

SOUTH LOOP DISTRICT AUAR
(Appendix G)

MITIGATION PLAN

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SOUTH LOOP DISTRICT AUAR MITIGATION PLAN

1.0 INTRODUCTION

This Mitigation Plan has been prepared as part of the Alternative Urban Areawide Review (AUAR) process for the South Loop District completed by the City of Bloomington as a substitute form of environmental documentation, as provided for in Minnesota Rules Chapter 4410.3610, Subpart 1. This mitigation plan updates the original *Airport South District AUAR Mitigation Plan* prepared in 2002 in accordance with the Environmental Quality Board's (EQB) Environmental Review Program, MN Rules 4410.3610 and the Minnesota EQB's memorandum entitled *Recommended Content and Format – Alternative Urban Areawide Review Documents* updated September 2008.

The AUAR identifies the impacts anticipated to result from future development anticipated to occur within the defined study area. The study area is comprised of the South Loop District (f/k/a Airport South District) in Bloomington which encompasses a 2,350-acre area bounded by I-494 and the Minneapolis-St. Paul International Airport on the north, TH 77 (Cedar Avenue) on the west, and the Minnesota River and the Minnesota Valley National Wildlife Refuge on the south and east. The AUAR development scenario has been updated since the original 2002 AUAR and Mitigation Plan was approved. The updated development scenario describes development anticipated to occur on twelve sites within the South Loop District through Year 2040. Section 6 of the updated AUAR provides a detailed description of the amount, type, and location of proposed future development.

Purpose and Content

This mitigation plan identifies the actions to be taken by the City and/or other responsible parties to avoid or minimize environmental impacts and to mitigate for unavoidable impacts that could result from the development scenario examined in the AUAR. The purpose and content of the mitigation plan is outlined in the Environmental Quality Board (EQB) document, *Recommended Content and Format – Alternative Urban Areawide Review Documents* as follows:

AUAR: The final AUAR document must include an explicit mitigation plan. It must be understood that the mitigation plan is a commitment by the RGU to prevent potentially significant impacts from occurring from specific projects. It is more than just a list of ways to reduce impacts – it must include information about how the mitigation will be applied and assurance that it will. Otherwise, the AUAR may not be adequate and/or specific projects may lose their exemption from individual review.

The RGU's final action on the AUAR must specifically adopt the mitigation plan; therefore the plan has "political" as well as a technical dimension.

Based upon the guidelines summarized above, this Mitigation Plan provides the following information for each area of potential impact identified in the AUAR:

1. Summary of potential impacts;
2. Planned mitigation measures;
3. Identification of the agency/agencies involved in review/approval of mitigation plans;
4. Governmental programs that regulate impacts/mitigation;
5. Timeframes for implementing mitigation; and
6. Identification of party/parties with financial responsibility for implementation of the mitigation measures.

The sections below summarize the impacts and the mitigation measures related to specific resources and/or development activity. These include potential impacts related to implementation of new infrastructure required to accommodate proposed development; sensitive natural resources (e.g., bluffs); cultural resources; and airport-related impacts.

Responsible Parties

- *City of Bloomington* - The responsibility for insuring the implementation of many of the mitigation methods identified in this plan lies with the City of Bloomington. In many cases, the City's development review process and approval of preliminary and final subdivision plans, site plans, grading permits, building permits, and such required for individual development proposals will serve as the step where measures to avoid impacts and/or specific mitigation plans and requirements are identified and reviewed. City approval of development plans involves executed agreements with the developer(s) that may prescribe efforts to reduce environmental impacts, mitigation to be performed for unavoidable impacts, and financial and regulatory assurances that the mitigation plans will be implemented. In addition, the City will inspect the development as it is constructed, or will, through other means ascertain that the prescribed measures are implemented. A summary of the City's standard development review process is provided in Section 7 below.
- *Other Agencies* - Agencies other than the City of Bloomington also have authority for determining compliance with regulations within their jurisdiction as part of their plan approval and permitting processes. The applicable regulations and responsible agencies vary depending on the type and location of impacts. Some of the agencies with jurisdiction related to potential impacts in the South Loop District include: the Minnesota Pollution Control Agency (MPCA); the Minnesota Department of Transportation (Mn/DOT); the Minnesota Department of Natural Resources (MnDNR); the State Historic Preservation Officer (SHPO); State Archeologist; Minnesota Indian Affairs Council; Native American tribal representatives; Metropolitan Council; the Lower Minnesota River Watershed District; the Richfield-Bloomington Watershed Management Organization; and Hennepin County.

- *Developers/Property Owners* – Ultimately, the party responsible for implementing mitigation measures in accordance with the City’s and other agency’s plan review and permit requirements is the developer and/or private property owner. They are responsible for obtaining all required permits and approvals and for providing mitigation required as part of those approvals.

2.0 INFRASTRUCTURE IMPROVEMENTS

2.1 Summary of Infrastructure Impacts

The updated AUAR development scenario describes development forecast to occur in the South Loop District through Year 2040. Improvements to roads, sewers, watermain, and other infrastructure will be needed to accommodate new development that will consist primarily of a mix of retail, office, hotels, and residential uses.

The updated development scenario projects a net reduction in the amount of development in South Loop compared with what was proposed in the 2002 AUAR development scenario. Generally, the projected land use changes result in more evenly dispersed traffic flows and reduced peak hour traffic volumes. On the other hand, more proposed residential and hotel development will increase demand on water and sanitary sewer systems resulting in the need for increased capacity.

Specific infrastructure impacts and mitigation activities related to forecast development are described below. Given that development may occur at different times or in different amounts than assumed in this AUAR update, the actual need for specific infrastructure improvements will be re-evaluated as the AUAR is routinely updated every five years to adjust timing assumptions as planned development comes online and more accurate development timing information becomes available.

Traffic/Road Infrastructure Impacts

New traffic generated by future development in the South Loop District combined with existing background traffic result in traffic volume increases on roadways in and adjacent to the study area through 2040 and beyond. As traffic volumes increase, impacts on traffic operations on area roadways will need to be mitigated. The traffic study conducted for the South Loop District for this updated AUAR analyzed existing conditions and traffic impacts resulting from Year 2025 and Year 2040 forecast development. Given the speculative nature of development forecasts this far into the future, this mitigation plan focuses on traffic/road impacts through 2025.

