

City of Verona

Urban Service Area Amendment Request: Epic Campus 6 and 7 expansion

JANUARY 2, 2024

City of Verona

VANDEWALLE & ASSOCIATES

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Introduction

The City of Verona is requesting a 262-acre addition to its Urban Service Area to provide sanitary sewer, potable water, and other urban services to a site adjacent to the existing corporate campus of Epic Systems. As depicted on Map 1, this would be entirely within the existing boundaries of the City of Verona.

The developer, Epic Systems, currently owns all parcels in the USAA and is proposing to develop an office area called Epic Campus 6 and 7. The USAA consists of two separate areas. The first is a reclaimed quarry currently used for crushing activities related to construction throughout the property. The other area is primarily agricultural and open land, with a solar array in the center and various, small Epic facilities buildings. The existing right-of-way consists of County View Rd to the west and CTH PD to the north.

On September 5, 2023, the City of Verona Plan Commission recommended a Resolution to the City Council to initiate an Urban Service Area Amendment for the 262 acres and that the proposed development within the Urban Service Area Amendment is consistent with the City's Comprehensive Plan. On September 11, 2023 the City of Verona City Council adopted the recommended Resolution (Appendix A).

Plan Consistency and Need

1.1. Document Consistency

The City of Verona adopted a resolution on September 11, 2023 approving the USAA expansion and confirming its consistency with the Comprehensive Plan. A copy of that resolution is included in this application as Appendix A.

A majority of the property has a planned land use designation of Office in the City of Verona's Comprehensive Plan, which was updated in 2019. A portion of the property was not within the City of Verona's municipal boundaries during the adoption of the last comprehensive plan and was designated as Commercial by the Town of Verona's Comprehensive Plan, as shown on Map 3. This area has long been expected to be developed by Epic for their office campus expansion.

A wide variety of goals, strategies, and recommendations from the Comprehensive Plan align with the proposed development. In particular, the following objectives from the Comprehensive Plan are aligned with this project:

- Chapter 6: Economic Development and Agriculture:
 - Objective 1-C: Encourage new non-retail commercial development in appropriate locations
 - Policy: Encourage new non-retail commercial development – such as office parks and medical facilities - in areas outside of the downtown area
- Chapter 8: Land Use
 - Objective 1-C: Direct new non-retail commercial development to the “growing edge” of the city.
 - Policy: Direct new non-retail commercial development to areas along the city's corporate limits through annexations and expansions of the city's urban service area

Additionally, the city recently rezoned the area from Rural Agriculture to Suburban Industrial in anticipation of the new commercial development.

Finally, the proposed plans for the amendment area are also consistent with CARPC's 2050 Regional Development Framework. Epic is committed to the three overarching goals of the Regional Development Framework, which are 1) Reduce greenhouse gas emissions to foster community resilience to climate change, 2) Increase access to jobs, housing, and services for all people, and 3) Conserve farmland, water resources, natural areas, and fiscal resources.

The area planned for expansion with this Urban Service Area Amendment request aligns directly with the Framework's strategy of “planning areas for quality business growth”. As the largest private sector employer in Dane County, Epic Systems is shown on the Regional Development Framework's map as a “2050 employment district” (*CARPC Regional Development Framework, Page 29*).

Furthermore, Epic has demonstrated this commitment through land use and operational initiatives on the Epic Campus. Epic plans to further these efforts through each stage of expansion on their campus. A few notable initiatives to highlight include:

- Maintaining storm water control features.
- Using best practices for salt application management to reduce any harmful effects to the environment.
- Limiting the amount of impervious surfaces present on the campus through the design of structures, including approximately 43 acres of green roofs after the construction on Campus 5 is complete.
- The 1.4-megawatt solar field in the USAA on the west side of campus is elevated to allow for farming below and geothermal well field underground.
- The 21-acre quarry pond in the USAA on the northeast side of campus is utilized as a geothermal heat sink to improve the capacity and efficiency of a world-class geothermal system. Utilization of the lake supplants the need for additional traditional geothermal borefields, thereby preserving land from additional development.
- A 2-acre Epic Community Garden for staff to participate in organic community gardening.
- Preservation of environmentally sensitive features such as drainage/flood ways, burial mounds, federally delineated wetlands, and a native prairie remnant.
- Reuse of on-site materials for backfill in other areas of campus to avoid import/export of materials to the site.
- Building designs with durable materials to create long lasting “100 year” structures and with sustainable practices incorporated into building utility systems.
- Fully subsidize multiple bus routes to and from campus for employee use to reduce vehicle traffic. Campus bikes and shuttles are also provided to reduce vehicles as a mode of transportation on campus.
- Pedestrian paths are incorporated into the design of the landscape multi-modal transportation plan. Bike paths, bike racks, and showers are also included in campus design to encourage employees to bike to campus.

1.2. Applicable Neighborhood Plan or Studies

The area for the USAA is within the area of the North Neighborhood Plan, adopted in 2015. The North Neighborhood Plan subdivided the planning area in the Western, Central, and Eastern sub-planning areas. The USAA amendment lies within the Western planning area, with a designated future land use of “Office”. The plan further describes the future land use of the Western planning area as follows:

“The majority of lands within the Western Planning Area are planned for the future expansion of Epic Systems Corporation. Some of these lands may contain office buildings, while other areas will remain open space for geothermal use, solar areas and farming uses. Epic is the largest private employer in Dane County and additional campus growth is anticipated during the next few years. The City and Epic continue to work towards roadway improvements within the area including the reconstruction of Nine Mound Road, CTH PD, and a future northern Epic access point onto CTH PD between Country View Road and Nine Mound Road.”

The proposed plan for the area is consistent with this description. It expands office area, maintains existing renewable energy sources, and continues roadway improvements through the area. A copy of that plan can be found online at <https://www.ci.verona.wi.us/284/North-Neighborhood-Plan>.

The Greater Madison MPO sent the following comment regarding the planned reconstruction of Country View Road.

“Country View Road is currently considered a local roadway/connecting through-route on the Greater Madison MPO bike map. MPO staff suggest providing bicycle facilities on the reconstructed roadway – preferably a separated path, but at the very least bike lanes. Ideally the new facilities would connect to the existing separated path along Epic Lane.”

In response to the MPO's comment, the Country View realignment and any potential connection from there to the west, across the Sugar River, will include bike facilities.

1.3. Need for the Addition to the USA

From the time Epic constructed Campus 1 for their corporate headquarters in 2003, they have continued to steadily grow their corporate campus as needed to accommodate the company's growth. Epic is the largest private sector employer in Dane County and continues to be an incredibly important leader of the regional economy. The table below shows a brief timeline of past Epic corporate campus office expansions.

