July 2013 version

ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:

http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project title: **311 2nd Street SE ("Project")**

2. Proposer: **Doran-CSM SE II, LLC ("Developer")**

Contact person:	**Cody Dietrich**
Title:	**Senior Development Associate**
Address:	**7803 Glenroy Road, Suite 200**
City, State, ZIP:	**Bloomington, MN 55439**
Phone:	**952-288-2089**
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3. RGU: **City of Minneapolis**

Contact person:	**Hilary Dvorak**
Title:	**Principal City Planner**
Address:	**250 4th Street. South, Room 300**
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4. Reason for EAW Preparation: (check one)

Required:	Discretionary:
☐ EIS Scoping	☐ Citizen petition
X Mandatory EAW	☐ RGU discretion
	X Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):
4410.4300 subpart 32: Mixed residential and industrial-commercial projects.

5. Project Location:

PROJECT:
County: **Hennepin**
City/Township: **City of Minneapolis**
PLS Location (¼, ¼, Section, Township, Range): **E ½ of Section 23, Township 29 N, Range 24 W**
Watershed (81 major watershed scale): **#20 Mississippi River (Metro)**
GPS Coordinates: **44.984824, -93.251422**
Tax Parcel Number:
23-029-24-14-0100; 23-028-24-41-0022

EXPO
County: **Hennepin**
City/Township: **City of Minneapolis**
PLS Location (¼, ¼, Section, Township, Range): **E ½ of Section 23, Township 29 N, Range 24 W**
Watershed (81 major watershed scale): **#20 Mississippi River (Metro)**
GPS Coordinates: **44.984952, -93.251800**
Tax Parcel Number:
23-029-24-13-0037; 23-029-24-13-0038; 23-029-24-13-0039; 23-029-24-13-0040

At a minimum attach each of the following to the EAW:
- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

Figures:

Tables:

Table 4. Field Verified Wells
Table 5. Estimated Wastewater Production
Table 6. Estimated Solid Waste Production
Table 7. Mode Split Goals
Table 8. Estimated Trip Generation

Appendices:

Appendix 1. Natural Heritage Information System (NHIS) Query and MnDNR Response
Appendix 2. US Fish and Wildlife Service (USFWS) IPaC Report (Information for Planning and Consultation)
Appendix 3. Phase 1a Archaeological Resources Inventory
Appendix 4. Traffic Impact Study

6. Project Description:

a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The Project includes the redevelopment of two plus blocks at 311 2nd Street SE that is comprised of a research and development facility, surface parking lot and landscaping area covering approximately 6.18 acres. The Project may include up to 989 dwelling units and up to 5,000 SF of retail when fully complete, and may be comprised of several towers of approximately thirty stories.

For purposes of this EAW, Developer has included, where appropriate, discussion of the Expo project, located at 200 University Avenue SE, which is being developed by an affiliate of Developer ("Expo"). The Expo received proper municipal approvals and is currently under construction. No EAW was required for the Expo. The Expo includes 368 residential units and approximately 3,500 SF of retail and sits on a full City block.

In the aggregate, the Project and the Expo could include up to 1,257 units and 8,500 SF of retail space on 8.70 acres across three city blocks.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

The Project is a joint venture between CSM Corporation and Doran Companies on approximately 6.18 acres of developable property between University Avenue and 2nd Street SE, and between 3rd Avenue SE and 5th Avenue SE in Minneapolis (the "Project Site"). The Project Site currently contains a surface parking lot, lawn area, and the approximately 74,000 square-foot footprint of a 366,000 square-foot research and development building ("R&D Facility") (Figures 4 and 5).

The Expo is being developed by an affiliate of the Developer, and is located at 200 University Avenue SE on a 2.52-acre block adjacent to the Project Site ("Expo Site").

The Project Site and the Expo Site were acquired by their respective owners in April of 2017. At that time, the Expo Site was expected to be redeveloped and the R&D Facility on the Project Site was leased by Developer to General Mills through February of 2019. Accordingly, it was not contemplated that the Project Site would be redeveloped until at least that date.

The Expo proceeded through the RGU approval process in 2017 and received full municipal approvals by January of 2018. The Expo will contain 368 units and approximately 3,500 SF of commercial space, which is under the mandatory EAW guidelines set forth by Minnesota Statute 4410.4300 subpart 32: Mixed residential and industrial-commercial projects. Accordingly, the City of Minneapolis, as the RGU, determined that an EAW was not needed for the Expo. However, to the extent it is relevant to this EAW, information relating to the Expo is included with the information provided herein relating to the Project.
The Expo is being built on a post tension concrete podium that covers almost the entire site and will contain two and a half levels of parking that has 522 parking stalls. The podium will be wrapped at grade by 12 one- or two-story townhomes (depending on the finished grade level) as well as the leasing office, amenity space, a secondary lobby and retail space. The parking has an entry on 2nd Avenue SE for the parking at or above grade and a secondary entry to serve one and a half levels of parking at or below grade. On top of the podium, a 5-story wood-framed building that totals 157 units will be built in an "L" shape along 2nd Street SE and 3rd Avenue SE. At the corner of University Avenue SE and 2nd Avenue SE, a 25-story tower will be built with post tension concrete and will contain 199 units. Above the amenity deck there will be a pool and other outdoor amenities such as spa, grilling stations, firepits, a putting green and a bocce ball court. There will be additional amenity spaces in the tower that include a club room, fitness and group fitness areas, an indoor spa, sauna, game room and other uses. The redevelopment of the Expo Site included the removal of the asphalt surface parking lot, several underground storage tanks and approximately 26,000 tons of regulated material that needed to be properly disposed of at a landfill during excavation. A Response Action Plan ("RAP") was created for the project and approved by the Minnesota Pollution Control Agency ("MPCA"). The Expo

construction team has implemented a Storm Water Pollution Prevention Plan ("SWPPP") to prevent any storm water runoff and to keep all the sediment on the site. There were no buildings or other structures on the Expo Site that needed to be demolished. During construction, there will be typical construction waste that will be disposed of through dumpsters. Construction commenced on the Expo in June of 2018, and is expected to be fully complete prior to July of 2020.

The Project will contain approximately 5,000 SF of retail and up to 989 units. The Project Site is guided within *The Minneapolis Plan for Sustainable Growth* as Urban Neighborhood and is within the East Hennepin Activity Center, which promotes High Density Residential with density of up to 200 units per acre. Accordingly, the Project could contain as many as 989 units for the 6.18 acres. It would be difficult to create a feasible development in this location at that density so current plans target no more than 80% of the allowed amount. The Project will be constructed in multiple phases and will be split into two blocks with a private street separating the two. Currently, 4th Avenue SE from the northeast does not cross the site, terminating at University Avenue. The Project will extend 4th Avenue through the site as the private street. Utilities and storm water treatment systems will be housed under the private street and connect into University Avenue or 2nd Street. Each block will be built on a podium containing up to 4 levels of parking that would be at or below grade depending on the final density of the Project. The parking would be accessed by either one or two driveways on 3rd Avenue SE and 5th Avenue SE. 2nd Street SE would also have up to one potential access to the garage on each block. Other potential garage entries may occur on 4th Avenue SE which would be the private street. Any parking above or at grade would be lined with townhomes, leasing space, lobby space, amenities or retail space to create an active street presence. Any potential retail would likely be situated on University Avenue SE. Above the podiums there will be sections of up to 5 stories of wood framed apartments, and the Project could potentially include a tower on each bock of approximately 30 stories in height. The podium and tower structures would be built out of post tension concrete. There are several underground storage tanks and expected regulated material that would need to be removed from the Project Site during the redevelopment. The redevelopment would also require demolition of the R&D Facility, removal of the limited lawn and vegetation and removal of the asphalt surface parking lot. A RAP plan would be put in place and approved by the MPCA prior to starting construction of the Project. There would also be a SWPPP plan implemented to control any sediment from affecting storm water both on and off the Project Site. It is anticipated that the R&D Facility would be demolished in 2019 after vacation of the building by General Mills. Prior to demolition there will be a time dedicated to abatement of asbestos that was found in the building with previous non-destructive testing. That work will be completed by a licensed abatement contractor and properly disposed of as required by the MPCA. Construction of the Project would likely start in 2020 or 2021 and occur over multiple phases. It is expected that the Project would be fully built out by 2026.

c. Project magnitude:

Table 1. Project Magnitude

PROJECT	
Total Project Acreage	**6.18 acres**
Linear project length	**N/A**

Number and type of residential units	**989 units**
Commercial building area (in square feet)	**Up to 5,000 sf**
Industrial building area (in square feet)	**N/A**
Institutional building area (in square feet)	**N/A**
Other uses – specify (in square feet)	**N/A**
Structure height(s)	**Approximately 30 stories**

EXPO	
Total Project Acreage	**2.52 acres**
Linear project length	**N/A**
Number and type of residential units	**368 units**
Commercial building area (in square feet)	**3,500 sf**
Industrial building area (in square feet)	**N/A**
Institutional building area (in square feet)	**N/A**
Other uses – specify (in square feet)	**N/A**
Structure height(s)	**25 Stories**

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The Project will be carried out by a private developer, with private funds and financing. The purpose of the development is to redevelop a surface parking lot, lawn area, and existing R&D Facility in Minneapolis with a high-density housing and retail development.