Sanitary Sewer Impacts

Hydraulic modeling and capacity analysis of Bloomington's sanitary sewer system to accommodate forecast development in the AUAR study area indicates that several of the mainline sewer segments do not currently have adequate capacity to accommodate total forecast development. Infrastructure needs were modeled for two future development phases: 2016-2025 and 2026-2040 (and beyond to full build out).

The modeling and analysis indicates that the total average daily sewer flow rates (out of the South Loop District) could increase the existing flows by 1.6 times in year 2025 and by 2.1 times in year 2040 and beyond. Pipes where modeled flow levels exceeded 75% full, under peak flow conditions, were considered unacceptable and the associated pipe systems were examined for potential upgrades.

Water Distribution System Impacts

Average day water demand in the AUAR development scenario is expected to increase by 1.9 million gallons per day above current demand. As redevelopment occurs, new distribution piping will be needed for local service for both supply and fire protection. In order to provide reliable supply at adequate pressures during high demand periods or fire events, a supply main has been identified to be replaced with a larger capacity main.

Groundwater and Well Impacts

There are existing private water supply wells located on some of the development parcels (e.g., Kelley Farm property) that will need to be sealed when the property redevelops.

There are also currently two industries in the South Loop District that utilize private wells to supplement their public water supply to operate production facilities: Polar Semiconductor and Cypress. Both have obtained DNR appropriation permits. Any expansion of groundwater appropriation for these industries would need to be reviewed by the DNR for impacts on groundwater levels, surface water levels and potential impacts to protected features such as fens, trout streams (if so designated), as well as surface water quality.

Stormwater/Surface Water Impacts

While the updated AUAR development scenario includes more future redevelopment sites than the 2002 AUAR, the amount of impervious surface resulting from proposed new development is not expected to increase significantly above what was proposed in the 2002 AUAR. This is largely due to the high amount of impervious coverage currently existing in the South Loop District. In addition, the site where proposed redevelopment would most increase impervious surface coverage most significantly (e.g., the Kelley Farm) was included in both the 2002 and the updated AUAR development scenario. All other redevelopment sites in the AUAR study area are currently, or have been developed with urban/suburban development.

Given the existing amount of impervious coverage, proposed development should not significantly increase the amount of stormwater discharge under normal conditions when compared to existing conditions. In some cases, redevelopment may provide opportunities to increase the amount of pervious surface area and implement green infrastructure and other stormwater Best Management Practices (BMPs) to improve stormwater management regarding quantity and/or quality.

Surface Water Quantity Impacts - Updated modeling identified areas with existing flooding that could be exacerbated under future conditions. During redevelopment, modifications may be required to alleviate potential flooding, including:

- *MOA Transit Station* – Under existing conditions, the 100-year flood elevation at the light rail transit (LRT) station, located in the southeast ground level of the MOA, is 2.5 feet and is predicted to increase by approximately 0.1 feet as a result of future redevelopment.
- *Pond 30* – Modeling indicates this existing pond located on the Adjoining Lands (MOA Phase 3 site) currently retains stormwater from the local subwatershed as well as backflow from the 24th Avenue trunk storm sewer system. Reconfiguration of Pond 30 is anticipated with redevelopment of the Adjoining Lands (MOA Phase 3).

Surface Water Quality Impacts - Results of the 2008 model update provided an assessment of existing conditions and concluded:

- Through on-site and regional BMPs and naturally occurring wetlands, approximately 52% of the annual total phosphorus was removed from the Smith Pond and South Loop Drainage Districts; and
- Approximately 80% of the total suspended solids (TSS) loads generated are removed from the Smith Pond and South Loop Drainage Districts prior to discharge to downstream Long Meadow Lake.

In addition, a nondegradation pollutant load assessment report was completed in 2007 that measured changes in stormwater volume, total suspended solids, and phosphorus from 1988-2007 and 2007-2020. The results of this load assessment were incorporated into a nondegradation report that includes best management practices (BMPs) to be implemented to reduce pollutant loadings back to 1988 levels or lower.

2.2 Summary of Infrastructure Mitigation Measures

Mitigation measures recommended to alleviate impacts to specific infrastructure systems are described below.

Traffic/Road Infrastructure Mitigation

Upgrades to the transportation infrastructure located within the South Loop District, as well as infrastructure beyond the district, will be required to accommodate projected future development. Mitigation measures are described below specific to the regional and local transportation systems.

Regional Transportation System Mitigation

Increasing the intensity of development within the urbanized areas of the region, particularly areas with good transit service, is one of the objectives of the Metropolitan Council's regional growth policies. The high-intensity/mixed use type development envisioned for the South Loop District is consistent with these policies. However, this level of development can result in additional vehicle trips that may increase pressure on the regional transportation system serving the District (e.g., I-494, TH 77). Efforts to mitigate traffic congestion on the regional system resulting from vehicle trips into and out of the South Loop are described below.

- *Transit-Oriented/Mixed Use Development* - The South Loop District contains a concentration of mixed uses that increase the potential for "multiple purpose" trips that help reduce the total number of individual trips generated by development within the district. For example, the MOA has documented a reduction in site trips (compared to standard ITE trip generation estimates) due to a combination of shared trips at this multi-use facility and the proximity of transit service.

The South Loop District is well served by high-frequency transit service, which increases the potential for visitors, employees, and residents to use transit to get to/from other areas of the region. The availability of frequent transit service reduces local and regional traffic impacts related to the proposed development. Existing and future development in the area benefits from direct and convenient access to transit, in particular the Blue Line LRT. All of the sites anticipated for future redevelopment are located less than a ½ mile from one of the four LRT stations in the South Loop District and most are located within ¼ mile of a station.

Currently 12 bus transit routes serve the South Loop, many through the MOA Transit Center and the 28th Avenue Park N Ride, and provide access to locations throughout the metro area. The MOA Transit Center is the busiest transit hub in Minnesota, by any metric. In 2016, the transit center served 2.6 million transit trips and the MOA reports that 20% of their workers use transit to get to work.

