



210 Martin Luther King Jr. Blvd. Room 362 Madison, WI 53703 Phone: 608-266-4137 Fax: 608-266-9117 www.CapitalAreaRPC.org info@CapitalAreaRPC.org

March 22, 2016

Mr. Tim Asplund
Wisconsin Department of Natural Resources
101 S. Webster, WT/3
Madison, WI 53707

RE: Recommended Amendment to the *Dane County Water Quality Plan*, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains.

Dear Mr. Asplund:

We are submitting a proposed amendment to the *Dane County Water Quality Plan*, revising the Cross Plains Urban Service Area boundary and environmental corridors in the Town of Cross Plains for Department review and approval. The Capital Area Regional Planning Commission adopted Resolution CARPC No. 2016-04 at its March, 2016 meeting. This resolution recommends approval based on the land uses and services proposed and the conditions of approval indicated in the adopting Resolution.

Enclosed, please find a copy of the following items, which supplement previously submitted materials: (1) CARPC staff analysis of the proposed amendment dated February 9th, 2016; (2) Public Hearing Notice, dated February 9th, 2016; (3) agenda item Cover Sheet /Executive Summary of the public hearing; AND(4) Signed Resolution CARPC No. 2016-04. We will forward meeting minutes for March 10th following their adoption.

We appreciate your review of this amendment to the *Dane County Water Quality Plan*. If you have questions or need additional information or assistance in reviewing this amendment, please do not hesitate to contact me at 266-4593.

Sincerely,

Stephen Steinhoff, AICP
Deputy Director, and Director of Community and Regional Development Planning

email: Matthew G. Schuenke, Administrator/Clerk-Treasurer, Village of Cross Plains, 2417 Brewery Road, PO Box 97, Cross Plains, WI 53528
Pat Andreoni, Village President and Plan Commission Chair, Village of Cross Plains, 2417 Brewery Road, PO Box 97, Cross Plains, WI 53528
Greg Hyer, Chair, Town of Cross Plains, 4296 County Road P, Cross Plains, WI 53528
Nancy Meinholz, Clerk, Town of Cross Plains 3734 County Road P, Cross Plains WI 53528
Sharon Corrigan, Chair, Dane County Board, 210 Martin Luther King Jr Blvd#106 B, Madison, WI 53703
Nikole Jones, Supervisor, District 28, Dane County Board, 210 Martin Luther King Jr Blvd#106 B, Madison, WI 53703

w/enc.: Lisa Helmuth, WDNR Statewide WQM Planning Coordinator
Josie Lathrop, WDNR Statewide SSA Program Staff

**Staff Analysis of Proposed Amendment to the
Dane County Land Use and Transportation Plan and Dane County Water
Quality Plan, Revising the Cross Plains Urban Service Area Boundary and
Environmental Corridors in the Town of Cross Plains**

1) Existing Conditions**a) Land Use**

The current land uses within the amendment area are predominantly agriculture and woodlands. Land on and adjacent the site is planned to be annexed into the Village of Cross Plains from the Town of Cross Plains. The site is south of Glacier Creek Middle School and east of Baer Park. The proposal is for a single-family residential subdivision as a part of a larger, surrounding development that will contain 43 housing units. The proposal itself directly facilitates the development of 13 of these units. Surrounding land uses include:

- North—Agriculture; Civic
- South—Agriculture and Woodland
- West—Agriculture and Woodland; Residential and Park
- East—Agriculture and Woodland

Land Use	Existing (Acres)	Proposed Develop. (Acres)	Env. Corridor (Acres)
Single-Family Residential		4.1	
Agriculture	2.9		
Open Lands	0.7		(+1.8)
Woodland	0.7		
ROW		0.2	
TOTAL	4.3	4.3	(+1.8)

b) Cultural and Historic Sites

No previously recorded archaeological sites or cemeteries are recorded within the Cross Plains parcel. The nearest reported site is a marked Euro-American cemetery (BDA-0037) approximately one-half mile to the southwest. The parcel has not been surveyed for the presence of cultural resources. Given the position of the parcel on the landscape and its proximity to Black Earth Creek, which supported a dense pre-Contact population, archaeological survey of the parcel is recommended.

c) Transportation System

No major roadways directly serve the amendment area. Military Road, a two-lane local street located northwest of the amendment area, will be extended to the east to provide access to the planned local street network for the proposed single-family residential subdivision. Military Road is accessible via Church Street (CTH P), a two-lane, north-south minor arterial located approximately one-quarter mile northwest of the amendment area. West Brewery Road, a two lane collector Street that intersects Church Street, is located about one-quarter mile west of the amendment area. Both Church Street and Brewery Road intersect U.S. Highway 14.

Fixed-route bus service is not available within the Village of Cross Plains. There are currently four state vanpool routes that transport Cross Plains area commuters to downtown Madison, UW-Madison campus and hospital, Hill Farms State Office

Building, Public Service Commission, and the Department of Revenue. The Madison Area Transportation Planning Board's (MATPB) Rideshare Etc. program provides ride-matching services for individuals interested in car- or vanpooling. Dane County provides limited specialized group-ride services for seniors and people with disabilities to nutrition sites, senior center activities, adult day care, and shopping.

The section of Military Road located northwest of the amendment area has curb and gutter and a detached sidewalk on the east side. Church Street has a sidewalk on the west side and unmarked paved shoulder/parking lane on both sides. West Brewery Road has curb and gutter, a detached sidewalk on the west side, and under-utilized unmarked parking lanes. The residential neighborhoods located to the north and west of the amendment area were developed without sidewalks.

In 2015, WisDOT replaced the pavement on USH 14 (Main Street) between CTH KP and Westview Court and reconstructed the USH 14/Church Street (CTH P) intersection. Intersection improvements included added turn lanes and new pedestrian facilities.

d) Natural Resources

The proposed amendment area is located in the Black Earth Creek Watershed of the Lower Wisconsin River Basin (see Map 5). Wastewater from the Village of Cross Plains is treated at the Cross Plains Wastewater Treatment Facility and the treated effluent is discharged to Black Earth Creek. There are no wetlands, waterbodies, hydric soils, or floodplains located within the amendment area.

Black Earth Creek

From its mouth at Blue Mounds Creek in Iowa County (mile 0) to the confluence with Vermont Creek, just west of the Village of Black Earth (mile 11.08), the existing biological use of Black Earth Creek is classified as Fish and Aquatic Life water and the attainable use is classified as a warmwater sport fishery. This section supports a warm water sport fishery that includes smallmouth bass. Upstream of this point, including the segments along the Village of Black Earth and Village of Cross Plains, Black Earth Creek is classified a (Class I) cold water trout fishery. This section is fed by a series of spring complexes including a large cold water spring (Festge Springs) upstream from the Village of Cross Plains and numerous smaller springs.

