling system have been evaluated with the following goals: (1) improve the efficiency and reliability of the central cooling plant; (2) add cooling to other areas within the Trades Building; and (3) add an air handler to the records retention trailer adjacent to the Trades Building to improve dehumidification. A new split chiller comprised of an air-cooled condensing unit (outdoors) connected to an indoor evaporator utilizing six compressors was the system that provided for the best energy payback.

Police

iVISON (CCTV) Improvements \$1,300,000

This is an ongoing program to add new and upgrade existing Closed Circuit TV (CCTV) systems to ensure the safety and security of MSP. An analysis of the existing CCTV system was completed in 2010. The existing system consists of a mix of old and new technology with some equipment being in excess of 16 years old. The consensus of the CCTV working group was to replace and upgrade the existing CCTV system to a fully digital system. A CCTV Systems Integrator has been selected to assist in the development and installation of new Video Management System (VMS) and Physical Security Information System (PISM) software. New IP cameras were evaluated. This is the continuation of the program to systematically replace and integrate the approximately 1800 existing cameras and to add expand the camera coverage as required. A grant application has been submitted to the TSA requesting funding for eligible project costs.

Environment

Storm Sewer Rehabilitation – Deicing Areas \$500,000

This is a phased program to rehabilitate the storm sewer pipes and manholes at locations where aircraft deicing occurs. Sealing leaking pipes and manholes will enhance the collection and storage of glycol-impacted storm water resulting from deicing operations. The 2013 project will concentrate on the apron between Concourses E and F.

Runway 30R Deicing Pad Subdrain \$800,000

This project provides for the installation of a lift station and subdrain system to capture glycol-impacted drainage from beneath the 30R deicing pad and route it to the sanitary sewer system for treatment.

St. Paul

Storm Sewer Improvements \$500,000

This project will investigate and correct poor storm drainage on the west side of St. Paul Downtown Airport. The old storm sewer system infrastructure is not removing storm water from the site as effectively as it should. Improvements will also aid in fighting floods by insuring no ground water is infiltrating the old system and backing up into the airfield, which in the past has required additional groundwater pumping capacity to keep up. This project will also include work associated with MnDOT and the highway directional signage for the airport.

Lake Elmo

Pavement Rehabilitation \$300,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) at Lake Elmo Airport through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of the Runway 4/22 pavements and portions of the parallel taxiway.

Airport Layout Plan (ALP) \$200,000

In accordance with FAA and MnDOT requirements for obtaining AIP or state funds, the MAC must update the Lake Elmo Airport Layout Plan (ALP). This project will include the preparation of an update to the ALP to match the long-term comprehensive plans for the airport, reflect the existing configuration and any proposed future changes for the airfield, and be in compliance with FAA/MnDOT requirements for ALP preparation.

Airlake

Pavement Rehabilitation \$200,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) at Airlake Airport through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of the runway and taxiway pavements, full depth crack repairs and crack sealing.

Airport Layout Plan (ALP) \$200,000

In accordance with FAA and MnDOT requirements for obtaining AIP or state funds, the MAC must update the Airlake Airport Layout Plan (ALP). This project will include the preparation of an update to the ALP to match the long-term comprehensive plans for the airport, reflect the existing configuration and any proposed future changes for the airfield, and be in compliance with FAA/MnDOT requirements for ALP preparation.

Flying Cloud

Runway 18/36 Safety Improvements \$1,900,000

Segment 3 of Flying Cloud Airport's Runway 18/36 includes the Runway end 36 to the Runway 10R/28L safety area boundary. This portion of the runway will be rehabilitated, along with lighting and cable replacement. In addition, the runway safety area deficiency will be corrected and the runway extended to 2,800 feet as recommended in the long-term comprehensive plan. This project will also include relocation and replacement of the Runway End Identifier Lights (REILs), installation of new Precision Approach Path Indicator (PAPI) systems for the runway, and a supplemental wind cone on the airfield.

East/West Perimeter Road \$250,000

As part of the runway incursion reduction steps the MAC is taking at Flying Cloud Airport, an east/west perimeter road will be constructed to allow tenants, fueling trucks and maintenance vehicles access across the north end of the airfield without direct access to the taxiways or runways.