Trip generation estimates used in the AUAR traffic study used standard ITE trip estimates for all projected development outside the MOA. Standard ITE trips reflect trips associated with singular uses and may under-estimate potential multiple purpose trips. The types, intensity, and proximity of land uses proposed for future development in South Loop have high potential to promote multiple purpose and transit trips, thus decreasing actual traffic demand below the estimates included in the traffic analysis.

- *Regional/Freeway Wayfinding* – Six dynamic, electronic, changeable wayfinding signs were installed in 2011 on the freeways adjacent to the South Loop District. Information on the signs guides traffic in “real-time” to underutilized and less congested entrances to the District. This increases the traffic handling capacity of existing roadways in the District by directing motorists to underutilized roadways during peak traffic periods. The City currently requests MnDOT to change the sign message from a predetermined and pre-approved set of messages.
- *Travel Demand Management (TDM)* - Developers and employers in the developing/redeveloping areas of South Loop can assist in promoting use of transit and other TDM measures. The City of Bloomington requires preparation of a TDM plan for developments 300,000 square feet in size or larger. City staff will work together with developers and employers to identify TDM measures appropriate for future developments, including, but not limited to:
 - Maximizing transit accessibility to the site
 - Promoting use of transit by employees and/or customers by providing transit information and/or incentives through Metro Commuter Services
 - Promoting carpooling by employees through Metro Commuter Services
 - Flexible work hours and/or telecommuting, to minimize peak period demand
 - Promote pedestrian-friendly site development and connections to transit services, to encourage walking trips between land uses and the use of transit
 - At move-in, alert employees to alternative access points to adjacent freeways and alternative regional roadway options for travel.
 - Promote the regional Guaranteed Ride Home program for transit and carpool users.

Multiple transportation studies have been conducted for the South Loop area given it has been home to several regional destinations since the 1960s. The 1985 *Mall of America EIS* projected traffic demand from both Phase 1 (existing) and Phase 2 (expansion) development and recommended local and regional roadway improvements to support the demand. Over the past two decades, the City of Bloomington has participated in implementing many of the roadway improvements identified in the 1985 *Mall of America EIS* recommendations.

Other substantial improvements to the regional system have been made, including:

- *I-494 Alternative* - Various studies and analyses of demand and capacity on I-494 identified the need for a parallel local roadway system to accommodate local trips. The parallel arterial system was developed by the cities of Bloomington, Richfield and Edina to reduce the effects of increasing congestion on I-494 by providing an alternative for local and sub-regional trips. This arterial system serves demand for shorter trips along I-494 as well as potentially reducing demand in the I-494/I-35W interchange. American Boulevard (f/k/a 79th/80th Streets) functions as the parallel arterial in Bloomington and was designed to meet the demand of proposed development in the South Loop District. Improvements on the north side of I-494 (76th/77th Streets) have or will be implemented by the cities of Richfield and Edina.
- *I-494/34th Ave Interchange* – In 2013, a diverging diamond interchange was opened to simplify traffic operations at this interchange. It allows right and left turn movements onto freeway entrance ramps to occur unopposed and without stopping.

Local Transportation System Mitigation:

A comprehensive traffic study was prepared in conjunction with the original 2002 AUAR. Since then, traffic updates have been completed, typically in conjunction with specific development proposals such as the MOA Phase 2 expansion in 2006. The traffic study prepared for this AUAR update analyzed traffic impacts resulting from development in three snapshots in time: 2016, 2025, and 2040. Given the challenge in accurately predicting future development, the traffic study focuses on specific roadway system improvements needed to accommodate proposed South Loop development through 2025. Road improvements needed to mitigate traffic from projected development through 2025 are described below.

- **I-494 & 24th Ave Interchange:** Construct dual northbound right turn lanes onto eastbound I-494 ramps; signal timing improvements and possible ramp signalization.
- **I-494 & 34th Ave Interchange:** Construct dual northbound right turn lanes onto eastbound I-494 ramps; eliminate the eastbound free right at American Boulevard/34th Avenue by either adding a yield or bringing the turn lane into the intersection at 90 degrees; signal timing improvements and ramp signalization.
- **Killebrew Dr & 20th Ave:** Reconstruct southbound approach to repurpose lanes and provide dual southbound right turn lanes (signalized).
- **Lindau Ln at IKEA Way and 22nd Ave:** Modify southbound right “cat-tracking” at Lindau Lane/IKEA Way into the two south lanes; add southbound right “cat-tracking” into the two south lanes at Lindau Lane/22nd Avenue; update signal cycle lengths/splits; modify wayfinding signage.
- **American Blvd at International Dr and Metro Dr East:** Modify American Boulevard/International Drive intersection to three-quarter access; construct a roundabout at American Boulevard/Metro Drive East intersection.
- **24th Ave Corridor (Between I-494 and 82nd St):** Develop a concept layout to better utilize the existing roadway width; includes restriping/median work, removal of channelized right turns, removal of add-in lanes, access control, and pedestrian improvements.

- **Killebrew Dr & 22nd Ave:** Modify striping to single southbound and northbound left turn lane; modify signal timing to eliminate split phasing.
- **E Old Shakopee Rd & 28th Ave:** Construct a multi-lane roundabout.
- **E Old Shakopee Rd & 24th Ave:** Restripe to remove westbound trap right-turn; three westbound through lanes east of intersection would align with three westbound through lanes at the intersection and a right-turn lane would be developed.
- **E Old Shakopee Rd & 33rd Ave:** Pedestrian crossing improvements.
- **American Blvd E & 30th Ave:** Install a signal.
- **American Blvd & 28th Ave:** Repurpose lanes on south approach to better utilizing existing roadway width.

Sanitary Sewer Mitigation

A key element of the City's current *Wastewater and Comprehensive Sewer Plan* (WWCSP) is the Wastewater Capital Improvement Program (CIP). The WWCSP, which was updated in 2012 and 2015, identified a total of 29 improvements to relieve sewer mainline capacity constraints throughout the City. Ten of these directly affect the South Loop District (AUAR study area). To date three of these items have been completed and three additional items (located west of Cedar Ave) are scheduled for construction in 2017.

To relieve the flow capacity problems anticipated with projected 2025 development, additional sanitary sewer improvements are required and are included in the CIP:

- Complete a bypass that would redirect flow away from the constrained pipes in 24th Ave by taking a new route in 28th Ave (from American Blvd to E Old Shakopee Rd) with about 2,800 feet of larger 24" and 27" pipes (CIP-20 and CIP-02C).