From its mouth at Blue Mounds Creek in Iowa County (mile 0) to the confluence with Vermont Creek, just west of the Village of Black Earth (mile 11.08), Black Earth Creek is proposed for inclusion on the state 303d list of impaired waters for degraded biological community from unknown point source and nonpoint source pollution. From just west of the Village of Black Earth (mile 11.08) to its confluence with Garfoot Creek (mile 16.83), Black Earth Creek is also proposed for inclusion on the state 303d list of impaired waters for degraded biological community and elevated water temperature from unknown point source and nonpoint source pollution. A Total Maximum Daily Load (TMDL) has not been established for these segments of Black Earth Creek. Upstream segments of Black Earth Creek, including the segments along the Village of Cross Plains, are classified as outstanding and exceptional streams and are not proposed for inclusion on the state 303d list of impaired waters.

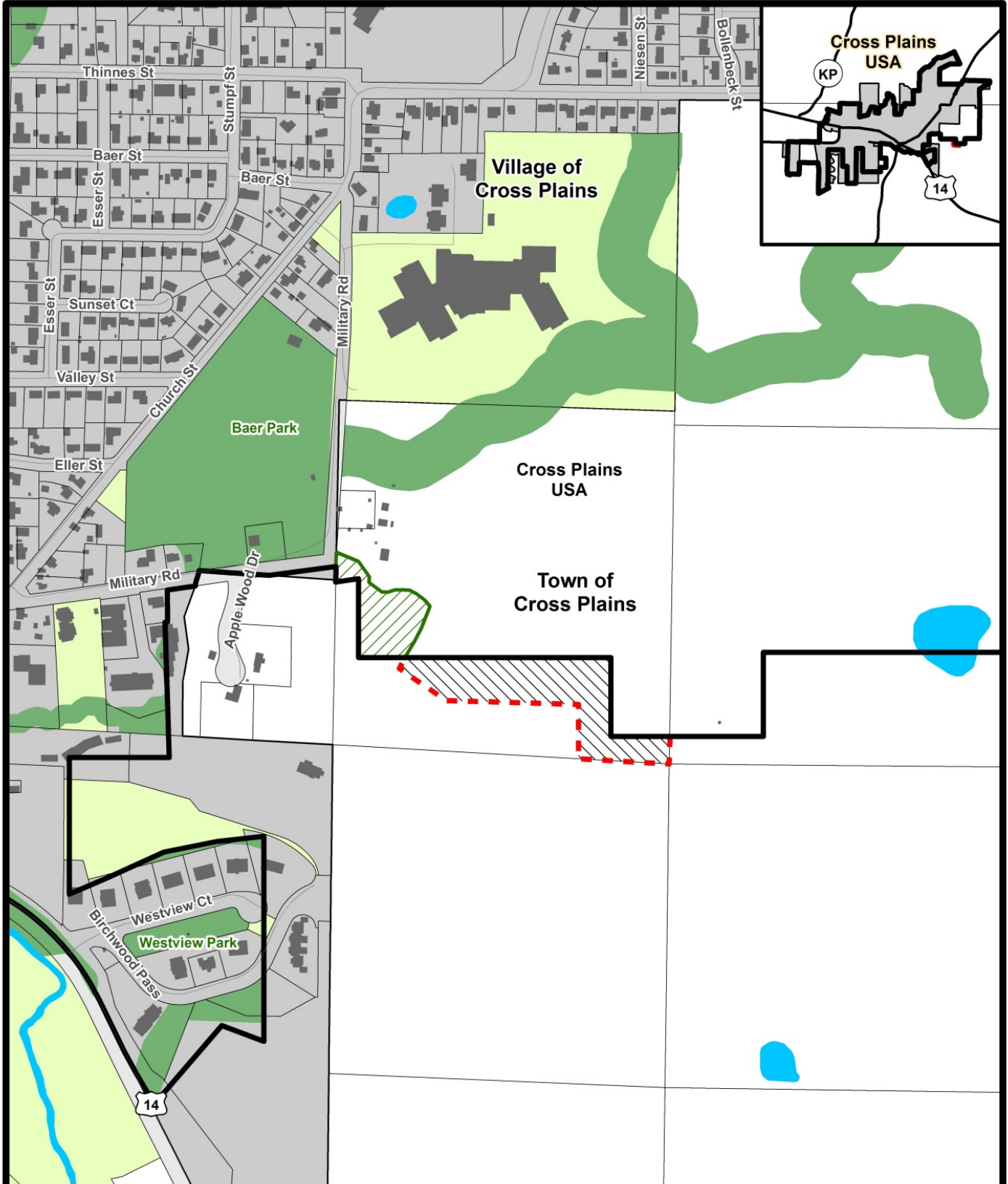
Groundwater modeling, using the regional groundwater model developed by the Wisconsin Geological and Natural History Survey, shows that baseflow in Black Earth Creek above Cross Plains has decreased from 4.95 cfs during predevelopment (no water

well pumping) conditions to 3.52 cfs in 2010 due to the cumulative effects of water well withdrawals in the groundwater-shed.

Endangered Resources








The WDNR Bureau of Endangered Resources maintains a database representing the known occurrences of rare species and natural communities that have been recorded in the Wisconsin Natural Heritage Inventory (NHI). A screening review conducted by CARPC staff identified five species of Special Concern and one Endangered species that have the potential to occur in the proposed amendment area if appropriate habitat exists. CARPC recommends that the applicant ask the DNR to complete a full endangered resources review for the possible presence of Threatened, Endangered, and Special Concern species in the amendment area.

Map 1 - Amendment Area

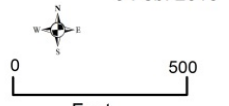


Map 1 Amendment Area

Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains

-  Service Area to be added (4.3 acres)
-  Proposed Environmental Corridors (1.8 acres)
-  Public Land
-  Existing Environmental Corridors
-  Incorporated Area
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary

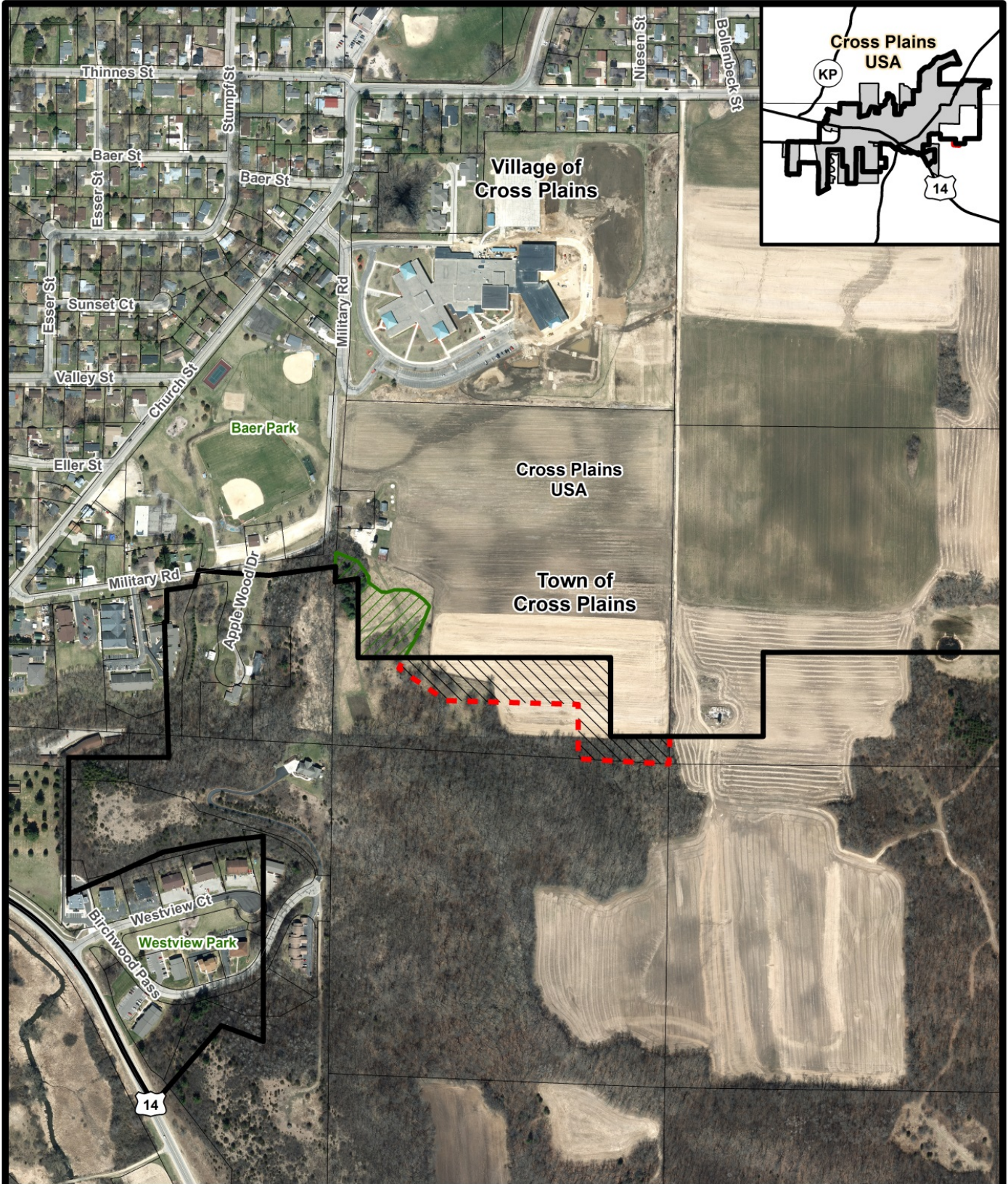
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Prepared by staff of the CARPC.