Crystal

Airport Layout Plan (ALP) \$200,000

In accordance with FAA and MnDOT requirements for obtaining AIP or state funds, the MAC must update the Crystal Airport Layout Plan (ALP). This project will include the preparation of an update to the ALP to match the long-term comprehensive plans for the airport, reflect the existing configuration and any proposed future changes for the airfield, and be in compliance with FAA/MnDOT requirements for ALP preparation.

Anoka County – Blaine

Pavement Rehabilitation - Alleyways

\$850,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) at Anoka County – Blaine Airport through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of the alleyways in the east building area.

2014 Capital Improvement Program

Noise Mitigation – 2010 Program

Noise Mitigation Settlement \$900,000

This project is a continuation of the implementation of the noise mitigation program based on the Noise Exposure Map contained in the court-ordered Consent Decree, including the construction and administrative costs associated with noise mitigation in the 2007 60-62 DNL contours. The 2014 project budget will reimburse homeowners in the 2005 60-64 DNL contours for approved noise mitigation work (Phase 3).

Terminal 1- Lindbergh

Safety/Security Projects

Telecommunications Room Equipment Continuity and Security \$3,300,000

The MAC network (MACNet) carries credit card data from the Landside Parking Revenue Control System. The credit card industry has created security standards that merchants, like the MAC, are required to meet to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally the network equipment itself must have added security features to prevent unauthorized network access. This program will address these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus. This program is being coordinated with the iVISON and Fiber Optic Cable Infrastructure Upgrade/Expansion programs to avoid duplication of effort and cost. This will be a multi-year program.

Fall Protection Program \$100,000

The Occupational Safety and Health Administration (OSHA) requires that employers protect their employees that work on roof tops, next to roof edges, and other locations where there could be the potential for injuries due to falls. Options range from warning signage and spotters to guardrail and tie-off systems. A Roof Fall Protection Committee has been reviewing roof areas around the MSP campus to determine potential hazards and mitigation options. This program is being implemented to address those roof areas deemed to present an imminent fall hazard that are not being addressed in other roof repair projects.

Facilities Rehabilitation

Electrical Infrastructure Rehabilitation Program \$2,500,000

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

Terminal Miscellaneous Modifications \$2,000,000

Each year, there is a list of “maintenance” projects that are beyond the capability of the MAC’s maintenance staff and trades to accomplish. These projects are prioritized and completed either

as a series of contracts or as purchase orders. The list of potential projects will be compiled and prioritized in early 2014.

Summarized below are the categories of the projects that are included in the Terminal Miscellaneous Modifications program:

Building Exterior Rehabilitation *

A continuation of the program to rehabilitate the exterior of the terminals and other MAC buildings, including roof and curtainwall rehabilitation.

Terminal Electrical Modifications *

An ongoing program to address electrical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Mechanical Modifications *

An ongoing program to address mechanical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Miscellaneous Modifications *

An ongoing program to update and remodel areas within the terminals to keep abreast with changing requirements. This may be accomplished through a series of small individual projects to meet the requirements of the various tenants or may be consolidated into a single project.

MSP Campus Modifications *

An ongoing program to modify or remodel areas within other facilities around the MSP Campus to meet the needs of the various tenants/general public/MAC departments utilizing the facilities.

Emergency Power Upgrades \$2,300,000

Studies and surveys of Terminal 1-Lindbergh transfer switches and emergency lighting were completed in 2008. This year's project will continue the design and implementation of emergency power and lighting corrective work identified in the studies.

Lower Level Roadway/GTC Water Infiltration Mitigation \$2,500,000

Water infiltration through the structural concrete slab above the Ground Transportation Center and lower level of Terminal 1-Lindbergh has required the use of buckets and other containers to collect the water. Long-term water infiltration of structural members will result in deterioration of the structural concrete and will shorten the life of the structure. This project will determine the causes of the infiltration and develop a mitigation solution to be implemented.

Restroom Upgrade Program \$2,000,000

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

Air Handling Unit Replacement \$1,500,000

There are existing air handling units serving Terminal 1-Lindbergh that were installed with the original terminal construction in 1958-60 and are over 40 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 to provide for the replacement of the units that have been identified as needing replacement will be implemented. 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.

Plumbing Infrastructure Upgrade Program \$500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer functional, and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. A four-year program was implemented in 2012 to upgrade the plumbing infrastructure system to meet current code requirements and MAC standards. The 2014 project will focus on the replacement of aging water meter assemblies and the upgrade of the meter reading to the MAC OABA building automation system.

