Houston Engineering Inc.

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ENVIRONMENTAL ASSESSMENT WORKSHEET

Moorhead Center Mall Redevelopment Project

Prepared for:

City of Moorhead
403 Center Avenue
Moorhead, MN 56560

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Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at**:** https://www.eqb.state.mn.us**/** The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

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: Moorhead Center Mall Redevelopment Project

2. Proposer: City of Moorhead
Contact person: Robin Huston
Title: City Planner/Zoning Administrator
Address: 403 Center Ave.
City, State, ZIP: Moorhead, MN 56560
Phone: 218-299-5374
Email: robin.huston@moorheadmn.gov

3. RGU: City of Moorhead
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4. Reason for EAW Preparation: (check one) Required

☐ EIS Scoping	☐ Citizen petition
Ξ Mandatory EAW	☐ RGU discretion
	☐ Proposer initiated

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

5. Project Location

- County: Clay
- City/Township: Moorhead
- PLS Location (¼, ¼, Section, Township, Range): Section 5 and 8, Township 139N, Range 48W
- Watershed (81 major watershed scale): 57 – Upper Red River of the North
- GPS Coordinates: 96.7730863°W 46.8759099°N
- **See Exhibit 1 & 2**

6. Project Description

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

The City of Moorhead is proposing to demolish the Moorhead Center Mall and subdivide the property into several downtown mixed-use lots consisting of multistory buildings with commercial, residential and civic properties. Additionally, this will require the expansion of the current stormwater system, utilities, and roadways.

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 proposed project is a redevelopment of the Moorhead Center Mall property, surrounding parking lots, and Moorhead City Hall. The project will be implemented over ten years (2024-2034) and will include several blocks of multi-story, mixed-use buildings (**Attachment 1: Proposed Land Use Plan)**. The project will include residential properties, commercial properties, and civic areas. The project will include the expansion of sewer systems, utilities, and roadways (**Attachment 2: Proposed Paving Plan; Attachment 3: Proposed Utility Plan**).

The project infrastructure expansion will be constructed in phases and the multi-use developments occurring in incremental milestones. Phase 1 will be completed in spring of 2025 with the construction and expansion of utilities along the northeastern portion of the project site. Phase 2 will be completed in fall 2025 and is the construction and paving of Red River Avenue, portions of Minnesota Avenue, Third Street North, 4th Street North, portions of 5th Street North, and 6th Street North. Finally, Phase 3 is the finishing of constructing and paving of Minnesota Avenue and 5th Street North which will take place in 2026.

The Moorhead Center Mall will be fully demolished. City Hall will remain and be fully renovated. The building development is broken down into nine milestones (see preliminary site plans for layout). Milestone #1 is the development of 15,700 square feet of commercial space with 123 residential units and 161 parking spaces. Milestone #2 is the development of 55,400 square feet of civic area with 127 parking spaces. Milestone #3 is the development of 14,000 square feet of commercial space with 200 residential units and 527 parking spaces. Milestone #4 is the development of 22,000 square feet of commercial space with 284 residential units and 449 parking spaces. Milestone #5 is the development of 45,900 square feet of civic area (ie: remodeled City Hall) and 24 parking spaces. Milestone #6 is the development of 22,000 square feet of commercial space with 194 residential units and 266 parking spaces. Milestone #7 is the development of 14,000 square feet of commercial space with 148 residential units and 199 parking spaces. Milestone #8 is the development of 17,000 square feet of commercial space, 50,000 square feet of civic area, 55 residential units, and 98 parking spaces. Milestone #9 is the development of 13,000 square feet of commercial space with 52 residential units and 56 parking spaces. There is one area of development that may occur sometime in the future and includes 27,000 square feet of commercial space, 212 residential units, and 246 parking spaces.

c. Project magnitude:

Table 1. Project magnitudes

Description	Number
Total Project Acreage	18.89 ac
Linear project length	
Number and type of residential units	1,268
Residential building area (in square feet)	
Commercial building area (in square feet)	144,700 sqft
Industrial building area (in square feet)	
Institutional building area (in square feet)	
Other uses – Civic Areas (in square feet)	151,300 sqft
Other uses – Park lot stalls	2,153 stalls
Structure height(s)	

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 purpose of this project is to redevelop and revitalize the Moorhead Center Mall area in downtown Moorhead. This project is key to the future growth and diversification of Moorhead.

A new network of streets and public utilities are needed to support the redevelopment project. The existing project area is comprised of an existing mall complex consisting of the mall building and associated parking lots. There are no public streets within the existing project area and the limited existing public utilities are nearing the end of their service life. The project will remove the existing mall building and parking lots for the redevelopment. The property will need to be re-platted to establish public right-of-way within the redevelopment area. A new network of public streets will be needed to accommodate vehicular mobility in the project area. New public utilities consisting of sanitary sewer, watermain, and storm sewer will be needed to service the new development and provide adequate drainage for the roadways. New pedestrian facilities will be needed to promote pedestrian safety and meet ADA requirements.

The project will benefit the citizens of the City of Moorhead by providing new commercial, retail, residential, and community spaces in the downtown area. The area is included within the approved Downtown Moorhead TIF District No. 31. Public infrastructure will be constructed by the City of Moorhead. Private developers will construct new commercial, retail, and residential spaces.

e. Are future stages of this development including development on any other property planned or likely to happen? □ Yes Ξ No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? □ Yes Ξ No
If yes, briefly describe the past development, timeline and any past environmental review.

7. Climate Adaptation and Resilience

a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

Based on the most recent "National Climate Assessment (NCA)"[1] report, developed by the U.S. Global Change Research Program (USGCRP), the climate trends in the Midwest are described as having increases in temperatures, increases in humidity, increases in droughts, increases in heavy rainfalls, and exacerbated stressors on ecosystems.

b. For each Resource Category in the table below: Describe how the project's proposed activities and how the project's design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

Table 2. Climate adaptation and resilience of proposed project

Resource Category	**Climate Considerations (example text provided below isto be replaced with project-specific information)**	**Project Information**	**Adaptations**
Project Design	increases in temperatures, increases in heavy rainfalls	The redevelopment will result in no significant change in impervious surfaces.	The project will not significantly change any existing conditions. The project will increase stormwater runoff capacity.
Land Use	There will be no significant changes in land-use between pre and post construction. The existing conditions are approx. 95% impervious surface. The proposed project will have equal to or less than 95% impervious surface. Impervious surfaces increase urban heat island conditions and could result in increase in temperatures	The redevelopment will result in no significant change in impervious surfaces.	The project will not significantly change any existing conditions. The project will increase stormwater runoff capacity. The existing parking lots are asphalt and all proposed pavement is concrete which will improve heat island conditions.
Water Resources	Address in item 12	Address in item 12	Address in item 12
Contamination/ Hazardous Materials/Wastes	Given the history of the area, contaminants are anticipated. The City is in process of testing and identifying any contamination plumes in the area. Related MPCA notifications and Redevelopment Action Plans will be completed.		
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Address in item 14.	Address in item 14.	Address in item14.

[1] U.S. Global Change Research Program (2018) Fourth National Climate Assessment – Impacts, Risks, and Adaptation in the United States, Volume 2. https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf

8. Cover types

Table 3. Estimated cover types before and after project completion.

Cover Types	Before (acres)	After (acres)
Wetlands and shallow lakes (<2 meters deep)	0	0
Deep lakes (>2 meters deep)	0	0
Wooded/forest	0	0
Rivers/streams	0	0
Brush/Grassland	0	0
Cropland	0	0
Livestock rangeland/pastureland	0	0
Lawn/landscaping	0.92	0.92
Green infrastructure TOTAL (from table below*)	0	0
Impervious surface/developed	17.97	17.97
Stormwater Pond (wet sedimentation basin)	0	0
Other (describe)	0	0
TOTAL	18.89	18.89

Table 4. Estimated green infrastructure before and after project completion.

Green Infrastructure*	Before (acreage)	After (acreage)
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams)	0	0
Constructed tree trenches and tree boxes		
Constructed wetlands	0	0
Constructed green roofs	0	0
Constructed permeable pavements	0	0
Other (describe)	0	0
TOTAL*	0	0

Table 5. Estimated tree cover before and after project completion.

Trees	Percent	Number
Percent tree canopy removed or number of mature trees removed during development	Trees make up 5% of the site.	
Number of new trees planted	Trees cover will be less than 5%	

9. Permits and approvals required

Table 6. Required Permits and Approvals

Unit of Government	Type of Application	Status
MPCA	Stormwater Permit	To be applied for.
MNDoH	Plan Review	To be applied for.
MPCA	Sanitary sewer extension permit	To be applied for.
BRRWD	Watershed Permit	To be applied for.
City of Moorhead	Floodplain Development Permit	To be applied for.
City of Moorhead	Conditional Use Permit	To be applied for.

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

10. Land use

a. Describe:
   i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.

Existing land Use

The existing site was formally known as the Moorhead Center Mall and included extensive commercial space and impervious parking lots along with Moorhead City Hall (**Exhibit 3 & 4**). There are some areas of limited landscaping and rows of planted trees for aesthetic. The areas surrounding the site are additional town infrastructure including buildings, parking lots, and roadways as well as some larger tracts of landscaping, forested areas, and floodplain wetlands directly adjacent to the Red River of the North. There are existing buildings to the north, west, south and east of the site. A BNSF railroad track runs along a portion of the north side of the site along with the 1st Avenue North roadway.

Cemeteries

There are no cemeteries located at or directly adjacent to the project site. The nearest cemetery is the Prairie Home Cemetery approximately 0.5 miles to the south of the project.

Trails and Parks

There are no designated trails located at the project site but there are sidewalks as well as walking and bike paths nearby that interconnect many parks in the area. The City of Moorhead constructed the Moorhead River Corridor trail with the vision of constructing a continuous trail along the Red River. The segment of the trail that is located near the project site is known as the Downtown Trail and was reconstructed in 2018-2019. As mentioned, there are several parks located in the surrounding area. These include Five Nine Park, Davy/Memorial Park, Riverfront Park, Viking Ship Park, Townsite Park, and Woodlawn Park. There are several other parks located across the Red

River in the City of Fargo, North Dakota. A new civic plaza is planned in the heart of this new development.

Prime Farmland[2]

The project is located entirely within the I900A – Urban Land, 0 to 2 percent slopes soil series. This soil is classified by the NRCS as "not prime farmland". There are no unique farmlands located at or near the project site.

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.

City of Moorhead "Onward Moorhead" Comprehensive Plan[3]

Adopted by the City of Moorhead March 28, 2022, Onward Moorhead is a comprehensive plan that "aims to provide direction to decision-makers, city staff, and partners on the long-term priorities for Moorhead." The purpose of the plan is to guide land use decisions and meet the cities vision as a "thriving and resilient community". The plan discusses the "Five Big Ideas" as the key strategies for the plan. The "Five Big Ideas" are:

- "Transform Downtown Moorhead into the 'heart of the community' by incorporating a range of housing and retail options, cultural amenities, parks, and public services.
- Integrate a mix of mutually supportive land uses and experiences in redevelopment areas by building upon and strengthening existing retail centers and utilizing experience-based marketing.
- Connect neighborhoods to parks and trails and provide multimodal access to downtown, the Red River, and community amenities.
- Embrace resilient environmental and equitable solutions, planning for infrastructure, building development, energy, and climate adaptation while building a greener community.
- Build and nurture local businesses as key partners in building and maintaining a prosperous community.

Downtown Moorhead Master Plan

The Downtown Moorhead Master Plan was developed in 2020 by Downtown Moorhead, Inc. and other supporters. The plan's mission is "Today we can reimagine and build a Downtown shaped around the aspirational values that the Moorhead community brought to the Downtown planning process: authenticity, vibrancy, equity and inclusion, resilience, and connectivity." The plan discusses the redevelopment of the Moorhead Center that focuses on "maximizing employment, residential, and retail spaces to create walkable environments with urban amenities that are a regional draw."

Clay County Local Water Management Plan[4]

The plan was prepared by the Clay Soil & Water Conservation District and the Local Water Management Plan Advisory Committee and went into effect May 9th, 2017. The purpose of the plan is:

- To identify existing or potential problems and opportunities for protection, management, or development of water resources and related land resources in the county.

[2] U.S. Department of Agriculture, Natural Resources Conservation Service (2023) Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/

[3] City of Moorhead (2022) Onward Moorhead Comprehensive Plan. https://www.ci.moorhead.mn.us/home/showdocument?id=8557

[4] Clay Soil & Water Conservation District, Local Water Management Plan Advisory Committee (2017) Local Water Management Plan. https://claycountymn.gov/DocumentCenter/View/5492/Clay-County-LWMP-2017-2026-?bidId=

- To develop and implement a plan of action to promote sound hydrologic management of water and related land resources in the county.
- To work towards effective environmental protection and management in the county.

Additionally, the plan states that pursuant to Minnesota Statute 103B.311 subd. 4, the plan must "address water management issues over the entire county, address problems in the context of watershed units and groundwater systems, be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management, be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or groundwater systems, and to address water management issues over a ten year period with five year implementation plans."

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

The site is zoned MU-1: Downtown Mixed Use. The milestone projects meet the purpose of this zoning district.
The City of Moorhead administers a Floodplain Management Ordinance that regulates the use and orderly development of the floodplain in Moorhead.
The proximity of the project site to the Red River is as close as 200 feet along the western portion which is within the Floodplain Area. All other areas of the project are outside the Floodplain of the Red River.

There are no wild and scenic rivers located at or near the project site.

iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

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

The proposed project is the direct result of planning through both the City of Moorhead's Comprehensive Plan and the Downtown Moorhead Master Plan. Thus, the project is compatible with these plans as it will provide the downtown Moorhead area with unique commercial, residential, and civic spaces.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

Not applicable.

11. 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.

The geology of Minnesota was developed during the Wisconsin Glaciation Period, the latest glaciation period.[5] During this period, several glaciers advanced across the state including the Wadena ice lobe, Rainy lobe, Itasca ice lobe, Superior ice lobes, and the most recent Des Moines Lobe. These glaciers altered the landscape by cutting out riverbeds, depositing sediments that created the rolling topography, and glacier melt fed the thousands of lakes. The geology of county includes flat glacial lake plains from the retreat of glacial Lake Agassiz and undulating hummocky topography from the advance and retreat of Wadena Lobe. The bedrock around the project area has depths between 100 feet in depth to 300 feet in depth.

The geology of the Fargo-Moorhead Area is characterized by Precambrian granitic rock overlayed by Pleistocene glacial drift which is overlayed by Lake Agassiz sediments.

The DNR and Minnesota Geologic Survey assess pollution sensitivity to near-surface geologic materials.[6] This assessment analyzes the rate of water movement through the soil to the water table at a depth of 10 feet. The sensitivity rating is described as high, moderate, low, very low, and ultra-low sensitivity of pollution of groundwater. High sensitivity ratings indicate that water travels through the surface at a rate between hours and a week, low and very low indicate a rate of week to a year and ultra-low indicates a travel rate of greater than a year. The majority of the project site and surrounding landscape has pollution sensitivity ranging between very low to ultra-low to high pollution sensitivity.

The geologic features have no limitations or susceptibility to adverse impacts that would be a concern for the proposed project.

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 12.b.ii.

[5] University of Minnesota, College of Science and Engineering (2023) Minnesota Geological Survey. https://cse.umn.edu/mgs/minnesota-geology

[6] Minnesota Department of Natural Resources and Minnesota Geological Survey (2023) Watershed Health Assessment Framework. https://arcgis.dnr.state.mn.us/ewr/whaf2/

Soils

According to the USDA, NRCS, Web Soil Survey[7], the project site is made up of one soil type, the I900A – Urban Land, 0 to 2 percent slopes (**Exhibit 5)**. All soils at the project site have been manipulated from construction of roadway infrastructure, industrial and commercial properties, and other city properties. Additionally, the majority of the landscape in this area is impervious surfaces with the exception of the Red River corridor. Due to this, there are no soil limitations, erosion potential, or soil stability issues. During construction, exposed soils will be managed and maintained to ensure soil stability and prevent soil erosion. Following construction, the majority of the soils will be redeveloped. Any soils that are left undeveloped will be converted into landscaping or turf cover.

Topography

Based on the Minnesota DNR and U.S. Forest Services "Ecological Classification System" the ecological land classification the AOI is located in is the Prairie Parkland Province, Red River Valley Section, Red River Prairie subsection. The Prairie Parkland Province makes up the northwestern border of Minnesota and climatic conditions favored grassland habitats. The Red River Valley Section (RRV), Red River Prairie subsections major landform is the lake plain of Glacial Lake Agassiz and minor landforms that include till plains, beach ridges, sand dunes and water-reworked till. The topography of this subsection is characteristic of a large glacial lake plain as is flat to gently rolling hills that are broken up by river, streams, drainages, and wetlands. Prior to the conversion to agricultural production, the main habitats included tallgrass prairie and wet prairies with forested floodplains located along the rivers and streams. The topography at the project site and the surrounding area is characterized by an extremely flat landscape with some steeper slopes occurring near the Red River Corridor.

12. 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, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the 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.

Wetlands and Public Waters

Based on a review of the Minnesota Department of Natural Resources Statewide Wetland inventory (NWI), there are no wetland features located within the project area (**Exhibit 6: NWI Map**).[8] The nearest NWI features include the Red River and riparian features connected to the Red River. The Red River is listed by the NWI as an R2UBH type wetland, while the riparian wetlands are either PEM1A or PFO1A type wetlands. Additionally, the Red River is identified as a Public Waters Watercourse (Name: Red River; DNR ID: 100537; Kittle: H-026) (**Exhibit 7: Public Waters Map**).