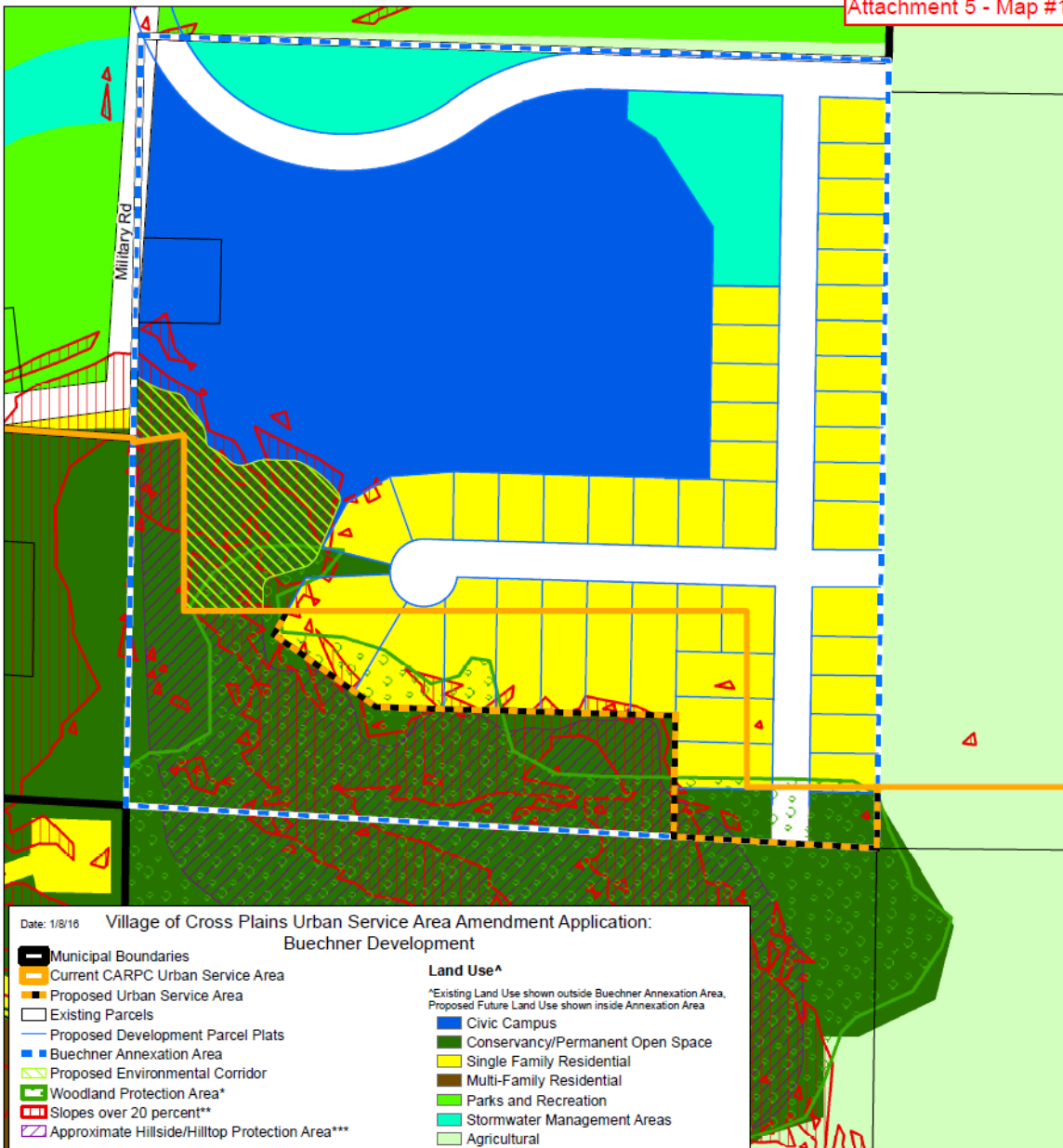
Map 2 - Aerial



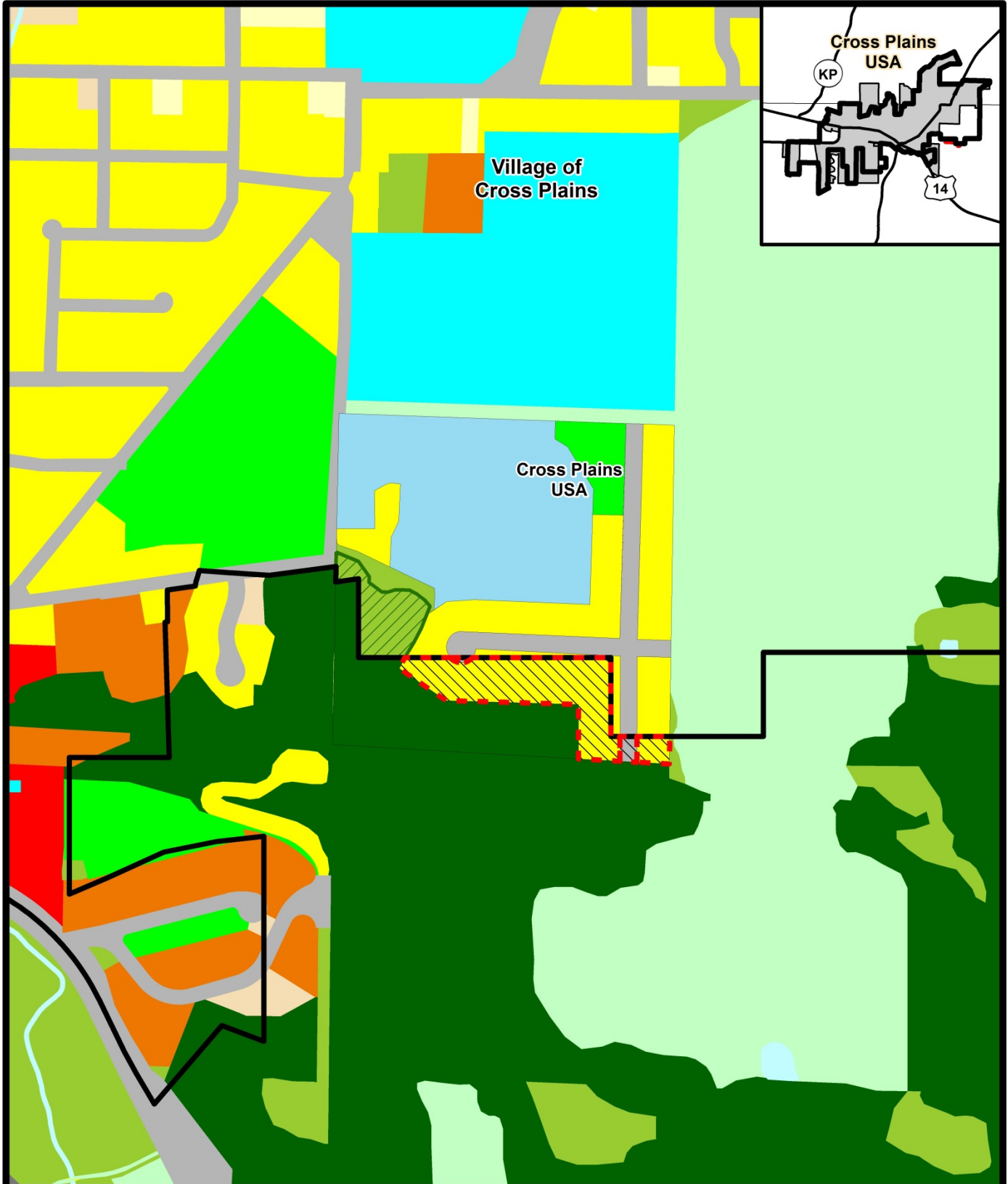
<p>Map 2 Aerial</p> <p>Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains</p>	<ul style="list-style-type: none">  Service Area to be added (4.3 acres)  Proposed Environmental Corridors (1.8 acres)  Existing Urban Service Area Boundary  Proposed Urban Service Area Boundary 	<p style="text-align: right;">9 Feb. 2016</p> <div style="text-align: center;">   <p>0 500 Feet</p> </div> <p style="text-align: center;">Prepared by staff of the CARPC.</p>
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Map 3 - Land Use

Attachment 5 - Map #1



Map 4 – Proposed Land Use



Map 4 Proposed Land Use

Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains

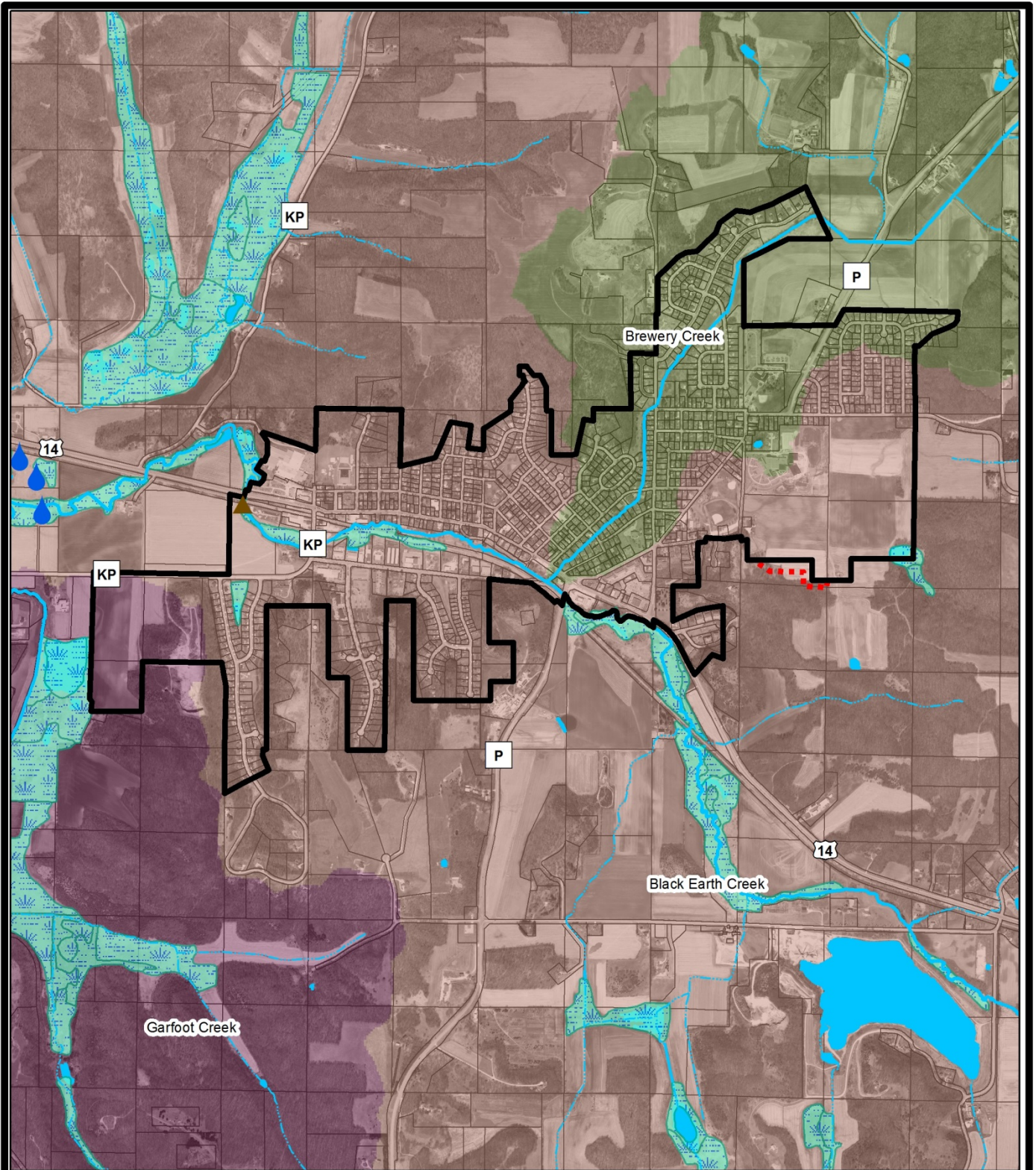
Agriculture	Open Land	Transportation
Commercial Sales or Services	Outdoor Recreation	Two Family
Institutional or Governmental	Right of Way	Vacant
Multi-Family	Single Family	Water
Service Area to be added (4.3 acres)	Proposed Environmental Corridors (1.8 acres)	Woodland

