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MEMO

Beaver Dam Commerce Park

FROM: Jeff Muenkel, Foth Companies

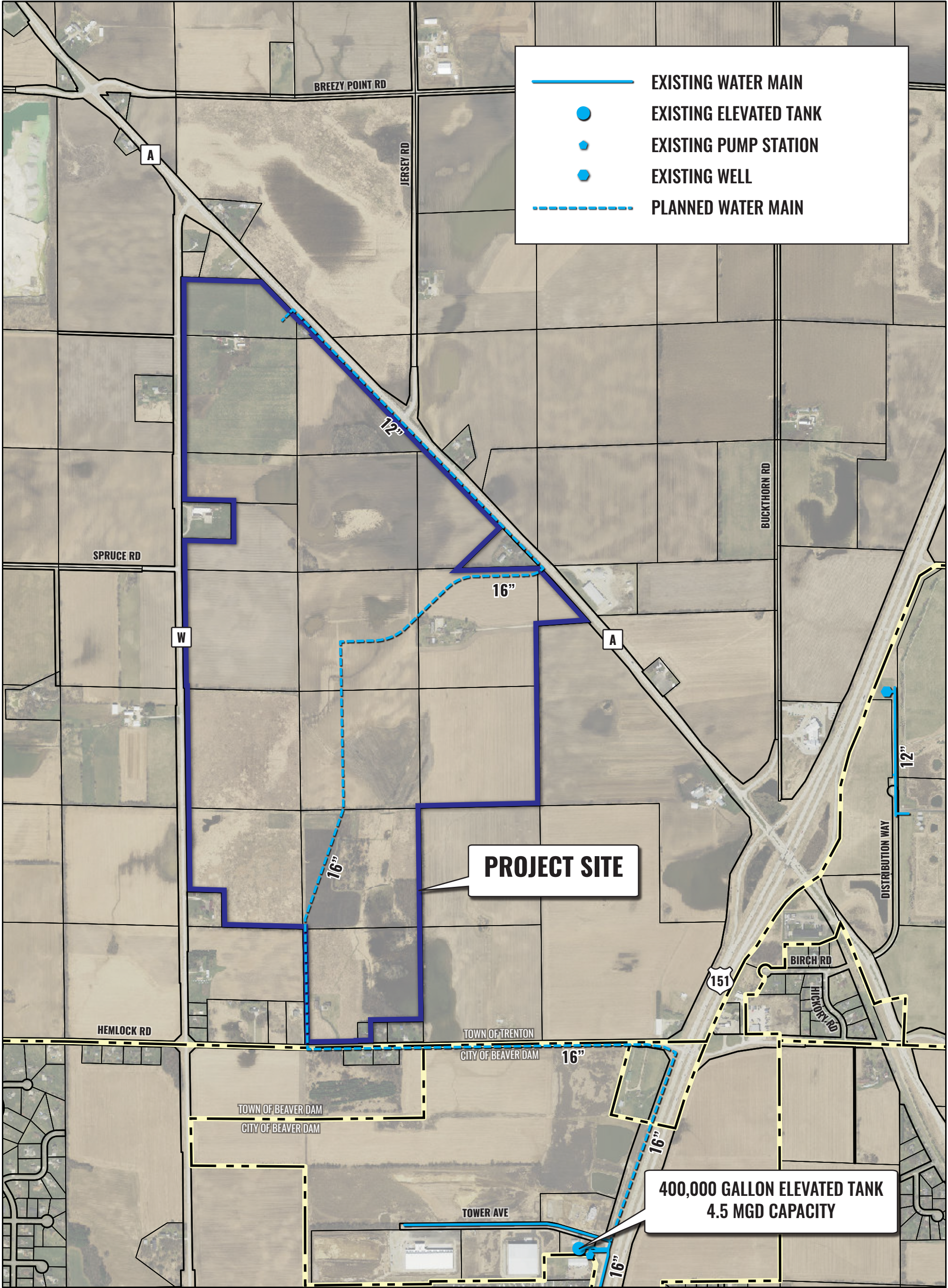
REGARDING: Water & Wastewater Report

DATE: November 8, 2018

This memo serves as documentation for the Wisconsin Certified Sites Program on the following for water and wastewater service documentation to the Beaver Dam Commerce Park:

- Water Service Information:
 - Water service is provided by Beaver Dam Water Utility who operates a centralized water softening plant to treat all water. The plant capacity is approximately 4.5 MGD.
 - Typical average day demand is 2.3 MGD and the peak day demand is approximately 3.0 MGD. The City has a reliable well capacity exceeding the maximum plant production rate.
 - The existing 151 Business Park is served by a 16" main leading to a water booster station having two 1,000 GPM pumps. The station has a reliable supply capacity of 1.44 MGD with one pump out of service. Water is pumped into an adjacent 400,000 gallon elevated tank on Kellom Road, approximately 0.62 miles to the southeast of the proposed Commerce Park. See the attached map.
 - The average water demand for the site is estimated to be 3,000 GPD.
 - Water main sizing to the all areas of the site are based on PVC piping providing a 2,500 gallon per minute fire flow.
 - Conceptual water planning includes 19,700 LF of 16" and 12" water main to serve the north reaches of the site. Normal static pressures are anticipated to be between 56 and 86 PSI. Planned water mains have been looped through the site to add redundancy to the system.
 - Design and construction costs (with contingency) are estimated to be \$4,789,000. It would take approximately four months to design and permit the project and another four months to construct the planned mains.
 - Permits would be required from the ACOE, Wisconsin DNR, Dodge County, and City of Beaver Dam.
- Wastewater Service Information:
 - Wastewater collection and treatment is provided by Beaver Dam Wastewater Utility.
 - The existing 151 Business Park is served by a lift station with a firm capacity of 800 GPM, or 1.15 MGD, and existing flow to the 151 Business Park lift station is from one office building at approximately 1,300 gal/day, or 0.0013 MGD.