Campus #	Year	Buildings
Campus 1	2003	Five office buildings; structured parking
Campus 2	2007	Four office buildings; structured parking
Campus 3	2011	Three office buildings; structured parking
Campus 4	2013-2023	Five office buildings; food service building, structured parking
Campus 5	2014-2022	Eight office buildings; food service building; structured parking

Epic has projected that hiring will continue at large enough numbers to warrant the investment in planning and construction of Campus 6 and Campus 7. Lands west of the current campus have been determined as optimal for Epic employee proximity and business function. The USAA is needed because part of the planned Campus 6 and most of Campus 7 are outside of the current USA. In addition to commercial office buildings, Epic anticipates other support buildings needed to facilitate the needs of the employees on site.

Epic also recently purchased the old Wingra Quarry parcels and annexed the parcels into the City of Verona. A utility building was permitted and constructed on this property and is currently served by a well and a sanitary holding tank. Epic is requesting to add these lands to the USA so that the well and holding tank can eventually be replaced with sewer service.

Intergovernmental Cooperation

2.1. Document Notification of Adjacent Local Governmental Units

The Town of Verona was notified of the USAA via email on August 9, 2023. The Town Administrator acknowledged receipt on August 10, 2023. A copy of this communication is included as Appendix B.

2.2. Adjacent Local Governmental Unit(s) Objections or Support

The City of Verona has not received any comments from adjacent local government units after notifying them of the proposed USAA. Any documented letter of support, neutrality, or opposition from the Town of Verona will be provided to CARPC.

Land Use

3.1. Proposed USAA Boundary and Existing Rights-of-Way Map

See Maps 1 and 2. The proposed addition to the USA is comprised of 12 existing parcels. The existing and future land uses on the property are described in the table in section 3.2. There are no existing housing units on the property, and no housing units are planned as a part of this development. Proposed land uses do not reflect current City of Verona land use designations for the area and are subject to change.

3.2. USA Amendment Area Data

Proposed Land Use	Total Acres	Existing Development	Environmental Corridor
Office (Corporate Campus)	30	-	-
Agricultural and Open Land	50	161	1.5
Construction Staging	0	58	-
Utilities (Solar Array)	16	16	-
Water	21	21	21
Parking	1	0	
Driveway	6	0	
Street R-O-W	16	7	-
Other Open Space	122	-	19.9
Total	262	262	42.4

**Sums of individual cells may not exactly match subtotal due to rounding.*

3.3. Existing and Planned Land Use Map

Map 2 depicts Existing Land Use for the amendment area and Map 1a depicts the conceptual plan for development. See Introduction and Section 3.1 for more information.

Map 3 depicts the Planned Land Use from comprehensive planning documents. The area has long been planned for future expansion of the Epic Campus, as further described in Section 1.1.

3.4 Proposed Quantity and Type of Housing Units

Epic Systems is not proposing any housing units within the Urban Service Amendment Area.

3.5 Land Use Phasing

The requested Urban Service Amendment Area is more than 100 developable acres, and thus requires a 10-year staging map for this application. Map 1a depicts the 10-year staging plan.

Natural Resources:

4.1. Natural Features

See Maps 4 and 4a. There is one area within the 100-year floodplain near the southern tip of the USAA that is near an intermittent stream. There is a water body within the quarry portion of the USAA and a majority of that portion is internally draining. There is another small internally drained area within the larger portion of the USAA. A wetland delineation study was performed on the site and is included as Appendix C.

Additionally, there are portions of the project within CARPC's Stewardship and Protection Areas. See Map 4 for Stewardship and Protection Areas, and Map 4b for proposed Environmental Corridors. All existing Protection Areas, aside from a section in the northeast corner of the quarry that has received a wetland exemption from the DNR, have been designated as Environmental Corridors. All waterbodies in the USAA have also been designated as Environmental Corridors.

In addition to the Protection Areas, three other areas have been included in the proposed Environmental Corridor.

1. The Stewardship Area surrounding the Protection Area in the Southwest portion of the USAA.
2. The stormwater pond directly south of the solar array
3. The man-made stormwater pond on the northwest portion of the site along Country View Road. The intention is for it to be relocated during the new development. A future relocation of the stormwater pond will require a WI DNR artificial wetland exemption. At that time the City would request a minor amendment to remove it as an Environmental Corridor.

There are two other general areas designated as CARPC Stewardship Areas that have not been included in the proposed Environmental Corridor. The area in the quarry is currently used for crushing operations to support construction activities on the Epic Campus and would not be suitable for an environmental corridor. The entire quarry received a wetland exemption from the WI DNR. The WI DNR exemption letter is attached in the appendices. There is no immediate anticipated development on the quarry site. Epic is requesting to add these lands to the USA so that the well and holding tank can eventually be replaced with sewer service. Lastly, there are scattered areas surrounding the northern stormwater pond that were designated as Stewardship Area. The wetland delineation determined that the stormwater pond is the only wetland in that portion of the USA. Therefore, the non-wetland areas outside of the 75 ft buffer were not included in the Environmental Corridor.

The City is also requesting minor amendments to the existing Environmental Corridor within the current Urban Service Area as shown on Map 4b. The suspected wetland in the existing Environmental Corridor was subject to an assured wetland determination and was found to not be a wetland. A copy of that assured delineation is attached in the appendices. The amendment is necessary to accommodate for existing development constructed in this area and allow for planned construction of the Campus 6 and 7 buildings.

The Wisconsin DNR Bureau of Natural Heritage Conservation for Endangered Resources Review Preliminary Assessment was completed on August 14, 2023. The Preliminary Assessments for the two areas for the application are attached as Appendix D and E. The Preliminary Assessments indicated that a full Endangered Resources Review was required. That review was completed on September 25, 2023. The review is attached as Appendix F and indicated that there are 0 species with required actions, 5 species with recommended actions, and 9 species with no follow-up actions. Details of the species with recommended actions have been provided to CARPC and the recommendations will be followed to the extent possible within the development area and may be exceeded in some circumstances.

When designing habitat space, Epic looks at the functionality of a plant list as a whole and the ability of each to contribute as part of an ecosystem as a key goal of selection. For example, the Epic Campus includes extended nectar and pollen sources from April-November, grasses for habitat, plants with stems for overwintering eggs, and the ability to infiltrate water. Some species tend to be more generalist in their foraging habits so the diversity of plants (including the large number of native plants) on the Epic Campus provides a large and suitable food source. The biggest factors to success for pollinators on site are nesting habitat (limiting site disturbance and soil compaction) and overwintering habitat (allowing the existence of buffer strips, brushy fence lines, and woodlands), minimizing pesticide and chemical usage, and making a sustained effort to properly restore areas that are disturbed. For other species on site, Epic's stormwater management practices help to keep the adjacent wetlands and sloughs productive and clean. Preservation of open upland sites nearby the wetlands provides availability of suitable nesting grounds.

4.2. Stormwater Management Facilities

Stormwater facilities for the future development will be privately owned and maintained. Stormwater management areas will require approval by the City and meeting all requirements of Dane County and the state of Wisconsin. The stormwater management standards are described in greater depth in Section 5.9.

4.3. Environmental Corridors

See Map 4b and section 4.1 for more details. Within the proposed USA amendment area, there are a total of 42.4 acres proposed as Environmental Corridor.