[7] U.S. Department of Agriculture, Natural Resources Conservation Service (2023) Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/

[8] Minnesota Department of Natural Resources (2023) NWI Wetland Finder. https://arcgis.dnr.state.mn.us/ewr/wetlandfinder/

MPCA 303d Impaired Waters List

The Minnesota Pollution Control Agency maintains a list of waters that are impaired and "fail to meet water quality standards" required by the Clean Water Act. These impairments include "mercury levels that lead to limits of fish consumption, phosphorus and other nutrients that grow algae, sediment that clouds water, bacteria that can make water unsafe for swimming, unhealthy conditions for fish and bugs, PFOS found in fish tissue, and sulfate impairments that may hinder the production of wild rice." Based on the MPCA's 2024 Impaired Waters List, there is only one waterbody located within a one mile radius of the project, the Red River of the North (AUID: 09020104-544). This waterbody is listed as impaired with Escherichia coli (E. coli), mercury in fish tissue (Hg-F), and turbidity. These waters and their impairments are listed below (**Table 7; Exhibit 8: MPCA Impaired Waters Map)**.

Table 7. MPCA 303d Impaired Waters List adjacent to the AOI

Water body name	Water body description	AUID	Use Class	Affected designated use	Pollutant or stressor
Red River of the North	Wild River R (ND) to Buffalo R	09020104-544	1C, 2Bdg	Aquatic Consumption	Hg-F
Red River of the North	Wild River R (ND) to Buffalo R	09020104-544	1C, 2Bdg	Aquatic Life	T
Red River of the North	Wild River R (ND) to Buffalo R	09020104-544	1C, 2Bdg	Aquatic Recreation	FC

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.

The Minnesota Pollution Control Agency published groundwater profiles for Minnesota, AOI falls within the Red River Valley Region.[9] The Red River Valley Region is characterized by beach ridges that act as local recharge areas and are susceptible to groundwater contamination. The regions groundwater quality consists of high-dissolved solids including manganese, potential arsenic, chloride, sulfate, nitrate, and total dissolved solids.

The Minnesota DNR published the Geologic Atlas of Clay County, Minnesota in 2018. This report describes the geology and hydrogeology throughout the county. The depth to the water table of the project area and the surrounding is primarily 0-10 feet in depth.

Based on the Minnesota Department of Health's Source Water Protection database, there are no Drinking Water Supply Management Areas (DWSMA) or Wellhead Protection areas within the project area.[10] The Moorhead Aquifer DWSMA and Wellhead Protection area is three-quarters of a mile to the east of the project area. The Moorhead Aquifer DWSMA is characterized as having "low" vulnerability.

[9] Minnesota Pollution Control Agency (2023) Ground Water Profile: Red River Valley Region. https://www.pca.state.mn.us/sites/default/files/gwp-redriver.pdf

[10] Minnesota Department of Health (2023) Source Water Protection Database. https://mdh.maps.arcgis.com/apps/View/index.html?appid=8b0db73d3c95452fb45231900e977be4

The Minnesota Department of Health maintains a Minnesota Well Index as an inventory of active and inactive wells in Minnesota.[11] There are no wells located within the project area but there are 5 field verified wells located within a 1-mile of the project (**Table 8**).

Table 8. Wells within a mile of the project area (Minnesota Well Index 2021)

Well No.	Name	Status	Well Type
270292	USGS FAIRMONT CREAMERY 2	Unknown	Scientific Investigation
221913	MOORHEAD-TW	Active	Test Well
270289	USGS MOORHEAD CITY TEST 2	Unknown	Scientific Investigation
221863	USGS FAIRMONT CREAMERY 1	Active	Commercial Well
632879	CLAY CTY COURTHOUSE	Active	Elevator 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.

Wastewater produced from the site will be domestic in nature and will be generated by a combination of commercial, high density residential, and civic spaces. It is estimated that residential spaces will contribute 95% of the flow and commercial/civic spaces will contribute the remaining 5%. The total wastewater flow from the site is estimated to be 200,393 gallons per day or 0.20039 million gallons per day (MGD). Wastewater from the site will discharge to the City of Moorhead Wastewater Treatment Plant where it will be treated prior to discharge to the Red River of the North. The facility has a permitted average wet weather design flow of 9 MGD and its current annual average daily flow is 4.37514 MGD. The plant is currently operating at 48.6% of its capacity. The proposed site is estimated to contribute 0.20039 MDG which is equal to 2.2% of the plant's capacity.

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. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.

Not Applicable.

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate

[11] Minnesota Department of Health (2023) Minnesota Well Index. https://mnwellindex.web.health.state.mn.us/

impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.

Not Applicable.

ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

The existing site consists of multiple connected buildings and paved parking lots. The existing site is approximately 95% impervious. The proposed site consists of multistory buildings, a plaza space, streets and parking areas. The proposed site is planned to be equal to or less than 95% impervious. The change in surface cover will have negligible impact on the site hydrology. Stormwater from the proposed site will be collected by underground storm sewer and conveyed to an existing stormwater outfall at the north end of the site. The existing stormwater outfall discharges to the Red River of the North. The proposed site is not anticipated to cause an increase in the runoff volume or pollutant loading from the site as the proposed project will maintain or decrease the overall site impervious area. The discharge rate for a given storm event may increase slightly as new storm sewer will be installed to current design standards which will increase the efficiency of the storm sewer system. This increase in discharge rate will not adversely impact the existing storm sewer outfall to the Red River of the North. A previously completed Climate Resilience Study in Moorhead indicated that climate change effects for Moorhead are estimated to result in a 15% increase in rainfall amounts under the Far Term, Hot/Dry climate scenario. Climate change will be considered when designing the storm sewer system for the site. The project will result in approximately 19 acres of total disturbance and will require a MPCA Construction Stormwater Permit. Construction will be phased so that not all 19 acres are disturbed at once. Due to the flat topography, impervious fat clay soils, and highly urbanized environment of the site, stormwater retention, infiltration, and other volume reduction techniques are not feasible. Current and projected stormwater runoff from the site must be collected via underground storm sewer pipes and discharged directly to the Red River of the North. The City of Moorhead will comply with water quality requirements through off-site stormwater treatment within the City in compliance with the applicable MPCA stormwater permits. .
Construction BMPs such as inlet protection, perimeter control, and temporary stabilization will be utilized during construction to prevent soil erosion and sediment transport. Any disturbed areas not covered by buildings or pavement will be stabilized with turf cover to prevent erosion and

sediment transport. The Red River of the North near the project site is listed as impaired due to turbidity but does not have a designated TMDL at this time. Since the site is within 1 mile of an impaired water, disturbed areas must be stabilized within 7 days of construction activities ceasing.

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. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

The project will not require any water appropriation. The water use from the project will come from city water supplies.

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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.

The proposed project includes the demolition of the current Moorhead Center Mall and associated infrastructure and constructing several areas of mix-use buildings and civic areas. The project will not result in the physical alteration of any natural wetland areas. There are not NWI identified wetlands within the project area.

The project will not have any direct impacts to wetland resources. The ground disturbing will be to existing infrastructure and/or impervious surfaces. BMPs will include silt fences, sediment traps, hay logs, and vegetation buffers. During construction, daily maintenance and inspection of erosion and sediment control devices will be done to ensure the stabilization of each construction site.

The project does not anticipate the need for wetland replacement through compensatory wetland mitigation. If further site investigation identifies any wetlands that will be impacted

from construction, the project proposer will submit the necessary permit applications to meet requirements under Minnesota's Wetland Conservation Act (WCA) and Section 404 of the Clean Water Act (CWA).

The climate trends in the area are projected to have an increase in temperatures, humidity, flooding, heavy rainfalls, and droughts. These trends could be exacerbated by projects that convert natural landscapes into developed landscapes. The proposed project is a redevelopment of an already impervious surface property. There will be no change or exacerbation of climate change.

b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicialditches) 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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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 thewater 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 lakes, ponds, or rivers located within the project area, but the Red River is in close proximity. The Red River is listed by the Minnesota DNR as a Public Waters Watercourse. The project's construction activities will be confined to the existing Moorhead Center Mall, thus no dredge or fill will be conducted within the banks of the Red River. As such, there will be no direct impacts to existing surface waters. As mentioned in the wetlands section, there is potential for indirect impacts as a result of unmanaged runoff from the construction site. This will be avoided through the strict use and maintenance of BMPs and erosion/sediment control devices during construction. These BMPs will include but not be limited to silt fences, sediment traps, hay logs, and vegetation buffers. During construction, daily maintenance and inspection of erosion and sediment control devices will be done to ensure the stabilization of each construction site.

Since the nearest waterbody is the Red River and a Public Water, any impact to the Red River will require the project to obtain a Section 404 Permit through the CWA and a Minnesota DNR Public Water Works permit. As mentioned previously, the project will be confined to the project area and no impact will occur to these waterbodies, thus no permits will be required.

As mentioned above, the climate trends in the area are an increase in temperatures, humidity, flooding, heavy rainfalls, and droughts that could be exacerbated by projects that convert natural landscapes into developed landscapes. The proposed project is a redevelopment of an already impervious surface property. There will be no change or exacerbation of climate change.

13. 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.

The MPCA, "What's in My Neighborhood"[12] online database was reviewed for the presence of potentially contaminated sites and other environmental information within project's AOI. There are 13 sites located within the project area.(**Table 9; Exhibit 9: MPCA What's in My Neighborhood**).

Given the history of the area, contaminants are anticipated. The City is in process of testing and identifying any contamination plumes in the area. Related MPCA notifications and Redevelopment Action Plans will be completed.

Table 9. MPCA Sites within the project area.

Site ID	MPCA ID	Name	Status	Activity
259942	C00069903	650 Center Ave. Apartments	Active	Construction Stormwater
14262	709330674	Wentz David C DDS PA	Not Active	Hazardous Waste
36704	705190783	Moorhead Vision Association	Not Active	Hazardous Waste
127247	C00028945	2009 Sanitary & Flood Control Lift - Moorhead	Not Active	Construction Stormwater
106169	Multiple IDs	Moorhead City Center/City Hall	Active	Multiple Activities
259048	C00069283	City of Moorhead Community Center & Public Library	Active	Construction Stormwater
36705	700820533	Ritz Camera	Not Active	Hazardous Waste
40533	MND085357507	Moorhead Public Service	Active	Hazardous Waste, Minimal quantity generator
90820	MS400107	Moorhead city of	Active	MS4
260767	C00070402	MCM Redevelopment Phase 1 (24-A6-02)	Active	Construction Stormwater
261062	Multiple IDs	Moorhead Fuel Station	Active	Multiple Activities
35945	706669371	Larum Pladson Chiropractic	Not Active	Hazardous Waste
8947	148623853	Moorhead Drug Co	Not Active	Hazardous Waste

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.

[12] Minnesota Pollution Control Agency (2023) What's in My Neighborhood. https://mpca.maps.arcgis.com/apps/webappviewer/index.html?id=9d45793c75644e05bac197525f633f87

The project will generate some solid waste during construction. This solid waste will be general garbage and construction materials. The project contractors will ensure the careful handling, storing, and disposing of solid waste generated during construction. All solid waste produced during construction will be disposed of daily and at an approved site in accordance with MPCA requirements. Additionally, the implementation of BMPs and erosion control devices will prevent these solid wastes from contaminating nearby wetlands and surface waters.

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 new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the project will use. 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.

Improperly handled and stored hazardous materials could have some significant environmental effects and could lead to public safety issues. A hazardous material spill or leak at the project site could result in contamination of nearby waterbodies. Without immediate containment, the spill or leak could reach the Red River. This would also impact the species that utilize the river including fish, wildlife, and plant communities. Additionally, contamination would pose risks to public health.

The chemicals/hazardous materials that will be present at the site include fuel and oil that are typical of heavy machinery operations. These materials will not contaminate any groundwater resources. There is a possibility that materials could leak or spill into nearby waterbodies if not contained. To prevent this from occurring, proper maintenance and inspection of all machinery will occur prior to work commencing each day. Any equipment that shows indication of leaks or improper operation will be removed and fixed prior to being deployed for work. Storage of these materials and refueling stations will be located away from all aquatic resources.

If a spill should occur during construction, it is the responsibility of the contractor to take appropriate action to remediate and contain the spill. Followed by immediate notification to the Project Engineer and Minnesota Department of Public Safety and Minnesota Duty Officer.

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.

No above or below-ground storage tanks are planned for permanent use in conjunction with the project. Temporary storage tanks for petroleum products may be used for refueling equipment during construction. A spill kit will be always kept near all storage tanks.

14. 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 project is located within the Prairie Parkland Province (PPA), Red River Valley Section (RRV), and the Red River Prairie Subsection of the DNR Ecological Classification System. This system runs along the entirety of the western boundary of Minnesota and was influenced by the expansion and retraction of

several glacial ice sheets. The most recent ice sheet, the Des Moines Lobe, deposited calcareous drift in southern Minnesota while Glacial Lake Agassiz deposited deep-water sediments across northern Minnesota.

The pre-settlement plant community was predominately tallgrass prairie with shrub and forest tracts along the river and stream corridors. The RRV Section makes-up the basin of Glacial Lake Agassiz. The section is characterized by extremely flat plains, beach ridges, and wave-cut scarp. The Red River Prairie Subsection falls between the Red River of the North and the historical tallgrass prairie boundary. The minor landforms include till plains, beach ridges, sand dunes, and water-reworked till. The tallgrass prairie and wet prairies pre-settlement vegetation were converted into agricultural production. Wetlands and streams were extensively ditched to accommodate the growing agricultural practices. There are several key habitats common to the subsection including prairie, forest-lowland deciduous, wetland-non-forest, river-headwater to large, and river-very large. There are no key habitats located within the project area. The project area is entirely made up of commercial buildings and impervious surfaces. The nearest key habitats are the Red River corridor and forested areas adjacent to the Red River.

River-Very Large

This habitat makes up the Red River and other large rivers in Minnesota that have wide corridors, slower velocities, and large volumes of water. The SGCN species includes eastern massasauga (*Sistrurus catenatus catenatus*), prothonotary warbler (*Protonotaria citrea*), yellow bass (*Morone mississippiensis*), pirate perch (*Aphredoderus sayanus*), pugnose minnow (*Opsopoeodus emiliae*), warmouth (*Lepomis gulosus*), skipjack herring (*Alosa chrysochloris*), and many freshwater mussel species.

Forest-lowland Deciduous

This habitat occurs on floodplains and terraces along rivers and streams. These areas are seasonally flooded, receiving flood waters from the associated riverine systems. In the regions of the AOI, these habitats canopies are dominated by black ash, silver maple, green ash, american elm, bur oak, and basswood. The understories are patchy but dominated by speckled alder (*Alnus incana*), mountain maple (*Acer spicatum*), dogwoods (*Cornus spp.*), gooseberries/currants (*Ribes spp.*), and winterberry (*Ilex verticillate*). The SGCN species includes prothonotary warblers (*Protonotaria citrea*), cerulean warblers (*Setophaga cerulea*), red-shouldered hawks (*Buteo lineatus*), and eastern massasauga (*Sistrurus catenatus*).

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, andother sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (**LA-944**) and/or correspondence number (MCE_____) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

State-Listed Species

The Minnesota Wildlife Action Plan (2015-2025)[13] was developed to "ensure the long-term viability of Minnesota's wildlife with a focus on species that are rare, declining, and vulnerable to decline; enhance opportunities to enjoy Species of Greatest Conservation Need (SGCN) and to participate in conservation; acquire the resources necessary to implement the Minnesota Wildlife Action Plan."

[13] Minnesota Department of Natural Resources (2015) Minnesota's Wildlife Action Plan 2015-2025. https://files.dnr.state.mn.us/assistance/nrplanning/bigpicture/mnwap/wildlife-action-plan-2015-2025.pdf

All threatened and endangered species are protected through Minnesota's Endangered and Threatened Species (Minnesota Statutes, Section 84.0895)[14] law passed by state legislatures in 1971. Currently, there are 592 species considered in Minnesota to be endangered, threatened, or species of special concern. Of these species, 143 species are listed as endangered, 149 species are listed as threatened, and 300 species are considered by the Minnesota DNR as species of special concern. The list includes species of mammals, birds, amphibians, reptiles, fish, mollusks, jumping spiders, dragonflies, butterflies, moths, caddisflies, tiger beetles, leafhoppers, fungi, lichens, mosses, and liverworts, but the majority of the Endangered or Threatened species are vascular plants (86 Endangered; 93 Threatened). The MN DNR Rare Species Guide describes the distribution of listed threatened and endangered species based on the DNR Natural Heritage Information System's "Biotics Database" which is based on the presence and absence of a species and not on known species distribution. There are currently 20 species threatened and endangered species and 41 species of special concern listed as present within Clay County (**Table 10; Table 11**).[15] Of the state-listed species in Clay County, eight species are threatened and twelve species are endangered. Additionally, along with being listed as a state species the threatened Dakota Skipper (*Hesperia dacotae*), the threatened Western Prairie Fringed Orchid (*Platanthera praeclara*), and the endangered poweshiek skipperling (*Oarisma poweshiek*) are listed federally by the U.S. Fish & Wildlife Service.