Terminal Curtainwall Repair \$100,000

The rubber gaskets that are integral to sealing the perimeter curtainwall system from air infiltration heating and cooling loss and water intrusion have been failing and require replacement in many locations. The gasket failures result in increased heating and cooling costs and repair costs resulting from water damage to the building wall assembly. This three-year program will provide for the replacement of failing gaskets and related repairs to the curtainwall system.

CBP Carpet Replacement \$350,000

The Customs Border Patrol (CBP) facilities on Concourse G were constructed in 1995 with the Federal Inspections Services (FIS) project. The existing carpet in the CBP offices and adjacent areas has reached the end of its useful life and is in need of replacement.

Lighting Infrastructure Technology and Equipment \$1,400,000

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

Passenger Amenities

Art in the Terminal \$250,000

This project is a continuation of the partnership with the Airport Foundation to provide opportunities for the display of permanent and temporary/rotating art exhibits.

Concessions Revenue Development/Upgrades \$200,000

This is an annual program to fund miscellaneous upgrades such as finishes, furniture, condiment stations, signage, and/or modified connections to utilities for the concession programs at Terminal 1-Lindbergh.

Operational Improvements

Concourse C Elevator to D Street \$450,000

Currently, the Concourse C elevator stops at the concourse level. MAC staff has requested that this elevator be modified to allow for access to D Street. The extension of the elevator to ramp level would allow the MAC trades to get lift equipment used to change lights and clean high areas to the east end of Concourse C.

Open Architecture Building Automation (OABA) \$1,700,000

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

Fiber Optic Cable Infrastructure Upgrade/Expansion \$1,200,000

Fiber optic cable infrastructure is the basic vehicle that allows for broader use of both new and existing communications and computer-based technologies. The cable infrastructure requires ongoing upgrade, replacement, and expansion. This multi-year project will provide for the expansion of cabling infrastructure including replacing materials that don't meet current MAC standards and adding capacity between locations where existing capacity has been used up.

Wireless Network Control System \$500,000

This project will provide a campus-wide wireless network to be implemented over a three-year period. This system will allow remote wireless access to the MAC Facilities Intelligent Monitoring and Control System (IMACS). The system will allow access to data and drawings from the MAC network as well as from remote vehicles on the airfield.

FIS Recheck Enhancements/Restrooms Relocation \$5,600,000

In 1995 the Commission approved construction of the Federal Inspection Services (FIS) facility on Concourse G. The FIS facility is connected to 10 gates (G1-G10) by a sterile corridor. The 10 gates can accommodate five wide-body aircraft simultaneously; however, processing of international passengers becomes congested when two wide-body aircraft arrive at the same time. There are times when a third wide-body aircraft arrives early, which makes processing of passengers in a timely manner extremely challenging. Recent discussions with Delta Air Lines have highlighted the need to identify short-term, low-cost measures that will provide a higher level of service for processing international passengers, and the need to conduct long-term planning that would increase the primary and secondary processing space as well as the baggage claim space to support expanded international service.

This is the first project to improve and expand the existing FIS facility and will provide for reconfiguration of the Recheck Lobby including relocation of existing concession space and restrooms.

MACNet Upgrade – Connectivity Elements \$3,000,000

The MACNet provides the critical and required infrastructure to support all of the current and future MAC voice, data, and video systems. This includes systems supporting mission critical applications and systems that are used by airside and landside operations, public safety, airport planning and development, environment and noise, finance and accounting, human resources, and overall MAC administration. This system has been modified over time to support the current systems in place as well as new systems, business, and operational requirements as they have been identified. The current version of MACNet, however, has reached its operational capacity and is not capable of supporting future growth. The upgraded MACNet will be implemented over a number of years to provide the necessary infrastructure to support all next generation systems and applications to be implemented in upcoming years.

Energy Management Center

Energy Savings Projects \$2,000,000

A program was initiated in 2002 to provide for the implementation of projects that would save the Commission energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the Commission additional energy costs. In order to qualify, projects must provide at least a five-year pay back.

Field and Runway

Airside Bituminous Rehabilitation/Electrical Construction \$500,000

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

Pavement Joint Sealing/Repair \$650,000

This is an ongoing program to provide for the resealing of joints in existing concrete pavements. The areas scheduled for sealing will be defined in the overall joint sealing program. This project will also provide for limited crack and surface repairs.