The City will request that CARPC amend the existing Environmental Corridor as shown on Map 4b. These corridor changes would remove 16.1 acres and is classified as a minor amendment because they do not include water bodies, floodplains, wetlands, minimum buffer strips, or steep slopes adjacent to water bodies. As shown on Map 4b, there are a few small areas where the requested corridor amendment areas conflict with existing or planned buildings. These areas comprise the existing corridor amendments and are shown in hatched purple color.

4.4. Proposed Environmental Corridors Map

See Map 4b.

4.5. Environmental Corridors Requirements

The proposed corridor achieves the intended goals outlined for Environmental Corridors in the Water Quality Plan for Dane County. It protects water quality and public health by including the intermittent stream area as part of the corridor, as well as the quarry pond. See Map 4 for Stewardship and Protection Areas, and Map 4b for proposed Environmental Corridors. All existing Protection Areas in the USAA, with the exception of a small area in the northeast corner of the quarry that has received a wetland exemption from the WI DNR, have been designated as Environmental Corridors. A few additional areas have also been designated as an Environmental Corridor. See section 4.1 for more detail.

Utilities and Stormwater Management

5.1. Proposed Sanitary Sewer

The sanitary sewers in this amendment area will ultimately drain to the Lower Badger Mill Creek interceptor. It is anticipated all sewers in the amendment area will be local sewers.

In the western portion of the amendment area, east of and adjacent to Country View Road, sanitary sewer will be extended along Country View Road north from the existing City of Verona Country View Lift Station.

The eastern portion of the amendment area (at the southwest quadrant of CTH PD and Northern Lights Road) will all drain directly to the LBMC Interceptor.

Laterals will be provided for future private connections. Proposed sanitary sewer routes are shown on Map 5.

The existing Country View Pump Station is rated to 250 gpm or 360,000 gpd during peak hour flows. The current average day flow measured during the 2019 Masterplan is 73,700 gpd with an average peak flow of 113,800 gpd.

The downstream gravity mains directly upstream of the LBMC Interceptor currently have additional capacity, as shown in Figure 1.

5.2. USAA Average Daily and Peak Wastewater Flow

2021 average daily flow to the Nine Springs wastewater plant from the City was 1.145 million gallons per day (January to December 2021 figures).

The City's 2019 Wastewater Master Plan analyzed future development areas within and adjacent to the City using flow monitoring data and a calibrated model. This amendment area was not included in that model.

The proposed future flow from the 262-acre expansion area is estimated at 184,410 gallons per day (average daily flow) and 371,000 gallons per day for peak flow, based on adding up to 8,400 office workers to the population. The peaking factor equates to 2.01, which is based on flow monitoring data at MMSD Pump Station 17 completed by the City in 2017. This data is based on Epic System's projections and previous flow studies as well as Administrative Code NR110. See spreadsheet included as Appendix I for source of assumptions and calculations.

To evaluate the local gravity and forcemain system, the calibrated 2019 hydraulic model was run with the future flows under the 10-year, 24-hour design storm with a 4.5 peaking factor. The results predict the existing gravity and forcemain system is adequate to serve the developments with an upgrade to the Country View Pump Station. The resulting hydraulic profile of the areas downstream of the new developments are shown in Figure 2.

5.3. Average Wastewater Treatment Plant Daily Flow

The sanitary sewers in this amendment area will all drain to the Lower Badger Mill Creek (LBMC) Interceptor. The LBMC Interceptor flows to Pump Station 17 in the southwest side of Verona and is then pumped to the MMSD Nine Springs regional wastewater treatment facility in Madison. The proposed future flow for this amendment area is calculated at approximately 22 gallons per day, per person, based on an adjusted average base flow for day use. The City continues to reduce its Infiltration/Inflow with maintenance of the system. The sanitary sewer will be approximately located through the site as shown on the mapping included in this submittal, see Map 5.

The western portion of the amendment area, east of and adjacent to Country View Road, drains to the City of Verona's Country View Lift Station which pumps flow east via forcemain before discharging to gravity sewer which connects to the LBMC Interceptor near the intersection of W Verona Ave and N Nine Mound Rd. The existing Country View Lift Station was designed with the ability to be reconfigured to handle future growth at Epic. The lift station has hydraulic capacity to handle the flows from the proposed USAA but will need pump and motor upgrades consistent with the original plans.

The eastern portion of the amendment area (at the southwest quadrant of CTH PD and Northern Lights Road) will all drain directly to the LBMC Interceptor.

5.4. Wastewater Treatment Plant Capacity

The MMSD Nine Springs regional wastewater treatment facility serves the City and will provide wastewater treatment for development within the amendment area. Capacity information for the Nine Springs treatment plant can be obtained from Curt Sauser at (608) 222-1201, ext. 269. The downstream capacity of the LBMC Interceptor is 5.53 MGD south of Verona Ave. Current flows at PS 17 are 1.15 MGD (2021); therefore, this pipe has sufficient capacity for this development.

5.5. Proposed USAA Public Water Supply

The Central Pressure Zone of the water system serves this amendment area. The Water System Master Plan completed in November of 2015 shows the proposed amendment area as future Epic development. The static pressure ranges at street level for the amendment area range from 39 to 49 psi on the northern limits to 89 psi on the southern portion of the area. See Map 5 for the proposed public water line location.

In the western portion of the amendment area, east of and adjacent to Country View Road, existing water main that currently ends at Epic Lane (south of Milky Way) is proposed to be extended north along Epic Lane and up Country View Road where it will connect to Campuses 6 & 7. A second connection to existing water main in the Campus 6 & 7 area is proposed on Epic-owned lands northeast of the solar fields, near the maintenance buildings from existing water main that tees off of Hubble Road. All proposed water main in the amendment area is planned to be 12-inch, consistent with the City's 2015 Water System Master Plan for this area.

The eastern portion of the amendment area (at the southwest quadrant of CTH PD and Northern Lights Road) is planned to connect to a 12-inch water main stub currently being constructed off of CTH PD to the south.

The entire City system is planned to be looped eventually with a connection from Well 5 north to CTH PD, which is also a requirement for the Ardent Glen subdivision located directly north of Epic, across CTH PD.

5.6. Estimated USAA Daily and Peak Hourly Water Demand

Projected 2040 city-wide average daily demand is 3.33 million gallons with a peak hour demand of 10,300 gallons per minute (City of Verona 2015 Water System Master Plan). The 2015 Water System Master Plan evaluated metered data for existing buildings at the time and estimated a per capita demand for Epic employees of 10 gpcd. Therefore, the proposed demand for this amendment area is calculated at approximately 84,000 gallons per day (8,400 population * 10 gallons per capita per day). The Peak Hour Demand is estimated to be 201 gallons per minute using a factor of 3.44 based on the 2015 Water System Master Plan. See spreadsheet included as Appendix I for source of assumptions and calculations.

5.7. Average Daily and Peak Hourly Water Demand

The 2022 City pumping records show the city-wide average daily demand is approximately 1.2 million gallons with a maximum daily demand of 2.6 million gallons. Peak hourly demand is 2,880 gallons per minute.