The Expo is being carried out by a private developer, with private funds and financing. The purpose of the development is to redevelop a surface parking lot in Minneapolis with a high-density housing and retail development.

e. Are future stages of this development including development on any other property planned or likely to happen? **No**

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

Currently there are no planned future stages of the Project requiring any additional environmental review.

f. Is this project a subsequent stage of an earlier project? **No**

If yes, briefly describe the past development, timeline and any past environmental review.

Developer considers the Project to be a stand-alone development without any prior phases. For purposes of this EAW, however, the Expo will be included, as appropriate, in the discussion relating to the potential impacts of the Project. Construction of The Expo started in 2018 and is anticipated to be complete by the summer of 2020. The Expo did not

require an EAW because the scope of the project did not trigger a mandatory EAW, nor was a discretionary EAW deemed necessary by the City of Minneapolis as the RGU. The Project Site is occupied by General Mills under a lease ending in 2019. Now that the lease will not be extended and the Project Site will be vacated, it is being contemplated for redevelopment. A Phase I ESA and Phase II ESA were completed on both the Expo Site and the Project Site to identify environmental concerns.

7. Cover types:

Estimate the acreage of the site with each of the following cover types before and after development:

Table 2. Cover Types (Project)

	Before	**After**		**Before**	**After**
Wetlands	0	0	Lawn/landscaping	1.22	1.00
Deep water/streams	0	0	Impervious surface	4.96	5.18
Wooded/forest	0	0	Stormwater Pond	0	0
Brush/Grassland	0	0	Other (describe)	0	0
Cropland	0	0			
			TOTAL	**6.18**	

Cover Types (Expo)

	Before	**After**		**Before**	**After**
Wetlands	0	0	Lawn/landscaping	0	0.23
Deep water/streams	0	0	Impervious surface	2.52	2.29
Wooded/forest	0	0	Stormwater Pond	0	0
Brush/Grassland	0	0	Other (describe)	0	0
Cropland	0	0			
			TOTAL	**2.52**	

8. Permits and approvals required:

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Table 3. Permits and Approvals Required

Unit of Government	Type of Application	Status (Expo)	Status (Project)
	Federal		
Federal Aviation Administration	Airspace hazard permit (for any structure more than 200 feet above ground level)	Required	Required
	State		
Minnesota Department of Health	Well sealing abandonment	Required	Required
	Asbestos abatement/removal	Not Required	Required
Minnesota Department of Natural Resources	Appropriation/Dewatering Permit (Construction)	To be applied for if needed	To be applied for if needed
Minnesota Pollution Control Agency	Sanitary Sewer Connection Permit	Required	Required
	Construction Stormwater Permit (NPDES)	Required	Required
	Stormwater Pollution Prevention Plan	Required	Required
	Regional		
Metropolitan Council Environmental Services	Sanitary Sewer Connection Permit/SAC Fee	Required	Required
Mississippi River Watershed Management Organization	Grading/Stormwater Permit	Required	Required
	Local		
City of Minneapolis	Building Permits	Required	Required
	Lane Use/Obstruction Permit	Required	To be applied for if needed
	Demolition Permit	Not Required	Required
	Remediation Permit	Not Required	Required
	Temporary On-Site Storage of Impacted Soil Approval	To be applied for if needed	To be applied for if needed
	After Hours Work Permit	To be applied for if needed	To be applied for if needed
	Right-of-way Excavation Permit	To be applied for if needed	To be applied for if needed
	Approval of Easement Vacation (existing utility easement)	To be applied for if needed	To be applied for if needed
	Sanitary Sewer Connection Permit	Required	Required
	Storm Sewer Connection Permit	Required	Required
	Utility Repair Permit	To be applied for if needed	To be applied for if needed
	Erosion and Sediment Control Permit/Plan Approval	Required	Required

	Stormwater Management Plan	Required	Required
	Encroachment Permit	Required	To be applied for if needed
	Sidewalk Construction Permit	Required	To be applied for if needed
	Zoning – CUPs, Variances, Site Plan Review	Required	Required
	Preliminary and Final Plat	Not Required	Required
	Certificate of Occupancy	Required	Required

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19

9. Land use:

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

The existing land use within, and adjacent to, the Project Site and Expo Site is depicted on Figure 3.

The 2.52 acre Expo Site consisted of a surface parking lot prior to construction.

The 6.18-acre Project Site of the future development currently consists of a surface parking lot, a landscaped area of lawn and scattered trees, and the R&D Facility. Adjacent land uses include residential housing to the north and east, and mixed use development to the south.

There are no parks, trails, or prime and unique farmlands within either the Project Site or the Expo Site. Both sites are approximately 550 feet northeast of the Mississippi River which abuts to the Central Mississippi Riverfront Regional Park, managed by the Minneapolis Park & Recreation Board, and are within the authorized boundary of the Mississippi National River and Recreation Area, managed by the National Park Service. The Project Site and the Expo Site are also both within a mile of the Stone Arch Bridge, Mill Ruins Park, and St. Anthony Falls.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

The Minneapolis Plan for Sustainable Growth

The City's comprehensive plan is *The Minneapolis Plan for Sustained Growth* (2009 – and as amended, the Comprehensive Plan).

The Project Site and the Expo Site are both guided within the *The Minneapolis Plan for Sustainable Growth* as Urban Neighborhood and are within the East Hennepin Activity Center, which promotes High Density Residential with density of up to 200 units per acre. Both sites also lie between the Downtown Minneapolis and University of Minnesota Growth Centers which allow for Very High Density residential of up to 800 units per acre when approved in a small area plan. Both University Avenue and Central Avenue are designated as Community Corridors. Community Corridors support new low to high density residential development and small amounts of commercial space that help serve the residential portion of the area.

Relevant policies of the Comprehensive Plan include:

<u>Land Use</u>

- **Land Use Policy 1.1: Establish land use regulations to achieve the highest possible development standards, enhance the environment, protect the public health, support a vital mix of land uses, and promote flexible approaches to carry out the comprehensive plan.**
  - **1.1.1 – Ensure that the City's zoning code is consistent with the Minneapolis Plan and provides clear, understandable guidance that can readily be administered**
  - **1.1.3 – Encourage the use of flexible regulatory options that promote high quality development, such as the Planned Unit Development (PUD) tool.**
  - **1.1.4 – Support context-sensitive regulations for development and land use, such as overlay districts, in order to promote additional land use objectives.**
  - **1.1.5 – Ensure that land use regulations continue to promote development that is compatible with nearby properties, neighborhood character, and natural features; minimizes pedestrian and vehicular conflict; promotes street life and activity; reinforces public spaces; and visually enhances development.**

- **Land Use Policy 1.5: Promote growth and encourage overall city vitality by directing new commercial and mixed-use development to designated corridors and districts.**
  - **1.5.1 – Support an appropriate mix of uses within a district or corridor with attention to surrounding uses, community needs and preferences, and availability of public facilities.**

- **Land Use Policy 1.8: Preserve the stability and diversity of the city's neighborhoods while allowing for increased density in order to attract and retain long-term residents and businesses.**
  - **1.8.1 – Promote a range of housing types and residential densities, with highest density development concentrated in and along appropriate land use features.**

- **Land Use Policy 1.12.: Support Activity Centers by preserving the mix and intensity of land uses and by enhancing the design features that give each center its unique urban character.**

- **1.12.1 – Encourage a variety of commercial and residential uses that generate activity all day long and into the evening.**
- **1.12.2 – Encourage mixed-use buildings, with commercial uses located on the ground floor and secure entrances for residential uses.**
- **1.12.3 – Encourage active uses on the ground floor of buildings in Activity Centers.**
- **1.12.5 – Encourage a height of at least two stories for new buildings in Activity Centers, in keeping with neighborhood character.**
- **1.12.6 – Encourage the development of high- to very-high density housing within the boundaries of Activity Centers.**
- **1.12.7 – Encourage the development of medium- to high-density housing immediately adjacent to Activity Centers to serve as a transition to surrounding residential areas.**
- **1.12.8 – Support district parking strategies in Activity Centers, including shared parking facilities with uniform signage, and other strategies.**
- **1.12.9 – Encourage architectural design, building mass and site plans to create or improve public and semi-public spaces in Activity Centers.**

<u>Housing</u>

- **Housing Policy 3.1: Grow by increasing the supply of housing.**
  - **3.1.1 – Support the development of new medium- and high-density housing in appropriate locations throughout the city.**

- **Housing Policy 3.2: Support housing density in locations that are well connected by transit, and are close to commercial, cultural, and natural amenities.**
  - **3.2.1 – Encourage and support housing development along commercial and community corridors, and in and near growth centers, activity centers, retail centers, transit station areas, and neighborhood commercial nodes.**

Both the Project Site and the Expo Site are guided for High Density Residential within the Marcy-Holmes Neighborhood Master Plan future land use map which was adopted by the City Council in 2014. Both sites also fall in the Riverfront Character Area as part of the master plan. The plan's goal for both sites is to "Expand and improve riverfront parks, improve connectivity, balance local and regional access and use, create bike and walk-friendly environments on 2nd Street SE, and embrace diversity of building uses and eras."