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Prepared by staff of the CARPC.

Map 5 - Subwatershed Map



Map 5 Subwatersheds
 Proposed Amendment to the Dane County
 Land Use and Transportation Plan and Dane
 County Water Quality Plan, Revising the
 Cross Plains Urban Service Area Boundary
 and Environmental Corridors in the
 Town of Cross Plains

- | | |
|---|--|
|  Existing Urban Service Area | Subwatersheds |
|  Service Area To Be Added |  Black Earth Creek |
|  Springs |  Brewery Creek |
|  Perennial Stream |  Garfoot Creek |
|  Intermittent Stream |  WWTF |

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 of the CARPC.

Soils and Geology

The amendment area is located in the Roxbury Hills. The Land Type Associations of Wisconsin classifies the surficial geology of this area as a hilly eroded moraine with nearly level to undulating valley floors. Surface elevations in the amendment area range from around 920 feet to 962 feet. There is an area of steep (> 20%) slopes, not associated with water resources, just outside of the amendment area. There is also area of steep (> 20%) slopes, not associated with water resources, within the current urban service area that has been proposed for inclusion in the environmental corridors (see Map 6).

According to the Natural Resource Conservation Service (NRCS) Soil Survey of Dane County, the soils in the amendment area are in the Dodge – St. Charles – McHenry association. These soils are well drained to moderately well drained, deep silt loams. Table 2 shows detailed classification for soils in the amendment area (see Map 7). Table 3 shows important soil characteristics for the amendment area (see Map 7).

According to Wisconsin Geological and Natural History Survey mapping, the bedrock in the majority of the amendment area is in the Trempealeau Group, which is quartz sandstone, dolomitic siltstone, silty dolomite, and sandy dolomite. It consists of two formations, the Jordan and the underlying St. Lawrence, which were combined as one mapping unit. Thickness is about 75 feet (23 m) where not eroded. The bedrock in the northeast corner of the amendment area is in the Tunnel City Group, which is fine to medium grained quartz sandstone up to 150 feet (46 m) thick. The depth to bedrock is 5 to 50 feet throughout most of the amendment area. The depth to bedrock is 50 to 100 feet in the northeast corners of the amendment area. The depth to bedrock is less than 3 feet in areas with Dunbarton Silt Loam soils (see Map 8).

As is common throughout much of the upper Midwest, karst features such as enlarged bedrock fractures are prevalent in the local dolomite uplands. Karst features such as vertical fractures and conduits provide primary pathways for groundwater movement and can dramatically increase groundwater susceptibility when present. The location of karst features are difficult to predict, and the thickness and type of the overlying soil greatly affects how much water drains into them. Where clay soils are thick, infiltration rates are likely to be very low. However, where bedrock fractures are near the surface infiltration rates can be very high. Based on the WGNHS Karst Potential map the amendment is within an area where the depth to bedrock over potential karst units is generally 0 to 50 feet.

Table 2
Soils Classification

Soil	% of Area	General Characteristics
<i>Dunbarton Silt Loam;</i> <i>DuD2</i>	21.5	Shallow, well drained, gently sloping to steep soils on uplands. Soils have low fertility, moderately slow permeability, and a very severe hazard of erosion. Poses severe limitations for development due to shallow bedrock.
<i>Kidder Soils;</i> <i>KrE2</i>	18.2	Deep, well drained, gently sloping to very steep soils on glaciated uplands. Soils have medium fertility, moderate permeability, a very severe hazard of erosion, and are moderately droughty. Poses severe limitations for development due to steep slopes.
<i>Orion Silt Loam;</i> <i>Or</i>	27.0	Deep, somewhat poorly drained, nearly level soils on flood plains and narrow stream bottoms. Soils have high fertility, moderate permeability, and a low hazard of erosion. Poses severe limitations for development due to flooding, seasonal high water table, and very low bearing capacity.

**Table 2
Soils Classification**

Soil	% of Area	General Characteristics
<i>Plano Silt Loam; PoC2</i>	17.1	Deep, well drained and moderately well drained, nearly level to sloping soils on glaciated uplands. Soils have high fertility, moderate permeability, and a severe hazard of erosion. Poses moderate limitations for development due to slopes.
<i>Port Byron Silt Loam; PrB</i>	15.9	Deep, moderately well drained, gently sloping and sloping soils on colluvial valley foot slopes. Soils have high fertility, moderate permeability, and a moderate hazard of erosion. Poses moderate limitations for development due to and low bearing capacity.
<i>Radford Silt Loam; RaA</i>	0.2	Deep, somewhat poorly drained, nearly level and gently undulating alluvial soils in low drainageways and stream channels. Soils have high fertility, moderate permeability, and a low hazard of erosion. Poses very severe limitations for development due to flooding, seasonal high water table, and very low bearing capacity.