[14] State of Minnesota Statutes (2022) 84.0895 Protection Of Threatened And Endangered Species. https://www.revisor.mn.gov/statutes/cite/84.0895

[15] Minnesota Department of Natural Resources (2023) Rare Species Guide. https://www.dnr.state.mn.us/rsg/index.html

Table 10. State-listed Threatened and Endangered Species in Clay County

Common name	Scientific name	Group	Federal status	State status
Assiniboia Skipper	*Hesperia assiniboia*	insect	none	endangered
Baird's Sparrow	*Centronyx bairdii*	bird	none	endangered
Burrowing Owl	*Athene cunicularia*	bird	none	endangered
Chestnut-collared Longspur	*Calcarius ornatus*	bird	none	endangered
Clustered Broomrape	*Orobanche fasciculata*	vascular plant	none	threatened
Dakota Skipper	*Hesperia dacotae*	insect	threatened	endangered
Garita Skipperling	*Oarisma garita*	insect	none	threatened
Hair-like Beak Rush	*Rhynchospora capillacea*	vascular plant	none	threatened
Henslow's Sparrow	*Centronyx henslowii*	bird	none	endangered
Loggerhead Shrike	*Lanius ludovicianus*	bird	none	endangered
Louisiana Broomrape	*Orobanche ludoviciana*	vascular plant	none	threatened
One-flowered Broomrape	*Orobanche uniflora*	vascular plant	none	threatened
Poweshiek Skipperling	*Oarisma poweshiek*	insect	endangered	endangered
Short-beaked Arrowhead	*Sagittaria brevirostra*	vascular plant	none	endangered
Sprague's Pipit	*Anthus spragueii*	bird	none	endangered
Sterile Sedge	*Carex sterilis*	vascular plant	none	threatened
Uhler's Arctic	*Oeneis uhleri varuna*	insect	none	endangered
Western Prairie Fringed Orchid	*Platanthera praeclara*	vascular plant	threatened	endangered
Whorled Nutrush	*Scleria verticillata*	vascular plant	none	threatened
Wilson's Phalarope	*Phalaropus tricolor*	bird	none	threatened

Table 11. State-listed Species of Special Concern in Clay County

Common name	Scientific name	Group	State status
American Eel	*Anguilla rostrata*	fish	special concern
Black Sandshell	*Ligumia recta*	mussel	special concern
Blanketflower	*Gaillardia aristata*	vascular plant	special concern
Blunt Sedge	*Carex obtusata*	vascular plant	special concern
Creek Heelsplitter	*Lasmigona compressa*	mussel	special concern
Drummond's Campion	*Silene drummondii* ssp. *drummondii*	vascular plant	special concern
Dry Sedge	*Carex xerantica*	vascular plant	special concern
Few-flowered Spikerush	*Eleocharis quinqueflora*	vascular plant	special concern
Greater Prairie-chicken	*Tympanuchus cupido*	bird	special concern
Hall's Sedge	*Carex hallii*	vascular plant	special concern
Hill's Thistle	*Cirsium pumilum* var. *hillii*	vascular plant	special concern
Iowa Skipper	*Atrytone arogos iowa*	insect	special concern
Lake Sturgeon	*Acipenser fulvescens*	fish	special concern
Lark Sparrow	*Chondestes grammacus*	bird	special concern
Leadplant Flower Moth	*Schinia lucens*	insect	special concern
Least Moonwort	*Botrychium simplex*	vascular plant	special concern
Marbled Godwit	*Limosa fedoa*	bird	special concern
Marsh Gentian	*Gentianella amarella* ssp. *acuta*	vascular plant	special concern

Common name	Scientific name	Group	State status
Narrow-leaved Water Plantain	*Alisma gramineum*	vascular plant	special concern
Nelson's Sparrow	*Ammospiza nelsoni*	bird	special concern
Northern Grasshopper Mouse	*Onychomys leucogaster*	mammal	special concern
Northern Single-spike Sedge	*Carex scirpoidea* ssp. *scirpoidea*	vascular plant	special concern
Nuttall's Sunflower	*Helianthus nuttallii* ssp. *rydbergii*	vascular plant	special concern
Pawnee Skipper	*Hesperia leonardus pawnee*	insect	special concern
Plains Hog-nosed Snake	*Heterodon nasicus*	reptile	special concern
Plains Pocket Mouse	*Perognathus flavescens*	mammal	special concern
Plains Reedgrass	*Calamagrostis montanensis*	vascular plant	special concern
Plains Spring Parsley	*Cymopterus acaulis* var. *acaulis*	vascular plant	special concern
Pleated Gentian	*Gentiana affinis* var. *affinis*	vascular plant	special concern
Prairie Moonwort	*Botrychium campestre* var. *campestre*	vascular plant	special concern
Prairie Vole	*Microtus ochrogaster*	mammal	special concern
Purple Martin	*Progne subis*	bird	special concern
Red Three-awn	*Aristida purpurea* var. *longiseta*	vascular plant	special concern
Red-tailed Prairie Leafhopper	*Aflexia rubranura*	insect	special concern
Regal Fritillary	*Argynnis idalia*	insect	special concern
Richardson's Ground Squirrel	*Urocitellus richardsonii*	mammal	special concern
Small White Lady's-slipper	*Cypripedium candidum*	vascular plant	special concern
Spike Oat	*Avenula hookeri*	vascular plant	special concern
Trumpeter Swan	*Cygnus buccinator*	bird	special concern
Western White Prairie-clover	*Dalea candida* var. *oligophylla*	vascular plant	special concern
Yellow Rail	*Coturnicops noveboracensis*	bird	special concern

A Natural Heritage Information System (NHIS) data review was submitted and the MN DNR Division of Ecological and Water Resources determined that there is one state-listed endangered species, one species on the watchlist, and two state-listed species of special concern identified within the vicinity of the project (**Attachment 4: Minnesota DNR NHIS Rare Features Review**).[16] These species includes the lake sturgeon (*Acipenser fulvescens*- special concern), American eel (*Anguilla rostrata*- special concern), rusty patched bumble bee (*Bombus affinis*- watchlist), and short-beaked arrowhead (*Sagittaria brevirostra*- endangered species).

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation Tool[17] identified the monarch butterfly (*Danaus* plexippus) as a candidate species potentially within the project area (**Attachment 5: U.S. FWS Threatened and Endangered Species Species List; Attachment 6: U.S. FWS Consistency Letter**). No critical habitats were identified within the project area. The IPaC identified two eagles, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), and 14 other migratory bird species within the AOI. The migratory birds includes the black tern (*Chlidonias niger surinamenisis*), black-billed cuckoo (*Coccyzus erythropthalmus*), bobolink (*Dolichonyx oryzivorus*), California gull (*Larus californicus*), chestnut-collared longspur (*Calcarius ornatus*), chimney swift (*Chaetura pelagica*), Eastern whip-poor-will (*Antrostomus vociferus*), Fanklin's gull (*Leucophaeus pipixcan*), golden-winged

[16] Minnesota Department of Natural Resources (2023) Minnesota Conservation Explorer – NHIS Database. https://mce.dnr.state.mn.us/

[17] U.S. Fish and Wildlife Service (2023) Information for Planning and Consultation. https://ipac.ecosphere.fws.gov/

warbler (*Vermicora chrysoptera*), grasshopper sparrow (*Ammodramus savannarum perpaliidus*), Le Conte's sparrow (*Ammospiza leconteii*), lesser yellowlegs (*Tringa flavipes*), long-eared owl (*Asio otus*), northern harrier (*Circus hudsonius*), red-headed woodpecker (*Melanerpes erythrocephalus*), short-billed dowitcher (*Limnodromus griseus*), western grebe (*Aechmophorus occidentalis*), and willet (*Tringa semipalmata*).

The U.S. Fish and Wildlife Service and a Minnesota Endangered Species specialists will be consulted prior to construction to identify measures to avoid or minimize impacts to these species. Some avoidance measures that will be considered includes avoiding suitable habitat locations and change the timing of construction to avoid nesting seasons.

Minnesota Biological Survey (MBS)

The Minnesota Biological Survey (MBS) identifies and describes sites of biodiversity significance and native plant communities. Sites of biological significance are ranked based on landscape context and ecological function, native plant community quality and rarity, and species quality and rarity. The ranks include below, moderate, high, and outstanding in which a "below" rank lacks rare species/native plant community occurrence or does not meet MBS standards and an "outstanding" rank has the best quality of rare species/native plant communities. A review of current MBS data indicates that there are no rare features located within project area. The nearest Native Plant Community site is approximately 3 miles to the southeast and is a WPn53n – Northern Wet Prairie (**Exhibit 10: MBS Sites of Biodiversity Significance Map; Exhibit 11: Native Plant Communities Map**). That site is also labeled as a "Moderate" Site of Biodiversity Significance named "Sabin-Moorhead Hwy 52 RR ROW.

Noxious Weeds

The Minnesota Department of Agriculture lists 32 "State Prohibited Noxious Weeds", 19 "Restricted Noxious Weeds, and 6 "Specially Regulated Plants" (**Table 12**).[18] Clay County lists three noxious weeds that are on the MDA Approved County Noxious Weeds list. These species include the bull thistle (*Cirsium vulgare*), kochia (*Bassia scoparia*), and musk thistle (*Carduus nutans*). The project will comply with the Minnesota Noxious Weed Law (Minnesota Statutes 18.75-18.91) to effectively control and eradicate weeds that could be present within or near the construction footprint.

Table 12. Minnesota Department of Agriculture's Noxious Weed List

Prohibited: Eradicate	
Black swallow-wort (*Cynanchum louiseae*)	Diffuse knapweed (*Centaurea diffusa*)
Common teasel (*Dipsacus fullonum*)	Johnsongrass (*Sorghum halepense*)
Dalmatian toadflax (*Linaria dalmatica*)	Pale swallow-wort (*Cynanchum rossicum*)
Grecian foxglove (*Digitalis lanata*)	Palmer amaranth (*Amaranthus palmeri*)
Japanese honeysuckle (*Lonicera japonica*)	Red hailstone (*Thladiantha dubia*)
Japanese hops (*Humulus japonicus*)	Tree-of-heaven (*Ailanthus altissima*)
Brown knapweed (*Centaurea jacea*)	Cutleaf teasel (*Dipsacus laciniatus*)
Yellow starthistle (*Centaurea solstitialis*)	Giant hogweed (*Heracleum mantegazzianum*)
Prohibited: Control	
Common barberry (*Berberis vulgaris*)	Leafy spurge (*Euphorbia esula*)
Canada Thistle (*Cirsium arvense*)	Narrowleaf bittercress (*Cardamine impatiens*)

[18] Minnesota Department of Agriculture (2023) Minnesota Noxious Weed List. https://www.mda.state.mn.us/plants-insects/minnesota-noxious-weed-list

Common tansy (*Tanacetum vulgare*)	Plumeless thistle (*Carduus acanthoides*)
Spotted knapweed (*Centaurea stoebe*)	Purple loosestrife (*Lythrum salicaria*)
Japanese knotweed (*Polygonum cuspidatum*)	Wild parsnip (*Pastinaca sativa*)
Giant knotweed (*Polygonum sachalinense*)	Non-native phragmites (*Phragmites australis*)
Bohemian knotweed (*Polygonum x bohemicum*)	Meadow knapweed (*Centaurea x moncktonii*)
Poison hemlock (*Conium maculatum*)	Round leaf bittersweet (*Celastrus orbiculatus*)
Restricted Noxious Weeds	
Amur honeysuckle (*Lonicera maackii*)	Japanese barberry (*Berberis thunbergii*)
Bell's honeysuckle (*Lonicera x bella*)	Morrow's honeysuckle (*Lonicera morrowii*)
Black locust (Robinia *pseudoacacia*)	Multiflora rose (*Rosa multiflora*)
Common buckthorn (*Rhamnus cathartica*)	Porcelain berry (*Ampelopsis brevipedunculata*)
Glossy buckthorn (*Frangula alnus*)	Siberian peashrub (*Caragana arborescens*)
Crown vetch (*Securigera varia*)	Tatarian honeysuckle (*Lonicera tatarica*)
European alder (*Alnus glutinosa*)	Wild carrot (*Daucus carota*)
Garlic mustard (*Alliaria petiolata*)	Amur silvergrass (*Miscanthus sacchariflorus*)
Lesser celandine (*Ficaria verna*)	Saltcedar (*Tamarix remosissima*)
Winged burning bush (*Euonymus alatus*)	
Specially Regulated	
Amur maple (*Acer ginnala*)	Common poison ivy (*Toxicodendron radicans*)
Norway maple (*Acer platanoides*)	Tatarian maple (*Acer tataricum*)
Amur corktree (*Phellodendron amurense*)	Callery pear (*Pyrus calleryana*)

Terrestrial invasives

There are 11 invasive terrestrial animals, 54 invasive terrestrial plants, and 7 invasive terrestrial pathogens listed in Minnesota (**Table 13**).[19] Although Clay County doesn't maintain a list of county invasive species, there is potential that these species could be present in Clay County and potentially the project site. In order to contain and prevent the spread of these species, all construction equipment will be thoroughly cleaned and checked for vegetation both pre-construction and post-construction. The project will comply with the Minnesota DNR Operational Order 113 to "prevent the introduction, establishment, or spread of invasive species by implementing site-level management."

Table 13. Minnesota DNR Listed Terrestrial Invasive Species

Animals			
European starling	Mute Swan	Eurasian swine	
Earthworms	Jumping worm	Asian-long horned beetle	
Brown marmorated stink bug	Emerald ash borer	Spongy moth	
Japanese beetle	Spotted lanternfly		
Plants			
Birdsfoot trefoil	Brown knapweed	Diffuse knapweed	Meadow knapweed
Bull thistle	Butter and eggs	Canada thistle	Common tansy
Common teasel	Cow vetch	Hairy vetch	Creeping Charlie
Crown vetch	Cut-leaved teasel	Dalmatian toadflax	Erect hedgeparsley
Garlic mustard	Giant hogweed	Grecian foxglove	Hoary alyssum

[19] Minnesota Department of Natural Resources (2023) Terrestrial Invasive Species. https://www.dnr.state.mn.us/invasives/terrestrial/id.html

Leafy spurge	Lesser celandine	Musk thistle	Narrowleaf bittercress
Orange hawkweed	Oxeye daisy	Poison hemlock	Queen Anne's lace
Spotted knapweed	White sweet clover	Yellow sweet clover	Wild parsnip
Yellow starthistle	Amur silver grass	Reed canary grass	Smooth brome grass
Amur cork tree	Amur maple	Autumn olive	Black locust
Buckthorn	Japanese barberry	Multiflora rose	Non-native bush honeysuckles
Non-native knotweeds	Norway maple	Russian olive	Siberian elm
Siberian peashrub	Tree of heaven	Winged burning bush	Black swallow-wort
Japanese hops	Oriental bittersweet		
Pathogens			
Butternut canker disease	Dutch elm disease	Oak wilt	
Sudden oak death	Heterobasidion root disease	White-nose syndrome	
White pine blister rust			

Aquatic invasives[20]

There are 20 invasive animals, 10 invasive plants, and 12 diseases identified by the Minnesota DNR as infesting the waterbodies in Minnesota (**Table 14**). A review of the Minnesota DNR Infested Waters List indicated that there are no waterbodies in the project area but the Red River is in close proximity and has been listed as infested by zebra mussels. Additionally, in Clay County there are two additional infested waterbodies. Lake Tilde is infested with red swamp crayfish and Turtle Lake is infested with zebra mussels. The spread of these species is managed through state aquatic invasive species laws including the "clean, drain, and dispose." The DNR requires all boats exiting a lake to "clean" the watercraft by removing vegetation and species, "drain" the water from the watercraft, and "dispose" of unwanted live bait. The project will comply with the Minnesota DNR Operational Order 113 to "prevent the introduction, establishment, or spread of invasive species by implementing site-level management." To every extent feasible, the contractor will implement practices that will prevent the spread of invasive species. All equipment be thoroughly cleaned prior to construction to prevent contaminating the site with new invasive and cleaned following the completion of construction completion to prevent the spread of any invasive species at the site.

Table 14. Minnesota DNR Listed Aquatic Invasive Species

Animals	
Banded mystery snail (*Vivaparus georgianus*)	Red swamp crayfish (*Procambarus clarkii*)
Bighead carp (*Hypophthalmichthys nobilis*)	Round goby (*Neogobius melanostomus*)
Black carp (*Mylopharyngodon piceus*)	Ruffe (*Gymnocephalus cernuus*)
Bloody red shrimp (*Hemimysis anomala*)	Rusty crayfish (*Orconectes rusticus*)
Chinese mystery snail (*Cipangopaludina chinensis*)	Sea lamprey (*Petromyzon marinus*)
Common carp (*Cyprius carpio*)	Silver carp (*Hypophthalmichthys molitrix*)
Faucet snail (*Bithynia tentaculata*)	Spiny waterflea (*Bythotrephes longimanus*)
Goldfish (*Carassius auratus*)	White perch (*Morone americana*)
Grass carp (*Ctenopharyngodon idella*)	Zebra mussel (*Dreissena polymorpha*)
New Zealand mud snail (*Potamopyrgus antipodarum*)	Signal grayfish (*Pacifastacus leniusculus*)
Plants	
Brazilian elodea (*Egeria densa*)	Non-native phragmites (*Phragmites australis*)

[20] Minnesota Department of Natural Resources (2023) Aquatic Invasive Species. https://www.dnr.state.mn.us/invasives/ais/id.html

Brittle naiad (*Najas minor*)	Non-native waterlilies (*Nymphaea*)
Curly-leaf pondweed (*Potamogeton crispus*)	Purple loosestrife (*Lythrum salicaria*)
Eurasian watermilfoil (*Myriophyllum spicatum*)	Starry stonewort (*Nitellopsis obtusa*)
Flowering rush (*Buotmus umbellatus*)	Yellow iris (*Iris pseudacorus*)
Diseases	
Viral Hemorrhagic Septicemia	Lymphosarcoma
Bass tapeworm	Lymphocystis
Neascus	Heterosporis
Dermal sarcoma	Spring Viremia of Carp (SVC)
Myofibrogranuloma	Yellow/White Grub
Largemouth bass virus	Barotrauma

Infested Waters[21]

As previously discussed, there are no waterbodies within the project area that have a known infestation of aquatic invasive species, but the Red River is in close proximity and has been determined to be infested with zebra mussels.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.

Habitats, Fish, and Wildlife Species

The existing conditions of the project area includes the commercial building that made up the Moorhead Center Mall, roadway infrastructure, and parking lots. The only potential habitats on-site include trees and plants that were planted around the property for aesthetics. Therefore, there will be no impacts to any natural habitats, fish species, or terrestrial species. Any species that may be present will be temporarily dispersed during construction. Upon completion of the project, there will be more landscaping than pre-construction conditions.

