



**MOUSE
RIVER
PLAN**

Mouse River Plan PROGRESS was developed by the Souris River Joint Board and its' partners to keep project stakeholders, constituents, and the region updated on the progress of the Mouse River Enhanced Flood Protection Project (MREFPP). The MREFPP is a basin-wide endeavor focusing on flood risk reduction along the Mouse River. The estimated \$1 billion project was initiated following the devastating 2011 flood and is anticipated to be completed in 20 years.

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PROGRESS



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**PHASE MI-1 CONSTRUCTION UPDATE
ROADWAYS OPENED AS BROADWAY PUMP
STATION WORK CONTINUES**

As temperatures drop, roadway work is winding down on the MI-1 4th Avenue project for this construction season. However, work on the Broadway Pump Station will continue through the winter months.

Major roadways were opened this fall with the intersection of 4th Avenue and 3rd Street NE and 4th Avenue open to traffic. As a result, the temporary signal at 6th Avenue and 3rd Street NE was removed.

For those walking, the Victoria Bridge has opened for pedestrian access on the east side. The Anne Street Bridge remains closed due to safety issues.

One major milestone reached this fall was the completion of the Broadway Pump Station pump verification of operation. This verification ensures that in the event of a flood the new pumps would work to evacuate rainwater and snow melt from the dry side of the flood protection. Construction will continue at the pump station with the majority of the work will be inside the structure. The Broadway Pump Station will be one of the largest in the State of North Dakota once complete.

The MI-1 4th Avenue Flood Protection Project is set to be completed in 2021.

**PHASE MI-4A CONSTRUCTION UPDATE
MAPLE DIVERSION SOUTH UTILITY
RELOCATIONS**

In August, work on the relocation of municipal utilities in advance of flood protection features proposed as part of phase MI-4A of the Maple Diversion Project started. Many of the buried utilities west of 6th Street SW along Western Avenue and 4th Avenue SW have been installed. Remaining utility relocations located east of 6th Street SW are scheduled to be completed in the spring of 2021.

As the 2020 construction season ended, Western Avenue and 4th Avenue SW were temporarily surfaced with gravel for the winter season. They are currently open to traffic and will be permanently paved next construction season.

The railway crossing connecting Burdick Expressway to 4th Avenue SW is in the “Quiet Zone” and requires additional infrastructure for safety. With the temporary gravel surfacing, temporary concrete barriers have been placed and the permanent barrier will also be installed in the spring of 2021. Although all roadways are open, the public is encouraged to use caution while traveling in this area.



PHASE MI-2 AND MI-3 UPDATE

A significant milestone the Mouse River Enhanced Flood Protection Project was accomplished this fall when Phase MI-2 and MI-3 reached final completion. The combined phases had a total construction cost of \$40 million and took three construction seasons to complete.

Specific items that have been recently completed this fall in order to reach final completion include staining of the concrete closure structure on 16th Street, installation of the retaining wall beneath the 16th Street Bridge, installation of remaining trees, shrubs, and planting beds, and seeding of all remaining areas.

Now that Phases MI-2 and MI-3 are completed, public facilities including the Dakota Bark Park, new walking path & underpass, and the recreational parking area west of the 16th Street bridge, are all now open to the public. Wee Links Golf Course will open spring 2021 in order to allow additional grow in time for the new golf holes. All roadways are also now fully open.

PHASE MI-5 DESIGN UPDATE **ACQUISITIONS MOVE FORWARD FOR NEW ALIGNMENT**

The Phase MI-5 NE Tieback Levee is a key, north-side of the Mouse River phase of the flood protection project. The project is currently under design and includes additional flood protection features north of the BNSF rail line, on top of a portion of the existing Railway Avenue footprint. The design work is 60% complete and has been submitted to the regulatory agencies for review. The team is working towards the next goal of 90% design completion by the spring of 2021. The total construction cost estimate of this alignment is approximately \$50 million.

This alignment will require the acquisition of several properties for the Phase MI-5 NE Tieback Levee. Acquisition of these properties is underway and being handled by the Souris River Joint Board and CDM Smith, under the City NDR program. The Souris River Joint Board is working to acquire the properties east of 13th Street NE, outside of the city limits, while the NDR/CDM Smith team works with the city to acquire the properties west of 13th Street NE using National Disaster Relief funds. This phase will start on the east end of the Phase MI-1 Fourth Avenue project by 3rd Street NE and continue to the east and north, tying into high ground to the east of 13th Street NE. Major features of Phase MI-5 includes earthen levees, arterial road changes, major utility relocations, a dry storm water pond, floodwalls, a city greenway feature, and a storm water pump station.