Miscellaneous Airfield Construction \$400,000

This is an ongoing program to consolidate various incidental repairs beyond the work load capabilities of the Field Maintenance personnel or to handle airfield problems requiring repair that come up unexpectedly.

Terminal Roads/Landside

Tunnel/Bridge Rehabilitation \$100,000

The MSP campus has MAC-owned bridges and tunnels. Bridge and tunnel inspections are conducted each year and maintenance repairs are then implemented.

Upper Level Roadway Electrical System Rehabilitation \$450,000

This project provides for the reconstruction for the upper level roadway electrical system infrastructure, and includes electrical removals and the installation of electrical devices, conduits and cable.

Parking

T1/T2 Parking Structure Rehabilitation \$2,500,000

This is an annual program to maintain the integrity of the airport's multi-level parking structures. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and lighting improvements. This project will implement recommendations made in the "Condition Assessment and Management Program Report" completed in 2007 and updated annually.

Terminal 2 – Humphrey

Operational Improvements

RAC Customer Service Building \$6,400,000

Rental auto car (RAC) operations at Terminal 2-Humphrey have been steadily increasing. Currently, RAC-related customer service space has been provided in the ground level core building on the west side of the Purple Ramp. Recent assessments of RAC customer service demands indicate that additional space is required to accommodate current and projected demands. Working with the RAC companies, a plan was developed that will provide for the construction of a new RAC Customer Service Building (CSB) on the east side of the Purple Ramp core building. The new CSB will include space to accommodate up to 10 rental companies and will include counters, offices, customer queuing and lobby areas, storage, and potential counter expansion. The CSB has been sized to allow all current RAC counter operations to vacate their existing space and is planned to accommodate projected RAC counter space needs through 2020.

RAC Quick Turnaround (QTA) Facility \$16,400,000

Current RAC operations at Terminal 2-Humphrey utilize off-site fueling and wash facilities and have limited space for vehicle staging. As RAC ready/return operations at Terminal 2-Humphrey continue to expand, the need for a Quick Turnaround (QTA) facility in close proximity to Terminal 2-Humphrey is recommended. This project will construct a new RAC QTA facility at Terminal 2-Humphrey to support expanding ready/return operations. The QTA will be constructed on the Building F lot on a portion of the space that will be reclaimed when Building F is demolished. The QTA will provide car wash and fueling facilities and car stacking/storage space. Specifically, the facility is planned to provide eight (8) car wash locations, twenty-four (24) fueling positions, and space for approximately seven-hundred (700) stored/stacked RAC vehicles. Canopies will cover the car wash and fueling positions. Two new right turn lanes will be provided to accommodate the additional RAC-related traffic accessing the site.

Incident Response Friends and Relatives Fit-up \$1,300,000

The MAC has used several different locations over the years to serve as a Friends and Relatives Incident Response center in the event of an airline incident, a weather-related event such as a tornado, or possibly a terrorist incident. This facility would be available for family and friends of those killed/injured in the incident to gather for incident updates and counseling. The 2012 Emergency Preparedness Exercise used the old Navy Administration Building as the "survivor" center. The MAC Fire Marshall, however, has stated that this building does not have the required

facilities and does not meet the current codes to function in this capacity. This project will build out a currently undeveloped area on the first level of Terminal 2-Humphrey that has been created with the construction of the Security Check Point project. The project will provide a large room that would house up to 100 people with tables and chairs, phones, TVs and data connections. There would also be small rooms for families and a re-unification room for family and airport personnel. A kitchenette with cabinets, sink, refrigerator and coffee machines would be included. New restrooms would also be constructed. This facility could be rented out to help defray the cost of construction.

Terminal 2-Humphrey North Expansion

Apron/Fueling Expansion \$15,300,000

The expansion of Terminal 2-Humphrey will require the expansion of the terminal apron. This project will provide for the concrete apron expansion and installation of aircraft fueling pits to the north of the terminal to accommodate future gate expansion. The expansion of the apron will also require the reconfiguration of the ARFF Station No. 1 parking lot, and any required storm water modifications will also be completed.