Source: Soil Survey Geographic data for Dane County developed by the USDA Natural Resources Conservation Service

**Table 3
Soils Characteristics**

Characteristic	Soil Map Symbols (see Map 7)	% of Area
Prime Agricultural Soils	Or, PrB, RaA	43.2
Hydric Soils (Indicates Potential / Restorable Wetlands)	None	0
Soils with Seasonal High Water Table (< 5')	Or, PrB, RaA	43.2
Soils Associated with Steep Slopes (> 12%)	DuD2, KrE2	39.7
Soils Associated with Shallow Bedrock (< 5')	DuD2	21.5
Poorly Drained Soils	Or, RaA	27.3
Best Potential for High Rates of Infiltration in Subsoils	KrE2, PoC2	35.3

Source: Soil Survey Geographic data for Dane County developed by the USDA Natural Resources Conservation Service

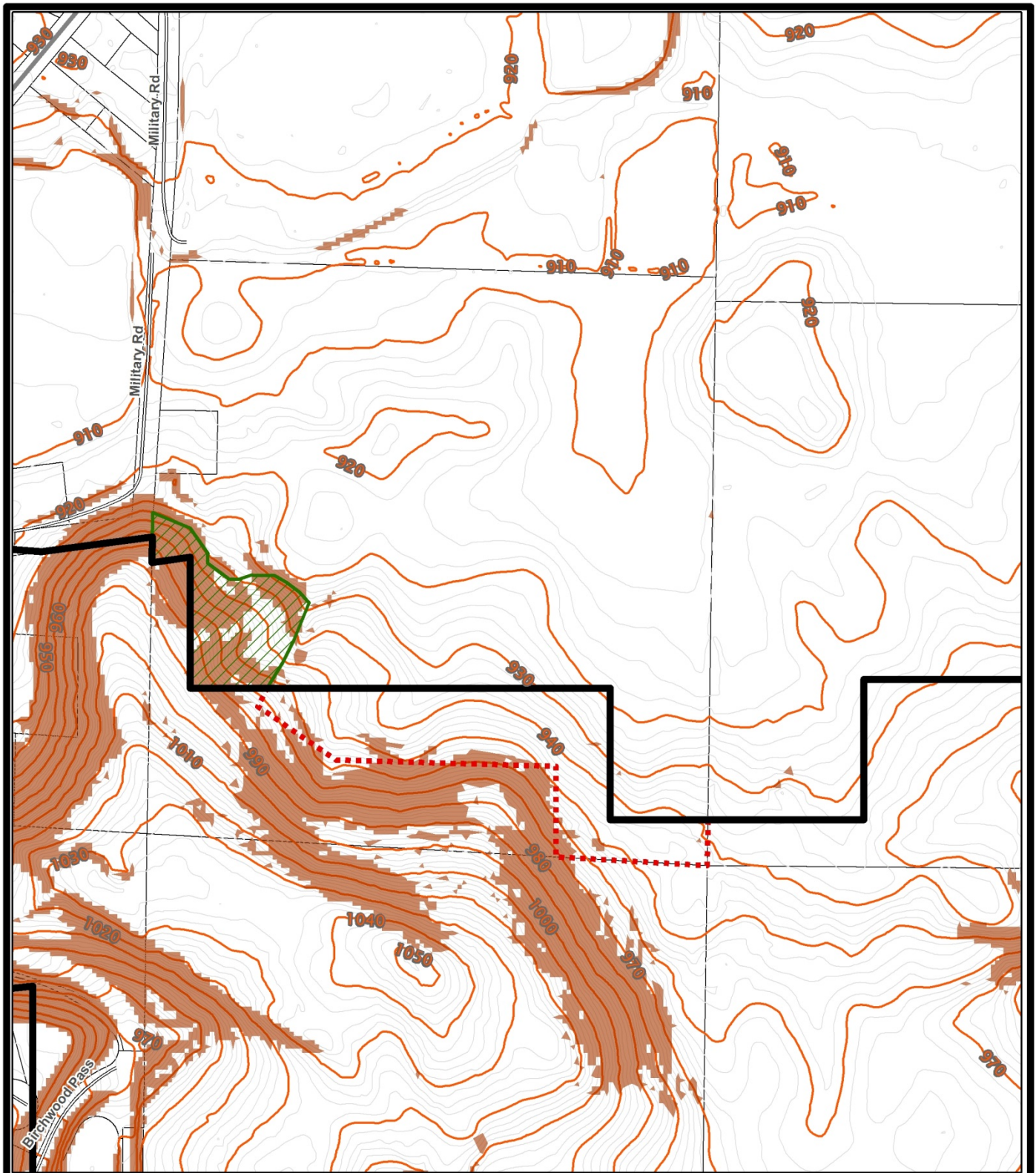
Groundwater Recharge

Map 8 shows areas with seasonal high water table within 5 feet of the land surface based on NRCS soil survey data. Nearly half of the amendment area has the potential for a seasonal high water table within 5 feet of the surface. NR 151 and Dane County Ordinance Chapter 14 limit infiltration in areas with these conditions to roof runoff or stormwater management practices using engineered soil with at least 10% fines. There are also soils in and near the amendment area with the potential for high rates of infiltration, which would be the most appropriate place for stormwater infiltration practices.

There are no hydric soils within the amendment area. The Radford and Orion silt loam soils (the RaA and Or map units) have hydric inclusions. The Radford, Port Byron, and Orion silt loam soils (the RaA, PrB, and Or map units) can have a seasonal (April to June) zone of

water saturation within 5 feet of the ground surface. The Radford and Orion soils are classified as somewhat poorly drained, while the Port Byron soils are classified as moderately well drained. The poorly drained soils can have limited suitability for buildings with basements due to their seasonal high water table (zone of soil saturation), which can cause problems with groundwater induced flooding.

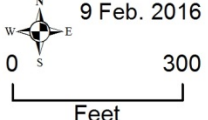
In 2009, the Wisconsin Geological and Natural History Survey published a report estimating the existing groundwater recharge rates in Dane County based on the soil water balance method. The study estimates the existing groundwater recharge rate in the amendment area to be 10 inches per year.