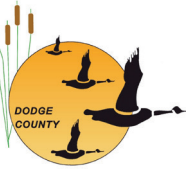
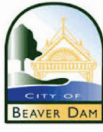
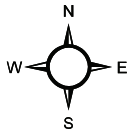
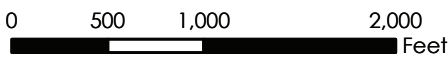
- The existing WWTP average flow design capacity is 4.3 MGD. Beaver Dam estimates they are currently operating at 50% of design hydraulic and loading capacities. The planned additional average flow from the Alliant expansion is 0.45 MGD. Remaining WWTP capacity after the addition of the Alliant site would be approximately 1.7 MGD.
- Conceptual sewer planning includes site mains, a lift station on the south end of the site, and approximately 5,480 LF of 6" force main to the existing lift station. Design and construction costs are estimated to be \$7,096,000 (with contingency). It would take approximately five months to design and 8 to 10 months to construct the sanitary system.
- An alternative gravity sewer conveyance route could be constructed in lieu of the lift station at the south end of the site if a direct route can be obtained via easements from private property owners. This would reduce the initial construction costs and should be investigated during the design phase.
- Permits would be required from the ACOE, Wisconsin DNR, Dodge County, and City of Beaver Dam.

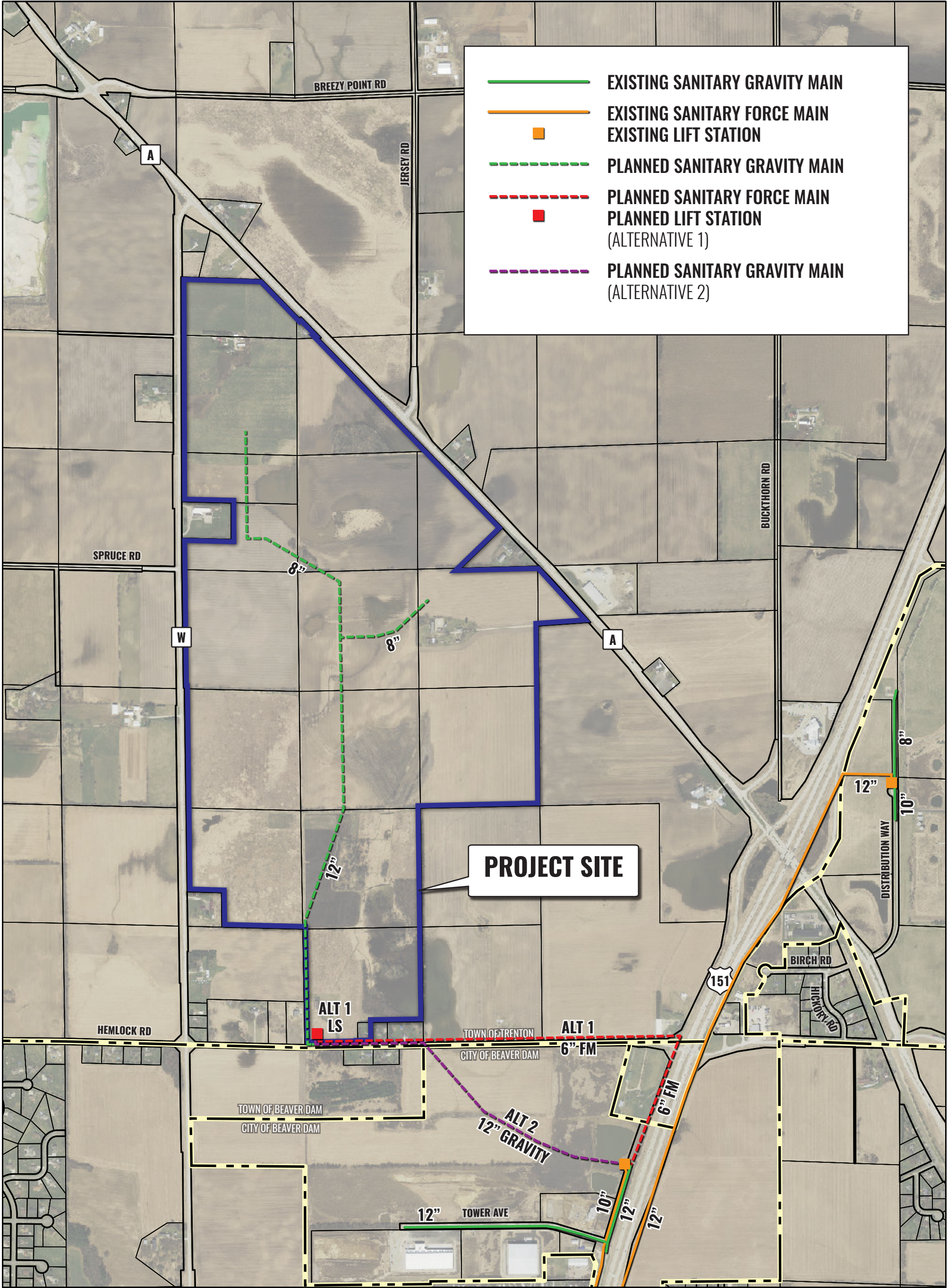


Planned Water Supply Map

Beaver Dam Commerce Park - Beaver Dam, WI

November 2018





Planned Wastewater Conveyance Map

Beaver Dam Commerce Park - Beaver Dam, WI

November 2018

