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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



THIS PUBLICATION IS A PERIODIC UPDATE PROVIDED BY THE SOURIS RIVER JOINT BOARD







## PHASE MI-1 CONSTRUCTION UPDATE 4TH AVE/PUMP STATION

With spring weather seemingly here to stay, contractors on the Phase MI-1 Fourth Avenue flood protection project will be resuming more of the underground work and starting work on floodwalls. Before Park Construction and its sub-contractors continue the underground work they have set de-watering wells and pipes in the area around the Broadway and 4th Avenue intersection. This is identical to what is being done at the Broadway Pump Station. Doing so will make for a drier, safer condition of the sub-soil when working 20 feet below grade in this area to install sanitary sewer, watermain, and storm sewer lines from just southeast of Sammy's Pizza across Broadway to the big pump station. The contractor has a scheduled two-week full closure of the Broadway and Fourth Avenue intersection planned for the middle of May (May 12 to May 22).

Over the winter, contractors on this phase of flood protection focused primarily on the Broadway Pump Station. This work continues, with the goal over the next month of finishing the lower walls of the station and backfilling in the area this spring. This would then allow the contractors to focus on forming outside, upper walls in early May.

Contractors on Phase MI-1 also plan to excavate floodwall footing areas and install the first floodwall footing forms over the upcoming weeks. These floodwalls, when complete, will average approximately 15-feet tall and be located just south of the realigned Fourth Avenue roadway and north of the Souris River. For more on the miniature mock-up of a floodwall made for the project, read the engineer's note on the back page of this report. All of these scheduled activities are subject to change depending on the weather.





## PHASE MI-2 & MI-3 CONSTRUCTION UPDATE NAPA VALLEY/FOREST ROAD

Construction on Phase MI-2 and MI-3 is beginning to ramp up as spring like conditions arrive. The Contractor, Wagner Construction, has begun limited earthwork activities as well as underground construction. Based on field conditions, it is anticipated that construction will be in full swing by the end of April. Work for 2019 will be focused on the area around 16th Street and the proposed closure structure. Major utility work is required in conjunction with the closure structure as critical waterlines will be rerouted. Major impacts to traffic along 16th Street include a new bypass road and two lane traffic near Forest Road. It is anticipated this area will be impacted for the entirety of the 2019 construction season.

Over the winter months, Wagner Construction and subcontractor Rice Lake Construction steadily progressed on several of the structures. The concrete work relating to the Perkett Ditch Pump Station has been completed, the roof components have been installed and the auxiliary power supply has been set. Mechanical and electrical subcontractors will be completing interior work over the next few weeks. The Wee Links Irrigation building has also progressed. The building has been framed, electrical work is being completed, as well as exterior construction including windows, doors, and masonry work.

The three gatewells featured as part of the Phase 2 portion have also progressed. Structural concrete at the largest structure near the Perkett Ditch Pump Station is complete and has been placed in operation. The gatewell at the Wee Links course was constructed over the winter and is also complete. The gate well at the Bark Park is under construction. The foundation for the structure is complete and the walls are scheduled to be poured in late April. All three gatewells along with the Perkett Ditch Pump Station are scheduled to be complete and ready for operation by mid-summer.

Scheduled construction items for the upcoming month include storm sewer installation near the Perkett Ditch Pump Station, rip rap placement near the box culvert outlet, and installation of a deep segment of 10-inch sanitary sewer. Reconstruction of the Wee Links Golf Course will also begin as the new sections of course are graded and shaped. Levee fill will commence once conditions at the borrow site allow. A majority of the levee fill placement has been completed, but several tie-in areas remain near the various structures. As previously mentioned, work on the pump stations and gatewells will continue with completion anticipated by mid-summer.





## Tierrecita Vallejo

Tierrecita Vallejo is a residential development located near the northwest corner of the US Hwy 83 bypass and Highway 2 intersection, directly west of Jack Hoeven Park. This portion of the flood protection project involves the construction of a levee extending west from the new US Hwy 83 bridge and follows the north bank of the Mouse River then crosses the Canadian Pacific Railroad and heads north along Gravel Products. The levee will protect the Tierrecita Vallejo neighborhood and serve as the west tieback for the City of Minot flood protection. The project will feature a closure structure across the railroad allowing Canadian Pacific Railroad to maintain operation while still protecting the Tierrecita Vallejo residents.

The initial field work consisting of soil borings, topographic survey, and wetland delineation has been completed and design is underway. The overall schedule of the project will be fairly aggressive so that design is completed in 2019.

### A NOTE FROM OUR PROJECT ENGINEERS

As construction continues on each of the phases throughout Minot, you may notice some things that make you question, "I wonder why they did that?" In this month's issue, our engineers explain why mock floodwalls are being constructed.

# Mock Floodwalls

## Why are they needed?



These pictures of the floodwalls do NOT represent final products. The staining to proof the colors still needs to be completed.



The Phase MI-1 Fourth Avenue project calls for approximately 2,250 feet of floodwalls, with the work on footing excavations and forms starting this April. But before the contractor could get going on the full-size floodwall construction they had to form and pour a mock floodwall – an engineering requirement on this project. Luke Beckermann, a structural design engineer with Houston Engineering, says the mock-up panel for the floodwall has various purposes. The design calls for self-consolidated concrete, a specialized mix just for this project. This concrete mix will allow the designs on the exterior wall to come out looking well defined – and doing the mock floodwall early allowed for verification of the product. Those designs on the mock floodwall come from detailed form liners, which were also tested when the miniature wall was formed and poured. According to Beckermann, the 8-foot tall mock floodwall allows the design team to ensure that contraction and expansion joints associated with the floodwalls will look and work properly. It also gave the team a chance to check how the recessed lighting that will be built into the floodwall columns will function.

Beckermann said the mock floodwall gives the Souris River Joint Board a chance to do color checks on the paint that will be used on the full-size floodwalls. After applying the right color of paint, the floodwalls will also get a sealant and an anti-graffiti coating applied.

Did you know? The construction of floodwalls and their footings on this phase of the overall project will require 10,500 cubic yards of concrete – or just over 1,000 concrete truck loads! As well, the concrete will be reinforced with rebar weighing approximately 2 million pounds. When finished, the exposed floodwall height will range from 14 to 17 feet along the Phase MI-1 Fourth Avenue project.