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

The Project Site is zoned I1 (Light Industrial District) and located in the Industrial Living and University Area Overlay Districts (Figures 6 and 7). The purpose of the I1 Light Industrial District is defined in Section 550.90 of the Minneapolis zoning code as follows. "The I1 Light Industrial District is established to provide clean, attractive locations for low impact and technology-based light industrial uses, research and development, and similar uses which produce little or no noise, odor, vibration, glare or other objectionable influences, and have little or no adverse effect on surrounding properties." A Planned Unit Development (PUD) is allowed as a conditional use in the I1 district.

In the Industrial Living Overlay District, the purpose is to provide limited residential and retail development uses. PUDs that include dwelling units are permitted as a conditional use and require a conditional use permit. The University Area Overlay District is intended to produce high quality residential development with design guidelines. The guidelines call for ½ off street parking stalls per bedroom and 1 bicycle stall per bedroom. The future development will meet these requirements.

The Project Site is within the St. Anthony Falls Historic District (1971) and in the immediate vicinity of similarly-designated structures. The Project will be reviewed by the Minneapolis Heritage Preservation Commission (HPC) under its codified regulations and organizational guidelines.

Developer anticipates applying for a conditional use permit to allow for a Planned Unit Development over the current I1 zoning. Other applications will include a site plan review, HPC application for Certificate of Appropriateness and potential variance applications to allow for increased height and Floor Area Ratio (FAR) as part of the PUD.

The Expo Site has the same zoning and overlay districts as the Project Site. The Expo was approved as a Planned Unit Development conditional use permit and received a Certificate of Appropriateness from the HPC.

Based on FEMA Floodplain mapping, both the Project Site and the Expo Site are located outside of either a 100 or 500-year flood zone.

There are no known wild and scenic rivers, critical areas, designated shorelands, or agricultural preserves within either the Project Site or the Expo Site. Both sites are approximately 550 feet from the Mississippi River.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

Properties surrounding the Project Site also fall within the I1 Districts and Industrial Living and University Area Overlay Districts as applicable; therefore, they have similar requirements and restrictions as those placed on the Project. The surrounding land uses are similar in nature and compatible with the residential and commercial uses proposed for the Project.

The Project is generally compatible with the land uses called for in the Comprehensive Plan. The Project would provide high density housing within an area of concentrated employment and other complementary uses. The Project would further support the City's goals for transit-oriented development due to its close proximity to mass transit services. The same is true for the Expo.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

Developer will work closely with City staff to ensure that the proper permits and approvals are obtained, and mitigation measures applied, as needed and warranted. No incompatibilities are anticipated. Likewise, no incompatibilities are anticipated for the Expo.

10. Geology, soils and topography/land forms:

a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

Based on a review of the Geologic Atlas of Hennepin County, bedrock geology below both the Project Site and the Expo Site includes Platteville and Glenwood Formations, which consist of fine-grained limestone containing thin shale partings near the top and base, underlain by green, sandy shale of the Glenwood Formation, which is thin and not always reported in well records (Olsen and Bloomgren, 1989). Depth to bedrock in this area is greater than 50 feet, with minor portions a depth of 40 to 50 feet (Figure 10). Bedrock is at an elevation of 750 to 800 feet (Bloomgren, Cleland and Olsen, 1989). The Project's parking garages will include one to three levels below ground, with a depth of up to approximately 19-30 feet below grade. The Expo has one and a half levels below ground and is approximately 19 feet below grade. Given the depth to bedrock, no effects to geologic features will occur as a result of either the Project or the Expo.

Hennepin County is located above the Cambrian-Ordovician aquifer system, which is comprised of sandstone formations with limestone or dolomite inclusions in the upper layers. This includes the Prairie du Chien-Jordan aquifer in the Project Site and the Expo Site and for most of Hennepin County (USGS Groundwater Atlas, 1992). There are no known identified karst formations within either site or within three miles of either site. There are no anticipated impacts to karst features as a result of either the Project or the Expo, whether individually or in the aggregate.

Susceptibility of the water table systems to pollution is rated as high due to the sand and gravel of the surficial geology and depth of material. Susceptibility of the Prairie du Chien-Jordan aquifer, the most heavily used aquifer in the county, is rated as "low to moderate". This is based on the relative travel time of contaminants to the Prairie du Chien-Jordan aquifer as influenced by the number and effectiveness of confining layers between the aquifer and the surface, depth to bedrock, and composition of overlying glacial deposits (Piegat, 1989). Given that both the Project and the Expo will result in a similar amount of

impervious surface as are present under existing conditions on both sites, no impacts to groundwater will occur as a result of either the Project or the Expo, whether considered individually or in the aggregate.

Surficial geology at both the Project Site and Expo Site is comprised of glacial outwash materials of terrace deposits. These are typically sand, gravelly sand, and loamy sand. These are covered by artificial fill and gravel of a glaciofluvial nature. It was deposited during the late Wisconsinan as outwash material from melting glaciers. Deposits are relatively thin and consists mostly of boulder lag or artificial fill material (Meyer and Hobbs, 1989).

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

Existing surfaces in the Project Site include a paved surface parking lot, a research and development building, and landscape areas. The landscape area is comprised of a small amount of lawn with scattered trees on the eastern portion of the site.

Pre-construction surfaces on the Expo Site consisted of a paved surface parking lot. No green space or non-impervious surfaces exist within the Expo Site.

The Hennepin County Soil Survey (Figure 8) indicates that both the Project Site and Expo Site are mapped as Urban land-Udipsamments (cut and fill land) with 0 to 2 percent slopes. Most areas in urban land units have been disturbed by construction with variable soil components. The Phase II Environmental Site Assessment conducted on the Expo Site observed about 12 feet of fill materials at that site consisting of ash, brick, concrete, and clinkers. Fill is underlain sand and sandy silt. The existing surface will be excavated and graded during development activities.

Grading and excavation activities during re-development of the Project Site will generally disturb the entire site but will be phased according to the development plan. Excavation depths will vary between 19 and 30 feet dependent on the building structure design for the Project. The planned multi-story buildings will require deeper excavations for construction of footings. The overall volume of material that is excavated from the Project Site will range from approximately 134,000 to 243,000 tons depending on the number of parking levels. Encountered contaminated soils would require off-site disposal as well (see Question 12 for additional detail). Excavation during construction activities would also include trenching for extension of existing utilities or installation of new utilities (i.e. storm sewer, sanitary sewer, and related infrastructure) to serve the development. Contaminated soil encountered during development of the Project Site will be excavated and removed from

the site per individual response action plans, dependent on the contaminants and the applicable standard for the type of development (i.e. industrial versus residential).

The Expo Site was excavated approximately 19 feet below grade and removed approximately 60,000 tons of material.

A Geotechnical Exploration and Engineering Review was completed for both the Project Site and the Expo Site by Northern Technologies, LLC (March 21, 2017). The report provided the following conclusions and recommendations:

- **Removal of all topsoil, organic soils, fill material and man-made structures. These extend within a range of 2 to 12 feet and are anticipated to be removed for the creation of below grade structures associated with both the Project and the Expo.**

- **The proposed structures can be supported upon standard perimeter strip and spread column footings on competent, non-organic natural soil(s) or engineered fill.**

- **For preliminary design building linear strip footings and interior column footings may be proportioned using the maximum net allowable soil bearing pressures of 4,000 pounds per square foot (psf). This value could be increased to up to 8,000 psf dependent upon the proposed depth of low floor elevation and / or soil corrections. The lower bearing pressures would require fewer corrections and allow for more reuse of on-site materials. The higher bearing pressures would require more selective use of on-site materials and generally deeper corrections or lower floor elevations, but would require significantly less concrete.**

- **There was a deep soft clay deposit encountered in the northeast corner of the Project Site. This area should be further investigated to find the extent of this deposit, especially if the Project involves large foundation loads.**

- **In general, the soils on both the Project Site and the Expo Site appear to be suitable for reuse as structural fill, although there may portions of the existing fill materials that contain debris or other unsuitable material that would not be suitable for reuse.**

- **As the Project design progresses closer to final, additional review of the actual foundation loads and distribution to help to reach a more optimized foundation solution that reflects a balance between allowable foundation bearing capacities in conjunction with the proposed structures, reuse of on-site soils, site logistics and ease of construction.**

Steep slopes are not anticipated to be constructed as part of redevelopment activities on either the Project Site or the Expo Site, minimizing the potential for erosion from stormwater runoff in the proposed condition. However, exposed soils during construction would be susceptible to erosion and sediment transport if not properly managed. Sediment tracking outside the construction area onto adjacent roadways would also be a concern during construction, due to the urban environment and traffic flows in the area. Construction vehicles will be required to use temporary construction entrances equipped

with vehicle tracking BMPs to minimize the track out of sediment (i.e. rock pads, mud mats, slash mulch, or equivalent systems).

11. Water resources:

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

There are no surface water resources within either the Project Site or the Expo Site (Figure 9). The Mississippi River is located approximately 550 feet to the southwest of both sites. This reach of the river (AUID 07010206-814; Upper St. Anthony Falls to St. Croix River) is impaired for aquatic consumption, aquatic life, and aquatic recreation. Neither the Project nor the Expo, individually or in the aggregate, will impact surface waters.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Groundwater data are shown on Figure 10. No groundwater discharge features such as wetlands, springs or seeps are present on either the Project Site or the Expo Site. The sites are not within a wellhead protection area. Depth to groundwater ranges from 40-50 feet. As a result, it is unlikely that groundwater will be encountered during construction of either project.

Field verified wells from the County Well Index (CWI) are shown on Figure 10 and tabulated in Table 4 below. Based on the CWI, there is one active field verified well adjacent to the Expo Site, and two active field verified wells adjacent to the Project Site. One non-field verified well from the CWI database is also shown on Figure 10; however, the locations of non-field verified wells are approximate and are based on information provided by the driller. During excavation operations at the Expo Site, two wells not identified in the CWI were discovered. Wells encountered will be properly sealed.

Table 4. Field Verified Wells – County Well Index

Phase	Unique Well No.	Use
The Expo	441500	Dewatering
Project	441496	Dewatering
Project	579471	Monitoring Well

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The Project and the Expo will collectively result in a net increase in wastewater production. Existing sanitary sewer infrastructure at both the Project Site and the Expo Site includes remnant lines from prior and existing uses. City of Minneapolis sanitary sewers currently serve existing residential areas to the north, east, and south of both project sites. Wastewater is conveyed through this existing infrastructure system to Metropolitan Council Environmental Services (MCES) interceptor(s) and ultimately to the MCES Metropolitan Wastewater Treatment Plant (WWTP). The Metropolitan WWTP, located in St. Paul, is the largest wastewater treatment plant in Minnesota. According to a Metropolitan Council fact sheet for the Metropolitan WWTP, the plant capacity is 250 million gallons per day (GPD). The WWTP discharges to the Mississippi River.

Wastewater generation rates have been estimated by development type for both the Project and the Expo based on the 2018 Metropolitan Council Sewer Availability Charge (SAC) Manual and the SAC Criteria Calculator spreadsheet (see Table 5 below). Wastewater produced at each project would be typical for residential (274 gallons per unit per day) and retail development (274 gallons per 3,050 sf per day). The estimated wastewater generation rate for the Project and the Expo, both individually and in the aggregate, is shown below with the potential cumulative rate of approximately 372,582 GPD. Given that the R&D Facility generation rate at the Project Site is estimated at 37,842 GPD (274 gallons per 2,650 sf per day), the net increase from the existing use of the Project Site to the cumulative estimate for both the Project and the Expo is 334,740 GPD.

Table 5. Estimated Wastewater Production

	Size	Description	SAC		SAC Equivalency	Flow (gpd)
			Parameter	Units		
Existing (Project Site)	366,000	Office	2650	Sf	138.11	37,842
					Total	37,842
Proposed (The Expo)	3,500 sf	Retail	3050	Sf	1.15	315
	368 units	Residential	1	Unit	368	100,832

Proposed (Project)	**5,000 sf**	**Retail**	**3050**	**Sf**	**1.64**	**449**
	989 units	**Residential**	**1**	**Unit**	**989**	**270,986**
					Total	**372,582**
					Net Change from Existing to Proposed	**334,740**

The existing City sewer infrastructure has capacity to collect the additional wastewater from both the Project and the Expo. Sanitary sewer infrastructure to accommodate generated flows will be constructed on both sites. No on-site domestic wastewater treatment is proposed for either the Project or the Expo.

The Expo Site has two connections to the sanitary sewer; one on University Avenue, the other along the 2nd Street SE side of the site. Both of these connections will be utilized by the project.

Exact sewer line sizing and location for the Project Site will be determined during final site engineering and design. Sanitary sewer extension permits will be required and will include detailed wastewater flow calculations. Permit applications are subject to review and approval by MCES and MPCA. A Utility Connection Permit will also be required from the City of Minneapolis.

No impacts have been identified from the increase in wastewater production due to the Project and the Expo, either individually or in the aggregate. There is sufficient capacity within the existing systems, including the City's sewer main and the MCES Metropolitan WWTP, to convey and treat the wastewater flows from both projects. The permitting process that will be followed during final design/construction of the Project Site allows for review of the utility plans for the Project to ensure all conditions are in compliance with applicable local and state regulations.

2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

No discharge to SSTS is anticipated from either the Project or the Expo.

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

No wastewater discharge to surface waters is anticipated from either the Project or the Expo.

ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP

site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

Based on existing topography, the Project Site generally drains from the northwest to the southeast. There are no existing storm ponds on the Project Site. The Project Site drains to the City storm sewer in the adjacent roadways. The 6.18-acre Project Site is comprised of 4.96 acres of impervious surfaces. The Project will create approximately 0.22 acres of additional impervious surfaces.

The pre-construction conditions for the 2.52 acre Expo Site were limited to impervious surfaces, with no non-impervious surfaces. The developed conditions will result in a slight decrease of impervious surfaces as landscaped areas are integrated into the design. Stormwater will be pre-treated prior to discharge to the storm sewer system through the use of a jellyfish filter system that will be located at the corner of 2nd Avenue SE and 2nd Street SE.

All runoff from the Project, the Expo and the adjacent area that does not infiltrate during overland flow and reaches the storm sewer system ultimately discharges to the Mississippi River. The reach of the Mississippi River receiving runoff is impairments for aquatic recreation, aquatic life, and aquatic consumption. These impairments are not influenced by construction-related activities and neither the Project nor the Expo (individually or in the aggregate) will require implementation of additional stormwater management BMPs because of the impairments.

Connection to existing City storm sewer for discharge from the Project is anticipated to be at one or more points, pending final site design.

Per Minneapolis ordinance Chapter 52 (Erosion and Sediment Control and Drainage), erosion and sediment control plan approval is required from the City of Minneapolis for any land disturbing activities in excess of five thousand square feet or five hundred cubic yards. An NPDES Construction Stormwater Permit, administered by the MPCA, would also be required for land disturbing activities greater than one acre, or less than one acre but part of a common plan of development greater than one acre. These requirements apply to the Project and the Expo individually. Erosion and sediment control measures to be implemented during and after construction for each project would at minimum meet the requirements of the City of Minneapolis ordinance and the NPDES permit.

In addition, temporary measures for construction and redevelopment would require conformance with City of Minneapolis and NPDES Construction Stormwater Permit requirements for permanent stormwater management at both the Project and the Expo individually. Stormwater management is required for all land-disturbing activities greater than one acre or less than one acre but part of a common plan of development (NPDES requirement) or phased/connected actions (City requirement). Discharge rates will be controlled so that there is no increase above existing conditions (demonstrated for the 2-yr, 10-yr, and 100-yr storm events) at either project site. Water quality treatment will also be provided at each

project individually through retention per the NPDES permit requirements and per the City requirement that 70% total suspended solids (TSS) be removed from a 1.25-inch storm event. The stormwater management plan developed for the project will be subject to City review and approval.

Impacts to water quality of downstream receiving waters are not anticipated due to required conformance to City of Minneapolis ordinance and the construction stormwater NPDES permit whether for the Project or the Expo individually or collectively. Although the volume of stormwater generated on the Project Site may increase slightly due to an increase of 0.22 acres of impervious surfaces, water quality and volume of runoff leaving the site would likely improve due to the lack of both existing stormwater management features and BMPs currently implemented on the Project Site and the addition of new BMPs to meet regulatory requirements. An SWPPP will be required for the Project and will address temporary erosion and sediment control BMPs as well as permanent stormwater management features. Since post-development runoff will be limited to existing conditions, storm sewer capacity will not be affected by the Project.

iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

Construction of the Project and the Expo will result in a cumulative increase in water demand across both project sites. Within the Project Site, water supply infrastructure is limited to a portion of the site where the R&D Facility is located. There is a City of Minneapolis watermain in University Avenue and 2nd Street SE that currently serves existing developed areas in the vicinity of the Project. The public water system has capacity to provide water supply/fire suppression services for the Project.

It is anticipated that the general layout of the infrastructure within the Project Site would be similar to the sanitary sewer system layout. The exact size and location of infrastructure will be determined during final site design. Final design flows, including fire flows, would also be calculated at that time. There may also be connections to the City system at University Avenue or 2nd Street SE. A Utility Connection Permit would be obtained from the City of Minneapolis along with any other required permits for construction.

Water supply to the Expo Site will be located at the northwest corner of the site, at the intersection of University Avenue SE and 2nd Avenue SE.

No impacts have been identified from the increase in water demand at the Project Site and the Expo Site, whether individually or cumulatively, due to the capacity of

the existing system and the permitting process that would be followed during final design/construction.

Groundwater levels are not anticipated to be permanently impacted by either the Project or the Expo, either individually or in the aggregate, as no new water appropriation wells are proposed, and no permanent dewatering will be required, at either project. Temporary construction dewatering is not anticipated for either the Project or the Expo, but may be required during site excavations. If required, appropriate permits from the MNDNR and the City of Minneapolis would be obtained for construction and discharge would comply with NPDES permit requirements. Existing wells on both the Project Site and Expo Site were previously identified and discussed in Section 11.a.ii above. Any well, either field or non-field verified, known or encountered during construction will either be re-appropriated for use or will be sealed per MDH requirements. Any other encountered non-field verified wells will also be sealed by the responsible party. Impacts to groundwater or public water supply are not anticipated for the Project or the Expo, either individually or in the aggregate. Mitigation in connection with either project will be regulated through the development review process, application for required permits and approvals, and well abandonment per MDH requirements.

iv. Surface Waters

a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

There are no wetlands within or adjacent to either the Project Site or the Expo Site. (Figure 9)

b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

There are no surface waters within or adjacent to either the Project Site or the Expo Site (Figure 9).

12. Contamination/Hazardous Materials/Wastes:

a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

Existing conditions consist of the R&D Facility on the central portion of the Project Site. The west portion of the Project Site consists of paved parking lot areas. A landscape area consisting of mowed lawn and scattered trees is located on the eastern corner of the Project Site. The Project Site does not have enough information at this time to provide a range of project regulated material that will need to be properly disposed of. The overall range of tons needed to be excavated would include any regulated material that will need to be disposed of.

The Expo Site is adjacent to the Project Site to the west and is currently being redeveloped from an asphalt surface parking lot. The Expo Site had approximately 26,000 tons of regulated material that was properly disposed of at a qualified landfill.

A non-destructive Asbestos & Regulated Materials Survey was conducted by Wenck (April 2017) of the R&D Facility. Asbestos and presumed asbestos-containing materials (PACM) were observed during the survey.

- **If the PACM is to be disturbed by demolition activities, these materials will need to be sampled prior to disturbance.**
- **In accordance with the State of Minnesota and Federal regulations regarding ACM, all friable and non-friable materials that may become friable, with greater than one percent asbestos which will be disturbed, must be identified and removed prior to demolition.**
- **All rules and regulations will need to be followed, including, but not limited to: notification, permit acquisition, abatement and disposal of ACM at a landfill approved to accept asbestos- containing waste.**
- **Asbestos abatement contractors and consultants licensed by the State of Minnesota must be used to perform asbestos related work.**
- **Regulated asbestos abatement projects (greater than 160 square feet and/or 260 linear feet) and demolition projects require written notification and payment of applicable permit fees at least 5 calendar days for MDH and 10 working days for the MPCA prior to the commencement of asbestos abatement activities.**

- **In addition, the demolition contractor must file a separate 10 working day notification to the MPCA prior to the start of demolition. The EPA and MPCA define demolition as the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility. The demolition notification cannot list a start date earlier than the termination date for the asbestos abatement.**

- **Asbestos detected at quantities of less than one percent does not require removal prior to renovation or demolition per MDH and MPCA requirements. However, OSHA regulations require the communication of the presence of asbestos in materials by owners and general contractors to workers or subcontractors who may disturb the asbestos in materials.**

- **The demolition contractor should be made aware of the Survey and given a copy of this Survey report prior to commencing demolition activities. If previously untested suspected ACM is discovered during demolition activities, work should stop and representative samples should be collected by a licensed asbestos building inspector.**

A Phase I Environmental Site Assessment (ESA) was completed for both the Project Site and the Expo Site by Wenck (March 20, 2017). The Phase I ESA identified several recognized environmental conditions (REC) pertaining to the Site.

- **The Project Site and Expo Site have been developed since at least 1890 and are located within an area of Minneapolis with an extended history of industrial and commercial development. Historical maps identified several former structures on both sites including multiple dwellings, shops, a truck and crane service company, two filling stations, automobile repair garage, transformer and electric device manufacturer, bakery and Pillsbury research and flour milling structures.**

- **These structures were demolished between 1968 and 1989. Previous environmental and geotechnical reports identified fill soils with debris consisting of brick, cinders, ash, concrete, glass and ceramic. The historical industrial use and presence of buried debris and fill of unknown origin represents a REC for the Project Site and the Expo Site.**

- **The Minneapolis building records for the Project Site and the Expo Site identified multiple oil burner permits and tank records for various structures at both sites. Removal dates for all the former tanks were not identified. The presence of historical oil burners and fuel oil use is considered a REC.**

- **Regulated facilities, including Superior Plating, in close proximity to both the Project Site and the Expo Site with documented releases of petroleum/solvents are considered a REC relative to both sites because they pose a risk to the subsurface soil, groundwater, and soil vapor conditions at each site.**

The Phase I ESA did not identify evidence of controlled recognized environmental conditions (CRECs) or historical recognized environmental conditions (HRECs) relative to either the Project Site or the Expo Site.

A Phase II ESA was completed for both the Project Site and the Expo Site by Wenck at the same time as the Phase I ESA (March 20, 2017). Based on the field observations and laboratory analysis of soil, soil vapor, and groundwater samples collected and analyzed from both sites, the following conclusions were reached:

- **The upper soils are comprised of fill at depths up to 12 feet below grade. The fill soils exceeds the MPCA soil reuse standards based on diesel range organics (DRO), polycyclic aromatic hydrocarbons (PAH) or Resource Conservation and Recovery Act (RCRA) Metal (arsenic) results. The fill soils also exhibited evidence of debris consisting of ash, brick, concrete and clinkers in the upper 12 feet at various locations on both the Project Site and the Expo Site.**

- **Soils which are presumed to be naturally occurring or native soils exhibited analytical sampling consistent with the MPCA soil reuse standards for unrestricted off-site reuse.**

- **Groundwater analytical results from one temporary well installed during the Phase II ESA indicate the presence of diesel range organics (DRO) at 2,500 ug/L. Groundwater was only encountered in limited borings.**

- **Soil vapor testing identified the presence of tetrachloroethene (PCE) at a low level in two samples collected at 20 ug/m^3 and 38 ug/m^3.**

The Phase II ESA offered the following recommendations:

- **Regulated fill interacted with for redevelopment of the Project Site and the Expo Site will require proper management and export of regulated fill soil will require off-site disposal at an MPCA approved landfill. Additional characterization of fill soil and native soil that will be interacted with during redevelopment of both sites may be necessary.**

- **As needed, a Response Action Plan (RAP) for each project site will be prepared and submitted to the MPCA Voluntary Brownfield Program for review and approval. The RAP establishes the rationales, goals and methods for a proposed site cleanup customized to the planned redevelopment at each project site. The RAP will include a Construction Contingency Plan (CCP) to address unanticipated environmental conditions that may be encountered during the planned redevelopment. A RAP will be prepared for the Project Site. A RAP has been approved by the MPCA and implemented for the Expo Site.**

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to

avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

No significant volumes of solid wastes are anticipated to be encountered or generated during construction and/or operation of either the Project or the Expo, individually or in the aggregate. Construction activities at each site would generate wastes typical of residential and commercial development operations. The contractor for each project will dispose of wastes generated during construction in an approved method by using commercial dumpsters and disposing construction wastes and contaminated soils at an MPCA-permitted landfill in accordance with an MPCA approved Response Action Plan. The contractor will minimize and mitigate adverse effects from the generation of solid waste from demolition and construction activities by recycling construction waste that can be recycled, when feasible.

Following project construction, solid waste generation at the Project and the Expo, both individually and collectively, would be typical of occupied residential/commercial developments of the size of both projects and would consist of mixed municipal/residential waste materials. The majority of the solid waste generated at each project would include materials such as paper, organics, plastics, and "other wastes" which includes materials such as appliances, furniture and textiles.

According to the Metropolitan Solid Waste Management Policy Plan 2010-2030 (MPCA, 2011), the Minnesota per capita rate for waste generation is 1.06 tons per person per year. The following residential solid waste generation rate estimates for the Project and the Expo were based, in part, on 2010 City of Minneapolis census data which indicate that the average persons per household is 2.21. The estimates assume 368 residential units for the Expo and 989 residential units for the Project (total of 1,357 units). To calculate the estimated amount of waste generated for both projects, the household occupant number (2.21) was multiplied by the maximum number of units (1,357) and then multiplied by 1.06 tons per person per year. Using these figures, the residential portions of both the Project and the Expo could generate approximately 3,179 tons of solid waste per year. The amount of solid waste produced for the commercial/retail components of each project was calculated using a metric of 2.5 pounds (lbs) generated per 1,000 SF. The estimates assume 3,500 SF of retail space for the Expo and up to 5,000 SF of retail space for the Project. Using these figures, the retail portions of the Project and the Expo could produce approximately 3.9 tons of solid waste per year (2.5 lbs x 8.5 x 365 days). Consequently, the total estimated solid waste produced cumulatively by the Project and the Expo is up to approximately 3,183 tons per year.

Table 6. Estimated Solid Waste Production

Residential	Units	Total Residents	Tons per Year
Expo	368	813	862
Project	989	2186	2,317
		Residential Total	**3,179**

Retail/Commercial	Retail (SF)	Tons per Year
Expo	3,500	1.6
Project	5,00	2.28
	Retail Total	**3.88**
	Sum Total	**3,183**

A source recycle/separation plan for the residential and retail components of each project will be implemented in accordance with city requirements. Mixed municipal solid waste not recycled by either the Project or the Expo will either be incinerated at the Hennepin County Energy Recovery Center or hauled to a sanitary landfill. Participation in the recycling program by future residents of the Project and the Expo is expected to reduce costs for solid waste trucking and disposal, and generally minimize and mitigate adverse effects from the generation and storage of solid waste.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

It is not anticipated that the Project or the Expo, individually or cumulatively, will generate, or require storage of, significant amounts of hazardous wastes aside from typical household cleaning supplies. During construction of each project, hazardous materials such as fuels (small quantities stored above ground) and specific construction materials will be stored and handled in conformance with State and Federal regulations to prevent accidental spill or release of hazardous materials. Builders and contractors are responsible for proper management of hazardous materials utilized during construction. The contractors will minimize and mitigate adverse effects from the generation and storage of hazardous wastes by recycling wastes that can be recycled, and by developing a spill prevention plan for each project.

Following construction, the Project will have emergency generators that would serve as a back-up source of electricity during power failures. The generators would be designed with internal, above-ground fuel tanks. A swimming pool and hot tubs may be part of the Project. As a result, related swimming pool and hot tub chemicals would be properly stored and used on site in accordance with required maintenance.

The Expo will have a swimming pool, two hot tubs and an emergency generator. The chemicals related to the swimming pools and hot tubs will be properly stored in a pool equipment building. The generator will be placed in the garage and will be powered by above ground fuel tanks in case of emergency.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

Outside of the materials described above, the Project is not anticipated to generate or require the storing, handling or disposal of hazardous wastes during construction or operation.

The Expo will not have any other hazardous wastes other than what is described above. Consequently, potential environmental effects from hazardous wastes, and measures to avoid, minimize, or mitigate adverse effects from the generation/storage of hazardous waste (including source reduction and recycling) have not been considered.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

The area in and around the Project Site and the Expo Site is characterized as a fully developed area that has been developed for more than 100 years. The Project Site consists of surface parking lots and the R&D Facility. There is an undeveloped green space at the eastern corner of the Project Site, consisting of mowed lawn and landscape trees and shrubs. Vegetation is also found on isolated small boulevard areas, consisting of mowed lawns and associated boulevard trees. The Expo Site is currently under construction. Consequently, there are no significant wildlife habitats within either the Project Site or the Expo Site. Both sites are surrounded by developed areas. No wetlands, waterbodies, lakes, forests, or grasslands or other areas are located on either the Project Site or the Expo Site that provide wildlife habitat.

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-____) and/or correspondence number (ERDB _____) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

The Minnesota Department of Natural Resources (MNDNR) was contacted to determine if rare plant or animal species or sensitive resources or habitats are present within an approximately one-mile radius of the Project Site and the Expo Site. A query of the National Heritage Information System (NHIS) was completed in July 2018; the query and MNDNR response (Correspondence # ERDB 20190004) was received July 11, 2018 and is included in the Appendix.

The results of the NHIS query indicated that two rare features have been documented in the search area. Several state-listed mussels have been documented in the Mississippi River near the Project Site and the Expo Site. Tricolored bats have been documented hibernating within a cave in close vicinity of the Project Site and the Expo Site.

The rusty patched bumble bee (Bonbus affinis) is a Federally listed endangered species. A "High Potential Zone" for the rusty patched bumble bee is located 0.3 miles to the southeast of the Project Site and the Expo Site, based on the 8/15/2018 high potential zone mapping.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The Mississippi River is located approximately 550 feet to the south of the Project Site and the Expo Site. Neither the Project nor the Expo, individually or collectively, will directly impact the Mississippi River, and stormwater management and protection measures will be implemented as required by applicable permits to ensure the development of each site does not result in water quality impacts to the river. Neither the Project nor the Expo, individually or collectively, will impact the habitat of the mussel species in the Mississippi River.

Neither the Project nor the Expo, individually or collectively, will impact the cave (hibernacula) utilized by hibernating tricolored bats. During the summer months, bats are known to roost in the bark of trees, in cavities, or in crevices of both live and dead trees. To prevent impact to roosting bats, any trees on the Project Site will be removed outside of the roosting season of April through October. There are no trees on the Expo Site.

The rusty patched bumble bee was recently added to the federal endangered species list on January 10, 2017. The bumble bee has been found in a variety of habitats but prefers areas with wildflowers and native prairie for foraging, nectar, and nesting. Hennepin County contains zones identified as both low-potential and high-potential areas for the bumble bee. The Project Site and Expo Site are located 0.3 miles north of a high-potential zone. The Expo Site is currently under construction. The Project Site contains a surface lot comprised of asphalt, the R&D Facility, and an area of mowed lawn and landscape trees. There are no native grasslands present on either the Project Site or the Expo Site. The existing conditions are unlikely to support rusty patched bumble bee foraging or nesting habitat.

A US Fish and Wildlife Service (USFWS) IPaC Report (Information for Planning and Consultation) was generated on June 25, 2018 for the area in and around the Project Site and the Expo Site. Based on USFWS Section 10(a)(1)(B) Voluntary Guidance for Project Proponents dated June 25, 2018, screening precisely defined project areas using the IPaC system may determine whether a project may affect an area where the rusty patched bumble bee is present. An IPaC report was generated using the specific project boundaries for both the Project Site and the Expo Site (see Appendix). The search area for the report did not include the documented areas as high or low potential for the rusty patched bumble bee. The result of the IPaC report, in conjunction with the lack of suitable habitat on either the Project Site or the Expo Site, serve as documentation that neither project, whether considered individually or collectively, is likely to incidentally take the species (Incidental take is defined by the USFWS as harm, wound, kill, trap, capture, or collection of a species that results from but is not the intent an otherwise lawful and legal action). This assessment was performed according to the Section 10 (a)(1)(B) described above.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

It is anticipated that conformance to regulatory requirements in connection with both the Project and the Expo will be protective of water quality for discharge to the Mississippi River and additional mitigation for state-listed mussels will not be required. Construction BMPs, such as storm sewer inlet protection, will be implemented on both the Project Site and the Expo Site for erosion and sediment control during development as required per City ordinance and the NPDES construction stormwater permits. The permanent stormwater management systems at the Project Site and Expo Site will be also be designed to meet City and NDPES requirements. Tree removal outside of the April to October bat roosting season at the Project Site will help avoid impacts to bats, as well as to nesting birds protected under the Migratory Bird Treaty Act.

The buildings on the Project Site and the Expo Site would likely not result in an undue hazard for migratory flight patterns. The flyway along the Mississippi River runs parallel to both sites. Migrating birds will follow along the river, but not be drawn away from the river because no suitable habitat exists on the north side of the river that would draw birds away. No large open spaces or parks exist to the north of the Project Site and the Expo Site that provide food or cover for migrating birds. As a result, the buildings on both sites would not be in a flight path that would create a hazard for birds.

Based on the IPaC assessment discussed in part c. above, mitigation for the rusty patched bumble bee is not required for either the Project or the Expo.

14. Historic properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

An archaeological and historic structures review was conducted for the Project Site (Blocks 35 and 36) of the St Anthony Falls Addition. The site is located within the St. Anthony Falls Historic District (1971), and more specifically within the University Avenue Transition Area of The Water Power Character Area. The University Avenue Transition Area is defined as the area from Central Avenue SE to 6th Avenue SE and University Avenue SE to 2nd Street SE.

The Project will be further reviewed by the Minneapolis Heritage Preservation Commission (HPC) under its codified regulations and organizational guidelines. This will include review of the design of the Project relative to effects on the St. Anthony Falls Historic District. Any determination or finding of effects of project development is outside the scope of this section and will be reviewed by HPC in consultation with regulatory partners such as the Minnesota State Historic Preservation Office (MnHPO). The St. Anthony Falls Historic District Design Guidelines call for height in the University Avenue Transition Area that is located between Central Avenue NE and 6th Avenue SE as well as University Avenue SE and 2nd Street SE to not exceed eight stories. Other projects in the area, including the Expo, have been granted a

Certificate of Appropriateness for heights exceeding eight stories. The area has lost most of its historic fabric as it has almost all been redeveloped since the historical period. Any new developments should respect the historical subarea characteristics while adding contemporary character to the area. Any buildings that are taller than what has been seen historically should be setback from the street edge. Variations in heights are encouraged to provide context to the area.

The archaeological and historic structures review addressed two possible historic property types, namely (1) the existing structures on the footprint and (2) any areas where subsurface archaeological deposits could have information important to an understanding of history. The review utilized historic fire insurance maps (Sanborn and Rascher, dating between 1885 and 1966) and a series of aerial photographs beginning in 1937 through 2016.

The R&D Facility on the Project Site was constructed in phases in the 1970s and 1980s, after the establishment of the St. Anthony Falls Historic District. In the St. Anthony Falls Historic District Design Guidelines (adopted October 23, 2012), the University Avenue Transition Area on page 129 states "This area has experienced significant changes and most of its historic fabric has been lost." The historic district was designated in 1971 to highlight the period of significance between 1848-1941. The R&D Facility was constructed during the 1970s and 1980s. Due to the building being constructed after the period of significance and with no attributes of a contributing building in the district, the existing building holds no historic relevance.

It is unlikely that any intact, pre-contact archaeological sites would be identified during Project construction. In addition, more than one hundred years of diverse land use on the Project Site suggests that historic-period cultural materials would of course be ubiquitous, but only in very specific instances would those materials constitute an NRHP-eligible archaeological site.

Before 1885, the Project Site was exclusively residential neighborhoods. Over time, that homogenous composition changed, as illustrated on historic fire insurance maps and aerial photographs. Land use of select lots shifted during the 20th century from domestic to industrial, storage, or commercial.

Archaeological deposits of value may exist in a few lots where the residences may have been unaltered in footprint between their first record, their removal, and where they were immediately replaced with blacktop or other street grade open space. In other cases, residences may have been replaced by industrial structures or different, larger residences. In these instances, construction of basements or foundations typical of the 20th century, given their corresponding techniques and utilized machinery, would have likely compromised the 19th century yard or privy deposits that could prove valuable for information on early Minneapolis history. Unlike these mixed-use residential/industrial lots, those occupied continuously as residences and without obvious major footprint modifications could have intact 19th century yard or privy deposits.

During construction of the Project, excavation contractors will be instructed to observe for the presence of unaltered residential house foundations and other archeological finds. Should any such items be uncovered, excavation work will be halted, and appropriate measures taken to preserve until proper archeological recovery can be completed.

No archaeological and historic structures review was required for City approval for the Expo. The majority of the Expo Site has been excavated as of the date of this report and no historical remnants have been encountered. Several cisterns of contemporary origin were uncovered, as were underground storage tanks that were previously unknown. None of these items held historical value and were removed from the site. The Expo was granted a Certificate of Appropriateness by the Heritage Preservation Commission as part of the City approval process which allowed the project to move forward and receive other governmental approvals necessary to commence construction.

15. Visual:

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

Development of the Project Site will include construction of new multi-story structures. The development may include towers approximately 30 stories tall with a small amount of retail on the first level and apartments above. Buildings within the Project Site may include up to four stories of structured parking with one level underground. The parking structure would be surrounded by townhomes, serving as a visual barrier. Above the garage structure may be five stories of wood framed apartments in addition to the previously mentioned potential towers.

The Expo will have a tower that is 25 stories tall along with a portion of the building that is five stories of wood framed apartments over a podium. The Expo was approved by the City of Minneapolis as the RGU.

The only identified scenic views or vistas near the Project Site and the Expo Site are from the Mississippi River. The Project and the Expo will not negatively impact the view from the river as many other urban structures are currently visible from this vantage point, and this section of the river is dominated by large structures on both sides. The buildings that run between the Project and the Expo and the river include the A-Mill, Mill and Main, Phoenix on the River and the Machine Shop. The A-Mill consists of several different buildings and ranges from 43 feet to 215 feet above grade counting accessory structures sitting on rooftops. The grain elevators connected to the A-Mill are approximately 95 to 100 feet above grade for the majority of the building with the high point being approximately 159 feet above grade. Mill and Main is approximately 77 feet above grade on the Main Street side. The Phoenix on the River condominiums range from 60 feet on the Main Street side to the highest point of to 177 feet along 3rd Avenue SE. The Machine Shop is approximately 30 feet above grade at 2nd Street SE.

Although development of the Project and the Expo will change the visual landscape from existing conditions, the surrounding area is a highly developed urban area. The Project and the Expo are consistent with an urbanized landscape. Under the existing conditions, the majority of the Project Site consists of a surface parking lot and the R&D Facility that are not consistent with the residential nature of the surrounding land uses to the north and east.

Building materials for the Project and the Expo would and will be typical for the type of development and are not anticipated to create impacts due to glare or to be significantly

inconsistent with the developed structures in the general area, whether considered independently or in the aggregate.

The Project will enhance the public realm by replacing a parking lot and industrial building with an active town home living streetscape, vibrant patios and housing diversity. The Project will also contribute landscaped features for visual interest and create pedestrian friendly sidewalks with trees and plantings of various color, scale and texture.

16. Air:

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

No significant impacts from air pollutants are anticipated from either the Project or the Expo, whether individually or in the aggregate.

The Project does not include significant stationary point source emission units that would trigger the need for air permitting or air dispersion modeling. Stationary source emissions from the Project would include the heating and cooling systems for the proposed residential and retail uses and would be similar to other buildings in the surrounding area. The emissions associated with these systems will not require air permitting and the systems are not anticipated to produce significant air quality impacts.

The Expo also did not require any permitting.

b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

A moderate increase in traffic is expected within the area around the Project and the Expo as a result of both projects. Typical vehicle emissions include particulate matter, hydrocarbons, nitrogen oxides, carbon monoxide, and sulfur dioxide. However, neither the Project nor the Expo, whether individually or in the aggregate, are expected to create new drivers, but instead relocate them from existing areas. Given the proximity of the Project Site and the Expo Site to the Minneapolis Central Business District (CBD) and the University of Minnesota, as well as the high level of access to walking, biking, and transit opportunities, the net vehicle emissions impact to the Twin Cities Metropolitan Area from both projects taken together is expected to be negligible. Consequently, baseline air quality monitoring, or predictive air quality modeling, has not been contemplated at this time, and no measures to mitigate air quality impacts have been considered.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under

item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

Temporary impacts from dust and odor may occur during construction of both the Project and the Expo. Grading, excavation, and general earthwork activities would cause dust to occur. Vehicle exhaust from construction equipment may cause diesel fuel odors. Dust and odor impacts would be temporary and would take place during daytime hours during typical construction activities. Significant impacts from odors are not anticipated; weather and wind conditions would influence the level of impact and the receptors. BMPs would be implemented to minimize impacts from dust, including watering dry exposed soil.

It is not anticipated that either the Project or the Expo, whether individually or in the aggregate, would create permanent dust or odor impacts. Minimal dust would be created due to the implementation of paved roadways and stabilization of exposed soils with vegetative cover. Neither of the projects include significant point source emission sources that would potentially be a source of odors. Odors associated with both projects would be consistent with nearby land uses and are not anticipated to be objectionable, whether considered individually or in the aggregate.

17. Noise:

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Existing noise levels/sources in and around the Project Site and the Expo Site are consistent with a highly developed urban area. The surrounding area is highly developed with residential and retail/commercial uses. The sources of noise in the area include traffic along University Avenue on the north side of both the Project Site and the Expo Site, and Central Avenue SE to the west of the Project Site and the Expo Site.

There are residential areas located to the northeast and southeast of the Project Site and Expo Site. The developed areas to the southwest are primarily mixed use including residential, retail, and commercial properties. There are some redevelopment projects under review/construction to the west that consist of residential housing and commercial uses.

Temporary construction noise would occur during the construction phase of both the Project and the Expo. Construction noise would be typical of other large-scale residential and commercial construction projects similar to redevelopment efforts currently underway in the surrounding area. Sources of construction noise include use of earthmoving equipment (i.e. bobcats, backhoes, and other excavating equipment), large machinery and trucks, hydraulic tools, and similar equipment necessary for building. The Minneapolis Code of Ordinances regulates the timeframe for construction activities by limiting the hours that construction and demolition activities can occur, limited to 7 AM to 6 PM Monday through Friday. Operation of construction equipment outside of the regulated timeframe without a permit is prohibited. An After-Hours Work Permit would be required for work outside of the identified weekday time

period or for anytime on Saturday, Sunday, or City Holidays. A permit would be obtained for the Project or the Expo, if needed, which would be determined by the construction contractor.

Operational noise at both the Project and the Expo would be regulated by the MPCA as the enforcing agent of the State of Minnesota noise rules. Minneapolis Code of Ordinances would also apply to building operation noise. Occupancy of the future development would be subject to such requirements. Both the Project and the Expo include new residential apartment buildings and potential new commercial space. These proposed uses will generate similar noise levels to those that currently exist in the area, including local residential traffic. Following construction and occupancy, noise is not anticipated to be noticeably or significantly increased and would be consistent with surrounding land uses, whether the Project and the Expo are considered individually or together.

Quality of life is not anticipated to be affected by the Project or the Expo, whether individually or collectively, due to conformance with applicable noise regulations, the temporary nature of construction noise, and consistency of the redevelopment with the surrounding land use and urbanized area.

18. Transportation:

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

1) Existing and Proposed Additional Parking Spaces

The Project Site contains 297 parking stalls on the existing research and development facility. Prior to the start of construction, the Expo Site contained 394 parking stalls. When complete, the Project is expected to contain up to 1,490 parking stalls and the Expo will contain 522 parking stalls. Accordingly, if the two projects are aggregated, there will be an addition of 1,321 parking stalls across both project sites.

2) Estimated Total Average Daily Traffic Generated
3) Estimated Maximum Peak Hour Traffic Generated and Time of Occurrence
4) Indicate Source of Trip Generation Rates Used in the Estimates

Based on direction from the RGU in connection with long-term City planning goals, the mode split goals shown in Table 7.1 have been identified for the Project.

Table 7.1: Mode Split Goals for the Project

Mode	***Goal***
Single Occupant Vehicle	*40%*
Transit	*35%*
Carpool and Drop-off	*5%*
Pedestrian/Bicycle/Other	*20%*

Based on direction from the RGU in connection with long-term City planning goals, the mode split goals shown in Table 7.2 have been identified for the Expo.

Table 7.2: Mode Split Goals

Mode	***Goal***
Single Occupant Vehicle	*55%*
Transit	*20%*
Carpool and Drop-off	*5%*
Pedestrian/Bicycle/Other	*20%*

Applying this mode split to automobile trips, the estimated traffic generated by both the Project and the Expo is shown in Table 8.

Table 8. Estimated Trip Generation

Land Use (ITE Code)[1]	**Units**	**Size**	**AM Peak Hour Trips[2]**			**PM Peak Hour Trips[2]**			**Daily Trips**
			Trips In	**Trips Out**	**Total Trips**	**Trips In**	**Trips Out**	**Total Trips**	
Proposed Land Use – Expo									
Apartments (222)	Units	368	27	87	114	81	51	132	1,638
High-Turnover Restaurant[3] (932)	SF	3,389	19	15	34	20	13	33	380
Subtotal Trips			**46**	**102**	**148**	**101**	**64**	**165**	**2,018**
Internal Reduction (5%)			-2	-5	-7	-5	-3	-8	-101
Modal Reduction (45%)			-20	-44	-64	-43	-27	-70	-863
New System Trips – Expo			**24**	**53**	**77**	**53**	**34**	**87**	**1,054**
Proposed Land Use - Project									
Apartments (222)	Units	989	74	233	307	217	139	356	4,402
Shopping Center (820)	SF	5,000	3	2	5	9	10	19	190
Subtotal Trips			**77**	**235**	**312**	**226**	**149**	**375**	**4,592**
Internal Capture/Multi-Use Reduction (5%)			-4	-12	-16	-11	-7	-18	-230
Modal Reduction (60%)			-44	-134	-178	-129	-85	-214	-2,618

New System Trips – Project			**29**	**89**	**118**	**86**	**57**	**143**	**1,744**
Gross Trips – Expo and Project			**53**	**142**	**195**	**139**	**91**	**230**	**2,798**
Existing Land Use – Displaced Facility Reductions at the Project Site									
Research & Development Center[4] (760)	Employees	115	-42	-17	-59	-8	-52	-60	-378
Net New System Trips			**11**	**125**	**136**	**131**	**39**	**170**	**2,420**

1. Per the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.
2. Trip generated for the a.m. and p.m. peak hours of the adjacent roadway network.
3. High-Turnover Restaurant land use utilized to conservatively estimate the trip generation potential of the proposed retail space.
4. Trips generated by the existing R&D Facility will be displaced from the local roadway network.

The weekday p.m. peak hour is expected to be the maximum hourly traffic generator over the course of a day, and this peak hour would be expected to occur within the 4:00 to 6:00 p.m. timeframe.

5) Availability of Transit and/or Other Alternative Transportation Modes

Both the Project Site and the Expo Site are ideally suited for transit access. Currently, local Metro Transit Bus Route 6 maintains service along University Avenue. Route 6 runs along 4th Street in the opposing direction and connects both project sites to the Minneapolis CBD, University of Minnesota, Uptown, 50th & France, and Southdale Mall. Two blocks to the west of the Project Site, local Metro Transit Bus Routes 10, 17, & 25 maintain service along Central Avenue. These routes provide an additional connection to the Minneapolis CBD. Once one arrives in the Minneapolis CBD there is access to the Light Rail Transit (LRT) system. The LRT connects the Minneapolis CBD with downtown St. Paul on the Green Line and to Bloomington at the Minneapolis-St. Paul International Airport as well as the Mall of America on the Blue Line. The LRT system is expected to expand over the next 10 years to better connect most of the Twin Cities region.

The proximity of both the Project Site and the Expo Site to the Minneapolis CBD and University of Minnesota provides residents with easy access to other modes of transportation, such as walking and bicycling. There is a designated bicycle lane on University Avenue SE, directly adjacent to both project sites, which provides access to the University of Minnesota. A separated bike trail on the Stone Arch Bridge provides safe and easy access to the Minneapolis CBD bicycle system. Both the Project and the Expo will provide secure bicycle storage on location. In addition, there are currently two Nice Ride bike rental stations located in the immediate vicinity of both project sites.

In addition to the bicycle network in the area, both the Project Site and the Expo Site are located within the existing pedestrian network which includes an extensive number of sidewalks and trails that connect the Marcy Holmes neighborhood to the Minneapolis CBD,

the University of Minnesota, and Northeast Minneapolis. Both projects are expected to be well-connected to the surrounding areas for all pedestrians.

Currently, there are several opportunities in the immediate area to use Peer-to-peer Car Share or Round-Trip Car Share: A Zipcar is located approximately four blocks east of the Project Site along 8th Avenue SE. An HOURCAR is located approximately one block east of the Project Site along 6th Avenue SE. Vehicles display a permit sticker identifying it as a Minneapolis Car Sharing Program participant vehicle.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 *(available at: http://www.dot.state.mn.us/accessmanagement/resources.html)* or a similar local guidance.

A moderate increase in traffic is expected within the study area due to the proposed development. Neither the Project nor the Expo, whether considered individually or in the aggregate, are creating new operational issues, but rather are providing a modest exacerbation of existing operational issues. However, the conclusion reached from the intersection capacity analysis under year 2024 build conditions is that intersections along Central Avenue will be most affected by the proposed development, with decreases in LOS and increased delay for both the a.m. and p.m. peak hours. Of the three Central Avenue intersections, Central Avenue & 2nd Street will see the largest decline in operations.

Note: A traffic impact study has been prepared and is attached as an appendix.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

Both the Project and/or the Expo will minimize or mitigate project related transportation effects through the following measures:

- **Support and encourage transit use by providing information to users on nearby transit routes.**
- **Support and encourage bicycling by providing secure, enclosed bicycle storage on location as well as a bike repair station in each building for the residents.**
- **The Project would provide information on Hourcar/Zipcar parking spaces that can be used for short-term needs. The Project will also work with the car sharing services to set up a car sharing location more conveniently located in public parking spaces near the proposed development and to promote their services to other nearby buildings. Providing the service will be contingent on the car sharing service provider agreeing to provide their services when the Project opens and on an ongoing basis.**
- **Working with local grocery delivery services to provide free or reduced grocery delivery to residents. This could include organizing a weekly time (or multiple times) for delivery to encourage less travel to the grocery store.**

- **Provide dry-cleaning delivery services for residents and exploring other services that could have deliveries coordinated.**
- **Support and encourage walking by providing logical connections between building entrances and the existing sidewalk network.**
- **Provide potential vehicle access points along 2nd Street SE, 3rd Avenue SE and 5th Avenue SE in order not to create new conflict points along University Avenue.**

19. Cumulative potential effects:

(Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

Cumulative effects of the Project, the Expo and other future third party projects on natural resources and infrastructure are expected to be roughly proportional to the impacts discussed in this EAW, or somewhat greater if future surrounding projects are developed at a higher density. The Project and the Expo are located within an area addressed in multiple City of Minneapolis planning documents that guide growth and development of the area. There are other redevelopment projects that have recently been constructed or are planned for in the area surrounding the Project Site and the Expo Site. Both the Project and the Expo, individually and collectively, are consistent with the planning documents for the broader vicinity.

Due to the planning for redevelopment in this area, the consistency with the surrounding land use, and the mitigation measures described in the preceding sections, neither the Project nor the Expo, whether considered individually or collectively, are anticipated to result in adverse cumulative potential impacts.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

There are a number of other residential projects in the vicinity of the Project Site and the Expo Site that are under construction, planned, or recently completed. These projects include the following:

120 5th Street NE – Phase I (Nordhaus) - Completed

- **280 residential units**
- **22,000 sf of commercial space**
- **390 parking spaces**

120 5th Street NE – Phase II (Nordhaus) - Planned

- **333 residential units**
- **8,163 sf of commercial space**
- **293 enclosed parking spaces**

333 E Hennepin Avenue – Under Construction

- **282 residential units**
- **5,000 sf commercial**
- **282 parking spaces**

200 Central Avenue SE - Planned

- **214 residential units**
- **6,500 sf commercial space**
- **389 parking spaces**

200 University Avenue SE – The Expo – Under Construction

- **368 residential units**
- **3,400 sf of retail space**
- **520 parking stalls**

The City's Comprehensive Plan anticipates and guides the intensity of development within the City and directs necessary infrastructure improvements to support future development projects. These planning efforts serve to avoid and mitigate potential cumulative environmental effects from projects that may be completed within the same general geographic area and timeframes.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Cumulative impacts to city infrastructure such as roads, sewer, and water have been contemplated and addressed in the Minneapolis planning documents. Any potential future projects in the area would be evaluated under the Minnesota Environmental Policy Act (MEPA) rules and would adhere to guidelines presented in the City's approved zoning and comprehensive plans. Neither the Project nor the Expo, whether considered individually or collectively, are expected to result in significant environmental effects.

20. Other potential environmental effects:

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

All known potential environmental effects are addressed herein and no other issues have been identified.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature Mary Drwiega Date October 5, 2018

Title Principal City Planner