Current demand is based upon user class (residential, commercial, etc.) and not a pressure zone. In general, the Central Pressure Zone peak hour factor is 3.44, per 2015 water master plan. Per data from the 2015 Water System Master Plan, the average daily demand is less presently (2022 data) than in 2015 (0.94 million gallons per day in 2022 vs 1.19 million gallons per day from the 2015 water master plan). See spreadsheet included as Appendix I for source of assumptions and calculations.

The current (2022 data) city-wide average daily demand is approximately 1.2 million gallons; therefore, the City of Verona is using less water currently versus the 2015 master plan. The central zone is approximately 78% of the city-wide demand (1.2 million gallons per day / 0.94 million gallons per day = 0.7833 (78.3% of overall average million gallons per day)).

The central pressure zone average daily demand in 2022 is 940,000 gallons per day (0.7833 x 1.2 million gallons per day = 0.94 million gallons per day) and the peak hour demand is estimated to be 1,890 gallons per minute (0.94 million gallons per day x 2.14 (maximum day factor) = 2.0 million gallons per day. 2.0 million gallons per day * 1.36 (peak hour factor) / 24 / 60 = 1890 gallons per minute).

5.8. Water Supply System Capacity

The City of Verona has 1,100,000 gallons of elevated water storage in three water towers, and 500,000 gallons of ground reservoir storage and a pumping capacity of 7,670 gallons per minute. The City currently has six wells and operates as follows: Well 1 pumps 450 gallons per minute, Well 2 pumps 1,100 gallons per minute, Well 3 pumps 1,750 gallons per minute, Well 4 pumps 1,900 gallons per minute, Well 5 pumps 2,200 gallons per minute, and Well 6 pumps 1,400 gallons per minute, totaling 8,600 gallons per minute. The City's firm pumping capacity with its largest well out of service is 6,700 gallons per minute.

The City's water system is currently composed of three (3) pressure zones. This project is within the Central Zone, which contains Wells 1 – 5, a 300,000-gallon water tower, and a 500,000-gallon ground reservoir with

firm pumping capacity of 3,000 gallon per minute supply booster station. Total pumping capacity within the Central Zone is 7,400 gallons per minute.

This amendment area demand of 201 gallons per minute during the peak hour is 2.7% of the Central Zone pumping capacity (201 divided by 7,400 gallons per minute). The City updates their Water Master Plan every 10 years. The next update will start in 2024. As demand increases, the City will address additional capacity and storage needs. If additional wells and or storage are needed, they will be added to the system.

5.9. Proposed Stormwater Management Standards

The western portion of the amendment area (east of and adjacent to Country View Road) drains southwest to the Sugar River. There are two existing stormwater basins in the western portion of the amendment area.

- One basin is located approximately 1,000 feet south of CTH PD on the east side of Country View Road. This was a historic sediment basin that does not meet today's stormwater standards. It is anticipated that this basin will be removed as a part of the development and a new basin (or set of basins) will replace it downstream (southwest) of its existing location that meets today's stormwater treatment standards, detailed below.
- A second basin is located south of the solar fields on the east side of Country View Road. This basin treats water from nearby buildings. It is anticipated that this basin will eventually shift downstream (southwest) and be enlarged to capture existing developments and additional development from Campuses 6 and 7. The new basin would be designed to meet today's stormwater standards, detailed below.

The eastern portion of the amendment area (at the southwest quadrant of CTH PD and Northern Lights Road) is a decommissioned quarry area. Historically this area would have drained southwest to the Dry Tributary to Badger Mill Creek. Due to quarrying operations, this area is now internally drained and is planned to stay that way. There is standing water in the old quarry, and water levels fluctuate and are closely tied to groundwater levels in the area. Should buildings be proposed in this area, the City would require that buildings be set two-feet above the back-to-back 100-year events and that an outlet (either gravity or pumping) be installed to the Dry Tributary to Badger Mill Creek.

The City of Verona has adopted construction site erosion and stormwater run-off control standards in Chapter 15-2 of the Code of City Ordinances. Chapter 15-2 has standards for sediment control, oil and grease control, runoff rate control, infiltration and thermal control for new developments that will occur in the amendment area in accordance with Wisconsin Administrative Code NR 151 and NR 216, and the Dane County Stormwater Management and Erosion Control Ordinance. For new development the standards in the Ordinance are summarized as follows:

- Sediment Control: Retain soil particles greater than five (5) microns resulting from a one-year, 24-hour storm event.
- Oil and Grease Control: Treat the first 0.5 inches of run-off using best management practices at commercial and industrial sites.
- Runoff Rate Control: Maintain pre-settlement peak run-off rates for the 1, 2, 10, 100 and 200-year, 24-hour storm events.
- Thermal Control: Stormwater management plans must include provisions and practices to reduce runoff temperatures for sites within the City since the entire City of Verona lies within the Upper Sugar River and Badger Mill Creek Watersheds.
- Infiltration: Infiltrate sufficient runoff volume so that post-development infiltration volume is a least 90% of the pre-development infiltration volume, based on average annual rainfall. Where feasible, strive for 100% stay-on.

The above standards will reduce the impact of development through minimization of sediment in stormwater runoff both during and after construction.

The City's Ordinance is enforced through the issuing of erosion control and stormwater management permits as part of the building permit process. The City Engineer reviews all erosion control and stormwater management permit applications. Often these reviews result in modifications to the proposed plans.