Federal & State Listed Species

Based on the USFWS IPaC Review, the project will have "no effect" on federally listed species. The review did indicate the monarch butterfly, a candidate species, as having potential of being present at the site. Additionally, based a review of current Minnesota Natural Heritage data, there is one Minnesota threatened species observed in the vicinity of the project. The proposed project will not have an impact on any federally or state protected species. This is due to the lack of habitats present at the site. The project will only impact previously disturbed areas from the construction of the Moorhead Center Mall and associated infrastructure.

[21] Minnesota Department of Natural Resources (2023) Infested Waters List. https://www.dnr.state.mn.us/invasives/ais/infested.html

Climate Trends

The climate trends in the area are projected to have an increase in temperatures, humidity, flooding, heavy rainfalls, and droughts. These trends could be exacerbated by projects that convert natural landscapes into developed landscapes. The proposed project is a redevelopment of an already impervious surface property. There will be no change or exacerbation of climate change from this project.

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

As mentioned in the previous sections, the proposed project will have no direct negative impacts to any fish species, wildlife species, or rare and important habitats. To ensure that no indirect impacts occur to nearby species and resources, the project contractors will install and maintain erosion and sediment control devices as well as implement BMPs. Erosion and sediment control devices may include but are not limited to silt fences, sediment logs, filter bags/socks, and dewatering bags. Additionally, contractors will implement daily maintenance of these devices, inspection of construction equipment, and site stability.

Prior to construction, the proposer will coordinate with all local, state, and federal agencies to meet all rules and regulations. This may include WCA permits, Section 404 permits, or State-listed species habitat surveys and avoidance.

15. 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.

A review of the Minnesota's Office of the State Archaeologist (OSA) public database[22] indicates that there are five archaeological sites located at or adjacent to the project area. There are five previously identified archaeological sites within four sections that intersect the AOI. Additionally, a review of Minnesota's Statewide Historic Inventory Portal (MnSHIP) indicated that there are no sites located within the project area but the Barnesville and Moorhead/StPM&M Railway (Great Northern Railway) is located directly adjacent the project area.

The project will not negatively impact any historic properties or cultural resources. The entirety of the project occurs within the footprint of previously disturbed areas including the Moorhead Center Mall and adjacent imperviously surfaces. It is highly improbable that there are any intact cultural resources at the project site. Thus, no Phase 1 survey is planned for the project unless required by state regulations.

[22] Minnesota Office of the State Archaeologist (2023) Minnesota OSA Public Viewer. https://osaportal.gisdata.mn.gov/OSAViewer

16. 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.

There are no scenic views or vistas within the project area. There will be temporary impacts to neighboring properties, roadway users, recreationalists during construction. These impacts will be minor as they will be confined to the construction zone and during normal daylight hours. The visual impacts may include dust clouds, vapor plumes, and intense light glares. These impacts will be managed by dust control measures (wetting soil, reduced machine speeds on exposed soils, limit exposed soils, etc.), the timing of construction, and the orientation of construction lights.

17. 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. 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.

The project will not result in stationary source air emissions concerns.

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.

The use of heavy machinery and equipment typical of construction will result in the burning of gasoline but is not anticipated to adversely impact current air quality at the site. The emissions will be temporary and will not exceed current emission standards. There are no management measures planned for the project. All equipment will be maintained to operate based on factory-suggested operations including periodic maintenance intervals to avoid inefficiencies in operations that would increase emissions.

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 17a). 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.

The dust and odors generated during the construction will be minimal and will occur during construction activities. Any dust impacts will be managed by dust control methods. These methods include but are not limited to wetting exposed soils, mulching exposed soils, and restricting unnecessary equipment movement on bare soils. Odors generated during construction will be the result of exhaust of diesel engines and fuel storage. The odors will be managed by zone restricting, operation timing, and standard emission controls.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

Construction Emissions – Scope 1

The project will require the use of heavy machinery typically used for construction projects. These include excavators, bulldozers, and loaders. All of which burn diesel fuel during construction. Construction emissions from these vehicles were estimated using the EPA's Simplified GHG Emissions Calculator (SGEC) (**Table 15**).[23] For this assessment, it was assumed that the machinery would be in operation for approximately 260 days/year at 8 hours per day. The construction of each building is estimated to be 2 years while the construction of the infrastructure is estimated to be 2 years in total. The exact days and hours per day of construction will vary depending on timing of year and environmental/climate conditions. The EPA's SGEC tool calculates the CO2 emissions based on duration of equipment operations and the estimated quantity (gallons) of diesel fuel consumed by the equipment.

Electricity Production – Scope 2

Emissions from electricity production were based on the U.S. EPA's Emission Factors for GHG Inventories based on the upper Midwest (MRO West) Emissions and Generation Resource Integrated Database (eGRID). The eGRID indicates that this region's emission factor is 936.5 Ib/MWh. An estimated electricity consumption per housing unit per year was estimated to be 5,832 kWh/unit/year. With the proposed construction of 1,268 units in total there are a total of 7,400,000 kWh/year consumed (**Table 16**). For the commercial use, a rate of 1.05kWh/square foot/month was used. For the proposed 144,700 square feet of commercial space this would result in 1,800,00 kWh/year consumed. These developments will be built to include energy efficient appliances to reduce the carbon emissions.

Table 15. Constriction Emissions calculated by SGEC.

Scope	Type of Emission	Emission Sub-type	Project-related CO_2e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Mobile Equipment	637.1/year of construction	EPA Simplified GHG Emissions Calculator (SGEC)

Table 16. Emissions for electricity consumption, calculated by SGEC.

Scope	Type of Emission	Emission Sub-type	Existing facility CO_2e Emissions (tons/year)	Project-related CO_2e Emissions (tons/year)	Total CO_2e Emissions (tons/year)	Calculation method(s)
Scope 2	Electricity	Commercial (144,700 sqft)	N/A	780.1	780.1	SGEC
Scope 2	Electricity	Residential (1,268 units)	N/A	3,040.5	3,040.5	SGEC

[23] U.S. Environmental Protection Agency (2023) Simplified GHG Emissions Calculator. https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator

19. 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 pollution at the site is from day-to-day functions of downtown Moorhead, roadway use, and any additional local construction projects. The existing nearby sensitive recepters are limited to commercial business owners, local resident use, and roadway users. The noise generated during construction will be caused by the use of heavy machinery and equipment. Noise impacts will be temporary and restricted to the construction period. Local residents, roadway users, and business owners adjacent to the construction zone could be affected by increased noise and annoyances during outdoor, everyday activities. All local residents and business owners will be notified about the timing and duration of construction prior to the beginning of construction. The project will not have permanent noise pollution impacts to the site. The project will conform to all state and local noise standards.

20. 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.

The project is located in downtown Moorhead but the majority of the construction will occur outside of the roadway corridor. There is potential for transportation delays during construction. This would be during construction mobilization and daily dump truck use. Additionally, equipment storage and construction staff parking may cause some delays in transportation. These delays will be limited to each site's construction duration.

The existing mall area had approximately 1,131 parking spaces and is estimated to produce 2,545 trip per day based on a 2.25 turnover rate per stall per day. Assuming a turnover rate of 1 per hour for each stall, the estimated maximum peak hour traffic generated by the existing parking lot is 2,262. The time of occurrence for the peak hour traffic would be late afternoon to early evening during weekdays. The proposed project is planned to have approximately 2,153 mixed-use parking spaces with a 60/40 residential to commercial split and is estimated to produce 2,518 trips per day based on a turnover rate per stall per day of 0.75 for residential spaces and 1.8 for commercial spaces. Assuming a turnover rate per hour of 0.75 for residential spaces and 1.3 for commercial spaces, the estimated maximum peak hour traffic generated by the proposed project is 2,088. The time of occurrence for the peak hour traffic of the proposed project would be late afternoon to early evening during weekdays. The change of use from commercial parking spaces (existing mall) to mixed-use parking spaces (commercial + residential) is expected to result in a net reduction of 27 trips per day.

Post-construction, these residential, commercial and civic units are located in the heart of downtown Fargo-Moorhead. The area is served by multiple bus routes, has quick access to

enhance multi-modal transportation options.

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,

The proposed project is anticipated to result in a net decrease in both the peak hour and total daily trips generated. The proposed project is not expected to have a negative impact on the regional transportation system once completed, therefore, no improvements to the existing transportation system are planned as a result of the project.

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

The existing traffic signal timing for the roadways adjacent to the proposed project can be reviewed and adjusted if necessary to minimize or mitigate any potential effects of the proposed project.

21. 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.

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 no foreseeable future projects that will intersect the scale and timeframe of the proposed project.

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.

There are no cumulative potential effects anticipated with this project that would adversely alter or modify environmental conditions or pose potential harm to the environment or well-being of individuals living within the area of the project.

22. 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.

There are no additional environmental effects to other than what has been provided in this EAW.

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_____ Date _____

Title _____

Exhibits

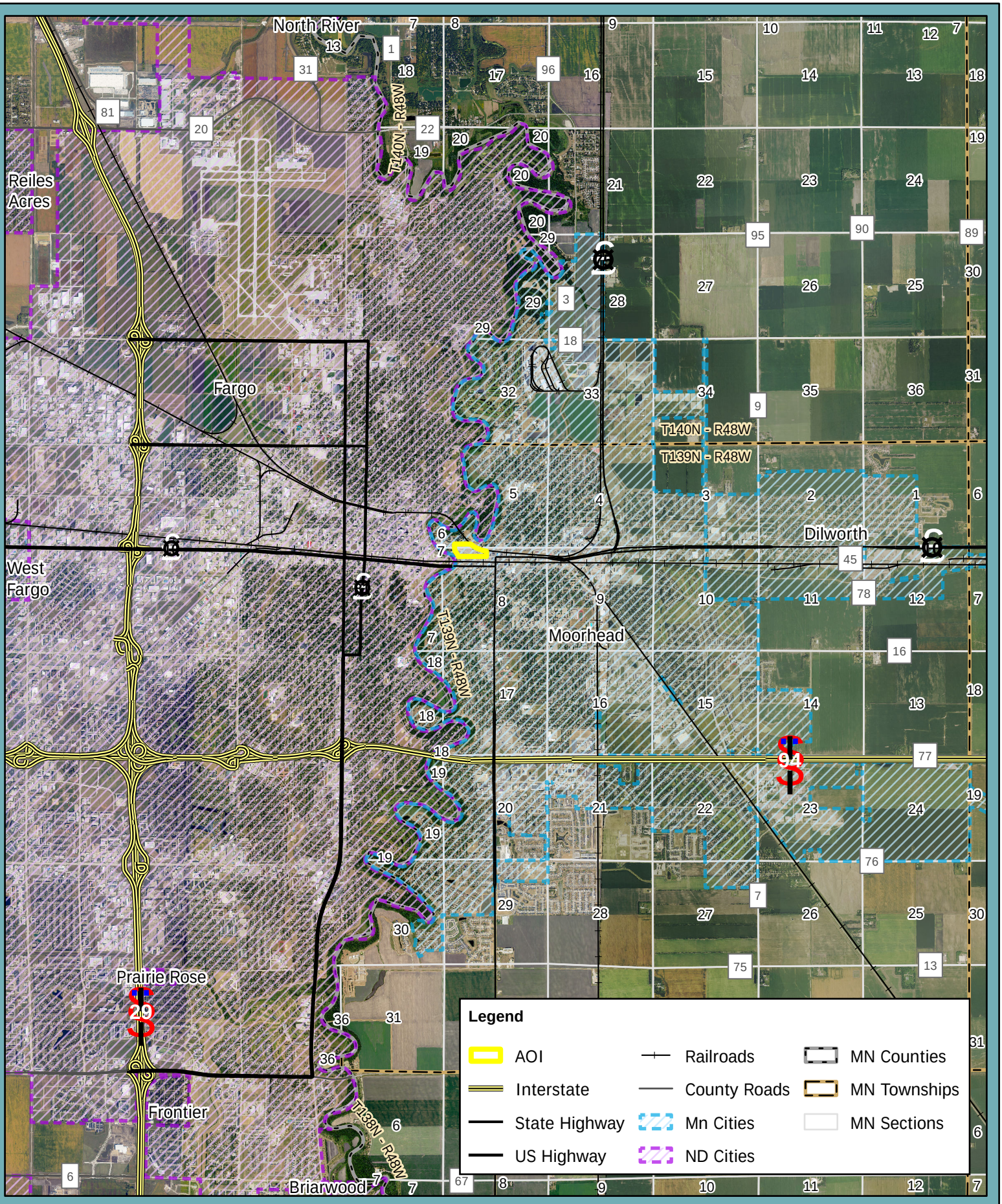


Exhibit 1

Project Location on Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 0.5 1 1.5 2 Miles

HOUSTON engineering, inc.

Exhibit 2

Area of Interest Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

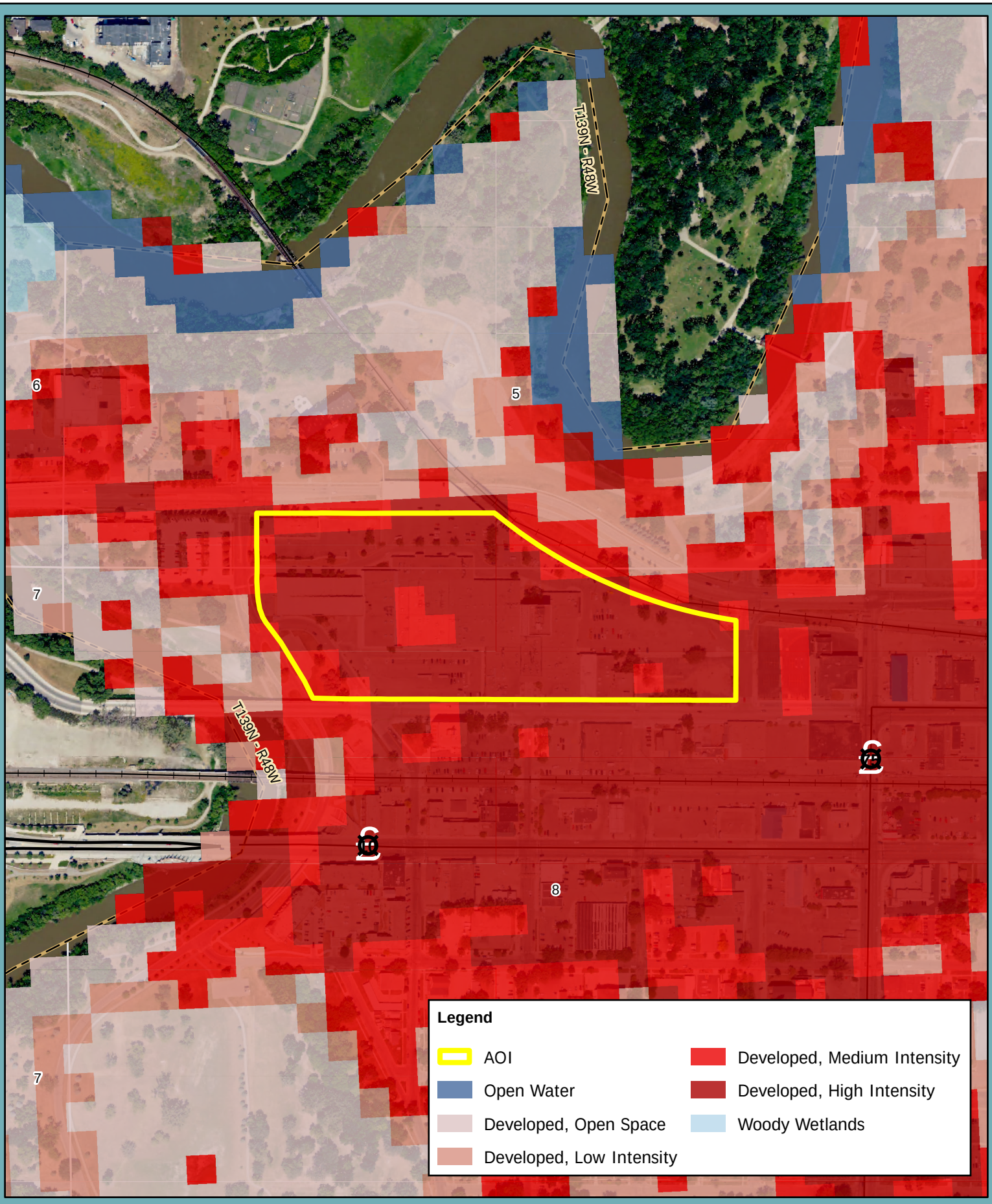


Exhibit 3

National Land Cover Database Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