To relieve the flow capacity problems caused by the additional forecast development out to year 2040 and beyond, the following improvements are required:

- Replace roughly 3,300 feet of existing 12 and 18 inch pipes in American Blvd from 28th Ave to 34th Ave and also in 34th Ave from American Blvd to the I-494 exit ramp with upsized 15" through 24" pipes (CIP-19A and CIP-19B).

Water Distribution System Mitigation

Based on forecasts for the AUAR development scenario, approximately 2,640 linear feet of new 16" diameter trunk water main should be constructed before 2025. While this new water main is located entirely outside of the South Loop District, it supplies water to distribution pipes inside the South Loop District. As development proceeds, local distribution pipes will need to be added to interconnect with, and strengthen, the existing pipe network. Some additional distribution piping and some larger trunk water main may also be needed for system reliability and to insure adequate pressures and fire flow to hydrants during high demand days. Extension of the water system into the Kelley

property will be required to support the proposed development. No additional improvements to the City's water system are required to support the updated AUAR development scenario.

The system improvements identified in the City's *Water System Master Plan* are programmed in the City's Five-Year Capital Improvement Program (CIP), which is updated annually.

Groundwater and Well Mitigation

Sealing of existing private wells must be done in accordance with Minnesota Department of Health (MDH) procedures and requirements. The City has records of private well locations (drinking, dewatering and monitoring) and status because of its history of permitting and inspecting wells since the 1950s. The City has procedures in place to properly locate unknown wells and have them sealed before demolition permits are issued. Currently, there are no active enforcement cases regarding ground water contamination.

There are currently industries in the South Loop District that utilize private wells to supplement their public water supply to operate their production facilities: Polar Semiconductor and Cypress. Both have obtained DNR appropriation permits. Any expansion of groundwater appropriation for these industries would need to be reviewed by the DNR for impacts on groundwater levels, surface water levels and potential impacts to protected features such as fens, trout streams (if so designated), etc., as well as surface water quality. This review, and its findings, would require approval by both the Minnesota Department of Natural Resources (DNR) and the MPCA. Because the water supplied by these private industrial wells is isolated from the public water supply system, it is not expected to affect future water demand from the public system.

Stormwater/Surface Water Mitigation

The stormwater quantity and quality model prepared for the 2002 AUAR identified several stormwater management projects and best practices to improve stormwater quality and better manage stormwater quantity. Many of these have since been implemented and are described in Section 17 of the AUAR. Since the 2002 AUAR was approved, the City has updated many of its surface water plans and regulations. The South Loop stormwater quantity and quality model was updated in 2008 and 2012. The City's Storm Water Pollution Prevention Program (SWPPP) and Comprehensive Surface Water Management Plan (CSWMP) have been updated, along with updates to State and Federal regulations.

The Bloomington *Comprehensive Surface Water Management Plan* (CSWMP) requires all new development/redevelopment to maintain surface water discharge rates at or below existing levels. Key items from the updated CSWMP that apply to all development in the City, including the South Loop District, include:

- For new development projects, Bloomington requires no net increase from pre-project conditions (on an annual average basis) of stormwater discharge volume, stormwater discharges of Total Suspended Solids (TSS), and stormwater discharges of Total Phosphorus (TP).
- For re-development projects, Bloomington requires a net reduction from pre-project conditions (on an annual average basis) of stormwater discharge volume, stormwater discharges of TSS, and stormwater discharges of TP.
- Surface water discharge rates from new development and redevelopment on sites disturbing less than one (1) acre of land must be reviewed by the City Engineer.
- In the design and construction of new, or modifications to existing storm water conveyance systems, treatment of all storm water runoff from the parcel shall be treated to at least sixty percent (60%) annual removal efficiency for phosphorus, and at least eighty percent (80%) annual removal efficiency for total suspended solids.

The City prepared a nondegradation pollutant load assessment report in 2007 and is committed to implement the recommended BMPs, including:

- Infiltration requirements for new development/redevelopment (Nine Mile Creek Watershed only);
- Completion of a natural resources inventory;
- Water quantity/quality modeling updates;
- Gully inventory (Minnesota River Bluff); and
- Regional infiltration.

Further, the Minnesota Pollution Control Agency replaced the nondegradation water quality rules with new antidegradation rules in 2015. The City meets the antidegradation rules through post construction stormwater management requirements detailed in Section 4 of the CSWMP.

In addition, development within the City's Bluff Protection Overlay District must ensure that post-development over-the-bluff storm water discharge rates are no greater than pre-development discharge rates. Five sites proposed for future development must comply with these regulations, including: Forest Glen Apartments, Kelley, Long Meadow Circle, and Apple Tree sites.

Flood Mitigation -

- *MOA Transit Station* – One potential mitigation approach would involve installation of a new 42-inch storm sewer system to drain the LRT station low point. This system would run southeast from the LRT station, under 24th Avenue and connect to the proposed Lindau Lane Low Point system just north of Old Shakopee Road. Pipes and manholes within the existing storm sewer system would also require modifications.

- *Pond 30* – Alternative infrastructure modifications evaluated in the model could successfully mitigate the flood elevation increases resulting from reconfiguration of Pond 30. Development of the Kelley Farm and the Adjoining Lands sites have potential to significantly alter runoff in this area. Redevelopment plans for sites that currently drain to this area should include significant rate control best management practices to mitigate the effects of Pond 30 reconfiguration. Volume control may also be necessary to mitigate the effects of additional flow volumes on the system.

Erosion Mitigation - Proposed development is not anticipated to result in unique and/or unusual earthwork requirements; however, the potential for erosion and sedimentation of soils exposed during development will be minimized by using the appropriate Best Management Practices (BMPs) during and after construction. These practices will be identified in the final construction and site grading plans as required by NPDES permitting for construction sites and in accordance with the City’s and the Watershed District’s erosion/sediment control standards. After construction, all disturbed areas will be either vegetated to eliminate exposed soil surfaces or surfaced in accordance with approved development plans.

2.3 Infrastructure Mitigation Implementation Information

The table below summarizes the responsible parties and general timing related to implementation of mitigation measures specific to infrastructure improvements required to accommodate forecast development in the South Loop District.