Gates 11 – 13 \$35,000,000

This project will provide three new gates with associated gate lobbies, and four new passenger boarding bridges for current and future fleet mixes, with ground boarding accommodation at the northern most gate, providing maximum short- and long-term flexibility. Modified passenger boarding bridge routes will create more accessible routes to all planned aircraft types, from regional to large narrow-body aircraft. Gate lobbies will provide 85% of seating for the planned aircraft, improving the waiting experience for the customer. The upper level build-out will include: public walkways, gate lobby space, restrooms, concessions (including vending and future build-outs), mechanical/penthouse space and equipment, fire/life-safety systems, other required appurtenances, publicly-accessible power, EVIDS/MUFIDS installations, and way-finding signage revisions on the north end of the terminal. This expansion will make use of the first half of the apron and fueling expansion project, and will provide additional access to Remain Over Night (RON) and for the ground boarding of smaller regional aircraft.

Terminal Utilities Relocation \$1,000,000

This project will provide the airside and landside utilities consisting of storm water drainage improvements, water main extensions, and fiber cable installation to support the construction of Gates 11 – 13.

Public Areas/Roads

Landside Pavement Rehabilitation \$400,000

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

Roadway Fixture Refurbishment \$100,000

Many of the light poles, clearance restriction bars, sign units, fence sections, and canopies on the airport roadways are in need of repainting and maintenance. This is a multi-year program that

provides for refurbishment of these fixtures utilizing both MAC staff and temporary seasonal staff as available.

I-494/34th Ave Interchange Enhancements/Diverging Diamond Interchange (DDI) \$6,000,000

The I-494 and 34th Avenue South interchange is located at the border of MSP and the City of Bloomington, between Airport Lane and American Boulevard East. During peak hours of traffic movement, the eastbound exit ramp from I-494 to northbound 34th Avenue results in traffic queues that extend two-thirds the length of the ramp. As traffic demand increases, the existing interchange will be unable to safely and efficiently handle the traffic. As this interchange is critical to both MSP's and the City of Bloomington's long range plans, the MAC and the City have partnered to apply for a grant through the Transportation Economic Development (TED) pilot program. This program provides state funding for a share of the costs for projects that will improve the statewide transportation network while promoting economic growth. The proposed interchange improvements will convert the existing diamond interchange to a diverging diamond interchange (DDI), increasing capacity and decreasing queue lengths and conflict points at a cost far below that of completely replacing the existing interchange. Approximately 85% of this project will be funded by a combination of a TED grant (70%) and reimbursement by the City of Bloomington (15%). Construction will include paving, lighting, storm water improvements, and reconstruction of interface areas with the Metro Transit LRT tracks.

Hangars and other Buildings

Impark Building Rehabilitation \$600,000

A study was completed in 2012 that identified older buildings on the airport that were either being used for auxiliary storage or are owned by the MAC and being leased/partially leased. The Impark Building was included in the study. The building is a one-story concrete block structure that was constructed in the 1960s. The entire 22,800 square foot building is used by the MAC Trades for material and equipment storage and also houses a paint booth blast area. Unlike the Zantop Hangar, the building does not contain asbestos or mold. MAC staff is recommending that this building should be maintained based on the need by the Trades for storage of materials and equipment. The building is structurally sound but needs exterior repair to prevent moisture damage. This project will provide for the repair of exterior walls, windows and doors as well as some modifications to the bead blasting booth area.

Drivers Training Facility Rehabilitation \$550,000

Another building that was included in the 2012 study of older buildings was Building H. This is a one-story concrete block structure that was built in 1985. A new roof was installed on this building in 2011. The MAC Drivers Training Center (DTC) is located in this building. This facility is currently planned to remain in Building H for the next 8-10 years and the building therefore requires some upgrades to improve the current level of customer service and security. This project will add card access security to exterior doors and add a security system to exterior windows and doors. The driver's administration/check-in/licensing area would be remodeled and the restrooms upgraded to meet ADA compliance.