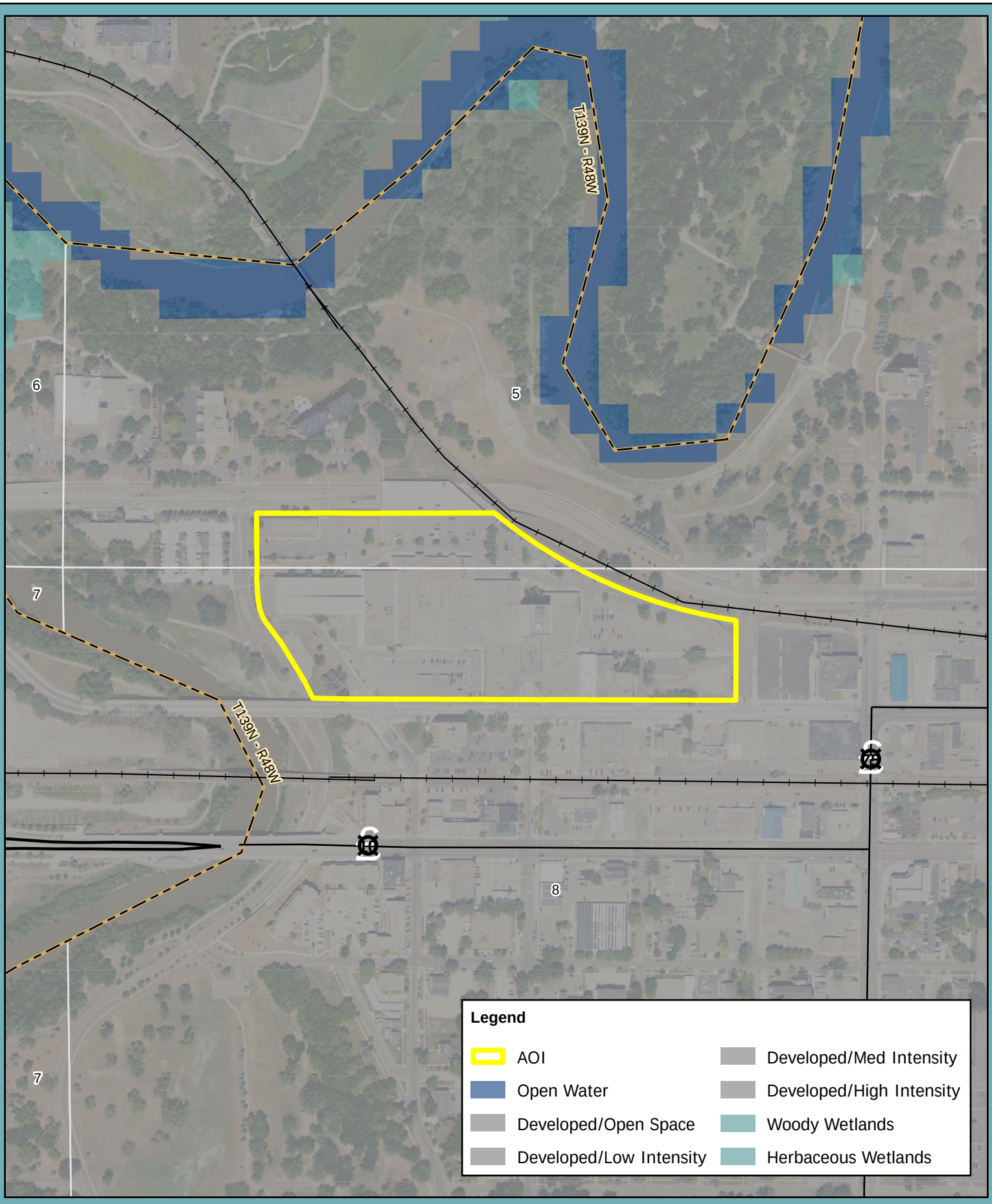


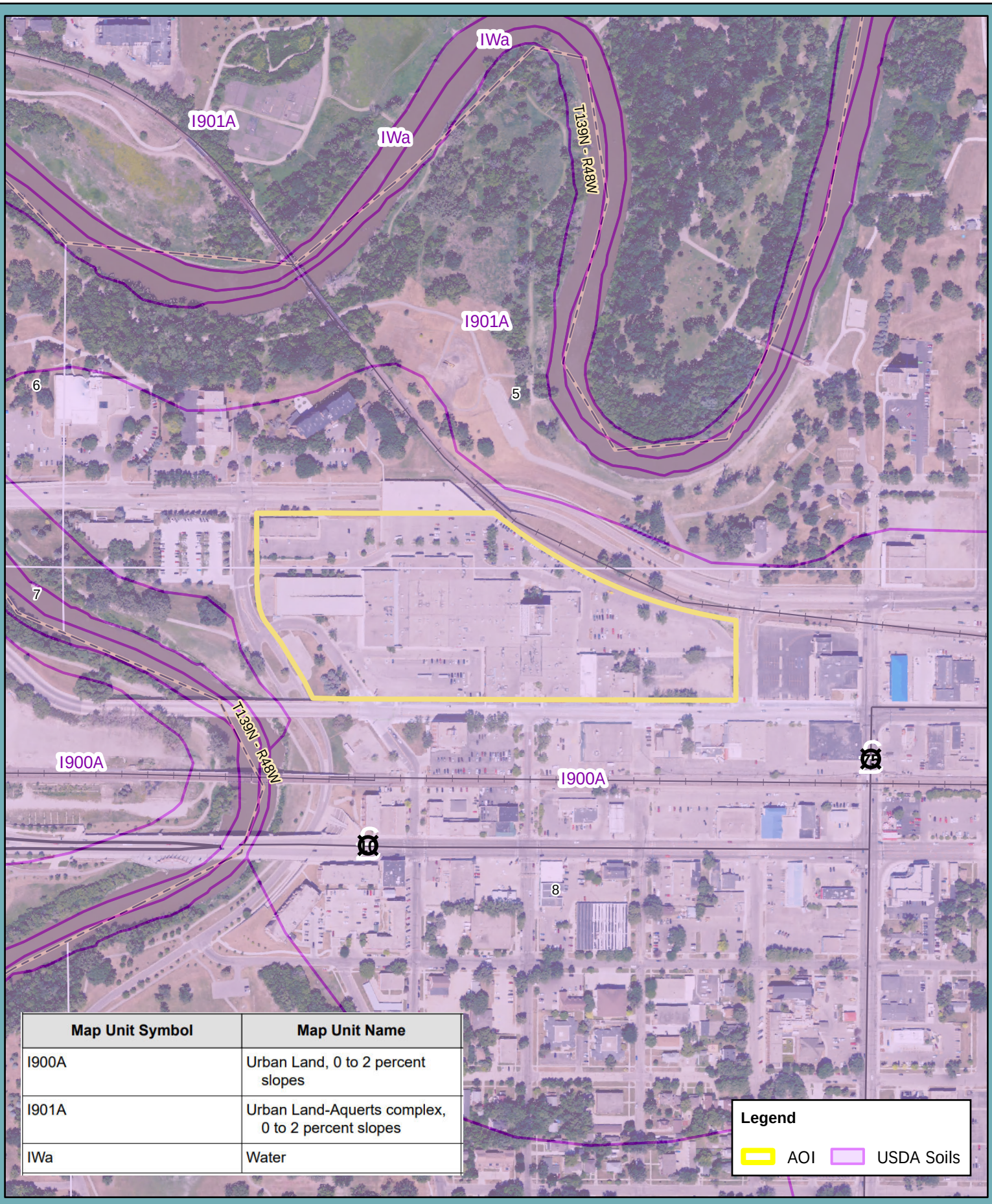
Exhibit 4

NASS CDL Land Use Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.



Map Unit Symbol	Map Unit Name
I900A	Urban Land, 0 to 2 percent slopes
I901A	Urban Land-Aquerts complex, 0 to 2 percent slopes
IWa	Water

Exhibit 5

USDA Soils Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

Exhibit 6

National Wetland Inventory Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

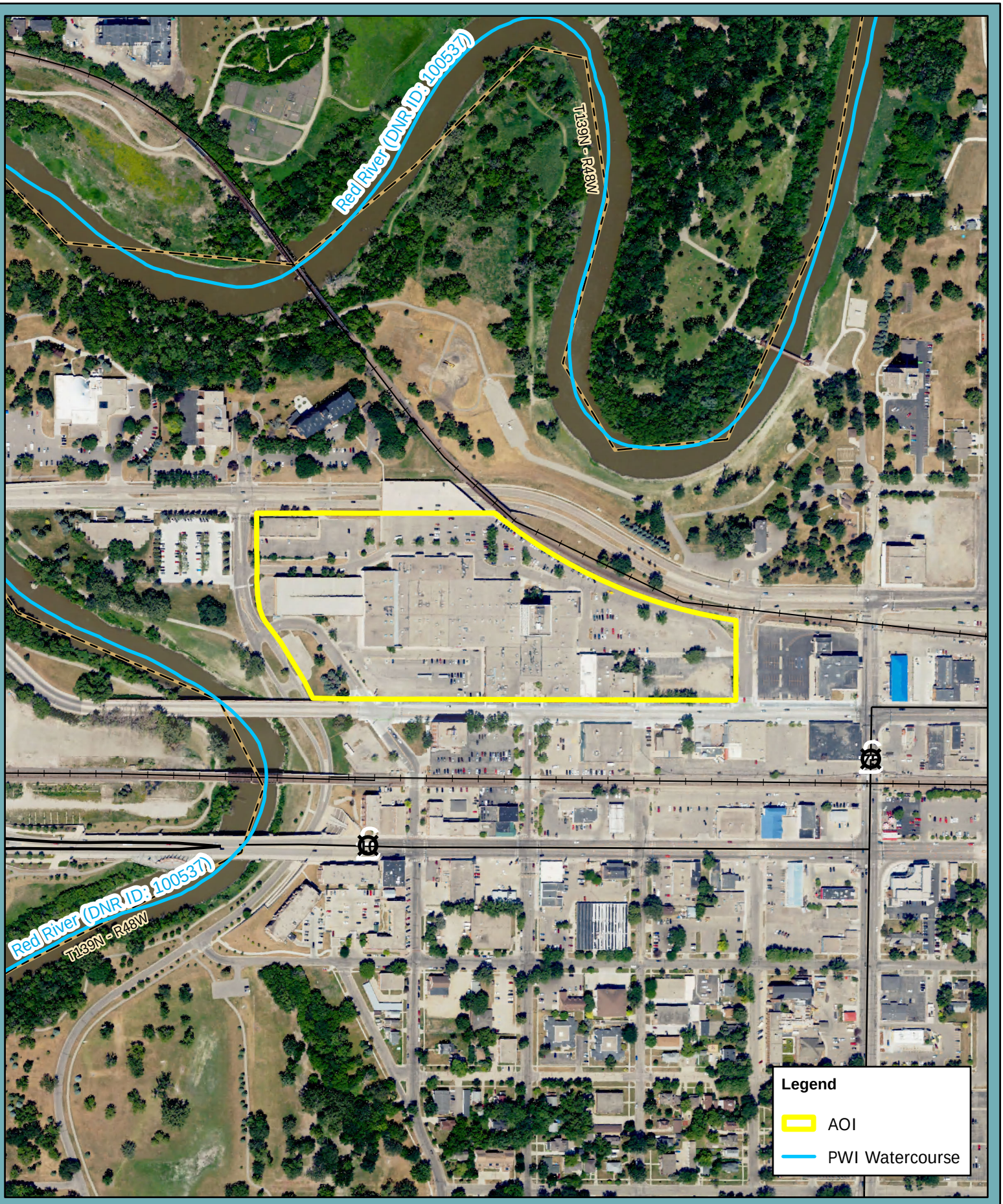


Exhibit 7

Minnesota Public Waters Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

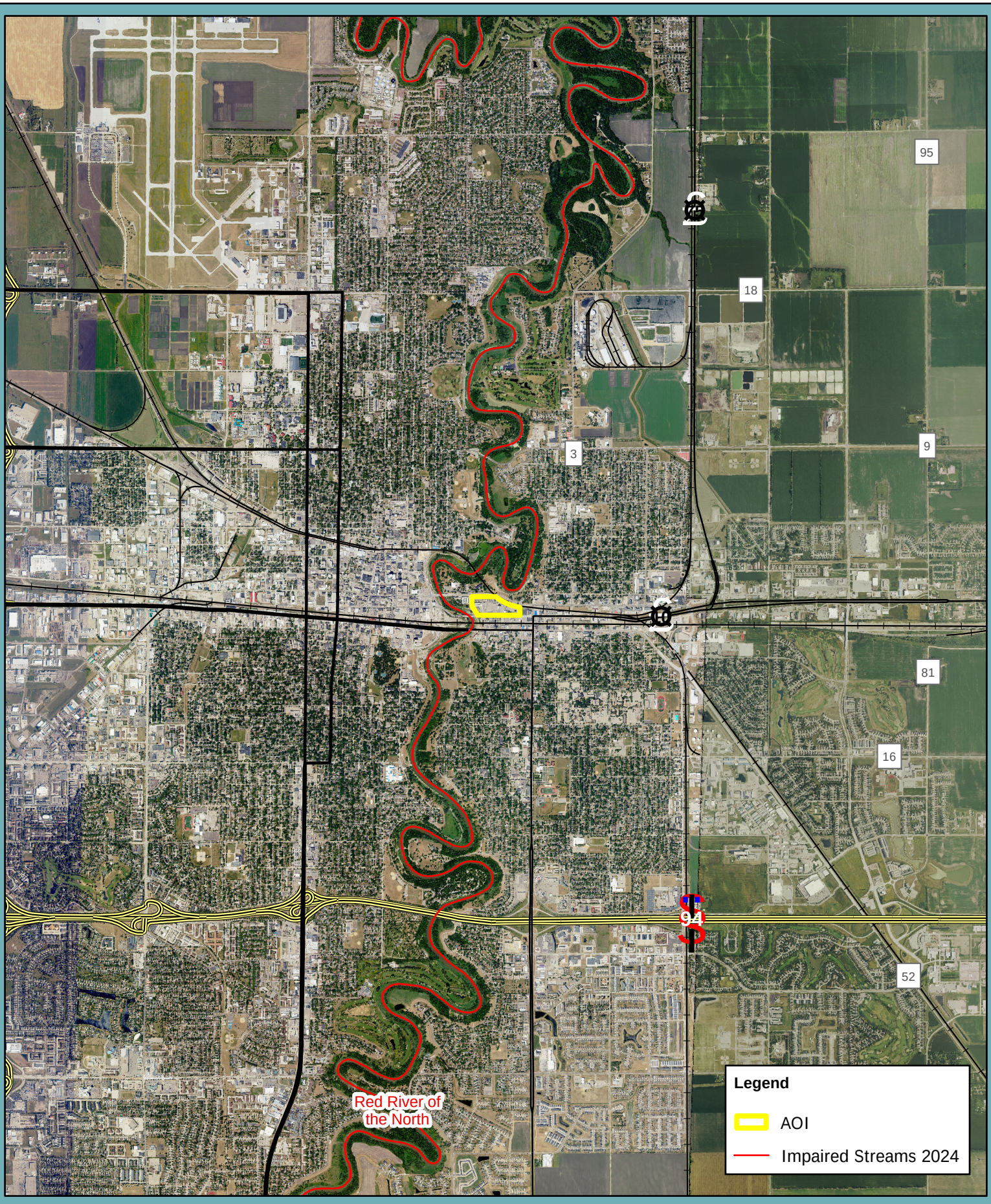


Exhibit 8

MPCA Impaired Waters Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 0.25 0.5 0.75 1 Miles

HOUSTON engineering, inc.

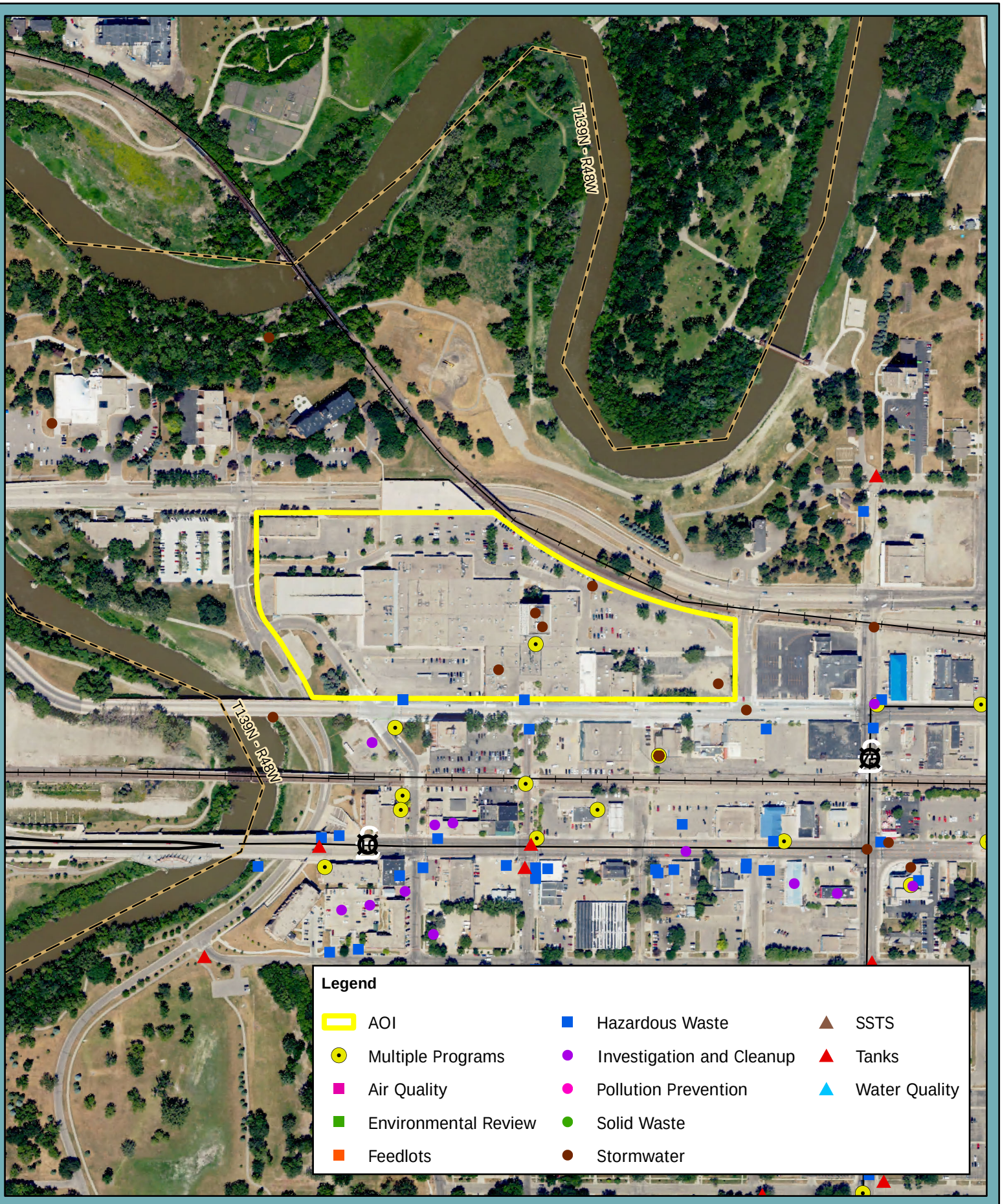


Exhibit 9

MPCA What's in My Neighborhood Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 125 250 375 500 Feet

HOUSTON engineering, inc.