	Agency(s)	Programs	Timing	Financial Responsibility
Traffic/Roads	<ul style="list-style-type: none"> • City of Bloomington • Mn/DOT • Hennepin County 	<ul style="list-style-type: none"> • Subdivision review • Development review • Contiguous plat review (Mn/DOT & County) 	As required by increases in traffic volumes.	<ul style="list-style-type: none"> • Private developers (based on traffic generation source and benefits accrued) • City of Bloomington • Hennepin County
Sanitary Sewer	<ul style="list-style-type: none"> • City of Bloomington • MCES • MPCA • Mn Dept of Health 	<ul style="list-style-type: none"> • Development review • Bloomington Wastewater and Comprehensive Sewer Plan (WWCSP) • Wastewater Capital Improvement Program (CIP) 	As required by actual development staging.	<ul style="list-style-type: none"> • Private developers (via assessments) • City of Bloomington
Watermain	<ul style="list-style-type: none"> • Mn Dept. of Health 	<ul style="list-style-type: none"> • Development review • Bloomington Water System Master Plan • Water Capital Improvement Program (CIP) 	As required by actual development staging	<ul style="list-style-type: none"> • Private developers (via assessments) • City of Bloomington

Wells	<ul style="list-style-type: none"> • City of Bloomington 	<ul style="list-style-type: none"> • Demolition permit review • Mn Dept of Health procedures and requirements 	<ul style="list-style-type: none"> • Property transfer • Private request 	<ul style="list-style-type: none"> • Private property owner
Stormwater/Surface Water	<ul style="list-style-type: none"> • City of Bloomington • Lower Mn River Watershed District • Richfield-Bloomington Watershed Management Organization • Mn/DNR • USFWS • MPCA 	<ul style="list-style-type: none"> • Development review • Grading permit review • Bloomington <i>Comprehensive Surface Water Management Plan</i> (CSWMP) • <i>Lower Minnesota River Watershed District Plan</i> • Richfield-Bloomington <i>Watershed Management Plan</i> • National Pollutant Discharge Elimination System (NPDES) program (MPCA) • Water Appropriation Permit program (Mn/DNR) 	As required by actual development staging and/or in conjunction with permit review and construction	<ul style="list-style-type: none"> • Private developers (on site mitigation) • City of Bloomington • WMOs and/or Watershed Districts

Funding for public infrastructure improvements will come from one or more of the following sources:

- Proportionate share payment by developers within the AUAR area as stipulated in the Developer’s Agreement.
- Special assessments of adjacent benefiting property owners.
- Joint powers agreements with affected agencies.
- City major capital funds.
- South Loop Tax Increment Financing may be used for select projects to be determined on a case specific basis.
- South Loop Redevelopment Fund may be used for select projects to be determined on a case specific basis.

3.0 BLUFF PROTECTION

The South Loop District is bordered by the Minnesota River Valley on the east and south. Much of the area in the river valley is located within the Minnesota Valley National Wildlife Refuge, owned and managed by the U.S. Fish and Wildlife Service, and is zoned and designated for conservation land uses. The bluffs of the river valley separate the upland areas where urban development may occur from the floodplain and ravine areas that cannot be developed. The bluff area consists of steep slopes (defined as 12 percent slope or greater) that extend through the AUAR study area from the southwest to the northeast corners. Slopes in the bluff area range up to 35 percent and are composed of erodible soils.

3.1 Summary of Impacts

Five of the twelve sites identified for redevelopment through 2040 abut the Minnesota River bluff. Portions of all these sites are located within the City's Bluff Protection Overlay district and are subject to additional development standards to minimize physical and visual impacts to the bluff environment. The other parcels slated for redevelopment within the AUAR study area are not located in the bluff protection overlay district or adjacent to steep slopes.

3.2 Mitigation Measures

The City has adopted plans and ordinances to protect and minimize development impacts on sensitive natural resources related to the Minnesota River valley bluffs and bottomlands. These include:

- *Bluff Report District Plan*, adopted in 1982, set the foundation for establishment of bluff district overlay zoning and design guidelines for development on or near the bluff.
- *Bluff District Overlay Zoning Districts (BP-1 and BP-2)* were adopted in 1982 to regulate development activities in the bluff zone.
- *Flood Hazard Overlay Zoning District (FH)* was adopted in 1982 to regulate development activities in floodway, flood fringe, and flood plain areas.
- *Shore Area Regulations* were adopted in 1993 to protect the natural characteristics of shore areas and adjacent water areas, prevent pollution of surface and groundwaters, and minimize flood damage.

Most applicable to the five sites in the AUAR redevelopment scenario that abut the bluff are the *Bluff Protection Overlay District* regulations. These apply to land along the bluff between the 722-foot and 800-foot elevations. Regulations to minimize development impacts on the bluff include: restrictions on tree and vegetation removal; increased bluff set-back requirements; impervious surface coverages limits; requirements to maintain storm water discharge rates at or below pre-development over-the-bluff discharge rates; and requirements for City permitting (including requirements for erosion control and stabilization measures) prior to excavation, filling or grading in the area.

The City will also continue to work with developers to achieve high quality and sensitive site design. We will consider application of required park dedication as land (rather than cash) to enhance buffer areas along the bluff where appropriate and effective.

In addition, the two watershed management districts with jurisdiction in portions of the South Loop District administer regulations regarding grading and storm water drainage (quantity and quality). Both organizations have updated their respective management plans within the last six years.

3.3 Implementation Information

Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Lower Minnesota River Watershed District.
- Richfield-Bloomington Watershed Management Organization.
- MPCA

Regulatory Programs

- Bloomington 2007 *Surface Water Management Plan*
- Lower Minnesota River *Watershed District plan*
- Richfield-Bloomington *Watershed Management Plan*
- National Pollutant Discharge Elimination System (NPDES) Program, administered by the MPCA.

Timeframe for Implementation of Mitigation

- Erosion and sedimentation mitigation required to support development-related impacts will be implemented as required in conjunction with grading permit review and construction for individual development projects.