Police

Public Safety Building \$500,000

This project will relocate the MAC Police Department to a new stand-alone facility outside of the terminal complex. The new facility will have convenient access to both airside and landside with

improved response to both terminals via airside or public roadways. The building is envisioned as a multi-story structure that will accommodate future growth and consolidation of the Emergency Call Center and Airport Operations into one building.

iVSN (CCTV) Improvements \$2,000,000

This is an ongoing program to add new and upgrade existing Closed Circuit TV (CCTV) systems to ensure the safety and security of MSP. An analysis of the existing CCTV system was completed in 2010. The existing system consists of a mix of old and new technology with some equipment being in excess of 16 years old. The consensus of the CCTV working group was to replace and upgrade the existing CCTV system to a fully digital system. A CCTV Systems Integrator has been selected to assist in the development and installation of new Video Management System (VMS) and Physical Security Information System (PISM) software. New IP cameras were evaluated. This is the continuation of the program to systematically replace and integrate the approximately 1800 existing cameras and to add expand the camera coverage as required. A grant application has been submitted to the TSA requesting funding for eligible project costs.

Environment

Concourses C/G Compactor Canopies \$450,000

The airside trash/recycling materials staging areas on Concourses C and G utilize 90-gallon carts for recyclables, collected within the terminal, and have a dumpsters/compactors for trash. These staging areas are fully exposed to the elements and become extremely difficult to properly operate during the winter months. This project will provide canopies over each trash/recycling area to protect the areas from rain and snow.

St. Paul

Joint and Crack Repairs \$100,000

Given the extremely poor sub grade materials at the St. Paul Downtown Airport (STP), the need for crack repair and joint sealing is critical to maintain pavement strength and pavement life. An inspection of the pavement will be completed to determine the areas most in need of repair.

MAC Building Maintenance \$250,000

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.

Pavement Rehabilitation \$500,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) at STP through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project will include the rehabilitation of Taxiway Bravo and Taxiway Charlie, along with other minor areas.

Electrical Vault Improvements \$800,000

The current electrical vault controlling the airfield lighting systems is reaching its life expectancy and requires improvements to become compliant with the National Electric code. This project will upgrade the facility and replace electrical equipment to meet current code and safety regulations.

Airlake

Maintenance Building Improvements \$100,000

This project will include improvements to the existing Airlake Airport maintenance building, specifically in the restroom and shower areas.

Flying Cloud

Commercial Development – All Relievers \$200,000

Similar to the costs expended in 2011 for a revenue generating parcel at Flying Cloud Airport, these costs allow the MAC to research and/or prepare sites at the Reliever Airports for potential development. Costs may include site preparation, surveying, marketing, and/or other development related costs. Funds expended for each parcel will be assessed to the developer who ultimately takes on the commercial development.

Crystal

Pavement Rehabilitation \$700,000

This is an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) at the Crystal Airport through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This project includes rehabilitation of portions of Taxiway Bravo on the west side of the airport along with other pavement repairs and crack sealing.

Roof Repairs/Replacement \$250,000

A site inspection has identified deficiencies in some of the roof structures on MAC-owned buildings at the Crystal Airport. This project will include further investigation of existing problems, determination of whether or not repairs or replacement is needed, evaluation of the benefits and costs, and completion of the improvements if warranted.

2015 – 2019 Capital Improvement Program

(Description of projects expected to be implemented in 2015 - 2019 are preliminary, and only those that have potential substantive environmental effects are included in this section.)

Terminal 1-Lindbbergh

Operational Improvements

CBP Primary Relocation Gates G8-G9 Infill & Penthouse \$51,000,000

This project will relocate the Customs Border Patrol (CBP) primary checking from the gate level to the penthouse level. There will be a two level infill between gates G8 and G9 that would reclaim the gate G8-G10 lobby. The two existing claim devices would be lengthened and two additional claim devices would be installed.

Terminal 1-Lindbergh Expansion/Remodeling

CONCOURSE G EXPANSION

Concourse G Tram – Equipment Procurement \$50,000,000

The Long-Term Comprehensive Plan (LTCP) for MSP recommends that Concourse G be expanded and that a tram system be installed for the efficient movement of passengers. This project will provide for the procurement of the Concourse G tram vehicles.

Apron Improvements \$17,000,000

This project will provide for the improvements to the apron including the extension of the fuel hydrant system to support the new gate hold expansion.

C-G Tunnel Expansion \$20,000,000

There is a tunnel that provides airside access from Concourse C to the airside adjacent to existing Concourse G. This tunnel will be extended under the new gate hold expansion.