Map 6 Elevation
Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains

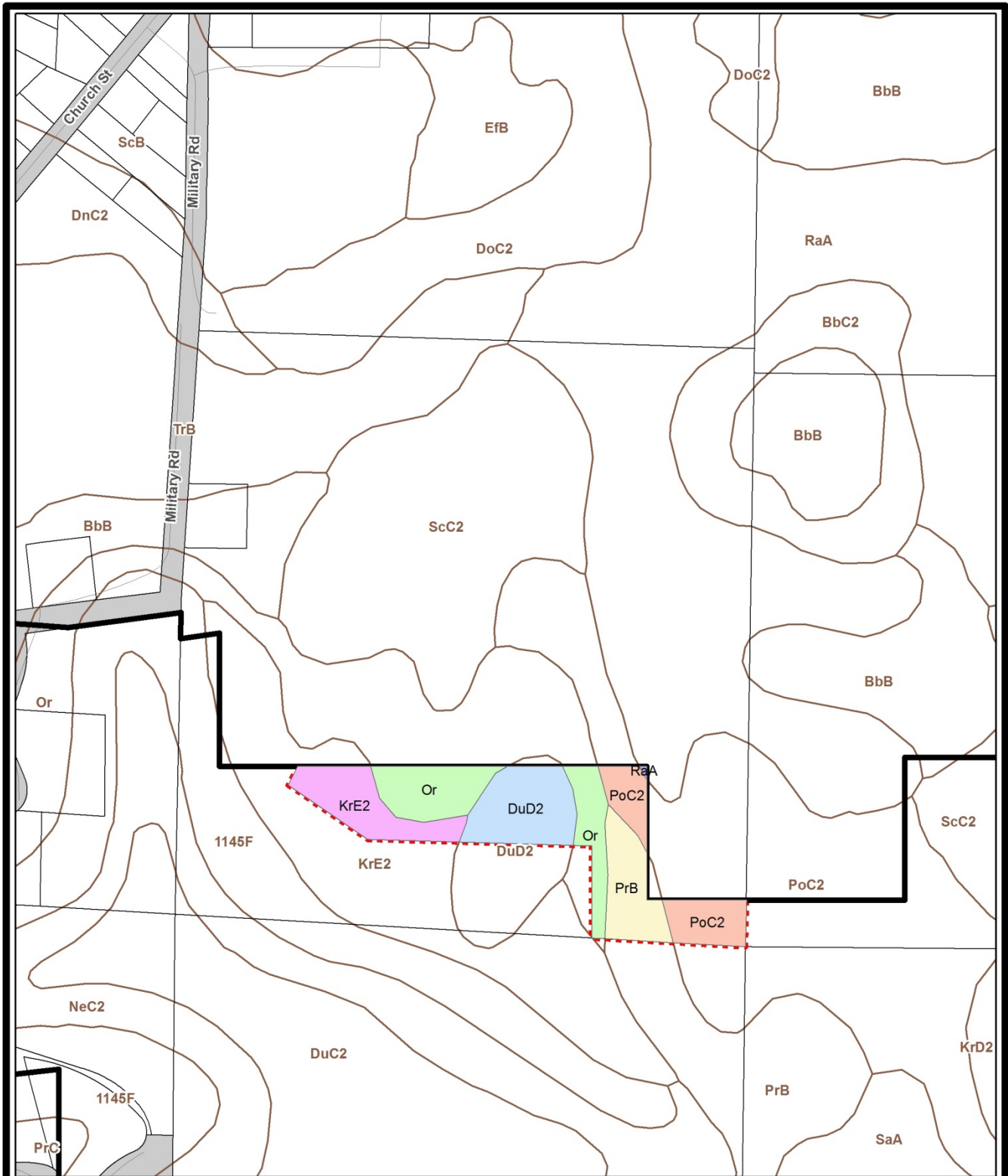
-  Existing Service Area Boundary
 -  Service Area To Be Added
 -  Proposed Environmental Corridor
- Percent Slope**
-  20% and greater
 -  Contours (10ft) 2009
 -  Rivers and Streams
 -  Lakes and Ponds

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Prepared by staff of the CARPC.



Map 7 Soil Map Units

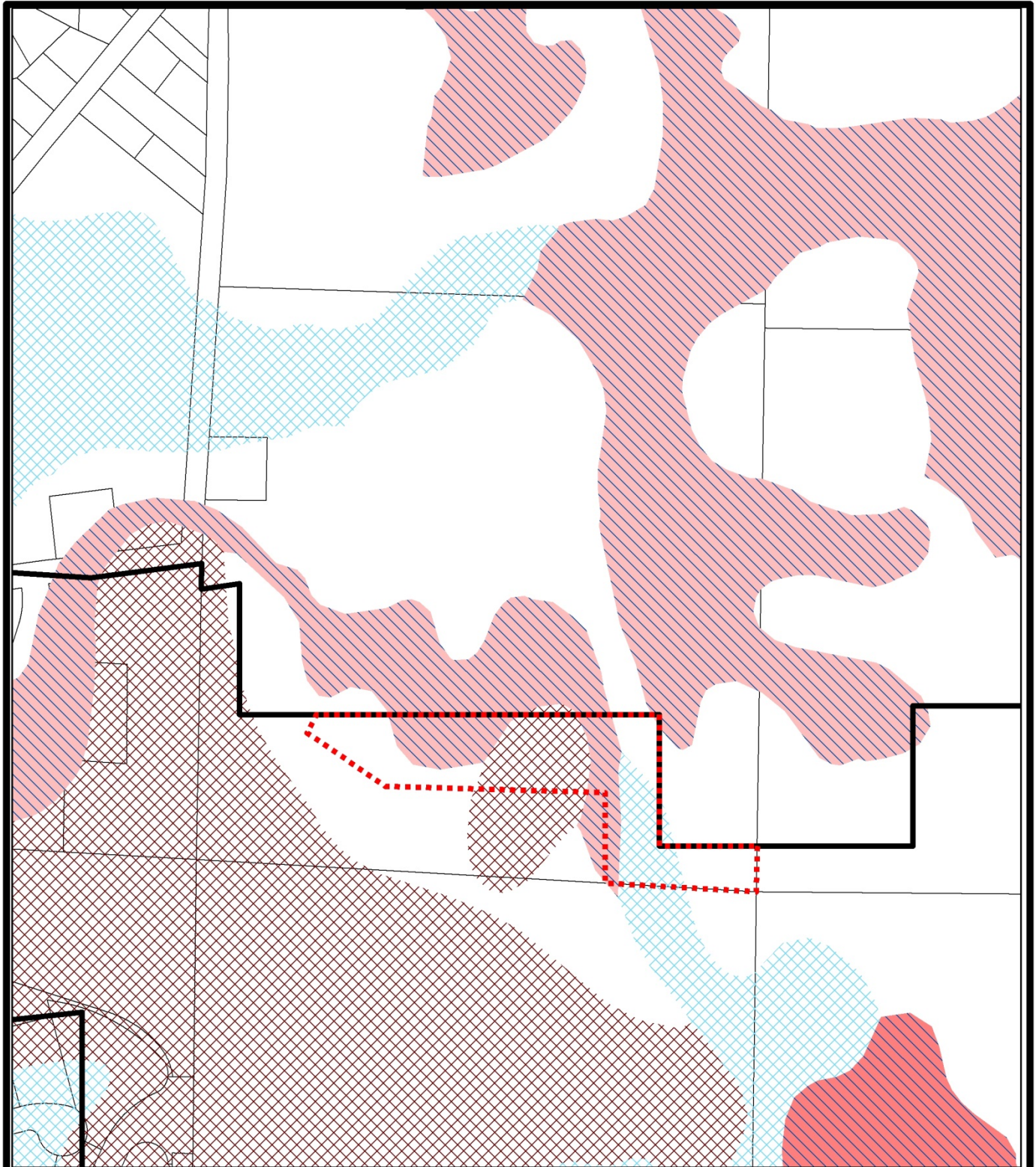
Proposed Amendment to the Dane County
 Land Use and Transportation Plan and Dane
 County Water Quality Plan, Revising the Cross
 Plains Urban Service Area Boundary and
 Environmental Corridors in the Town of Cross Plains

Soil Symbol	Color	Soil Unit
	Light Blue	DuD2
	Pink	KrE2
	Green	Or
	Orange	PoC2
	Yellow	PrB
	Light Purple	RaA

9 Feb. 2016

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 Prepared by staff
 of the CARPC.