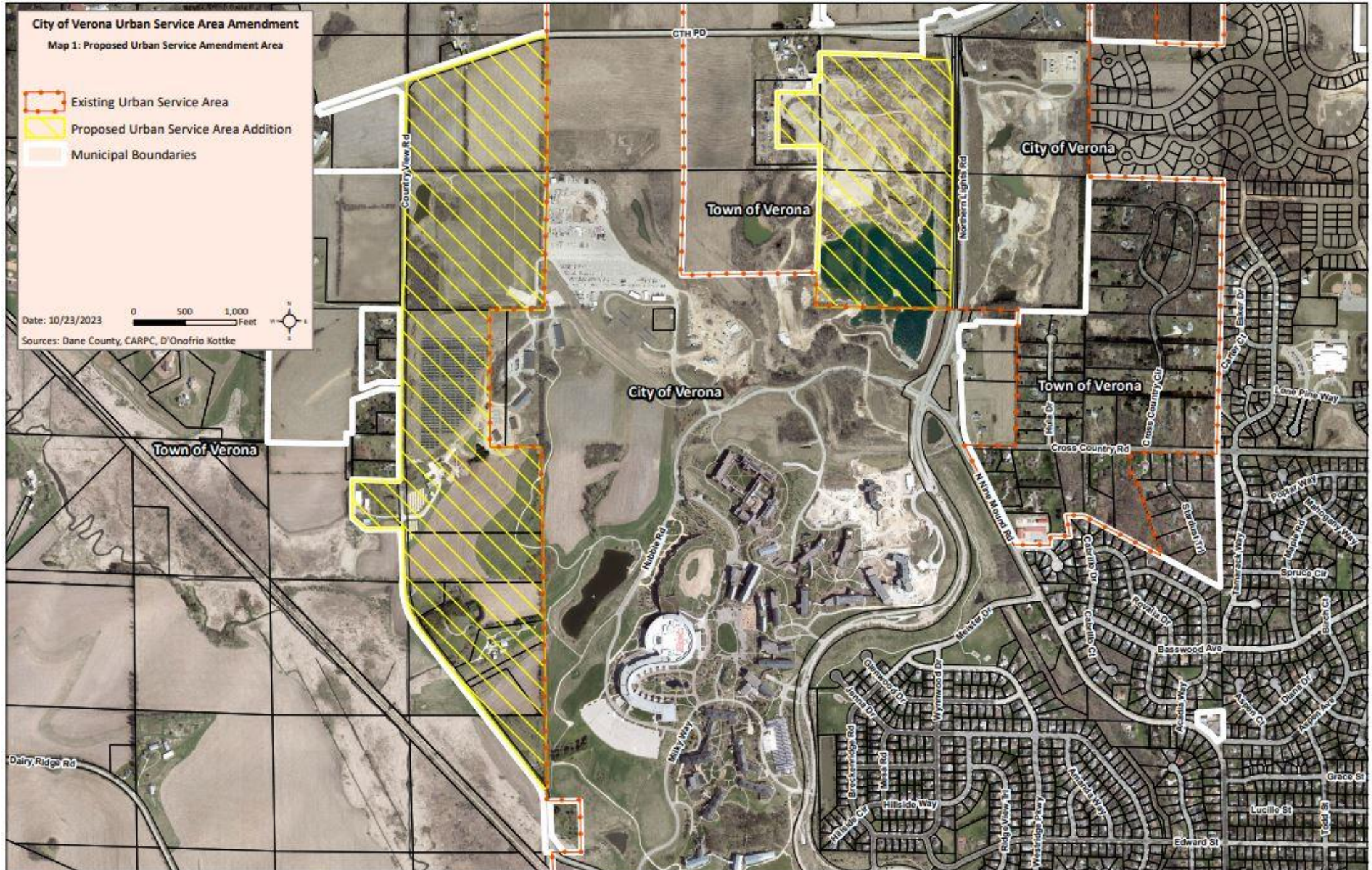
The City has committed to follow up on the approved erosion control plans through the Public Works Staff. Staff follows up on the stormwater management plans that have been implemented and inspects commercial and industrial construction sites for compliance with erosion control plans.

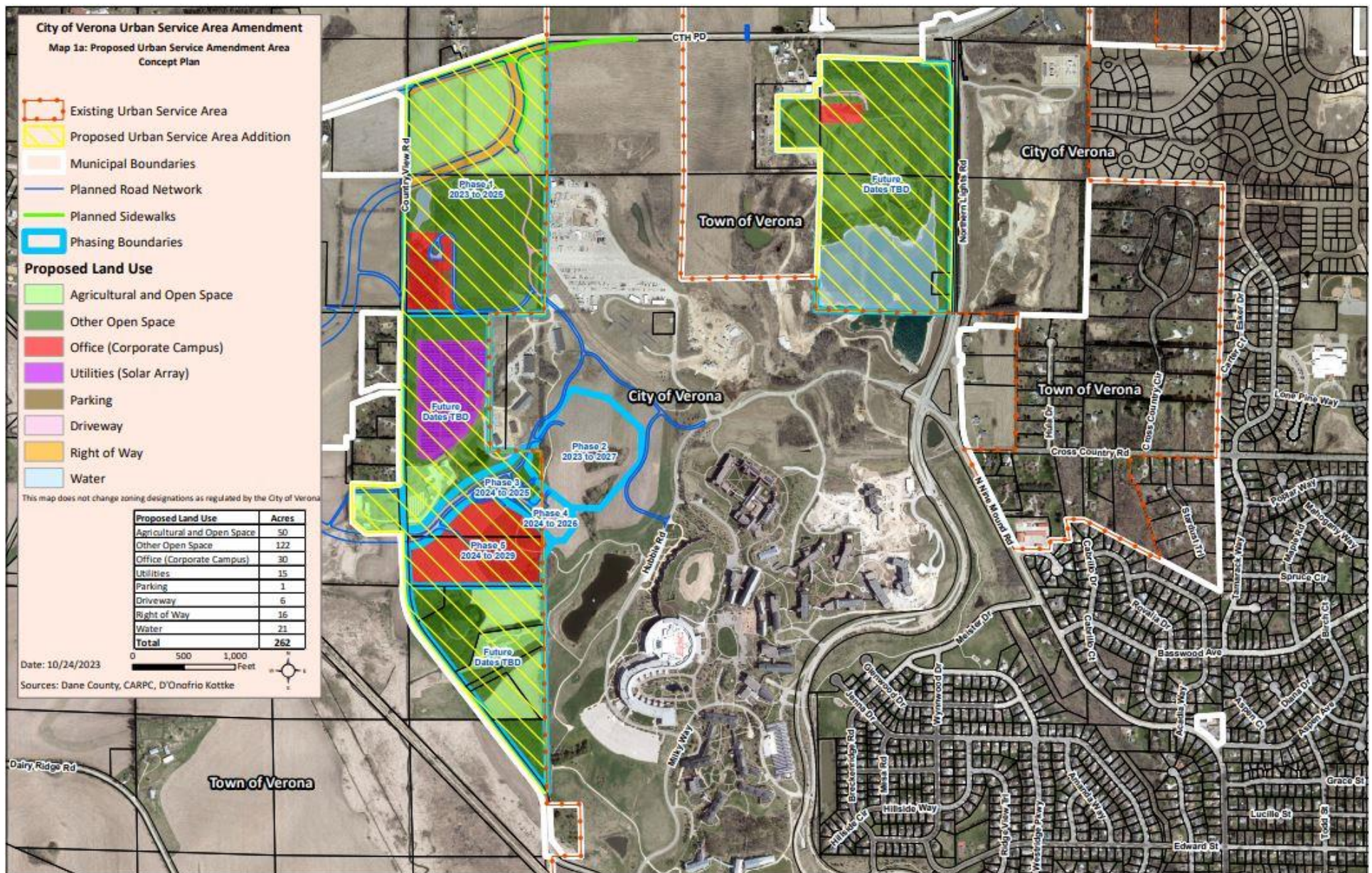
The issuance of the erosion control and stormwater management permits by the City Engineer requires the implementation of erosion and stormwater management controls as the first step in the construction process. Failure to meet this requirement subjects the contractor to cease work orders and fines. The requirement to implement stormwater management controls is enforced by both the Public Works Department and Building Inspection Department Staff.

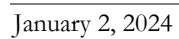
Stormwater will not directly discharge to wetlands. A full stormwater management report will be provided with future steps in the development review process, and the development will comply with all stormwater requirements.