ROADWAY AND PARKING EXPANSION

Lower Level Curbside Expansion \$10,500,000

The existing arrivals curb front cannot be lengthened due to Concourses G and C. This project will provide an outer curb with pedestrian crosswalks that will traverse the inner curb area, potentially at grade. These improvements to the curb area will improve capacity and efficiency for arriving passengers to reach shuttles, taxis and private vehicles.

Terminal 2 – Humphrey

Terminal 2 – Humphrey South Expansion

Apron Expansion – South \$58,000,000

The expansion of Terminal 2-Humphrey will require the expansion of the terminal apron. This project will provide for the construction of the apron and installation of aircraft fueling pits to accommodate gates 18 through 27.

Gates 14-27 \$165,000,000

In accordance with the LTCP, this project will add four new gates to the north end of Terminal 2-Humphrey and 10 new gates to the south end of the terminal including gate hold areas, passenger boarding bridges, space for additional vending and food services and signage revisions.

Purple Ramp South Expansion \$50,000,000

This project will provide for the expansion of the Terminal 2-Humphrey Purple Ramp to the south including construction of a long-term multi-level Quick Turn Around (QTA) facility for the rental auto companies.

Roadway Realignment \$6,000,000

Access to Terminal 2-Humphrey is provided by both Post Road and 34th Avenue. The LTCP states that both existing roadways will be incapable of handling the required traffic volumes to Terminal 2-Humphrey in future years. The concept for improving this condition is to route all inbound traffic to Post Road and outbound traffic to 34th Avenue. This concept will require widening Post Road, intersection improvements at 34th Avenue and 70th Street, and realignment of a section of the outbound road from Terminal 2-Humphrey to 34th Avenue.

Reliever Airport Programs

Lake Elmo

East Building Area Development \$2,800,000

The LTCP for the Lake Elmo Airport forecasts that there will be an increase in based aircraft that will require the development of a new hangar area. The LTCP recommends the development of a new hangar area on the east side of the airport. Funding for this project will be provided by others.

East Side Parallel Taxiway \$1,200,000

This project includes the construction of a full parallel taxiway to Runway 4/22 in conjunction with the extension of Runway 4/22 and a new east side hangar area.

Runway 14/32 Replacement \$5,000,000

The current LTCP for the Lake Elmo Airport demonstrates a need to have an extended runway length of 3,200 feet to accommodate the existing users. While the LTCP originally envisioned an extension would occur on the crosswind Runway 4/22, the MAC is considering accommodating the 3,200-foot length as part of a Runway 14/32 replacement project, in which a new longer runway would be constructed parallel to the existing Runway 14/32. The existing runway would then

become a taxiway. All LTCP updates and environmental study would be completed prior to the proposed construction of the replacement runway. The replacement runway project would involve grading, paving, storm sewer management, lighting and pavement marking. Since there are wetlands on the airport property, an evaluation would be completed to review any potential impacts as part of the documentation listed above. No land acquisition would be required.

Airlake

South Building Area Development \$2,700,000

This project will provide for alleyway construction at the Airlake Airport, including aggregate base and bituminous pavements, along with the installation of sanitary sewer and water main including a stand-alone restroom facility and fire protection hydrant line. The project also includes paving a section of 225th Street that will then connect to Cedar Avenue. Funding for this project will be provided by others.

Runway 12/30 Extension \$8,000,000

This project will provide for the extension of Runway 12/30 from 4,098 feet to 5,000 feet. The runway extension would have an impact on Cedar Avenue, which lies directly east of the airfield, and a segment of the road would be rerouted around the end of the runway end safety area.

Crystal

Runway 14R/32L Modifications \$1,000,000

As defined in the Crystal Airport LTCP update, this project will include closure of Runway 14R/32L and reconstruction of the pavement into a parallel taxiway. Portions of the Taxiway Echo connectors will also be reconstructed. An environmental study for the runway closure will be completed prior to commencement of the project.

Anoka County – Blaine

Building Area Development – East Annex \$2,400,000

This Anoka County – Blaine Airport project includes installation of sanitary sewer and water main, grading and paving of alleyways for up to 80 storage hangars and includes facilities to accommodate storm water runoff. Funding for this project will be provided by others.

Building Area Development – Xylite St. Relocation \$1,000,000

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

Building Area Development – West Annex \$850,000

This project provides for the construction of two alleyways for eight storage hangars and three corporate hangars, sanitary sewer and water main and accommodation of storm water drainage. Funding for this project will be provided by others.