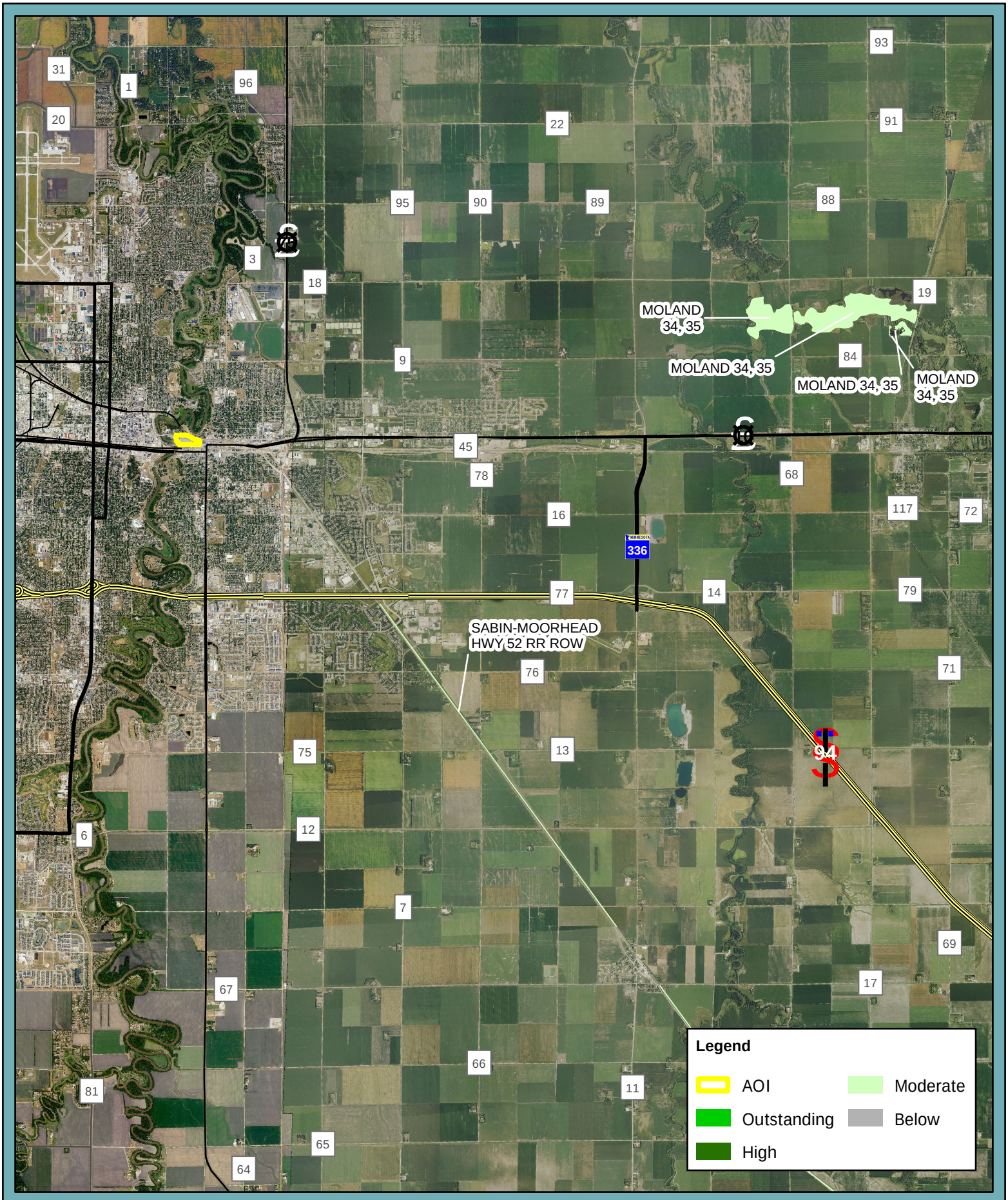


Exhibit 10

MBS Sites of Biodiversity Significance Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

N W E S

0 0.5 1 1.5 2 Miles

HOUSTON engineering, inc.

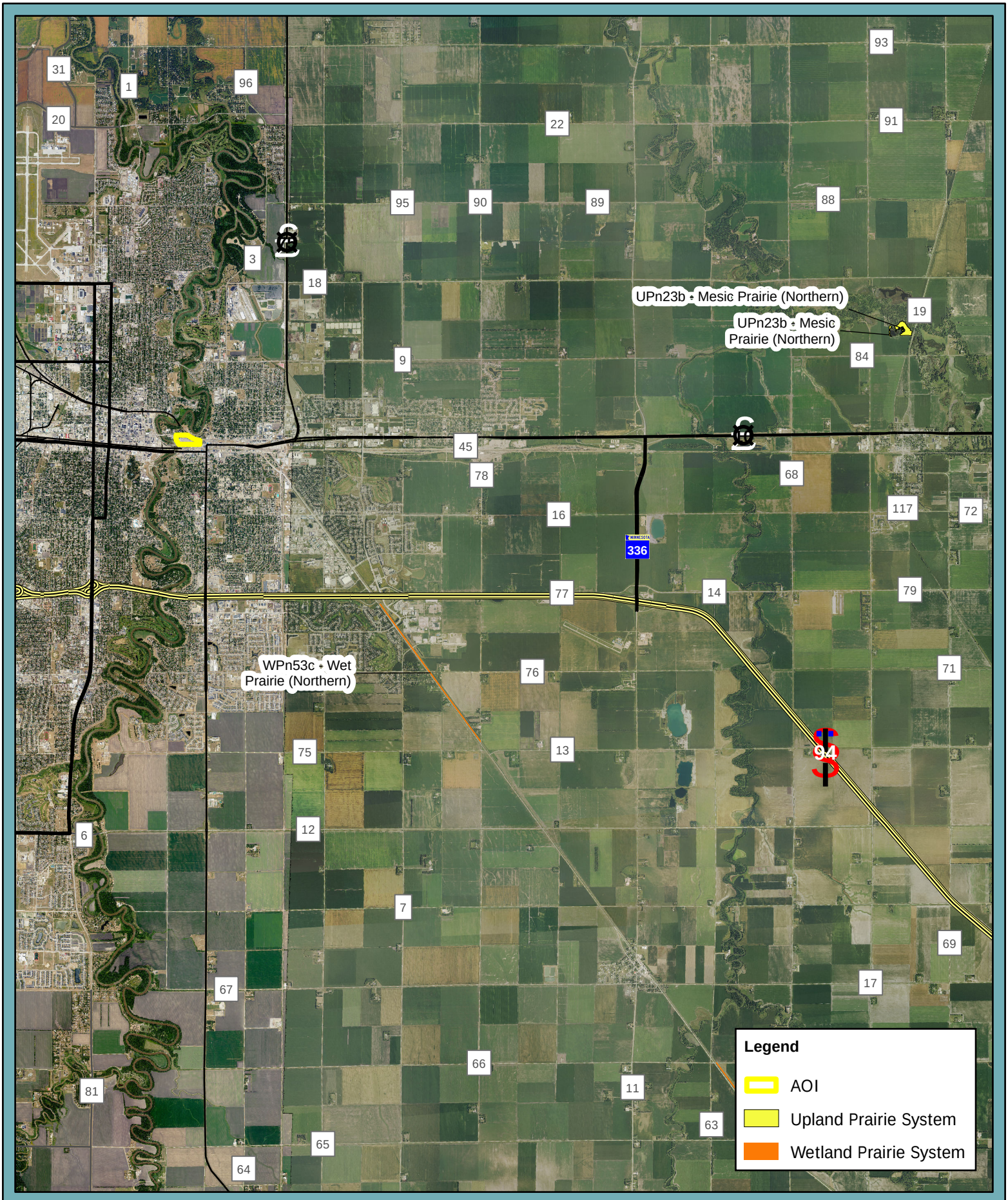


Exhibit 11

MBS Native Plant Communities Map
Environmental Assessment Worksheet
Moorhead City Mall Redevelopment
City of Moorhead, Minnesota

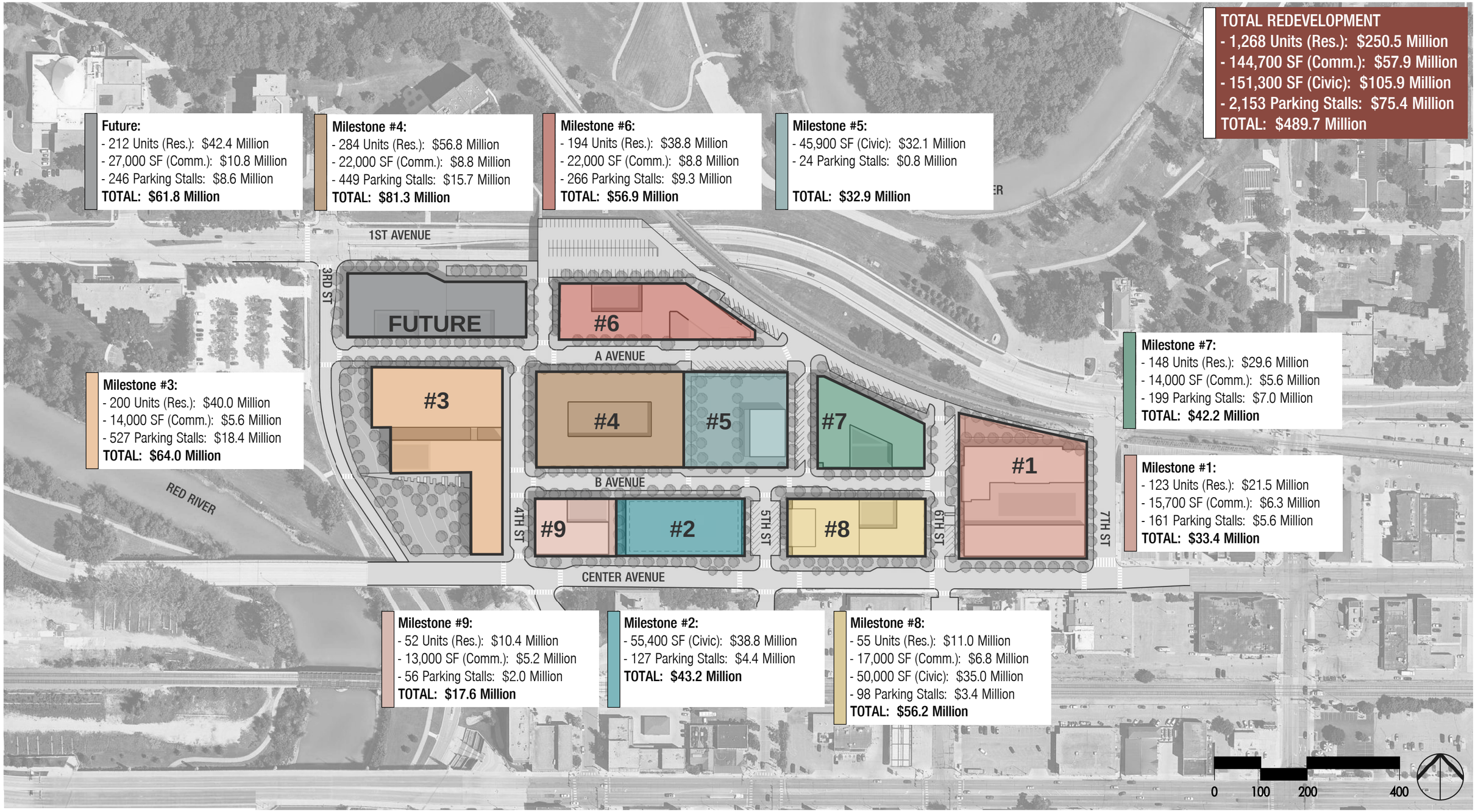
N W E S

0 0.5 1 1.5 2 Miles

HOUSTON engineering, inc.

Attachment 1

Proposed Land Use Plan



MOORHEAD CENTER MALL REDEVELOPMENT

MILESTONE & PHASING PLAN (2024 - 2034)

MARCH 2024

MOORHEAD MINNESOTA

MOORHEAD PUBLIC SERVICE connecting our community

ROERS Building success.

Stantec

JLG

MOORHEAD DOWNTOWN ADDITION

BEING A REPLAT OF .....

.....

TO THE CITY OF MOORHEAD,
CLAY COUNTY, MINNESOTA

HOUSTON ENGINEERING, INC.

Sheet 1 of 2
Project No. 6019-0152

N

60 0 60 120
Scale Feet

LEGEND

IRON MONUMENT FOUND	●
1/2" I.D. PIPE SET	○
MEASURED BEARING	N00°00'00"E
PLAT OR RECORD BEARING	(N00°00'00"E)
MEASURED DISTANCE	100.00'
PLAT OR RECORD DISTANCE	(100.00')
PLAT BOUNDARY	
NEW LOT LINE	
NEW UTILITY EASEMENT	
EXISTING PLATTED LOT LINE	
EXISTING PROPERTY LINE	
EXISTING RIGHT-OF-WAY LINE	R/W
EXISTING UTILITY EASEMENT	
EXISTING BUILDING OR STRUCTURE	
EXISTING EASEMENT (DOC. NO. 844513)	

BEARINGS SHOWN ARE BASED ON THE CITY OF MOORHEAD HORIZONTAL DATUM

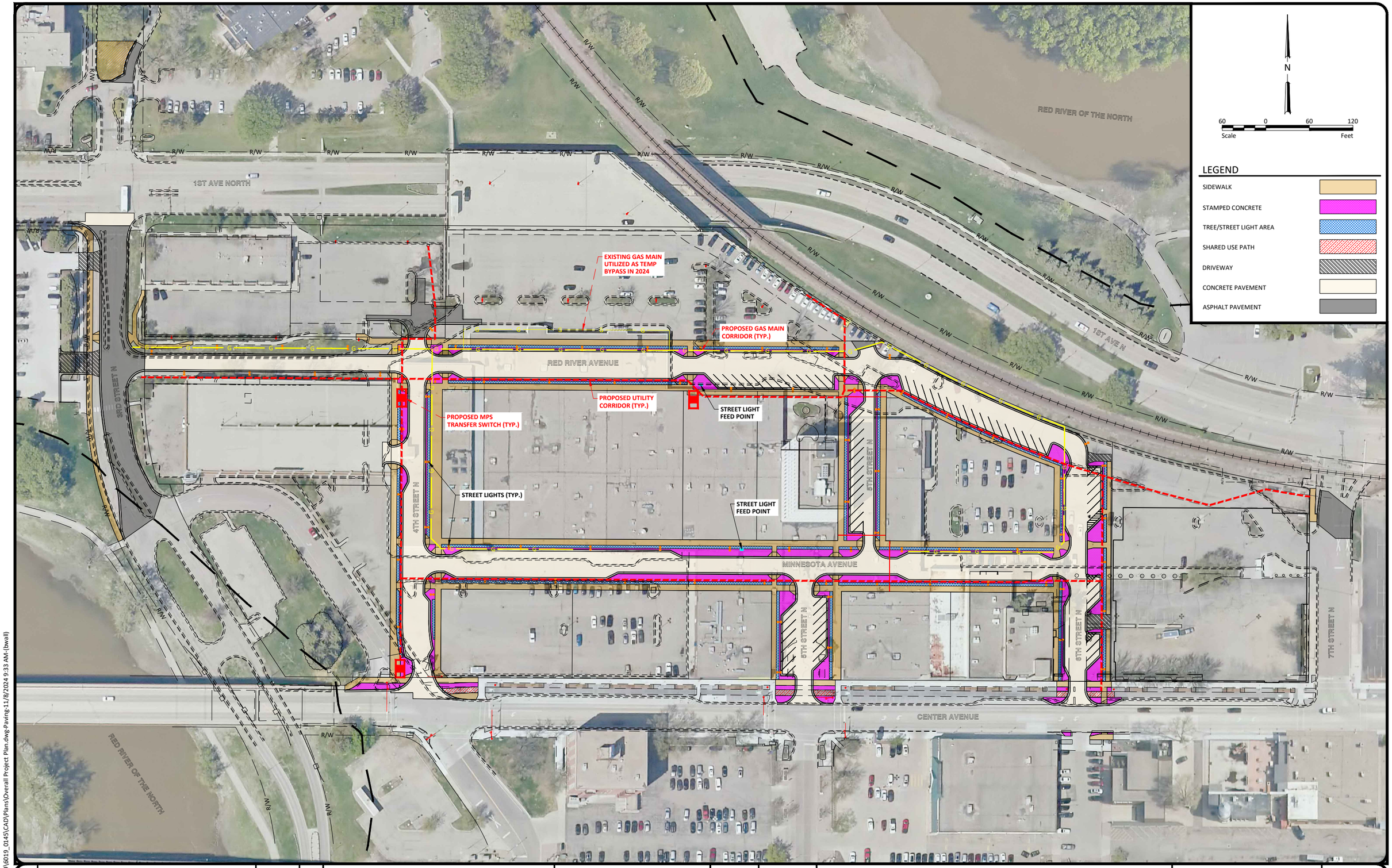
PRELIMINARY PLAT (5-7-24)

1ST AVE. N.
BLOCK 5
LOT 1 32,826 SQ. FT.
LOT 2 75,752 SQ. FT.
40.00 ACCESS EASEMENT
30.00 ACCESS EASEMENT
25.00 ACCESS EASEMENT
30.00 RETAINING WALL SUPPORT & MAINT. EASEMENT
ZONE AE / ZONE X
BOUNDARY OF SPECIAL FLOOD HAZARD AREA
FLOODWAY BOUNDARY
BNSF RAILWAY
L= 276.54
Block 60
Block 68
RED RIVER AVENUE
THIRD STREET
LOT 2 46,181 SQ. FT.
BLOCK 4
LOT 1 60,912 SQ. FT.
STREET TO BE VACATED
L= 100.73
L= 216.45
4TH ST. N.
BLOCK 6
LOT 1 68,060 SQ. FT.
LOT 2 20,910 SQ. FT.
LOT 3 22,928 SQ. FT.
5TH ST. N.
BLOCK 7
LOT 1 34,840 SQ. FT.
L= 253.93
RED RIVER AVENUE
MINNESOTA AVENUE
BLOCK 3
LOT 1 22,032 SQ. FT.
LOT 2 33,465 SQ. FT.
10.00 ACCESS & PEDESTRIAN EASEMENT
BLOCK 2
LOT 1 18,361 SQ. FT.
LOT 2 17,263 SQ. FT.
6TH ST. N.
BLOCK 1
LOT 1 67,772 SQ. FT.
LOT 2 12,041 SQ. FT.
L= 157.41
L= 144.62
L= 49.41
EXISTING UTILITY, MULTIUSE PATH & LANDSCAPING EASEMENT (DOC. NO. 844513)
EXISTING RAILROAD EASEMENT
7TH ST. N.
VACATED 7TH ST. N.
BRIDGE
RED RIVER
NORTH
S89°39'46"E
272.26
CENTER AVENUE
(FRONT STREET)
CENTER AVENUE
Block 4
Block 6
Block 8
Block 10
4TH ST. N.
5TH ST. N.
6TH ST. NO.
7TH ST. N.
℄ WESTBOUND TRACK

H:\JBN\6000\6019\6019-0152\CAD\6019-0152_PreliminaryPlat.dwg

Attachment 2

Proposed Paving Plan



H:\JBN\6000\6019\6019_0145\CAD\Plans\Overall Project Plan.dwg-Paving-11/8/2024 9:33 AM-(bwall)

No.	Revision	Date	By

PRELIMINARY
Not for Construction

HOUSTON engineering, inc.