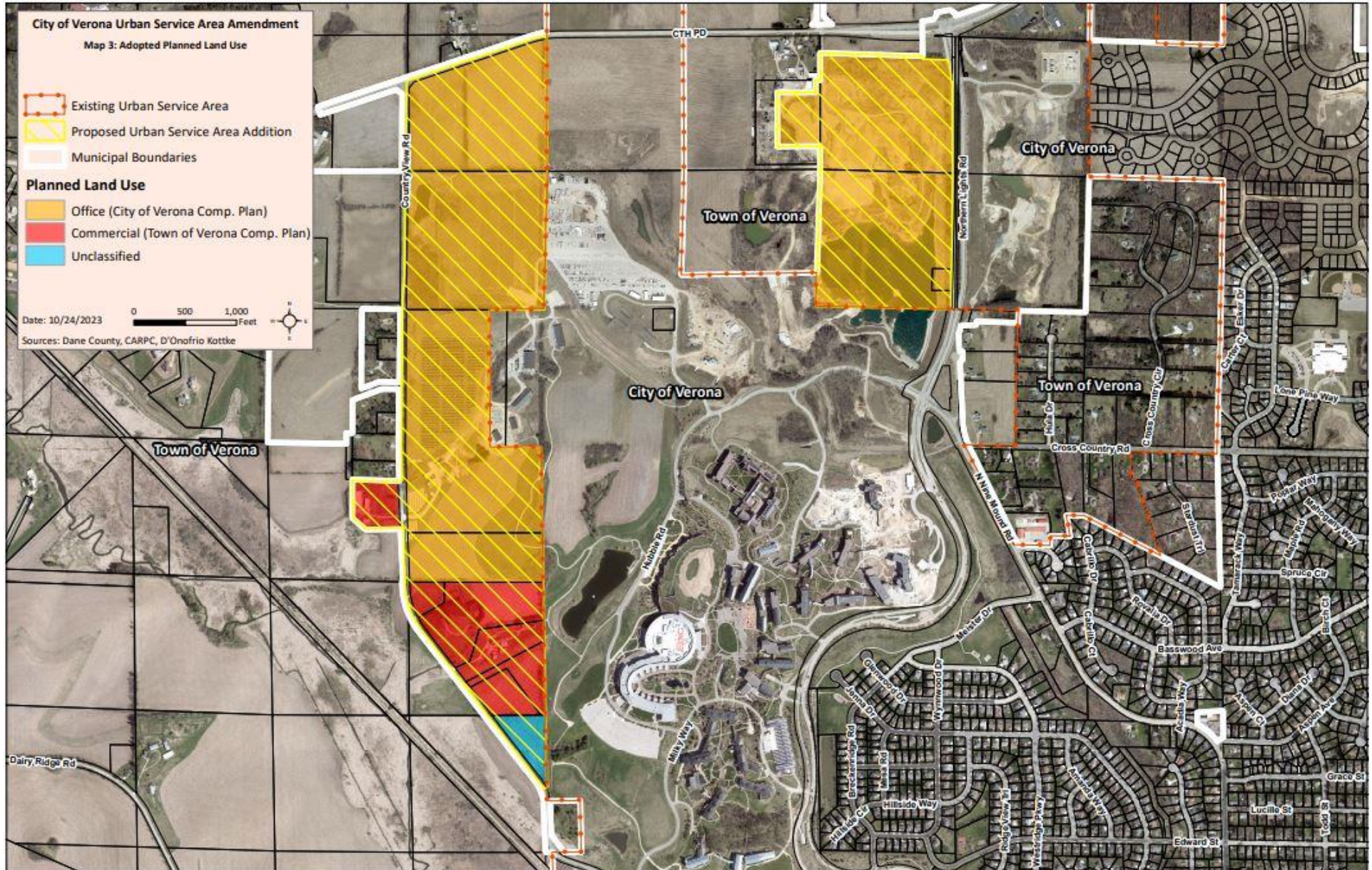
5.10. Stormwater Management Plan

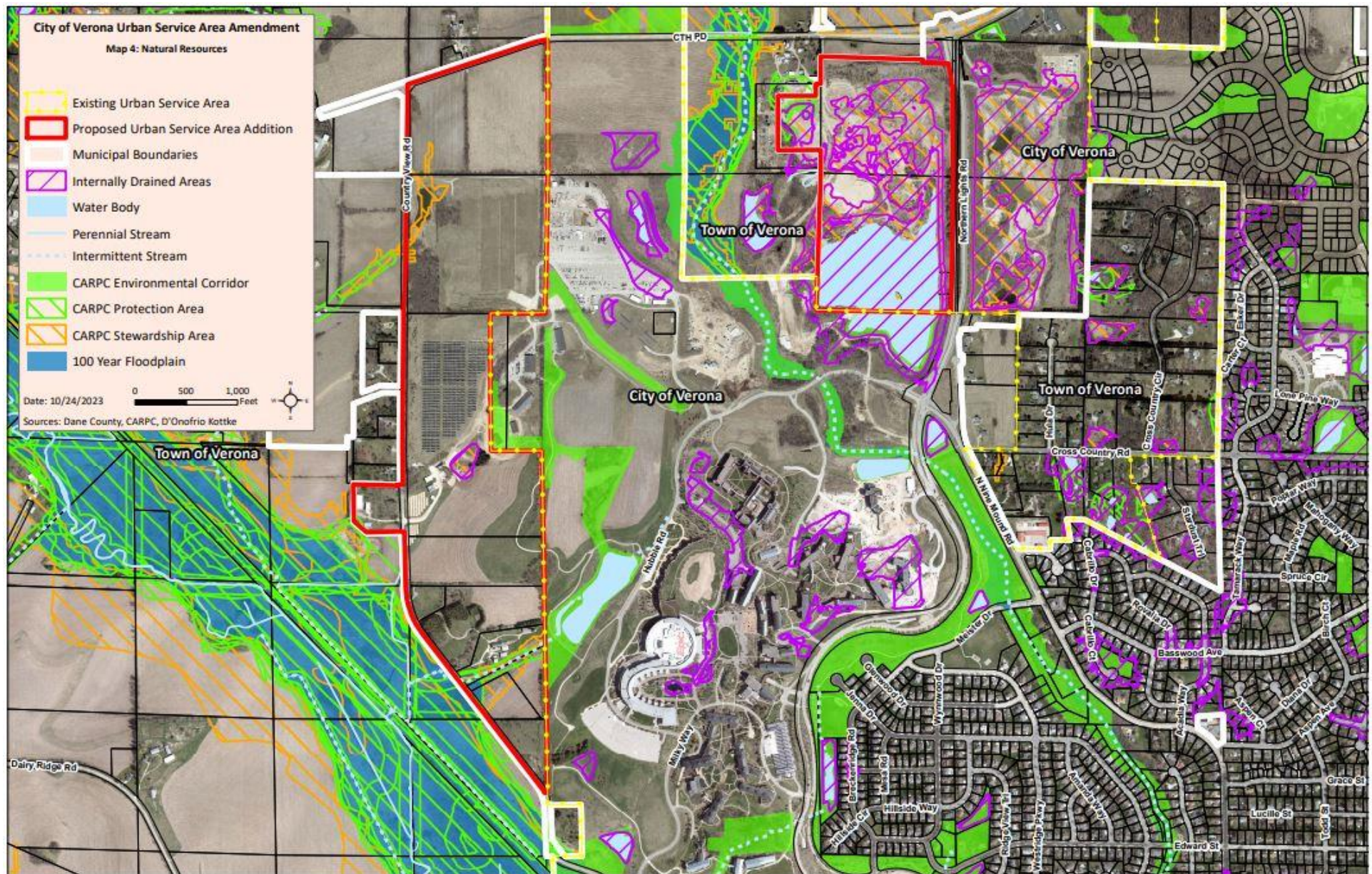
The City of Verona has adopted stormwater management requirements that are as stringent as or more stringent than current Dane County stormwater management requirements. The City has a consultant who is responsible for insuring that private and public stormwater management facilities within the City of Verona are being managed and maintained according to the approved management plans for these facilities. The ownership and management follow the City's development procedures. Stormwater management facilities that are designed at the plat level or certified survey map (CSM) level and located in outlots that are dedicated to the public, are ultimately owned and managed by the City. Facilities that are not dedicated to the City are owned and maintained by the property owner.