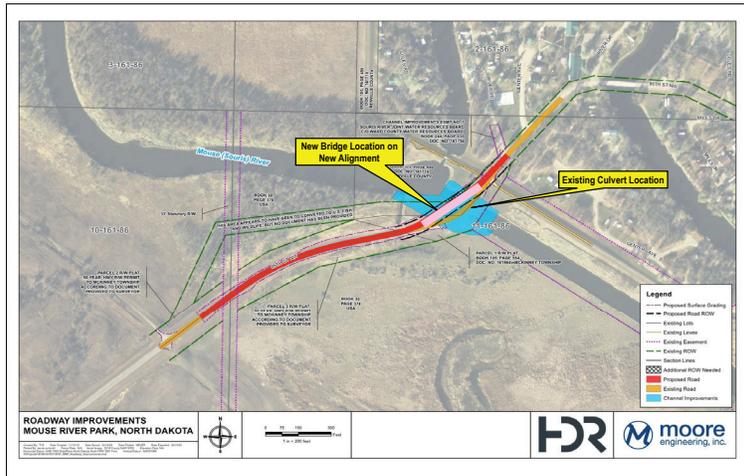
PHASE BU-1B CONSTRUCTION UPDATE

Construction of Phase BU-1B for the Mouse River Enhanced Flood Protection Project has been in full swing through summer and fall in Burlington. The Contractor, Wagner Construction, has been focusing on several key portions that are critical items in the construction schedule. Earthwork for the new levee is underway and is nearly half complete. The base of levee was constructed for use as a working surface for the installation of the slurry cutoff wall. The slurry cut off wall is a trench excavated to depth of approximately 30 to 35 feet. During excavation, the trench is supported by an engineered fluid or slurry which consists of water and bentonite. The dense slurry mix acts as shoring during excavation, preventing the trench from collapsing. The trench is backfilled with a mixture of native soil, bentonite, and cement. The backfill mixture is designed to provide a specified permeability and strength and is intended to prevent groundwater from leaching beneath the new levee. The slurry wall is located along the centerline of the new levee and extends from the base of the levee prism to a depth up to 35 feet below the base. Construction of the slurry cutoff wall was completed in November.

Utility construction related to flood protection has also been progressing through the 2020 construction season. Utilities were installed beneath the CP Railroad at three separate locations. In order to be constructed without disruption to the railway, a steel casing pipe was installed via auger and jack methods. The carrier pipe was then installed within the steel casing. Carrier piping included a 6-inch PVC sanitary sewer forcemain, 42-inch RPC stormwater culvert, and a 20-inch HDPE stormwater forcemain. The 20-inch HDPE was also auger and jacked beneath Colton Avenue. Several utilities were also installed via horizontal direction drilling including a new 6-inch PVC sanitary sewer forcemain beneath Ida Avenue and a 20-inch HDPE stormwater forcemain along Colton Avenue. The multiple methods of trenchless installation were chosen to minimize surface impacts during construction.

Construction of the Kittelson Pump Station began this fall. The pump station consists of four large pre-cast concrete structures which will be responsible for removal of storm water from the existing dead loops situated throughout the city. All four of the pre-cast structures have been excavated, placed, and backfilled. The process piping in the valve vault, the pump appurtenances in the wet well, the metal screening in the trash rack, and electrical items are currently being installed in an effort to have the pump station operation by Spring of 2021. Two of the three segments of storm sewer leading into the pump station are completed along with the 20-inch HPDE stormwater forcemain exiting the pump station.

Construction over the winter months will be limited to a few items. Installation of rip rap along the river channel is scheduled for early winter, mainly near the Colton Avenue Bridge. Construction of the Kittelson Pump Station will also continue through the winter months. Process piping, trash rack grating, electrical, the control panel, and the backup generator are all scheduled to be installed in the upcoming weeks.



**Phase RC-1 DESIGN UPDATE
MOUSE RIVER PARK BRIDGE REPLACEMENT**

Following several attempts to host public meetings, Souris River Joint Board members decided to provide the presentation information electronically and request public comments/questions through the website. The presentation can be viewed at <https://www.youtube.com/watch?v=yxxNDxufOKw&t=3s>.

Phase RC-1 Mouse River Park Bridge Replacement Project entails the replacement of the bridge along 95th St NW on the west end of Mouse River Park. The current bridge span is 32 feet and is inundated with water during a 10-year event. The proposed bridge will span 232 feet and will remain dry through a 25-year event. This new, larger bridge will allow for significant excavation work to be completed creating more flow area and aiding in the elimination of accumulation of debris.

The new bridge will be constructed adjacent to the current bridge to create a small detour around the construction area that will be open to resident access during a large portion of the project. During times when this detour is required to be closed due to construction restrictions, a 9-mile detour will be put in place.

Bridge design is expected to be completed in early 2021. Construction will be advanced once funding has been secured.

Detailed presentations for RC-1 and VE-1 are located on www.mouseriverplan.com

**Phase VE-1 DESIGN UPDATE
VELVA BRIDGE REPLACEMENT PROJECT**

Due to our inability to safely host public meetings, Souris River Joint Board members decided to communicate project information to Velva project stakeholders through electronic means and request public comments/questions be submitted through the website. The presentation can be viewed at <https://www.youtube.com/watch?v=1zIeErzCeNA&t=2s>.

Phase VE-1 Velva Bridge Replacement Project entails the replacement of the bridge along Highway 41. This is the first phase of the Velva projects. Subsequent phases would include dirt levees, if the community supports those efforts. The current bridge span is 155 feet. The proposed bridge will span 262 feet. This new, larger bridge will allow for significant excavation work to be completed creating more conveyance under the bridge and eliminating the water back up issues that occurred in 2011. Minor levee modifications in the area are also included in this phase.

Significant time and effort were put into the analysis of the construction and detour routes. The NDDOT requires that the route include paved roadways leaving the only option a 50-mile detour. The Souris River Joint Board determined that this was not an acceptable solution. Further analysis identified the construction of temporary crossings at various locations in the area. This solution was cost prohibitive. The preferred option includes a detour utilizing the existing bridge structure.

The new bridge will be constructed in the same location as the current bridge with phase 1 to include removal of one side of the bridge, installation of temporary barriers, and one lane open for one-way traffic. Phase 2 would open the new portion of the bridge and allow demolition of the other side, with one-way traffic on the new side of the bridge.

Bridge design is expected to be completed in early 2021. Construction will be advanced once funding has been secured.