Drawn by	Date
BKW	11/8/2024
Checked by	Scale
MPL	AS SHOWN

MOORHEAD CENTER MALL REDEVELOPMENT
CITY OF MOORHEAD, MINNESOTA

OVERALL PLAN PAVING

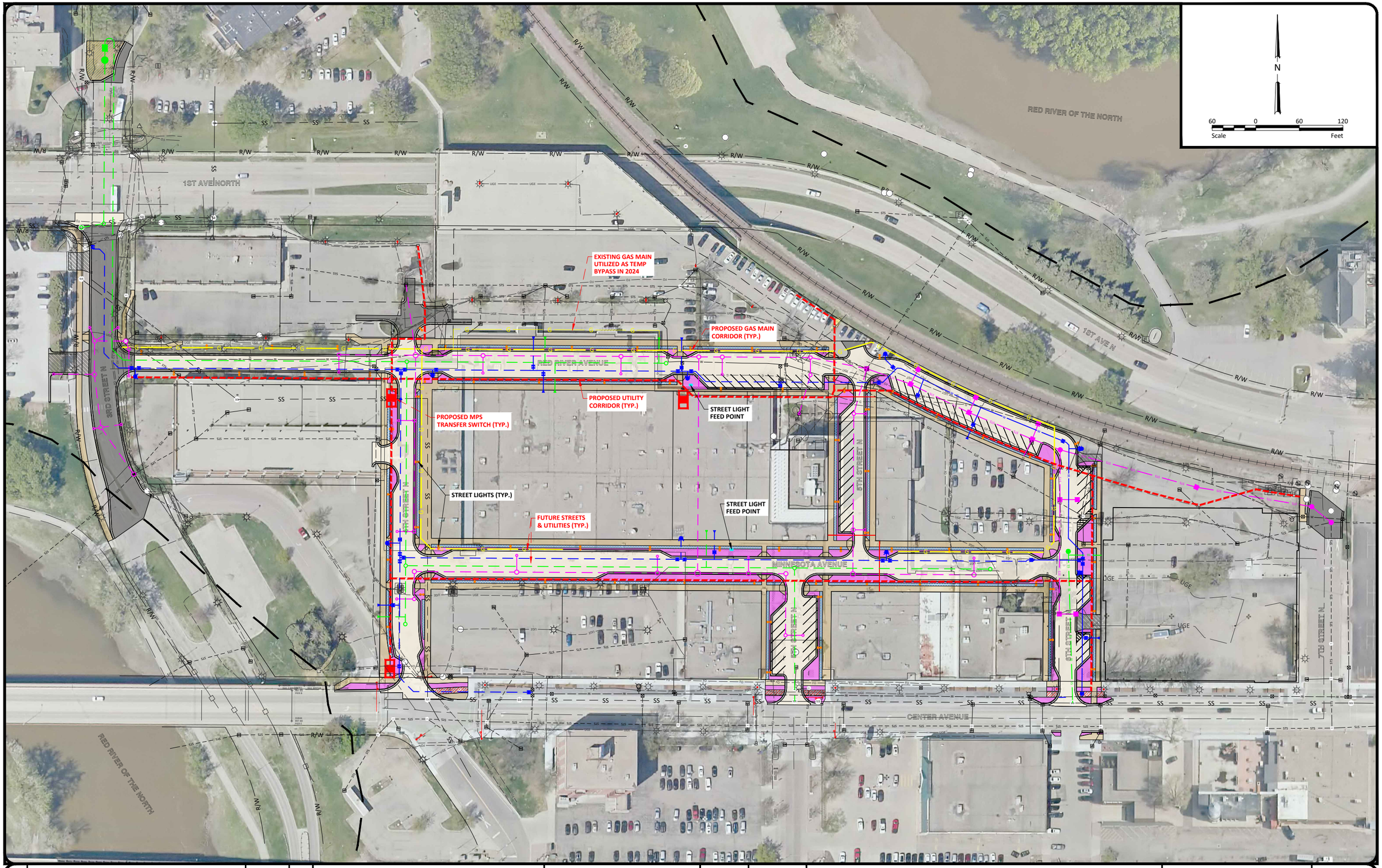
PROJECT NO. 24-A6-02

SHEET 1

HEI NO. 6019-0158

Attachment 3

Proposed Utility Plan



No.	Revision	Date	By

PRELIMINARY
Not for Construction

HOUSTON engineering, inc.

Drawn by	Date
BKW	11/8/24
Checked by	Scale
MPL	AS SHOWN

MOORHEAD CENTER MALL REDEVELOPMENT STREET & UTILITY IMPROVEMENTS, SANITARY LIFT STATION NO. 2 RELOCATION PROJECT
CITY OF MOORHEAD, MINNESOTA

OVERALL PLAN UTILITIES

PROJECT NO. 24-A6-02
18-13-8C

SHEET 4

HEI NO. PPPP-PPP

H:\JBN\6000\6019\6019_0145\CAD\Plans\Overall Project Plan.dwg-Utilities-11/8/2024 9:31 AM-(bwall)

Attachment 4

Minnesota DNR NHIS Rare Features Review

DEPARTMENT OF NATURAL RESOURCES

Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Moorhead City Mall Redevelopment

Project Proposer: City of Moorhead

Project Type: Development, Mixed Use

Project Type Activities: Tree Removal;Structure Removal or Bridge Removal

TRS: T139 R48 S5, T139 R48 S8

County(s): Clay

DNR Admin Region(s): Northwest

Reason Requested: State EAW

Project Description: The City has partnered with a developer (Roers) to demolish the mall property and subdivide it into downtown mixed use lots consisting of multi-story buildings ...

Existing Land Uses: The existing landuse is the moorhead city mall that consists of impervious parking lots and commercial businesses.

Landcover / Habitat Impacted: Trees planted along buildings and parking lot may be removed during demolition. The project is entirely in a previously disturbed area and mainly impervious surfaces.

Waterbodies Affected: No waterbodies will be impacted from the project. The expansion of the sewer system will increase volume at discharge point but will not impact or overwhelm the system.

Groundwater Resources Affected: There will be no impacts to groundwater systems.

Previous Natural Heritage Review: No

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	Comments	Tree Removal - Recommendations
Ecologically Significant Area	No Comments	No Further Review Required
State-Listed Endangered or Threatened Species	Needs Further Review	State-protected Species in Vicinity
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	Comments	Visit IPaC for Federal Review

DEPARTMENT OF NATURAL RESOURCES

November 1, 2024

Project Name: Moorhead City Mall Redevelopment
Project Proposer: City of Moorhead
Project Type: Development, Mixed Use
Project ID: MCE #2024-00907

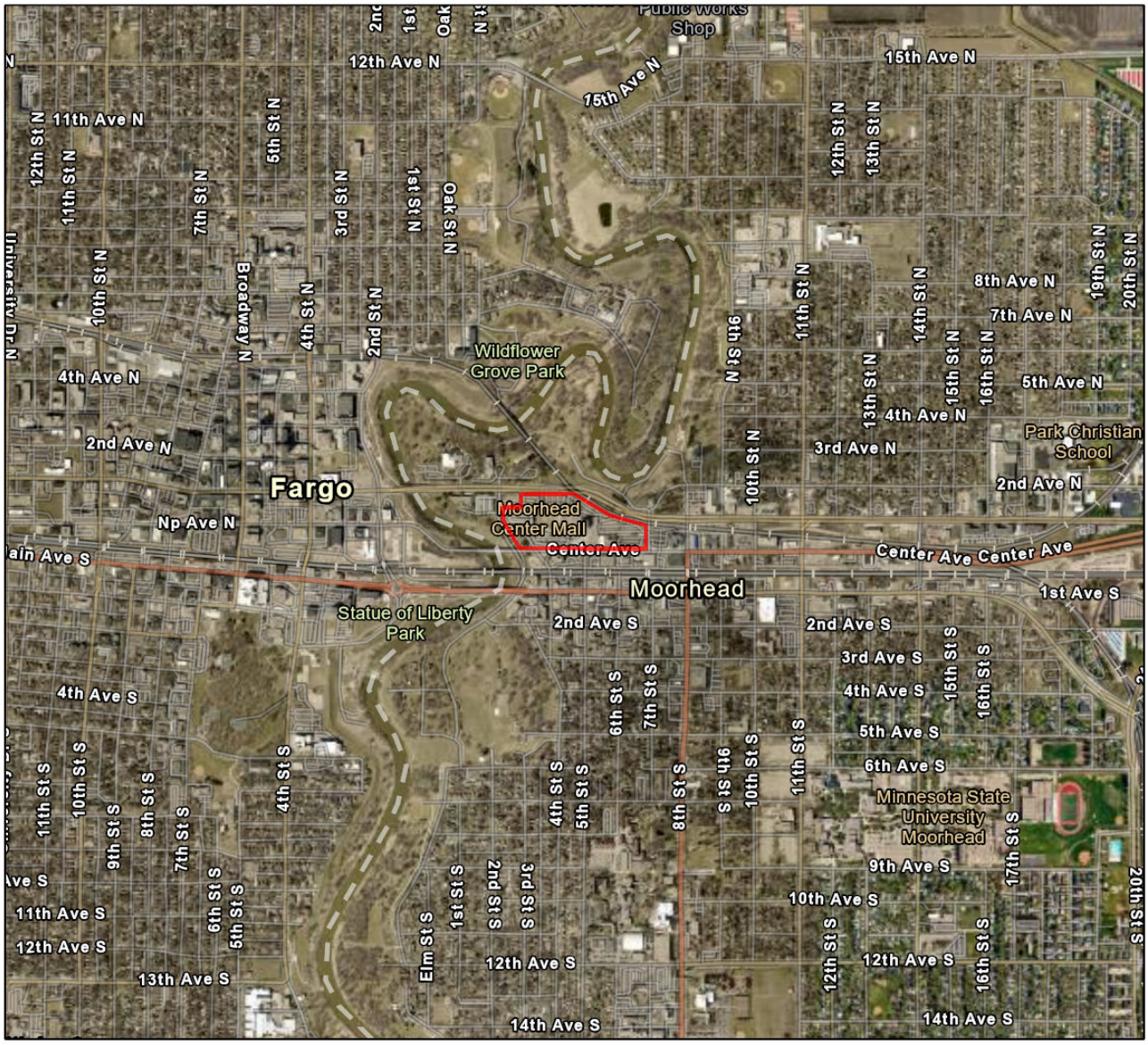
AUTOMATED RESULTS: FURTHER REVIEW IS NEEDED
As requested, the above project has undergone an automated review for potential impacts to rare features. Based on this review, one or more rare features may be impacted by the proposed project and further review by the Natural Heritage Review Team is needed. You will receive a separate notification email when the review process is complete and the Natural Heritage Review letter has been posted.

Please refer to the table on the cover page of this report for a summary of potential impacts to rare features. For additional information or planning purposes, use the Explore Page in Minnesota Conservation Explorer to view the potentially impacted rare features or to create a Conservation Planning Report for the proposed project.

If you have additional information to help resolve the potential impacts listed in the summary results, please attach related project documentation in the Edit Details tab of the Project page. Relevant information includes, but is not limited to, additional project details, completed habitat assessments, or survey results. This additional information will be considered during the project review.

Moorhead City Mall Redevelopment

Aerial Imagery With Locator Map



N
W E
S

0 0.130.25 0.5 0.75 1 Miles

Project_Boundary

Project Type: Development, Mixed Use

Project Size (acres): 17.66

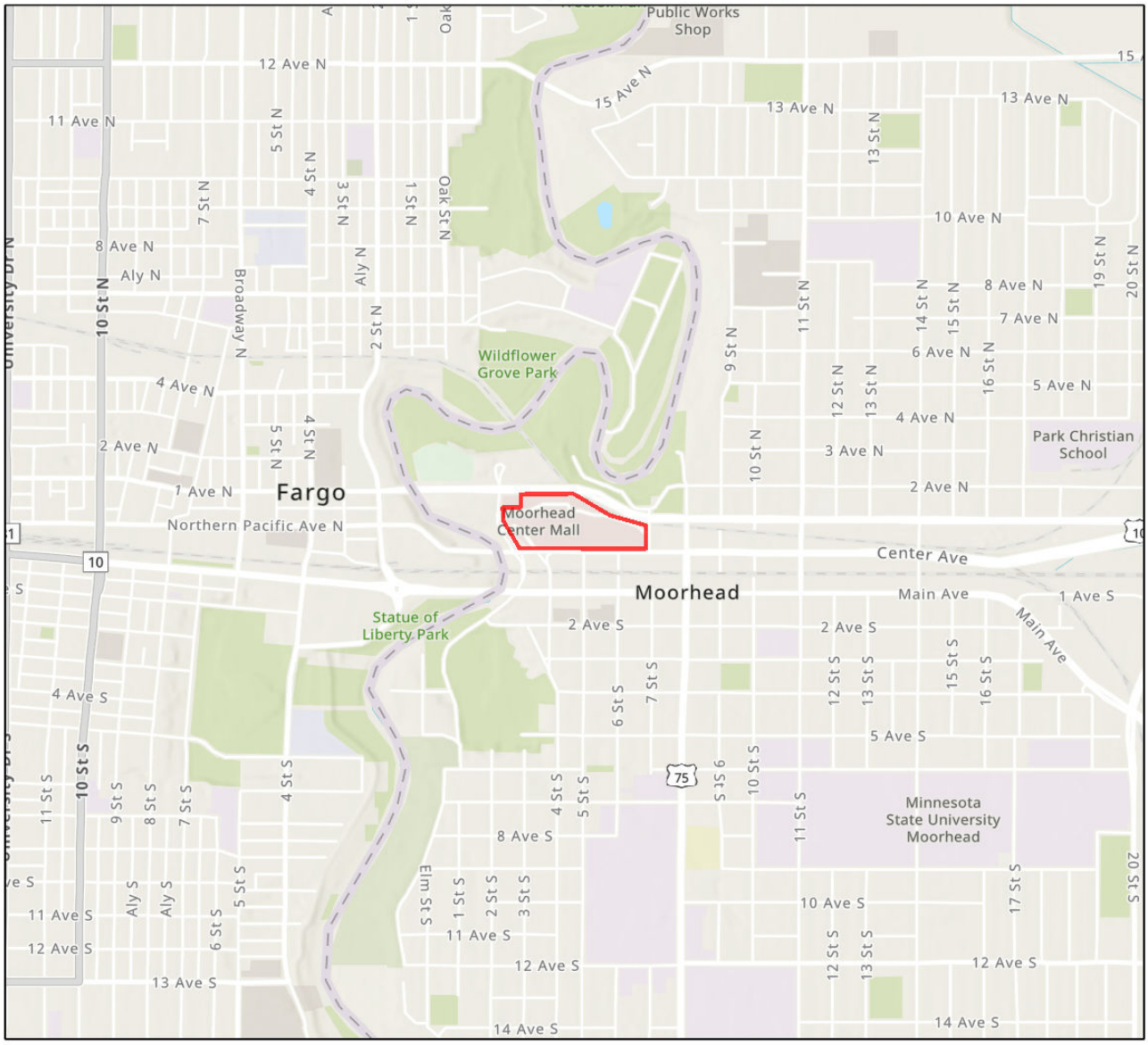
County(s): Clay

TRS: T139 R48 S5, T139 R48 S8

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
City of Fargo, City of Moorhead, County of Cass, ND, State of North Dakota, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

Moorhead City Mall Redevelopment

USA Topo Basemap With Locator Map



N
W E
S

0 0.13 0.25 0.5 0.75 1 Miles

Project_Boundary

Project Type: Development, Mixed Use

Project Size (acres): 17.66

County(s): Clay

TRS: T139 R48 S5, T139 R48 S8

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
City of Fargo, City of Moorhead, County of Cass, ND, State of North Dakota, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

Attachment 5

U.S. FWS Threatened and Endangered Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793

In Reply Refer To: 11/11/2024 17:37:57 UTC
Project Code: 2025-0017623
Project Name: Moorhead Center Mall Redevelopment Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

Threatened and Endangered Species
The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance
Please refer to refer to our Section 7 website for guidance and technical assistance, including step-by-step instructions for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, USDA Rural Development projects, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

We recommend running the project (if it qualifies) through our **Minnesota-Wisconsin Federal Endangered Species Determination Key (Minnesota-Wisconsin ("D-key"))**. A demonstration video showing how-to access and use the determination key is available. Please note that the Minnesota-Wisconsin D-key is the third option of 3 available d-keys. D-keys are tools to help Federal agencies and other project proponents determine if their proposed action has the potential to adversely affect federally listed species and designated critical habitat. The Minnesota-Wisconsin D-key includes a structured set of questions that assists a project proponent in determining whether a proposed project qualifies for a certain predetermined consultation outcome for all federally listed species found in Minnesota and Wisconsin (except for the northern long-eared bat- see below), which includes determinations of “no effect” or “may affect, not likely to adversely affect." In each case, the Service has compiled and analyzed the best available information on the species’ biology and the impacts of certain activities to support these determinations.