Financially Responsible Party/Parties

- Private Developers

4.0 FISH, WILDLIFE & ECOLOGICALLY SENSITIVE RESOURCES

4.1 Summary of Impacts

All proposed future development will be located in the relatively flat upland area that lies above the river bluff (760-foot elevation). Over 60 percent of the AUAR study area will remain as open space/conservation uses, which includes a portion of the Minnesota Valley National Wildlife Refuge (MVNWR).

The majority of the upland, developable area is currently or was formerly developed with urban/suburban uses, including housing, retail, office, and industrial development. The AUAR redevelopment scenario identifies twelve sites expected to redevelop by 2040. Only one - the Kelley Farm property - has not been previously developed for urban/suburban uses. However, it has been actively farmed for many decades and much of its natural condition and pre-settlement cultural resources have been altered.

According to the Minnesota Biological Survey for Carver, Hennepin, and Scott Counties, three major natural communities are located in the South Loop District:

- *Oak Woodland – Brushland*: This includes portions of the South Loop district proposed for development, as well as some areas within ravines or along the bluff where development is restriction or prohibited.
- *Mixed Emergent Marsh*: This community is located in the Minnesota River floodplain areas in open, flooded wetlands at lake or river margins.
- *Floodplain Forest – Silver Maple subtype*: This community is also located in the river floodplain.

As noted above, most of the upland Oak Woodland area, where existing and future development will be located, has been developed and its natural community altered. The Mixed Emergent Marsh and Floodplain Forest are both located within the Minnesota Valley National Wildlife Refuge and/or zoned and guided for Conservation land uses. This area is not proposed for development and several existing regulatory protections are in place to minimize impacts from development on adjacent or nearby properties.

The primary potential development impact on ecologically sensitive resources relates to an unnamed stream located south and east of East Old Shakopee Road and 24th Ave, known by some locally as “Ike’s Creek”. The USFWS and the Minnesota Department of Natural Resources (DNR) stocked the stream with heritage-strain brook trout in 2007. The DNR has been evaluating the fish routinely and have found that the stream is supporting a healthy population of brook trout that have been reproducing naturally. The primary source aquifer for “Ike’s Creek” is assumed to be the shallow water table. Proposals to appropriate water from shallow wells in the vicinity of the stream have the potential to affect stream flow. Water appropriation may be proposed for dewatering to facilitate new construction. In addition, there are existing industries in the South Loop District that currently have water appropriation permits to operate their production facilities

(Polar Semiconductor and Cypress). Expansion of groundwater appropriation for these industries could have impacts on groundwater levels, surface water levels or the trout stream.

4.2 Mitigation Measures

The DNR is considering adding “Ike’s Creek” to its designated trout stream list. The DNR and City of Bloomington are discussing alternatives to formal designation.

New development will be required to meet regulations regarding stormwater management, erosion control, and grading. Existing regulations require 1-inch of abstraction from new impervious surfaces as part of the NPDES Construction Permit. The DNR is encouraging increased infiltration practices when sites are being developed to provide extra groundwater recharge.

Some uses and development may request a water use permit. DNR review and permit approval is required for all users withdrawing more than 10,000 gallons of water per day or 1 million gallons per year. The DNR’s Water Appropriation Permit program exists to balance competing management objectives that include both development and protection of Minnesota’s water resources. If a water appropriation request is determined to have the potential to reduce the stream level by 10% or more, additional provisions may be imposed by the DNR in order to protect the stream level. Such provisions may include: reducing pumping rate, reduced pumping time, and winter withdrawal.

Five of the sites forecast for new or redevelopment in the AUAR development scenario are located adjacent to the Minnesota River bluff. Portions of these sites are located within the City’s Bluff Protection Overlay district and are subject to additional development standards to minimize physical and visual impacts on the bluff environment as described above in Section 3. Areas below the bluff are covered by the Flood Hazard Overlay district which generally prohibits uses requiring structures, fill or storage of materials or equipment. In addition, the City’s stormwater management and grading regulations protect against erosion and water quality degradation.

4.3 Implementation Information

Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- MPCA
- Minnesota Department of Natural Resources

Regulatory Programs

- City of Bloomington development review and approval
- City of Bloomington Bluff Protection Overlay zoning district regulations
- City of Bloomington Flood Hazard Overlay zoning district regulations

- Bloomington Comprehensive Surface Water Management Plan
- DNR Water Appropriation Permit program
- MPCA NPDES Construction Permit

Timeframe for Implementation of Mitigation

- Actual impacts and need for mitigation would be identified in conjunction with review of specific development proposal.
- Permit review time varies by reviewing agencies

Financially Responsible Party/Parties

- Private Developers
- City of Bloomington (for City Projects only)

5.0 CULTURAL RESOURCES

5.1 Summary of Impacts

Historic Resources - The South Loop District contains one architectural property that has been determined eligible for the National Register of Historic Places by the Minnesota State Historic Preservation Office (SHPO), Spruce Shadows Farm (HE-BLC-071 and HE-BLC-079), 2901 Old Shakopee Road, located near the bluff overlooking the Minnesota River in the SW-SE ¼ of Section 1, T27N, R24W. Spruce Shadows Farm includes a 2 ½ story stone residence constructed in 1933 and a complex of farm outbuildings that may be architecturally significant.

The farm site (Kelley Farm) is one of the 12 sites included in the AUAR redevelopment scenario. The property is listed for sale and a future owner will likely pursue development of the site that would involve demolition of the farmstead house and outbuildings. Development is also proposed for the surrounding acreage, which may contain archaeological resources as described below.

Archaeological Resources - SHPO records contain documentation of seven recorded archaeological sites in the South Loop District. Five of the recorded sites document American Indian earthworks, four of which (21HE7, 21HE8, 21HE10 and 21HE11) were reported destroyed by subsequent land disturbances in the 1970s. The remaining earthworks site (21HE9) is reported no longer apparent. The remaining two sites (21HE158) and 21HE190) are historic-period isolated finds and of limited historical significance and do not appear eligible for the National Register of Historic Places.

Only one of these seven sites - the Van Ness Mounds (21HE8) - is located within the Kelley property, which is identified as a future development site under the AUAR. While archaeological resources on this site may have been destroyed by agricultural activity over the past 100 years, identification of below ground remains of the nearby Lincoln Mound group (21HE7) during development of the nearby Ceridian campus (also located

on the bluff) suggests the possibility that remnants of the other reportedly destroyed earthworks may survive. Records of this mound group date from the late nineteenth century and indicate a collection of mounds ranging in height from one to five feet.

In addition to the seven-recorded archaeological sites discussed above, some relatively undisturbed portions of the South Loop District, particularly near the bluff edge, within intermediate terraces of the bluff, and in the floodplain at the base of the bluff, have high potential for containing previously unreported sites.

5.2 Mitigation Measures

Historic Properties - As development approvals are considered for the property, the City of Bloomington will encourage the property owner/developer to explore opportunities to preserve and reuse significant architectural resources as part of their development. If preservation or reuse is not feasible, the City of Bloomington will determine appropriate mitigation (including resource documentation) in consultation with the State Historic Preservation Office and the property owner/developer.

Archaeological Resources - In previous AUAR reviews and a recent letter (date January 25, 2017), the State Historic Preservation Office recommended that prior to development or other construction in the seven-recorded archaeological sites discussed above and the undisturbed areas near and on the bluff, an archaeological profile and preliminary archaeological testing (e.g. field walks and shovel tests) be conducted to determine the probability of additional archaeological sites in the area. Any evidence indicating the presence of an archaeological site should be discussed with the State Historic Preservation Office and the Office of the State Archaeologist per the Minnesota Private Cemeteries Act (Minn. Statutes 307.08), the Minnesota Indian Affairs Council, and appropriate Native American tribes.

The City will ensure future property owners/developers are aware of the potential existence of archaeological resources and require that preliminary archaeological testing is conducted. Any evidence indicating the presence of an archaeological site will be discussed with the State Historic Preservation Office and the Office of the State Archaeologist per the Minnesota Private Cemeteries Act (Minn. Statutes 307.08), the Minnesota Indian Affairs Council, and appropriate Native American tribes.

5.3 Implementation Information

Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Minnesota State Historic Preservation Office (SHPO)
- Minnesota State Archaeologist
- Minnesota Indian Affairs Council
- Native American tribal representatives

Regulatory Programs

- City of Bloomington development and permit review process
- State of Minnesota and tribal cultural resources review processes

Timeframe for Implementation of Mitigation

- As required by reviewing agencies (SHPO, State Archaeologist, Minnesota Indian Affairs Council, Native American tribal representatives).

Financially Responsible Party/Parties

- Private developer

6.0 AIRSPACE RESTRICTIONS AND AIRPORT NOISE

The proximity of the South Loop District to the Minneapolis-St. Paul International Airport (MSP) and the alignment of the Runway 17/35 result in some areas of the District being affected by aircraft noise and land use and airspace restrictions. Federal and state aviation regulations restrict intensity and type of land uses and the height of structures within defined areas in the vicinity of airport runways. Current regulations are described in the *Minneapolis-St. Paul International Airport (MSP) 2030 Long Term Comprehensive Plan Update (July 26, 2010)* and the Metropolitan Council's *2040 Transportation Policy Plan*. In addition, the Joint Airport Zoning Board (JAZB) updated the MSP Zoning Ordinance, which was approved by the Minnesota Department of Transportation in 2004. Also in 2004, the City of Bloomington adopted Airport Runway Overlay Districts to provide consistency with the 2004 MSP Zoning Ordinance and ensure appropriate regulation of noise sensitive land uses.

6.1 Summary of Impacts

Structure Height – The safety zone for Runway 17/35 at MSP covers the central portion of the South Loop District and is divided into two portions. Structures are only allowed in Safety Zone B, generally located south of American Boulevard. Over half of the sites identified for future redevelopment in the AUAR are located in Safety Zone B and subject to height restrictions.

Aircraft Noise – Since 2002, the area of the South Loop District located within high noise contours (65-70 decibel DNL and 70-75 decibel DNL) has been greatly reduced. In 2002, much of the central portion of the South Loop District was within the 70 and 75 DNL contours. Today, none of the South Loop district is within the 75 DNL contour and only a very small portion - located in the Runway Protection Zone, where development is prohibited - remains in the 70 DNL contour. According to the 2015 MSP Noise Contour Analysis, the center portion of the South Loop District lies between the 65 and 70 DNL contours where the City's zoning regulations related to runway safety zones prohibit

certain uses, such as residential, hospitals, nursing homes, and theatres are prohibited, unless a variance is granted by the MSP Board of Adjustments. Most other uses allowed in this area, including office and retail uses, are considered to be compatible within this noise-level zone. Most of the remainder of the South Loop District - where future development is proposed - lies between the 60 and 65 DNL contours.

Given noise reductions associated with newer aircraft and vehicles, and reduced peak traffic levels associated with the revised development scenario, an overall decrease in noise impacts is anticipated compared to the 2002 AUAR assessment. As such, the 2002 AUAR assessment reflects a “worst case” scenario relative to noise pollution.

6.2 Mitigation Measures

In 2004, the City adopted its *Airport Runway Overlay Zoning Districts (AR-17 and AR-22)* to implement the 2004 Minneapolis-St Paul International Airport Zoning Ordinance, pursuant to the provisions and authority of Minnesota Statutes Sec. 360.063. These regulations prevent the establishment of Airport Hazards, including noise sensitive uses and establish limits for structure height.

Height Limits – The 2004 MSP zoning ordinance defines height limits generally and in relation to encroachment into the defined runway airspace. Height limits are graduated from north to south within Safety Zone B. Structures may exceed these limits, provided the City grants an Airport Zoning Permit. Structures may only pierce the airspace “ceiling” if granted permission by the MSP Airport Zoning Board of Adjustments and the Federal Aviation Administration (FAA) through the 7460 Airspace Review process. Variances are commonly requested to allow temporary structures, such as construction cranes, to exceed height limits.

Noise Mitigation – The City’s zoning regulations restrict certain uses within the airport safety zones, which are located in the 60—65 and 65-70 DNL contours. However use restrictions due to noise levels only apply to residential uses in areas subject to noise levels above the 70 DNL contour. The only area currently within the 70 DNL contour is the Runway Protection Zone (RPZ) where development is not allowed.

The City does not currently have code requirements for noise attenuation. The City’s practice has been to attach conditions related to noise attenuation to project approval, on a case-specific basis. In the last five years, private hotel developers have taken the initiative to conduct noise studies and built the shells of their buildings to mitigate noise. The City intends to develop airport noise insulation standards in 2017. If adopted, these would apply to all future development located in areas with high noise levels.

6.3 Implementation Information

Agency Responsible for Review of Impacts/Mitigation Plans

- City of Bloomington
- Metropolitan Airports Commission

- Joint MSP Airport Zoning Board
- Federal Aviation Administration
- Minnesota Department of Transportation – Aeronautics??

Regulatory Programs

- City of Bloomington *Airport Runway Overlay Zoning Districts (AR-17 and AR-22)* – development review process;
- Joint MSP Airport Zoning Board *2004 Minneapolis-St Paul International Airport Zoning Ordinance* (pursuant to Minnesota Statutes Sec. 360.063) - Height variance reviews, airspace permit reviews;
- Metropolitan Airports Commission (MAC) – *Minneapolis-St. Paul International Airport (MSP) 2030 Long Term Comprehensive Plan Update (July 26, 2010)* and the Metropolitan Council’s *2040 Transportation Policy Plan*.
- Federal Aviation Administration Part 150 regulations (14 CFR Part 150)

Timeframe for Implementation of Mitigation

- Implemented in conjunction with review of development proposals on individual parcels

Financially Responsible Party/Parties

- No financial obligations to implement regulatory programs.
- Private developers responsible for installation of noise attenuation features in buildings.

7.0 BLOOMINGTON DEVELOPMENT REVIEW PROCESS

The City of Bloomington has an established process for reviewing development proposals. Having a clear and consistent review process ensures:

- Compliance with Minnesota Statutes for notice and hearing requirements;
- Provision of a reasonable level of public review and input;
- Thorough evaluation of design elements that affect the public;
- Efficient use of time by the applicant, City staff, and the public; and
- Facilitation of a clear and objective review.

The process involves multiple steps; though certain types of applications are eligible for expedited review. Most development applications adhere to the review process described below.

1. **Informal Discussion with Staff** – potential applicants discuss their development proposals with planning and other staff to identify the necessary review/approval process, deficiencies relative to City Code requirements, consistency with City development policies, and plans and documents that must be submitted with a formal application.
2. **Informal Development Review Committee (DRC) Review** – the applicant prepares necessary plans and documents to explain the nature of the use or development for review by the DRC prior to submission of a formal development application. The DRC (composed of staff from City departments involved in development, infrastructure, and public safety) reviews the plans to identify modifications or issues to address prior to submitting plans for formal review.
3. **Formal DRC Review** – after a formal development application has been submitted and deemed complete, the DRC reviews the proposal for compliance with City’s plans, policies, and ordinances.
4. **Planning Commission Review** – the Planning Commission holds public hearings and makes recommendations on land use and development issues that are forwarded to the City Council.
5. **City Council Review and Approval** – the City Council exercises the legislative power of the City of Bloomington and establishes City policy. The City Council is the final authority on development applications and may apply specific conditions to an approval to mitigate potential negative impacts. Execution of development agreements, stipulating the roles and responsibilities of the developer and City is also required for many projects.

Once a development proposal is approved by the City Council, the applicant/developer prepares detailed plans and applies for required permits. Most development proposals require permits issued by the City and other agencies. The most common permit types reviewed and issued by the City include:

- Building demolition
- Grading and erosion control
- Building, electrical, and plumbing permits
- Access (driveway) permits onto local (city) streets. Permits for access onto County or State roads are provided by the agency with road jurisdiction.

The City also has review and issuing authority for the following types of permits that apply to some, but not all development proposal:

- Airport Zoning Permit – these permits are administered by the City and are required when structures exceed defined height levels in the MSP Airport Zoning Ordinance.

- Well sealing – private water supply wells existing on property proposed for redevelopment must be sealing in accordance with Minnesota Department of Health regulations. The City administers this process.

Some development proposals trigger the need for review and/or permits from other agencies. Some examples include:

- Water Appropriation – the DNR reviews and issues permits for water users withdrawing more than 10,000 gallons per day or 1 million gallons per year.
- Airspace Height Variance – structures are not allowed to pierce the Airspace Zone height limits unless granted permission by the MSP Airport Zoning Board of Adjustments and Federal Aviation Administration (FAA). It is fairly common for height variances to be granted for construction equipment that will temporarily exceed the maximum construction height limits.
- Noise Attenuation – during 2017, the City expects to develop and adopt standards related to noise attenuation that will apply to all development. Current City Council practice has been to require noise attenuation via conditions to approval for multifamily residential developments in the South Loop District. In addition, noise attenuation measures are reviewed by the Minnesota Pollution Control Agency (MPCA) who manages noise mitigation requirements in Section 7030 of State Statutes.

Table 8.1 in the AUAR provides a more comprehensive description of the range of permits that may apply to a development proposal in the South Loop District. In addition, the table in subsection 2.3 above summarizes common permits and responsible implementing parties related to infrastructure improvements proposed to accommodate forecast development in the South Loop District.

8.0 FUTURE ENVIRONMENTAL CONCERNS OR IMPACTS NOT ANTICIPATED IN THIS AUAR AND MITIGATION PLAN

This Mitigation Plan identifies potential impacts and proposed mitigation related to the updated AUAR development scenario, which describes future development anticipated to occur in the South Loop District through 2040. Given the AUAR development scenario spans over 20 years, as actual development plans are prepared and/or regulatory requirements change, environmental concerns or issues may be identified that differ from those addressed in the AUAR and this Mitigation Plan. Also, new information or mitigation methods may be developed after the approval of this Plan.

To remain in effect, the AUAR and this Mitigation Plan must be routinely updated at least every five years. More frequent updates will occur if development activity occurs that triggers an update in accordance with Minnesota Rules 4410.36.10, Subpart 7. Updates to this Mitigation Plan will be conducted as necessary to identify measures to avoid,

minimize and mitigate for any additional or new impacts identified through future AUAR updates.

9.0 ACTIONS BEYOND THE SCOPE OF THIS AUAR AND MITIGATION PLAN

The City is responsible for permits/approvals and related mitigation for regulatory issues and impacts under its local jurisdiction (e.g., traffic improvements). Private developers are responsible for obtaining all permits necessary from all governmental agencies having jurisdiction over their development.