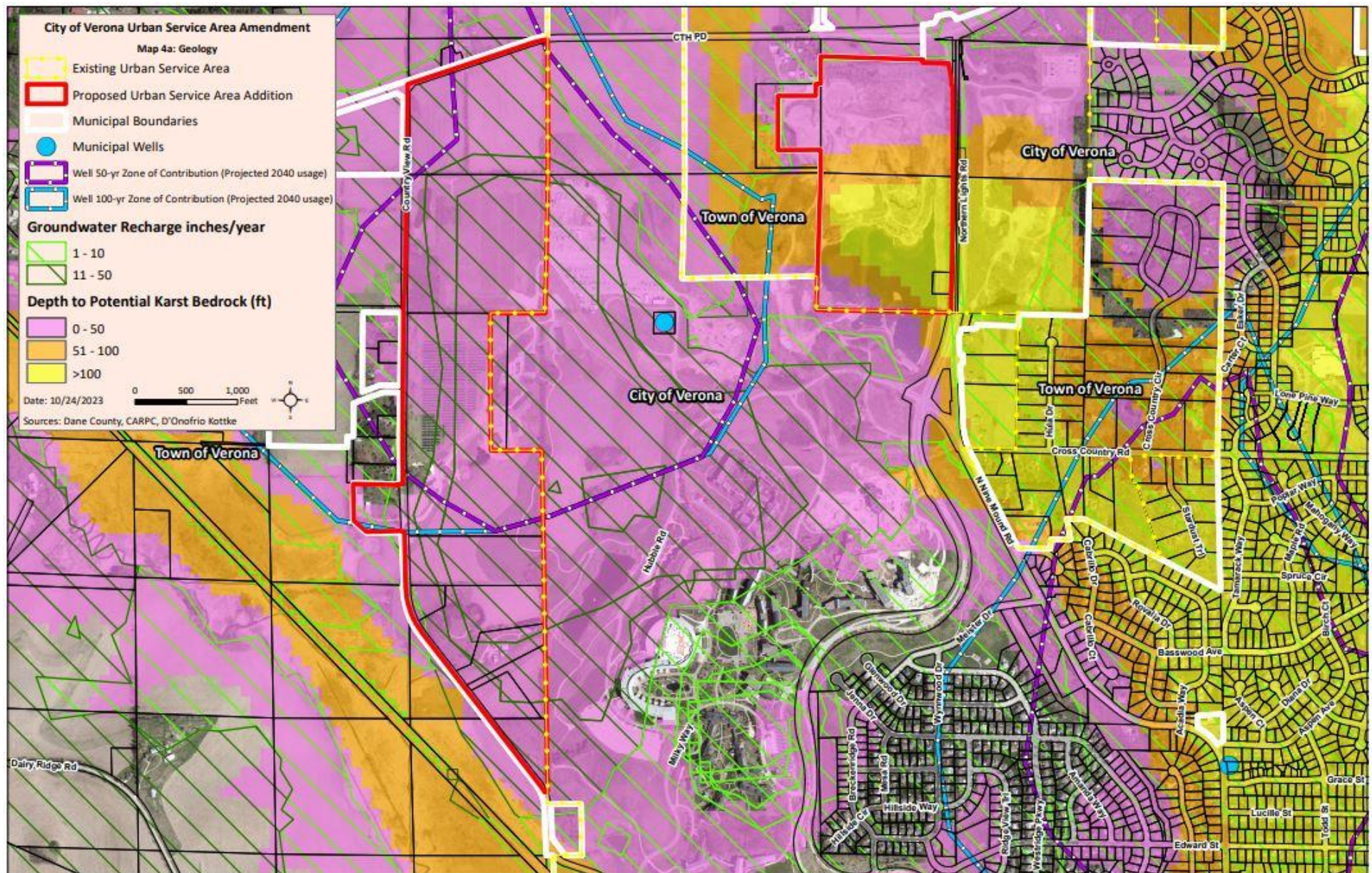


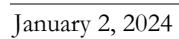












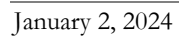


Figure 1: Existing Average Daily Flow and Average Day Peak Flows in Downstream Piping

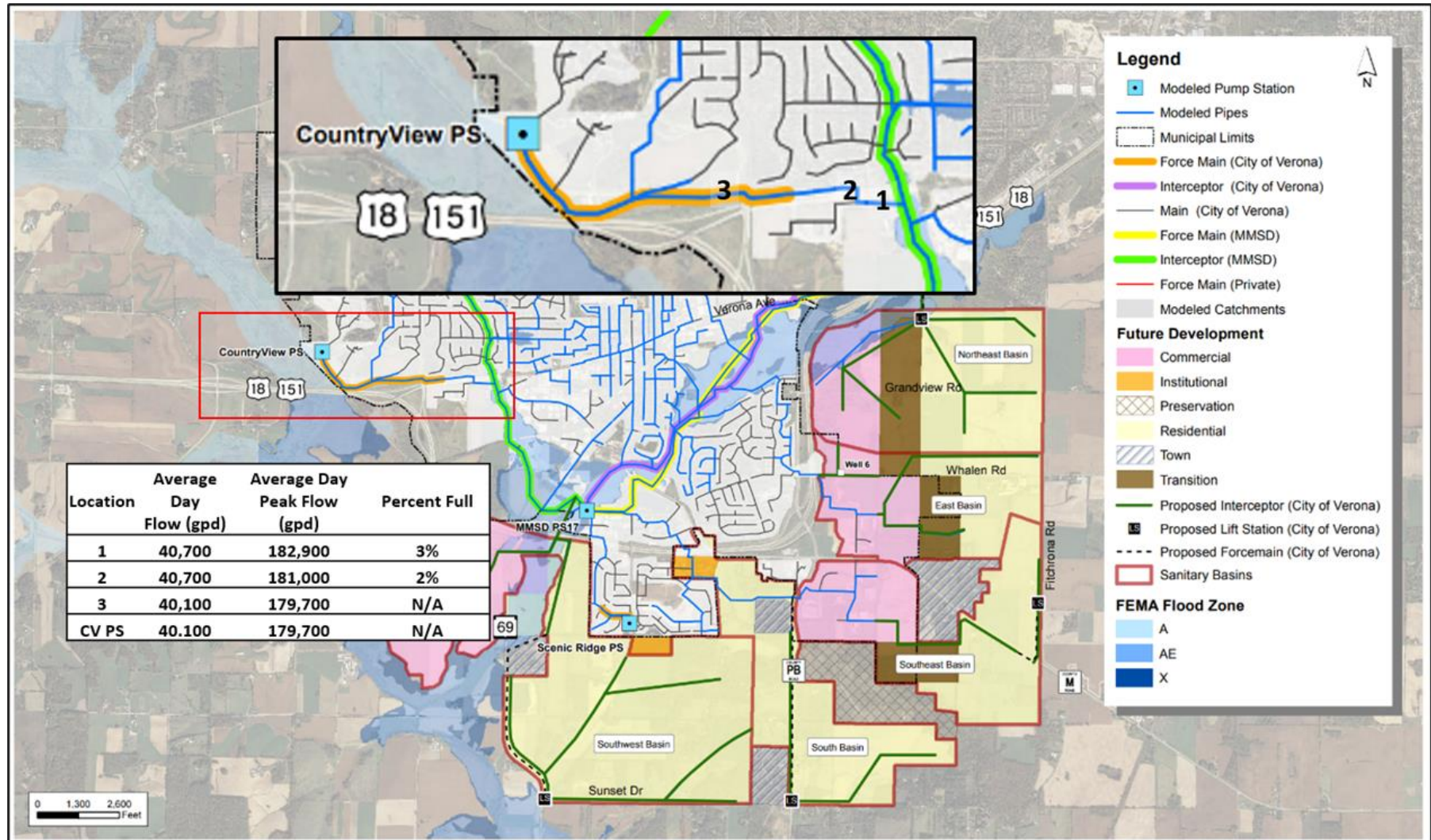
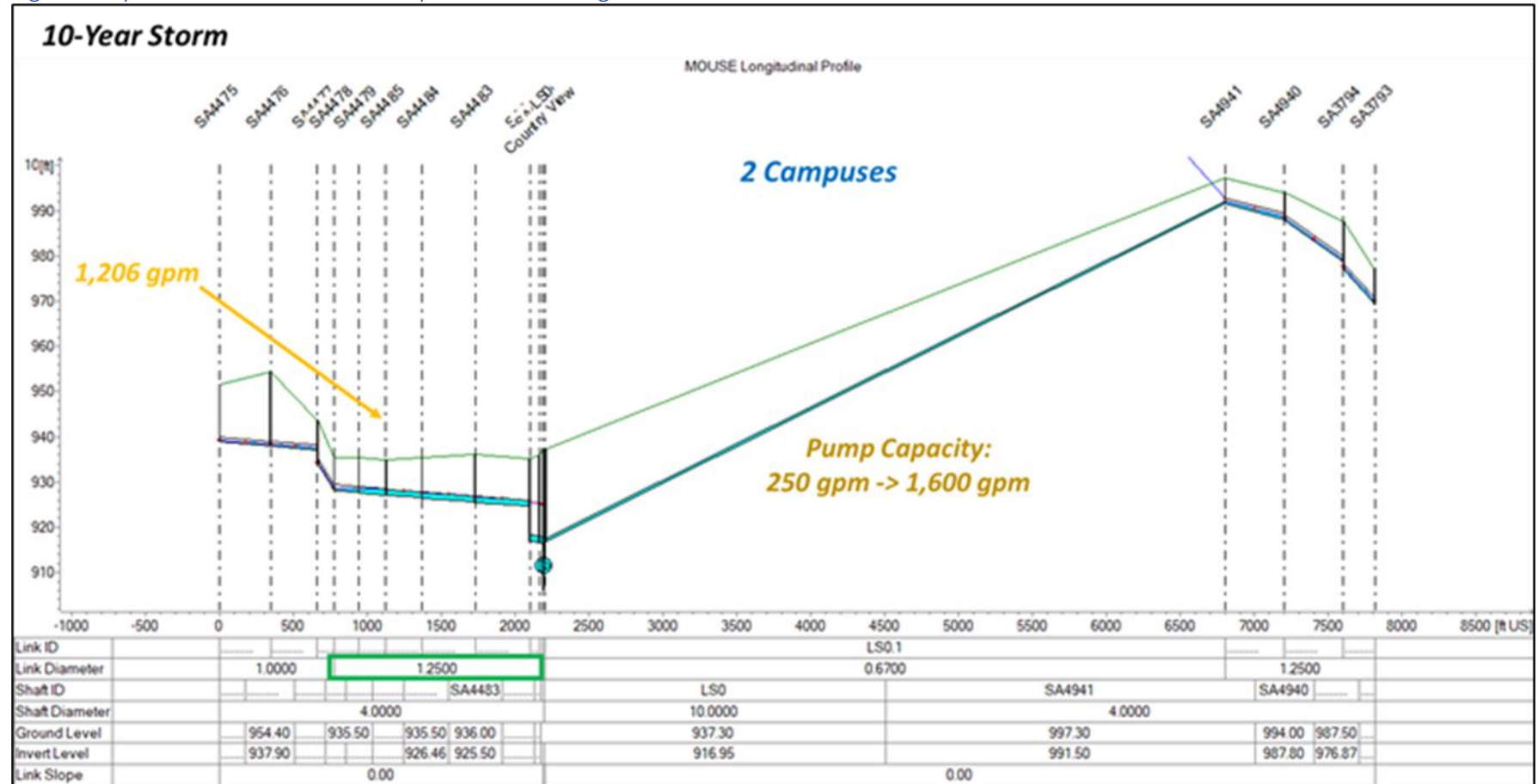


Figure 2: Hydraulic Profile under the 10-year 24-hour Design Storm



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Appendix B: Town of Verona Notification

Appendix C: USA Expansion Wetland Delineation

Appendix D: Wisconsin DNR Bureau of Natural Heritage Conservation for Endangered Resources Review Preliminary Assessment Section A

Appendix E: Wisconsin DNR Bureau of Natural Heritage Conservation for Endangered Resources Review Preliminary Assessment Section B

Appendix F: Wisconsin DNR Bureau of Natural Heritage Conservation for Endangered Resources Review Assessment

Appendix G: Artificial Wetland Exemption- Quarry

Appendix H: Assured Wetland Determination- Existing USA

Appendix I: Sanitary and Water Flow Calculations