If your completed d-key output letter shows a "No Effect" (NE) determination for all listed species, print your IPaC output letter for your files to document your compliance with the Endangered Species Act.

For Federal projects with a “Not Likely to Adversely Affect” (NLAA) determination, our concurrence becomes valid if you do not hear otherwise from us after a 30-day review period, as indicated in your letter.

If your d-key output letter indicates additional coordination with the Minnesota-Wisconsin Ecological Services Field Office is necessary (i.e., you get a “May Affect” determination), you will be provided additional guidance on contacting the Service to continue ESA coordination outside of the key; ESA compliance cannot be concluded using the key for “May Affect” determinations unless otherwise indicated in your output letter.

Note: Once you obtain your official species list, you are not required to continue in IPaC with d-keys, although in most cases these tools should expedite your review. If you choose to make an effects determination on your own, you may do so. If the project is a Federal Action, you may want to review our section 7 step-by-step instructions before making your determinations.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

Northern Long-Eared Bats
Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected. For bat activity dates, please review Appendix L in the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A monoculture stand of shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:

- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or
- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC

species list report for your records.

If any of the above activities are proposed, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the northern long-eared bat and tricolored bat range-wide D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys helps to determine if prohibited take might occur and, if not, will generate an automated verification letter. Additional information about available tools can be found on the Service's northern long-eared bat website.

Whooping Crane
Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "Establishment of a Nonessential Experimental Population of Whooping Cranes in the Eastern United States."

Other Trust Resources and Activities
Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a permit. A nest take permit is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

State Department of Natural Resources Coordination
While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. **Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.**

Minnesota
Minnesota Department of Natural Resources - Endangered Resources Review Homepage
Email: Review.NHIS@state.mn.us

Wisconsin
Wisconsin Department of Natural Resources - Endangered Resources Review Homepage
Email: DNRERReview@wi.gov

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

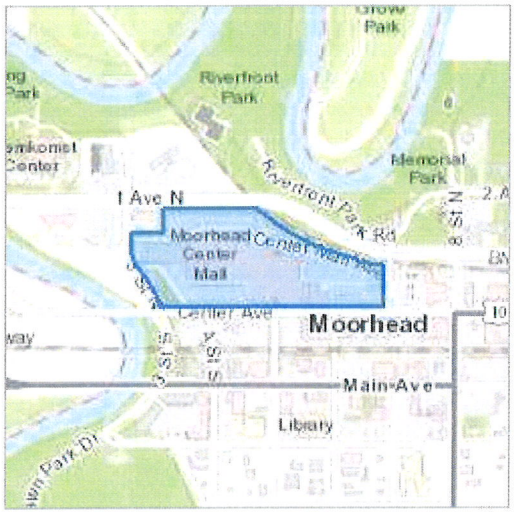
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
(952) 858-0793

PROJECT SUMMARY

Project Code: 2025-0017623
Project Name: Moorhead Center Mall Redevelopment Project
Project Type: Commercial Development
Project Description: The City of Moorhead is proposing to demolish the Moorhead Center Mall and subdivide the property into a downtown mixed-use lot consisting of multistory buildings with commercial and residential properties. Additionally, this will require the expansion of the current stormwater system, utilities, and roadways.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.8760266,-96.77325299858413,14z



Counties: Clay County, Minnesota

ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

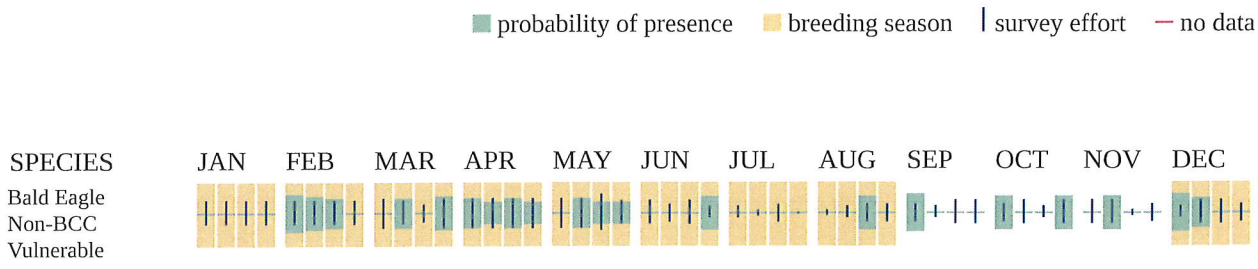
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

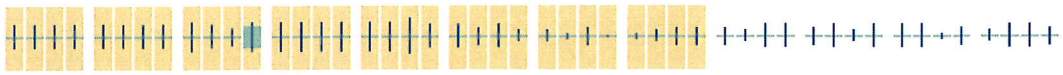
Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Golden Eagle
Non-BCC
Vulnerable



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

NAME	BREEDING SEASON
Black Tern *Chlidonias niger surinamenisis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Chestnut-collared Longspur *Calcarius ornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9437	Breeds May 1 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Franklin's Gull *Leucophaeus pipixcan* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Golden-winged Warbler *Vermivora chrysoptera* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20

NAME	BREEDING SEASON
Grasshopper Sparrow *Ammodramus savannarum perpallidus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Le Conte's Sparrow *Ammospiza leconteii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9469	Breeds Jun 1 to Aug 15
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

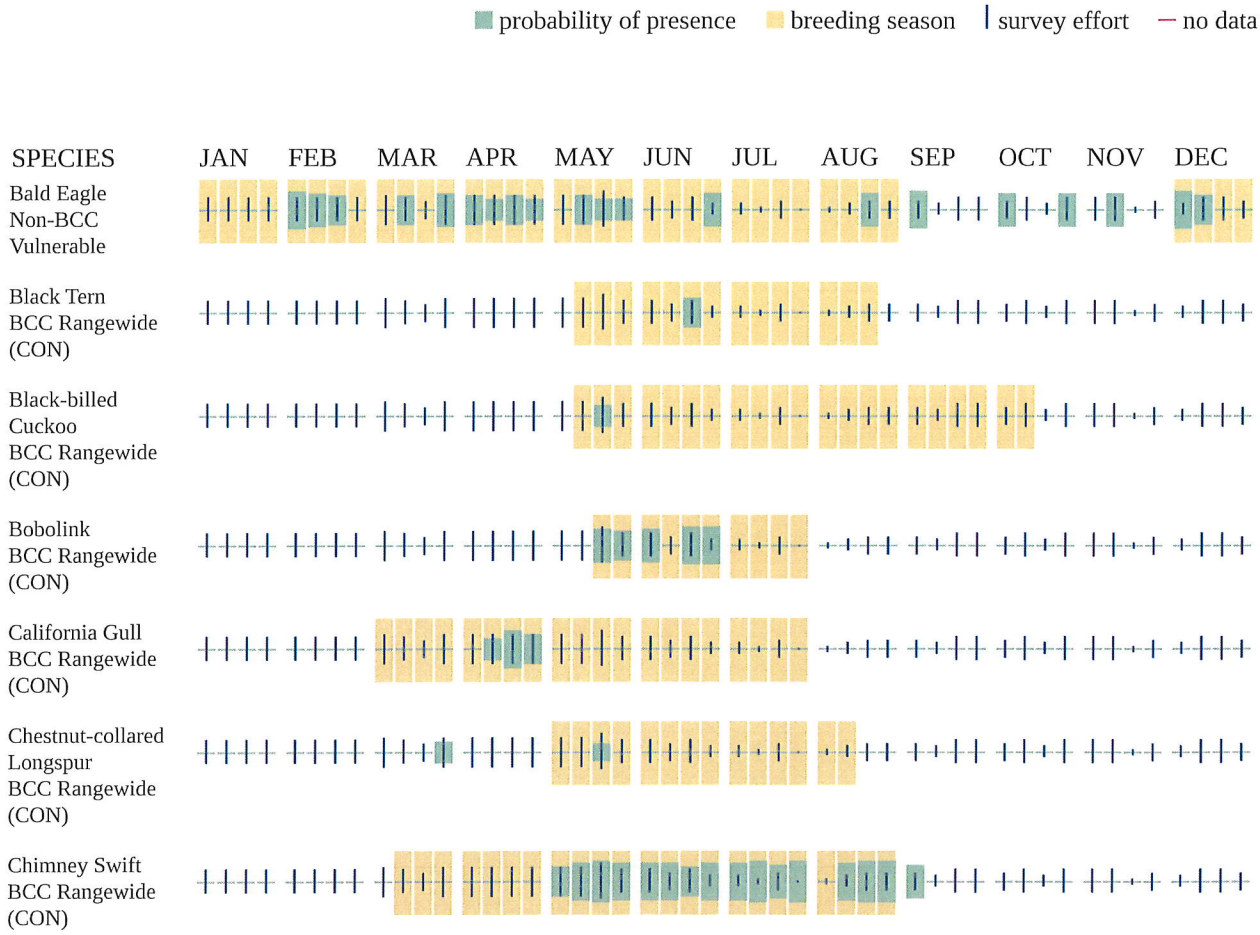
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Moorhead city
Name: Benjamin Hengel
Address: 1401 21st. Ave. N
City: Fargo
State: ND
Zip: 58102
Email bhengel@houstoneng.com
Phone: 7014999468

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

Attachment 6

U.S. FWS Consistency Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793

In Reply Refer To: 11/11/2024 17:52:17 UTC
Project code: 2025-0017623
Project Name: Moorhead Center Mall Redevelopment Project

Subject: Consistency letter for 'Moorhead Center Mall Redevelopment Project' for specified threatened and endangered species that may occur in your proposed project location consistent with the Minnesota-Wisconsin Endangered Species Determination Key (Minnesota-Wisconsin DKey).

Dear Benjamin Hengel:

The U.S. Fish and Wildlife Service (Service) received on **November 11, 2024** your effect determination(s) for the 'Moorhead Center Mall Redevelopment Project' (Action) using the Minnesota-Wisconsin DKey within the Information for Planning and Consultation (IPaC) system. You have submitted this key to satisfy requirements under Section 7(a)(2). The Service developed this system in accordance of with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.).

Based on your answers and the assistance of the Service's Minnesota-Wisconsin DKey, you made the following effect determination(s) for the proposed Action:

Species	Listing Status	Determination
Monarch Butterfly (*Danaus plexippus*)	Candidate	No effect

Determination Information

Thank you for informing the Service of your "No Effect" determination(s). Your agency has met consultation requirements and no further consultation is required for the species you determined will not be affected by the Action.

Additional Information

Sufficient project details: Please provide sufficient project details on your project homepage in IPaC (Define Project, Project Description) to support your conclusions. Failure to disclose important aspects of your project that would influence the outcome of your effects determinations may negate your determinations and invalidate this letter. If you have site-specific information that leads you to believe a different determination is more appropriate for your

project than what the Dkey concludes, you can and should proceed based on the best available information.

Future project changes: The Service recommends that you contact the Minnesota-Wisconsin Ecological Services Field Office or re-evaluate the project in IPaC if: 1) the scope or location of the proposed Action is changed; 2) new information reveals that the action may affect listed species or designated critical habitat in a manner or to an extent not previously considered; 3) the Action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

For non-Federal representatives: Please note that when a project requires consultation under section 7 of the Act, the Service must consult directly with the Federal action agency unless that agency formally designates a non-Federal representative (50 CFR 402.08). Non-Federal representatives may prepare analyses or conduct informal consultations; however, the ultimate responsibility for section 7 compliance under the Act remains with the Federal agency. Please include the Federal action agency in additional correspondence regarding this project.

Species-specific information

Bald and Golden Eagles: Bald eagles, golden eagles, and their nests are protected under the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (Eagle Act). The Eagle Act prohibits, except when authorized by an Eagle Act permit, the "taking" of bald and golden eagles and defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The Eagle Act's implementing regulations define disturb as "… to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Coordination with the Service is not complete if additional coordination is advised above for any species.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

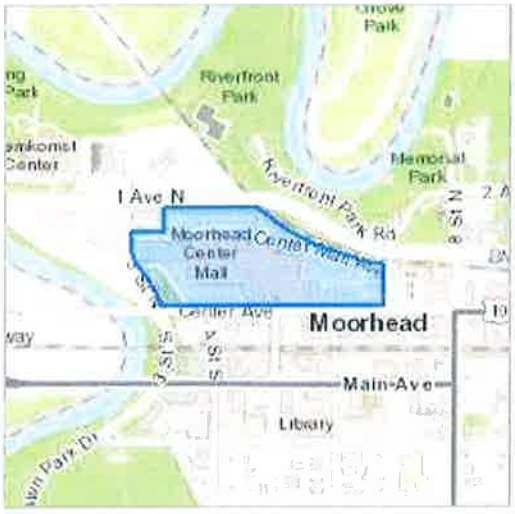
Moorhead Center Mall Redevelopment Project

2. Description

The following description was provided for the project 'Moorhead Center Mall Redevelopment Project':

> The City of Moorhead is proposing to demolish the Moorhead Center Mall and subdivide the property into a downtown mixed-use lot consisting of multistory buildings with commercial and residential properties. Additionally, this will require the expansion of the current stormwater system, utilities, and roadways.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.8760266,-96.77325299858413,14z



QUALIFICATION INTERVIEW

1. This determination key is intended to assist the user in evaluating the effects of their actions on Federally listed species in Minnesota and Wisconsin. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes. Additionally, this key DOES NOT cover wind development, purposeful take (e.g., for research or surveys), communication towers that have guy wires or are over 450 feet in height, aerial or other large-scale application of any chemical (such as insecticide or herbicide), and approval of long-term permits or plans (e.g., FERC licenses, HCP's).

   Click **YES** to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

   Yes
2. Is the action being funded, authorized, or carried out by a Federal agency?

   Yes
3. Are you the Federal agency or designated non-federal representative?

   No
4. Does the action involve the installation or operation of wind turbines?

   No
5. Does the action involve purposeful take of a listed animal?

   No
6. Does the action involve a new communications tower?

   No
7. Does the activity involve aerial or other large-scale application of ANY chemical, including pesticides (insecticide, herbicide, fungicide, rodenticide, etc)?

   No
8. Will your action permanently affect local hydrology?

   No
9. Will your action temporarily affect local hydrology?

   No
10. Will your project have any direct impacts to a stream or river (e.g., Horizontal Directional Drilling (HDD), hydrostatic testing, stream/road crossings, new stormwater outfall discharge, dams, other in-stream work, etc.)?

    No

11. Does your project have the potential to impact the riparian zone or indirectly impact a stream/river (e.g., cut and fill; horizontal directional drilling; construction; vegetation removal; pesticide or fertilizer application; discharge; runoff of sediment or pollutants; increase in erosion, etc.)?

    Note: Consider all potential effects of the action, including those that may happen later in time and outside and downstream of the immediate area involved in the action.

    Endangered Species Act regulation defines "effects of the action" to include all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (50 CFR 402.02).

    No

12. Will your action disturb the ground or existing vegetation?

    Note: This includes any off-road vehicle access, soil compaction (enough to collapse a rodent burrow), digging, seismic survey, directional drilling, heavy equipment, grading, trenching, placement of fill, pesticide application (herbicide, fungicide), vegetation management (including removal or maintenance using equipment or prescribed fire), cultivation, development, etc.

    Yes

13. Will your action include spraying insecticides?

    No

14. Does your action area occur entirely within an already developed area?

    Note: Already developed areas are already paved, covered by existing structures, manicured lawns, industrial sites, or cultivated cropland, AND do not contain trees that could be roosting habitat. Be aware that listed species may occur in areas with natural, or semi-natural, vegetation immediately adjacent to existing utilities (e.g. roadways, railways) or within utility rights-of-way such as overhead transmission line corridors, and can utilize suitable trees, bridges, or culverts for roosting even in urban dominated landscapes (so these are not considered "already developed areas" for the purposes of this question). If unsure, select NO..

    Yes

15. Does the action have potential indirect effects to listed species or the habitats they depend on (e.g., water discharge into adjacent habitat or waterbody, changes in groundwater elevation, introduction of an exotic plant species)?

    No

16. [Hidden Semantic] Does the action area intersect the monarch butterfly species list area?

    Automatically answered

    Yes

IPAC USER CONTACT INFORMATION

Agency: Moorhead city
Name: Benjamin Hengel
Address: 1401 21st. Ave. N
City: Fargo
State: ND
Zip: 58102
Email bhengel@houstoneng.com
Phone: 7014999468

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers