

VILLAGE OF CROSS PLAINS

URBAN SERVICE AREA AMENDMENT REQUEST: WEST SIDE OF BREWERY ROAD

JULY 17, 2017

VILLAGE OF CROSS PLAINS

TOWN AND COUNTRY ENGINEERING

VANDEWALLE & ASSOCIATES

Table of Contents

Introduction.....	1
Plan Consistency and Need.....	1
1.1. Document Consistency.....	1
1.2. Applicable Neighborhood Plan or Studies	2
1.3. Need for the Addition to the USA	3
Figure 1: Village of Cross Plains Population Trends	3
Intergovernmental Cooperation.....	4
2.1. Document Notification of Adjacent Local Governmental Units	4
2.2. Adjacent Local Governmental Unit(s) Objections or Support	4
Land Use	4
3.1. Proposed USAA Boundary and Existing Rights-of-Way Map.....	4
3.2. USA Amendment Area Data	5
3.3. Existing and Planned Land Use Map	6
3.4 Proposed Quantity and Type of Housing Units.....	6
3.5 Land Use Phasing	6
Natural Resources:.....	7
4.1. Natural Features.....	7
4.2. Parks and Stormwater Management Facilities Map	7
4.3. Environmental Corridors	7
4.4. Proposed Environmental Corridors Map	8
4.5. Environmental Corridors Requirements.....	8
Utilities and Stormwater Management	8
5.1. Proposed Sanitary Sewer Map	8
5.2. USAA Average Daily and Peak Wastewater Flow	8
5.3. Average Wastewater Treatment Plant Daily Flow.....	8
5.4. Wastewater Treatment Plant Capacity.....	9
5.5. Proposed USAA Public Water Supply Map	9
5.6. Estimated USAA Daily and Peak Hourly Water Demand.....	9
5.7. Average Daily and Peak Hourly Water Demand.....	10
5.8. Water Supply System Capacity.....	10
5.9. Proposed Stormwater Management Standards Map.....	10
5.10. Stormwater Management Plan.....	10
5.11. Engineering Reports.....	10

Introduction

The Village of Cross Plains is requesting a 181.9-acre addition to its Urban Service Area (USA) to provide sanitary sewer and other urban services to a site immediately north of the Village's municipal boundary on the west side of Brewery Road. The impetus for the requested addition is the proposed Sundance residential subdivision which would occupy most of the amendment area. The development would be served by public sewer, but due to water pressure system constraints would likely be served by private on-site water supply.

As depicted in [Map 1](#) in Section 3.1, the proposed addition is currently almost entirely within the Town of Berry, though most is expected to be annexed into the Village. It is also immediately adjacent to the current USA where it runs along Brewery Road. A tiny portion, totaling 0.4 acres at the southeastern edge, is already within the Village of Cross Plains, and was included to avoid leaving a gap with the current USA boundary.

The proposed amendment area comprises all or portions of eleven parcels held by ten different property owners, though the largest parcel, and the planned location of the bulk of the Sundance single-family residential development, consists of 126.3 acres owned by Oregon Parks, LLC. Approximately 4.5 acres are public right-of-way along Brewery Road. A 7.3-acre partial parcel owned by Scenic Bluffs, LLC is tentatively planned for a smaller conjoining single-family residential development.

Most of the remaining parcels are not planned for immediate annexation, development, or redevelopment, but are depicted primarily as "Planned Neighborhood" in the Village of Cross Plains Comprehensive Plan Future Land Use Map ([Attachment 1](#)).

This application is being submitted for review to the Capital Area Regional Planning Commission (CARPC) and seeking a letter of approval by CARPC to the Department of Natural Resources (DNR), as part of their joint Areawide Water Quality Management Planning process.

Plan Consistency and Need

1.1. Document Consistency

With the exception of existing right-of-way of Brewery Road, most of the proposed USA addition is depicted as "Planned Neighborhood" on the Village's Future Land Use Map ([Attachment 1](#)), which is part of the Village's Comprehensive Plan and was last amended in 2014. A few segments, particularly in the northwest and southeast corners, are depicted as "Woodlands/Open Space".

The Village's "Planned Neighborhood" land use category is described in the Comprehensive Plan as, "a mix of Single-Family Residential – Urban, Two-Family/Townhouse Residential, Mixed Residential, Community Facilities, Parks, and Neighborhood Business uses," predominated by single-family development.

The conceptual subdivision layouts for the Sundance development are consistent with this description. The subdivision is expected to include 101 new single-family Residential lots, 1 neighborhood park, 1 tot-lot, stormwater detention areas, and conservancy land. The neighborhood park may also include a dog park.

Sundance Project: The 126-acre Oregon Parks, LLC parcel would contain 93 single-family homes, along with two parks (including one possible dog park), a conservancy area in the northwest corner largely overlapping with the "Woodland/Open Space" area depicted in the Future Land Use map, as well as preliminary right-of-way and stormwater management areas. The 1.3-acre parcel also owned by Oregon Parks, LLC with frontage on Brewery Road would be subdivided into four single-family lots. Three additional single-family lots would be subdivided immediately to the north on the portion of the Roessler parcel with Brewery Road frontage.

The single-family lots would vary in size from 0.4 acres to 4.2 acres, with an average size of 0.8 acres.

The balance of the amendment area is not included in the Sundance development plans.

Scenic Bluffs Project: The portion of the Scenic Bluffs, LLC parcel included in the amendment area is also almost entirely shown as Planned Neighborhood in the Village's Land Use Plan. This is also consistent with the conceptual plan for the site that includes 11 single-family homes average about 0.5 acres, along with a

small stormwater detention and conservancy area.

Other Parcels in Amendment Area: The Schulenberg and Henneman parcels in the southeast corner of the USA addition area are depicted as “Woodlands/Open Space” in the Village’s Future Land Use Map. Both parcels contain small developable portions with existing housing units and have been described as “Existing Large-lot Septic Residential” in this application’s proposed land use table. The remainder of the amendment area, including the rest of the Roessler parcel not included in the Sundance development and the partial parcel owned by Scenic Bluffs, LLC, is depicted as “Planned Neighborhood” and may develop in the future.

The Roessler, Statz, and Scenic Bluffs, LLC parcels have also conceptually discussed annexation with the Village.

The conceptually planned single-family subdivisions are a logical continuation of the single-family residential housing currently abutting the east and southeast sides of the amendment area.

The Village Comprehensive Plan does state that “Planned Neighborhoods” “will be served by the Village’s public sanitary sewer and water systems.” However, after lengthy study, the Village has determined that the most appropriate service arrangement for the Sundance development would be public sanitary sewer and private on-site water systems. (See Section 5.5 for additional detail).

The Village Comprehensive Plan’s [“Transportation, Utilities, and Community Facilities” Map, \(Attachment 2\)](#), depicts a small park in the amendment area, and depicts the entire amendment area as within the “Potential Future Urban Service Area.”

The Town of Berry’s Comprehensive Plan was last updated in 2012. Eastern portions of the proposed USA addition are depicted in the Town’s FLU Map ([Attachment 3](#)) as a “Possible Rural Development Area”, which is defined as on-site sewer lower-density residential development with a minimum lot size of 1 net acre. The southwestern portion of the amendment area is depicted as “Agricultural Transition”, which is stated as an area that the Town may identify in the future for more intensive development. The rest of the site is depicted as “Agricultural and Rural Lands Preservation Area.” The Town’s Plan does not depict the amendment area within the Village’s Urban Service Area.

1.2. Applicable Neighborhood Plan or Studies

Sundance Development, LLC has completed a detailed development plan that includes most of the proposed USA addition area ([Attachment 4](#)). The plan includes the following detailed description of the Sundance development:

Due to its unique geography and sizeable lots, we envision a high-end residential profile for the Sundance development.

The neighborhood design sets aside and dedicates to the Village significantly sized parcels for conservancy.

A 4 acre Village park and a 1/3 acre “tot lot” park are included in the development... The large park connects to conservancy and features an off-street parking lot. The tot park is centrally located in a flat and high-elevation area of the subdivision for easy pedestrian access...

Of the 142 acres Sundance is proposing to annex (not including the Brewery Rd R.O.W):

- 44 acres are devoted to open/green space
- 15 acres constitute the Roessler parcel
- 64 acres (101 lots) are devoted to single-family dwellings
- the rest will be right-of-way (“ROW”).

With the sizeable green-space areas, the development density is very low at 1.0 dwellings per acre. Vistas are primarily internal to the development and to the surrounding bluffs—there is very little visibility between the proposed development

and the existing Village. The Sundance Development would be a premier housing development for Cross Plains. The unique geography and large estate-sized lots are likely to attract larger homes with higher values.

The proposed lots are a mixture of large estate lots (SR-1) and medium-sized lots (SR-3) for single-family dwellings.

1.3. Need for the Addition to the USA

According to CARPC, the most recent development projections indicated 112 additional acres of development would be required to meet the Village's growth by 2040. As of 2010, approximately 200 additional undeveloped acres existed in the Village.

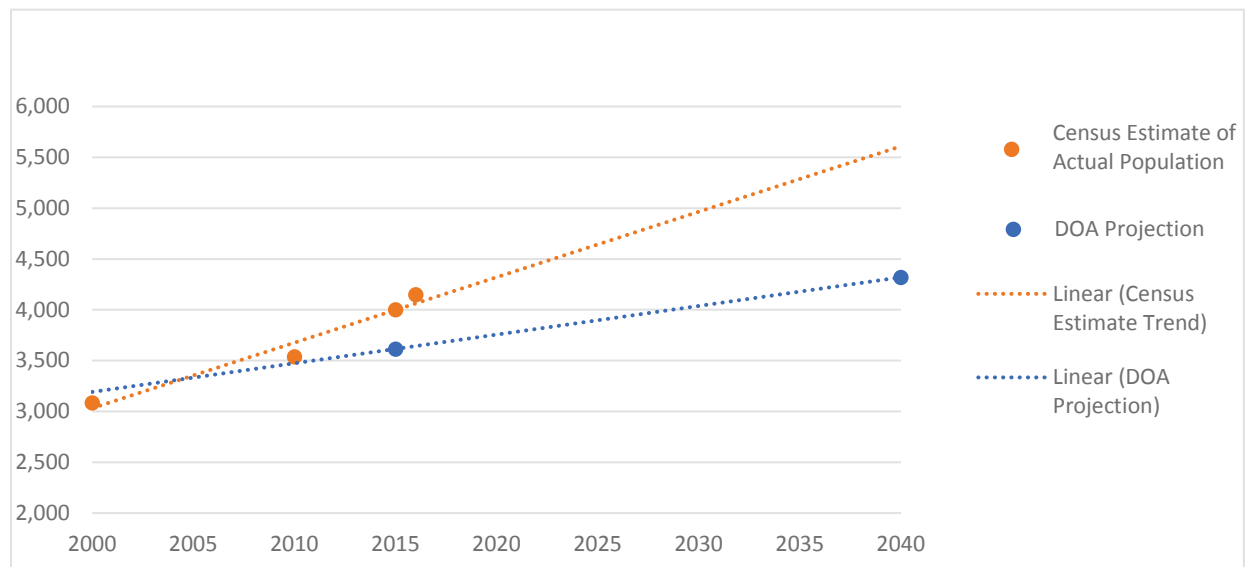
However, those projections were based on slow prior short-term population growth, which was limited by a combination of the recession and more importantly by the lack of land available for new single-family housing. The lack of housing was due in part to capacity issues at the Village's sewer treatment plant which were fixed in 2008 just as the recession hit.

At the 2010 Census, the Village had a population of 3,538. Based on this estimate and prior trends, the Wisconsin Department of Administration (DOA) projected the Village would have a population of 3,615 by 2015 and of 4,320 by 2040.

The Census Bureau estimated the Village's actual population to be 4,000 in 2015, indicating a growth rate 6 times faster than the DOA. By 2016 the Village was estimated to have a population of 4,148. If current trends hold, the Village's population could exceed their DOA 2040 projection by 2020.

These low DOA projections were used in calculating the estimated acre demand for the Village's USA.

Figure 1: Village of Cross Plains Population Trends



In 2016 the Village approved the small Glacier Ridge subdivision with 43 housing units, primarily smaller single-family lots. Aside from this, there are few available vacant lots in the Village, and the Sundance proposal would help meet that need. As of May 2017, there were 45 vacant single-family lots within the Village. Building permits for 15 new single-family homes within the Village had already been approved between January and April of 2017.

Further, due to the large-lot character and somewhat isolated location of the Sundance development, it wouldn't compete as directly with the higher-density 43-unit subdivision.

Over the last three years (2014-2016), the Village has also approved three large residential redevelopment projects, that have added 143 new multi-family dwelling units and approximately \$15 million dollars of tax base. The average net density of these projects is 39.0 dwelling units per acre. The most recent project, Esser Place, adds 4,500 square feet of commercial area on the western end of the mixed-use building. A summary of this redevelopment activity is provided below:

VILLAGE OF CROSS PLAINS RESIDENTIAL REDEVELOPMENT PROJECTS 2014-2016					
Project	Address	Developer	Dwelling Units	Net Site Area	Net Site Density
Zander Place	1300 Main St.	Iconica	45	1.21 acres	37.1 du/ac
Mill Creek	1400 Bourbon	Gallina	53	1.50 acres	35.3 du/ac
Esser Place	1900 Mill Ck.	Iconica	45	0.96 acres	56.4 du/ac
Total for recent Residential Redevelopment:			143	3.67 acres	39.0 du/ac

Source: Village of Cross Plains

Intergovernmental Cooperation

2.1. Document Notification of Adjacent Local Governmental Units

On June 19, 2017, the proposed USA Amendment was presented to the Town of Berry Board by representatives from the Village at the Board's monthly meeting. A packet containing a summary of the amendment was sent to the Board one week in advance.

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

When presenting the amendment to the Town of Berry Board in June 2017, the Village requested that the Board offer their support. The Board agreed take it under consideration, but noted they may not make a decision until their next meeting on July 17th, 2017.

Land Use

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

[See Map 1](#). The Oregon Parks, LLC parcels, as well as a small portion of the Roessler parcel, are part of the initial planned Sundance Development covering 129.5 acres. The development is planned to include large-lot single-family residential homes, parks, conservancy land, stormwater detention areas, and right-of-way.

The Oregon Parks, LLC area is currently farmed in row and pasture crops. Several small farm buildings exist on the smaller parcel along Brewery Road. The Roessler parcel contains a small horse stable.

The Statz parcel and the remainder of the Roessler parcel may develop in time, likely as single-family residential homes with similar densities to those preliminarily platted along Brewery Road in the Sundance Development Plan. Currently the Statz parcel contains one single-family home.

The partial Scenic Bluffs, LLC parcel is currently farmed, with a small strip of Woodlands on the periphery. The majority of the 34.8-acre parcel is composed of undevelopable wooded steep slopes and was left out of

the amendment area. The remaining 7.3-acre site is conceptually planned to develop with 11 smaller single-family homes, a right-of-way connection from Hillside Trail through to the Sundance development, a small stormwater detention area in its northeast corner adjacent to a planned detention area in Sundance, and a small conservancy area on its western half to provide a connection to the Ice Age Trail.

The four additional parcels along Brewery Road at the southern end of the proposed USA addition all contain one existing single-family home each. Redevelopment at higher densities is unlikely on these parcels due to environmental constraints.

The two Village parcels at the north end of Hillside Trail partially included in the USA amendment have existing single-family homes in the portion of the properties already within the current USA.

3.2. USA Amendment Area Data

Proposed Land Use	Acres			Projected Number of Housing Units
	Total Acres	Existing Development on Site	Environmental Corridor	
Planned Neighborhood*	34.4	5.8		29
Single Family Residential	86.0	.8	7.7	112
Existing Large-lot Septic Residential	6.9	2.3		2
Residential Total	127.3	5.9	7.7	143
Village Park	3.6		3.3	
Parkland Conservancy	29.2		29.2	
Parking	0.2			
Street Right-of-Way**	19.4	4.4		
Stormwater Management	2.0		2.0	
Total	181.9	10.3	42.3	143

*Will likely develop as low density single-family residential, some area will become street right-of-way. Housing Unit estimate based on assumption of 0.45 net acres per unit on unconstrained land. 4 housing units currently exist.

**Will increase with subdivision development

3.3. Existing and Planned Land Use Map

See [Maps 2](#) and [2a](#).

Development Enhancements

See [Map 3](#).

Emergency Access: The Village and developer have agreed to provide an emergency access drive linking to the south edge of the Sundance parcel to ensure an alternative emergency access route in case the north end of Brewery Road is blocked to traffic. This emergency route will improve the existing access drive to the Village Well site south of the Sundance property and east of the Scenic Bluffs, LLC parcel to accommodate emergency vehicles, and will extend the existing drive northward via the planned right-of-way connection in the Scenic Bluffs, LLC property development. Due to water pressure issues, there would not be hydrants serving the site; it would be served by Tanker vehicles in the same manner that rural Town areas of the Cross Plains Fire District are served at present.

Trail Connections: The Village and developer have agreed to provide several trail segments that link the Sundance development to the Ice Age Trail to the west, and the Village Trail System to the south. An additional Village trail will be extended through the northern portion of the Sundance property linking the proposed Village dog park to potential future trail improvements to the west and north.

The Scenic Bluffs, LLC partial parcel is also planned to have a connection to the Ice Age Trail by way of a dedicated conservancy lot on the southwest side of the site.

Viewshed Landscaping: The Village and the developer have agreed to provide enhanced evergreen landscaping along the eastern margins of the Sundance property to ensure that homes are screened from long-distance views from the east. These plantings will be directed into the 150-foot-wide Hilltop area protected by Village Overlay zoning. Elsewhere the protected woodland areas accomplish this objective.

3.4 Proposed Quantity and Type of Housing Units

As described in Section 1.2, the Sundance development itself is proposed to have 101 single-family units ranging in size from 0.4 acres to 4.2 acres.

A conceptual land use plan has been created for the Scenic Bluffs, LLC property which depicts 11 single-family homes.

Other portions of the amendment area, primarily the Roessler and Statz properties, which are suitable for development may develop as single-family residential lots at net densities of approximately 2.2 lots per acre in unconstrained areas.

Six existing single-family housing units are now present in the proposed amendment area.

3.5 Land Use Phasing

A planned phasing map (p. 14 of [Attachment 4](#)) for the Sundance development is included. The subdivision is expected to develop in three primary phases, each with approximately 33 units, with timing dictated by market conditions.

Detailed phasing has not been done for the planned single-family homes in the Scenic Bluffs, LLC parcel. However, given the site's proximity to the likely entry point for both an emergency access point from Hillside Trail into the south-central portion of the Sundance development, and the likelihood that the adjacent drainageway there would also serve as a logical entry-point for a sewer system, the Scenic Bluffs property may develop relatively close to the beginning of development in the first phase of Sundance.

The areas in the Roessler and Statz properties not conceptually platted in the Sundance Development Plan would likely not develop, if at all, until after those areas that were conceptually platted in the Sundance Plan.

Natural Resources:

4.1. Natural Features

See [Map 4](#).

There are no wetlands, floodplains, unique flora or fauna, or hydric soils in the amendment area.

A number of other natural resources exist on the site, particularly in the northwest corner. As described in the Land Use Chapter, the northwest corner of the site is considered to be undevelopable and will be planned as parkland conservancy.

A small intermittent drainageway exists in the northwest corner of the site. A 50-foot buffer around those portions of the drainage-way mapped by the US Geological Survey would be additionally subject to the Village's Drainageway Protection Overlay Zoning District.

A sizeable woodland also exists in the northwest corner of the site, as well as a few small pockets near the center and southeast corner of the amendment area. These woodlands would be subject to the Village's Woodland Protection Overlay Zoning District.

A substantial amount of steep slopes above 20% are present on the site, most notably in the northwest corner and also on the eastside near Brewery Road. Much of these areas would be subject to the Village's Hillside/Hilltop Protection Overlay Zoning District.

A generalized state-wide map ([Attachment 5](#)) from the University of Wisconsin Extension office indicates there could be karst present less than 50 feet from the surface across the site, indicating vulnerability to possible groundwater contamination.

Based on a map ([Attachment 6](#)) of groundwater recharge areas in Dane County by the Wisconsin Geological and Natural History Survey, the western third of the proposed amendment area may have high groundwater recharge rates of 12-14 inches per year.

It should be noted that a now closed landfill operated approximately 0.8 miles northeast of the amendment area from 1968-1990 at 5129 N Hill Point Road. The site was capped with a cover thicker than 2 feet (FID 113116960). The DNR stated that it is "very unlikely" given the size and type of waste at the landfill that groundwater contamination would occur nearly a mile downstream.

4.2. Parks and Stormwater Management Facilities Map

See [Map 2](#). Two Village Parks, a small "tot-lot" pocket park, and a larger possible neighborhood park and dog park, are planned for the Sundance Development, comprising 4 acres. An additional 28.9 acres of undevelopable steep land (primarily slopes above 20%) on the western half of the site is planned to be reserved as Parkland Conservancy.

A number of small stormwater detention areas have been designated around the development, totaling 2.0 acres. These areas will likely be adjusted during the platting process to respond to detailed stormwater management plans.

4.3. Environmental Corridors

33.4 acres of land are proposed as Environmental Corridors, comprising 3.3 acres of planned Village Park, 28.9 acres of planned Parkland Conservancy, 1.8 acres of Stormwater Management land, and 7.7 acres of planned Single-Family Residential (primarily at the rear of several large conceptual platted lots). Delineation

was based on large continuous segments of 20% or greater slopes, preliminary locations of stormwater detention areas and woodlands. This comprises approximately 24% of the amendment area.

4.4. Proposed Environmental Corridors Map

See [Map 4](#).

4.5. Environmental Corridors Requirements

The proposed corridor contains the entire planned Parkland Conservancy and planned Village Park in the northwest corner, and, in addition to steep slopes, contains many of the natural features described in Section 4.2. Exact locations of stormwater areas and park land may be refined closer to time of development and the corridor should be updated accordingly in these areas.

The proposed corridor achieves the intended goals outlined for Environmental Corridors in the *Water Quality Plan for Dane County*. It protects water quality by including the lone intermittent drainageway within the amendment area as part of the corridor (including a greater than 50-foot buffer), as well as planned stormwater retention areas. It provides outdoor recreation options by including a planned neighborhood park and protects wildlife habitat and maintains scenic beauty with the inclusion of a substantial woodlands as a Parkland Conservancy area. It protects public health and property and provides pollution control by including all sizable 20% or greater steep slopes, limiting potential erosion that development could incur.

As discussed in Section 4.1, if annexed, additional protections equaling or exceeding CARPC's adopted criteria for Environmental Corridors would apply to all land within the Village's Hillside/Hilltop Protection, Groundwater Protection, and a Natural Resources Protection overlay zoning districts. This would include some additional land outside the proposed environmental corridor delineation.

Utilities and Stormwater Management

5.1. Proposed Sanitary Sewer Map

A map depicting the proposed sanitary sewer extension for the USAA is included (p. 11 of [Attachment 4](#)).

Development in the area will be connected to the existing municipal sewer system at the intersection of Brewery Road and Laufenberg Boulevard. A few lots in the west-central edge of the subdivision will likely require a grinder pump.

5.2. USAA Average Daily and Peak Wastewater Flow

Each housing unit in the proposed development is expected to contribute an additional 163 gallons per day, and would amount to approximately 23,309 gallons per day for the 143 homes planned or existing in the amendment. Peak flow is estimated at 93,236 gallons per day.

These values assume 2.5 persons per home, 65 gallons per person per day, and a peaking factor of 4. These were the values used in the January 2001 Long Range Utility Plan ([Attachment 7](#)).

5.3. Average Wastewater Treatment Plant Daily Flow

Currently the Village's treatment plant receives an average of about 252,000 gallons per day, and has a capacity of 593,000 gallons per day.

The Brewery Road interceptor capacity is 0.60 cubic feet per second (cfs). Including the proposed development, the peak demand on the sewer would be 0.64 cfs, exceeding existing capacity by 0.04 cfs. The existing sewer is made of clay, Orangeburg, and ABS truss material and is due for replacement. The Village will replace the sewer as a requisite step prior to full buildout if the Sundance Development is approved.

Downstream interceptors on Valley Street and Main Street were found to have adequate capacity to service the Sundance Development and remainder of the amendment area. Capacity of the Valley Street interceptor is 1.87 cfs with a post development demand of 0.82 cfs. Capacity of the Main Street Interceptor is 4.57 cfs with a post development demand of 1.18 cfs.

5.4. Wastewater Treatment Plant Capacity

The Village last reconstructed the Wastewater Treatment Plant in 2008. The Village is capable of treating wastewater through the solid waste disposal process. The Village contracts with the Dane-Iowa Wastewater Plant for the final phase in disposing of the solid waste removed from the water. The Village treatment plant's capacity is 0.593 mgd.

The estimated daily reserve capacity is 0.341 mgd. We estimate this capacity can support an additional 1,312 people (using the same person and household assumptions as Section 5.2). The Wastewater Treatment Plant has more than enough capacity to accommodate all development in the proposed USA amendment area.

5.5. Proposed USAA Public Water Supply Map

The site is on a high plateau well above the existing pressure levels of the Village water service system. All proposed units are planned to have private wells.

The existing water system will not be able to service the Sundance Development area due to the extreme elevation difference between the plateau and existing water reservoirs. The average water elevation in the water storage tanks is 1037.3 feet. The ground elevations in the developable areas of the proposed Urban Service Area Amendment typically range from 1030 to 1110 feet. Serving the area would require a completely separate water system with a storage facility and two independent water supply sources that would create pressures that are too high to serve any of the intermediate elevations between Sundance and the current system. The 2009 report which is supplied in the appendix ([Attachment 8](#)) estimates the total cost of providing water to a new pressure zone at \$2.7M. Assuming 3% annual inflation, this cost would exceed \$3.5M if constructed in 2018.

Although capital costs associated with installing the public water system to serve the amendment area would largely be borne by the developer(s), after construction and acceptance by the Village, the ongoing cost of staffing, operating, and maintaining such a system would be borne by rate payers throughout the Village public water service area. Such additional costs would not be incremental as is typical for amendment areas, as in this instance it would essentially be a second freestanding municipal water system – possibly requiring doubling the number of Village public water staff. Initial estimates indicate operations and maintenance would cost approximately \$160,000 annually. Please reference the appendix for further details and discussion for requiring providing private water to the homes in the Sundance Development area.

A map of the existing adjacent water system is also provided ([Attachment 9](#)).

5.6. Estimated USAA Daily and Peak Hourly Water Demand

Each of the 143 existing or anticipated housing units would be expected to use 120 gallons per day which would amount to approximately 17,160 gpd for the amendment area. Peak hourly demand is estimated at 1,634 gallons. In addition to the peak hourly demand for residential use, a fire flow demand of 1,500 gpm would have to be considered in sizing the water tower.

5.7. Average Daily and Peak Hourly Water Demand

The current capacity of the Village's public water system is 1,300,000 gpd, with an average daily demand of 420,000. Peak hourly demand is estimated at 40,000 gallons.

5.8. Water Supply System Capacity

The water system has an estimated unused daily capacity of 880,000 gallons per day. Although, as described in Section 5.5, it is anticipated development in the amendment area would utilize private on-site water supply, even if it were to be serviced by public water the estimated additional 17,160 gpd would be well within the current system's capacity.

5.9. Proposed Stormwater Management Standards Map

Tentative Stormwater Management detention areas are seen depicted on Map 2.

5.10. Stormwater Management Plan

The immediate and future development areas would all be bound by the Village of Cross Plains stormwater management ordinance performance standards, as well as those by Dane County and Wisconsin DNR. The Village's standards are similar to the Dane County Standards, but further require infiltration of 100% of predevelopment levels in a concerted effort to protect the downstream tributary areas to Black Earth Creek.

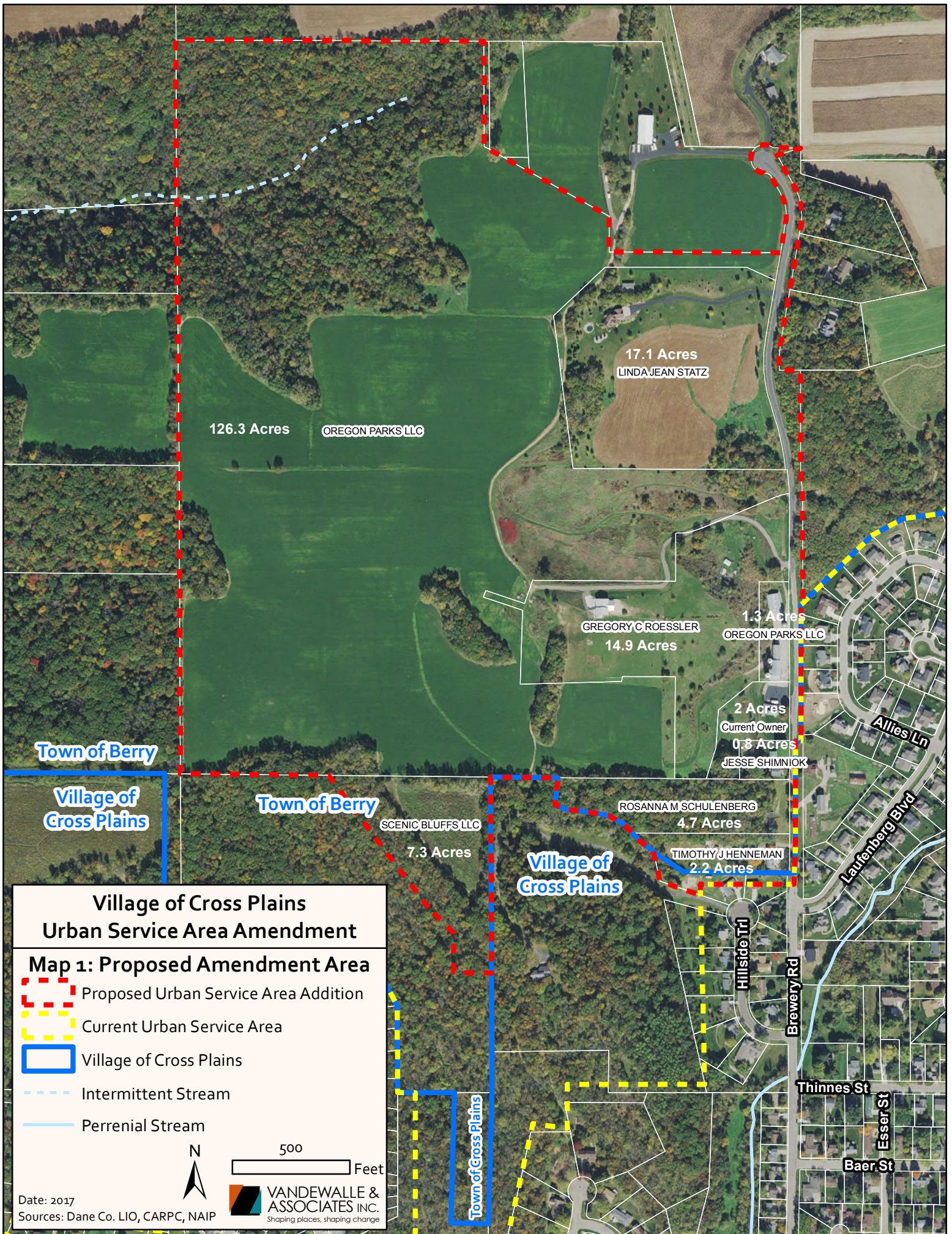
To contribute to the maintenance of water quality, the development will incorporate a hybrid swale-based road profile and storm-water system, with some curb and gutters. This improves water quality and reduces runoff by encouraging much more natural infiltration than a traditional purely gutter-and-storm-drain system. These would mimic similar installations in the Gil's Way development in the southwest part of the Village.

Preliminary stormwater detention areas are seen in [Map 2](#), and more detailed delineations can be seen in [Attachment 10](#).

A detailed stormwater management plan will need to be approved by the Village and DNR prior to beginning any development construction."

5.11. Engineering Reports

See Attachments 7 through 10.



Village of Cross Plains Urban Service Area Amendment




Map 2. Planned Land Use

Planned Land Use

-  Single Family Residential
-  Planned Neighborhood
-  Village Park
-  Parkland Conservancy
-  Parking
-  Stormwater Detention
-  Existing Large-lot Septic Residential
-  Right-of-Way

Current Land Use

-  Single Family Residential
-  Agricultural
-  Open Land
-  Woodlands
-  Right-of-Way
-  Intermittent Stream
-  Perennial Stream

-  Proposed Urban Service Area Addition
-  Current Urban Service Area
-  Village of Cross Plains

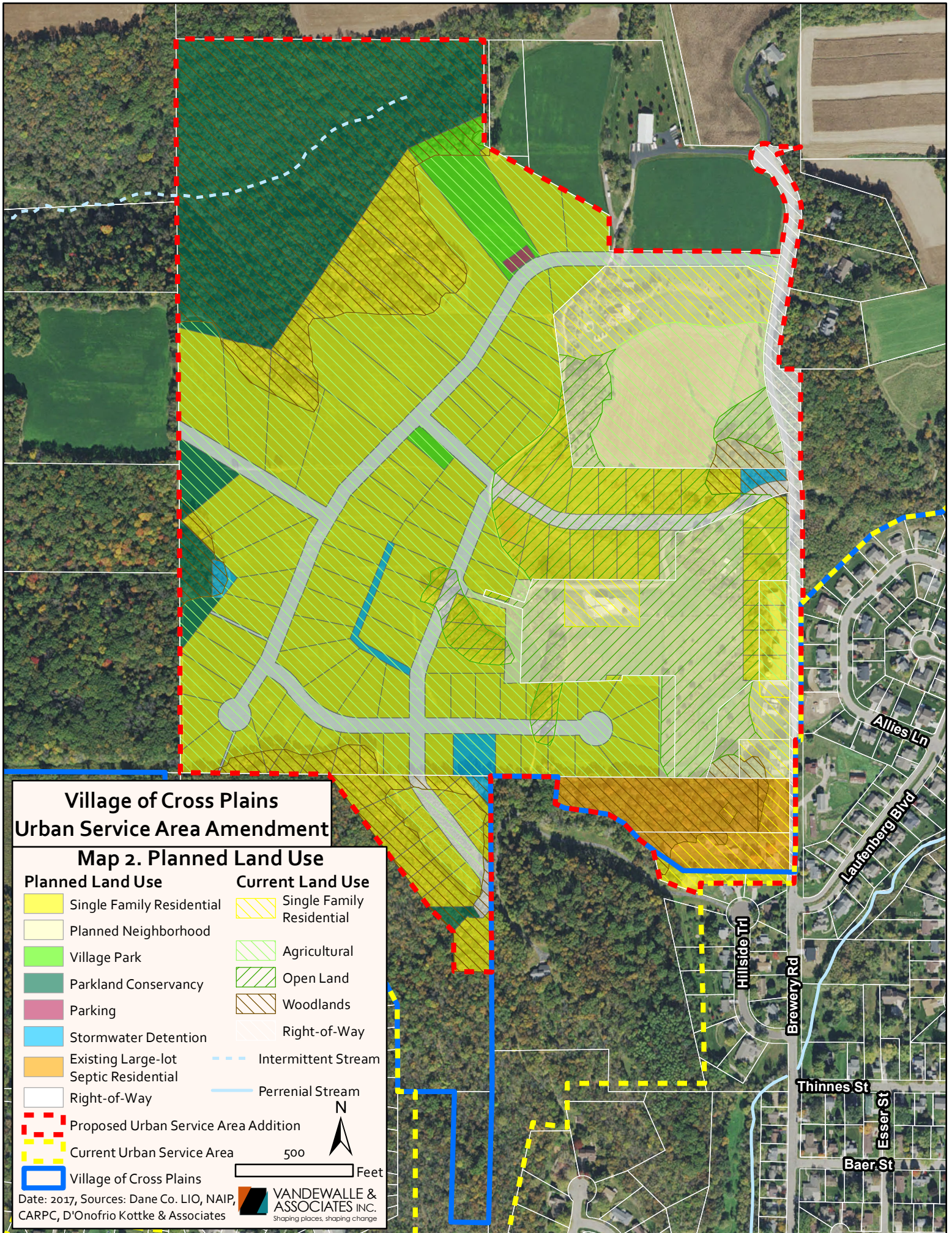
500



Feet

Date: 2017, Sources: Dane Co. LIO, NAIP, CARPC, D'Onofrio Kottke & Associates

VANDEWALLE & ASSOCIATES INC.
Shaping places, shaping change

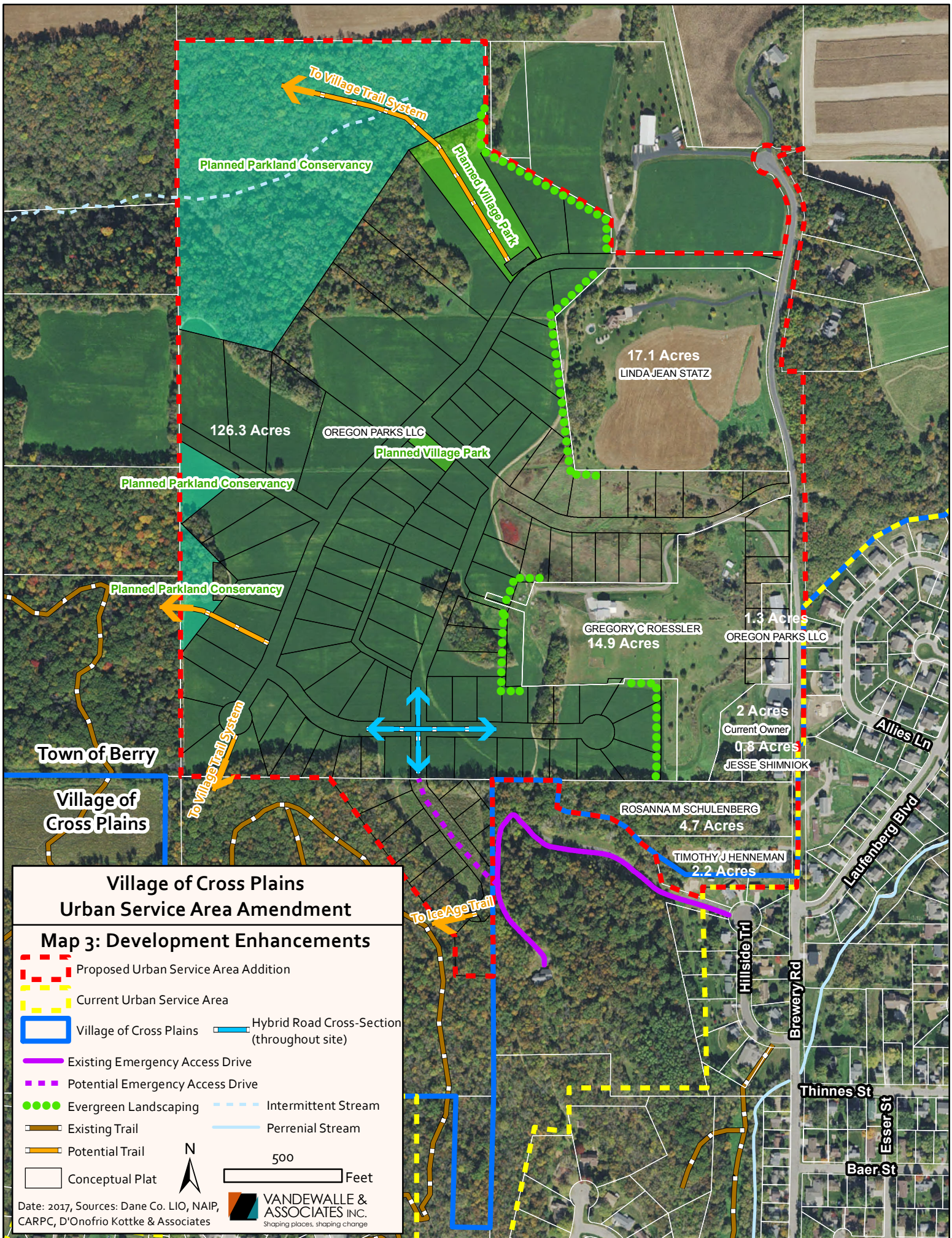


Shapes on map represent general recommendations for future land use. Actual boundaries between different land use categories and associated zoning districts may vary somewhat from representations on this map. Please see the Village's Comprehensive Plan document for specific policies related to the land use categories shown on this map. Existing (not future) land use pattern shown for adjacent towns. Environmental Corridors depicted on this map use generalized boundaries of environmental features identified on air photos by the DNR and Dane County. Actual Environmental Corridor boundaries are to be refined through detailed on-site investigation.

Proposed Urban Service Area Addition

Village of Cross Plains
Comprehensive Plan
Map 2a: Future Land Use-ETJ View





Village of Cross Plains
Urban Service Area Amendment

Map 3: Development Enhancements

- Proposed Urban Service Area Addition
- Current Urban Service Area
- Village of Cross Plains
- Hybrid Road Cross-Section (throughout site)
- Existing Emergency Access Drive
- Potential Emergency Access Drive
- Evergreen Landscaping
- Intermittent Stream
- Existing Trail
- Perennial Stream
- Potential Trail
- Conceptual Plat



500

Feet

Date: 2017, Sources: Dane Co. LIO, NAIP,
CARPC, D'Onofrio Kottke & Associates

**VANDEWALLE &
ASSOCIATES INC.**
Shaping places, shaping change