Map 8 – Potential Seasonal High Groundwater and Shallow Bedrock



<p>Map 8 Potential Seasonal High Groundwater and Shallow Bedrock</p> <p>Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains</p>		<p>Depth to Bedrock (ft)</p> <p> < 5</p> <p>High Water Table Depth (ft)</p> <p> 0 to 3</p> <p> 3 to 5</p>	<p> Service Area To Be Added</p> <p>Drainage Class</p> <p> Somewhat poorly drained</p> <p> Poorly drained</p> <p> Very poorly drained</p>	<p>9 Feb. 2016</p> <p>0 300 Feet</p> <p>Prepared by staff of the CARPC.</p>
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2) Proposed Urban Services

a) Public Safety Services and Other City Services.

Police protective services will be provided to the proposed amendment area by the Village of Cross Plains Police Department. The Department employs five full-time equivalent officers and is located ¼ mile due west of the amendment area. Fire protection services will be provided by the Cross Plains-Berry Fire District located less than two miles to the west. The District is staffed by volunteers. Response time to the amendment area is an estimated five minutes, depending on volunteer availability. Emergency medical services will be provided to the area by the Cross Plains Area EMS (serving the communities of Berry, Cross Plains, and Springfield) from its station located on Park Street. The EMS station is also less than two miles from the amendment area. EMS response times to the site would be an estimated five minutes, again depending on volunteer availability. Solid waste collection, public water, and refuse collection are also planned for the site. The northwest quadrant, roughly 10 acres, of the larger development area (outside of the requested amendment area) is planned for a civic campus to include: a village hall, community center, pool, playing fields, playground, and pavilion.

b) Urban Transportation System

The proposed development plan for the single-family residential subdivision indicates that access will be provided by extending Military Road to the east. The provided cross sections show that Military Road will have a 66 foot wide right-of-way with two travel lanes, a ten-foot wide pedestrian pathway, and on-street parking along the park frontage. A pedestrian path connection denoted between lots 14 and 15 on the development plan will provide access from the cul-de-sac to the planned park/municipal complex north of the amendment area. Local streets serving the amendment area will include sidewalks on both sides according to the application.

In 2017, Church Street (CTH P) will be reconstructed to an urban cross section with bike lanes between USH 14 (Main Street) and the Village's northern limits.

The MATPB's Bicycle Transportation Plan for the Madison Metropolitan Area recommends construction of an east-west shared-use path through Cross Plains known as the Good Neighbor Trail along the rail corridor south of USH 14. The Good Neighbor Trail is proposed to extend from the west side of Madison to the Village of Mazomanie. The Village's comprehensive plan shows a conceptual potential future path extending south from the amendment area to USH 14 via Birchwood Pass and Westview Ct.

c) Parks and Open Space

The requested amendment area is located less than ¼ mile from the athletic fields of the middle school as well as a planned municipal complex that will include a pool, playing fields, playground, and pavilion. The amendment area is also less than ¼ mile from the existing Baer Park.

f) Public Water System

The Village of Cross Plains Water Utility will provide public water service to the amendment area through the extension of the existing water main located on Military Road. A 12" water main will be extended across the northern portion of the proposed

development following the new road. This service will be extended to the far eastern property line to allow for future connections to the east as appropriate. Service to the remainder of the development will be provided by an 8" main that will follow the streets proposed for the development. This 8" main will be stubbed to the east and southern property lines to allow for potential future connections. Some of the homes within the amendment area will require booster pumps due to the low topography and available water pressure. This will be determined on a case by case basis at the time of home construction.

The Village provides municipal water through two high capacity wells. Well #1 (410 gpm) is located at the end of East St. and Well #2 (600 gpm) is located adjacent to this development in Baer Park. The current capacity of the water utility's system is 1,300,000 gpd, with an average demand of 420,000 gpd. The Village estimates that the average daily pumped water demand for the amendment area will be 5,160 gpd, based on 43 units at an average of 120 gallons per day per unit. This estimate is consistent with the water utility's annual reports to the Public Service Commission.

The Village's water system currently has two storage tanks that provide a total of approximately 548,000 gallons of storage. This is adequate storage volume to provide the estimate peak hourly water demand for the Village in addition to 2,000 gallons per minute for 2.5 hours for firefighting purposes with the largest well out of service. The Village has also had the water distribution system modeled and determined that with all well pumps off the residual pressure can provide a minimum of 920 gpm within the proposed development. This exceeds the Insurance Services Office (ISO) fire flow guidelines of 750 gpm for single family dwellings where there is at least 31 feet between buildings.

g) Wastewater

Sanitary sewer service will be provided to the proposed development by connection to the Village's existing sanitary sewer collection system manhole on Military Road. A 10" sanitary sewer will be extended across the northern portion of the proposed development following the new road. This service will be extended to the far eastern property line to allow for future connections to the east as appropriate. Service to the remainder of the development will be provided by an 8" sanitary sewer that will follow the streets proposed for the development. This 8" sewer will be stubbed to the east and southern property lines to allow for potential future connections.

The Village estimates that the development that includes the amendment area will generate an average of 7,740 gallons of wastewater per day (gpd). This estimate is based on a 43 residential units at 180 gpd per unit, including infiltration and inflow. Utilizing a peaking factor of 4, it is estimated that the amendment area would generate a peak of 30,960 gallons per day or a peak hourly flow of 0.06 cubic feet per second (cfs). The estimate is consistent with historical wastewater generation rates in the Village. The Village has determined that there is available capacity in their existing sanitary sewer collection system for the proposed amendment area.

Wastewater Treatment

Cross Plains operates a wastewater treatment facility (WWTF) that provides secondary treatment and nutrient removal to primarily domestic wastewater. Treatment units include mechanical influent step screening, selector basins to enhance biological phosphorus removal, two oxidation ditches for activated sludge secondary treatment, final clarification, seasonal ultraviolet disinfection and effluent diffused and cascade aeration. The wastewater treatment facility has a design capacity of 0.593 mgd and received an average of 0.343 mgd in 2014, including infiltration and inflow. The Village reports that the average daily wastewater flow at the treatment facility has decreased to 0.242 mgd in 2015 due to sanitary sewer replacement projects that reduced the amount of infiltration and inflow from old sewers on Lagoon Street and Main Street. Biosolids are aerobically digested and thickened with a gravity belt thickener before being hauled to another facility. The facility hauls biosolids to the Dane-Iowa WWTF for further Class A sludge treatment and eventual land application on WDNR approved agricultural fields. The Cross Plains Wastewater Treatment Facility has not had any issues meeting its WPDES permit limits for the quality of effluent discharged to Black Earth Creek according to their 2014 Compliance Maintenance Annual Report.

h) Stormwater Management System

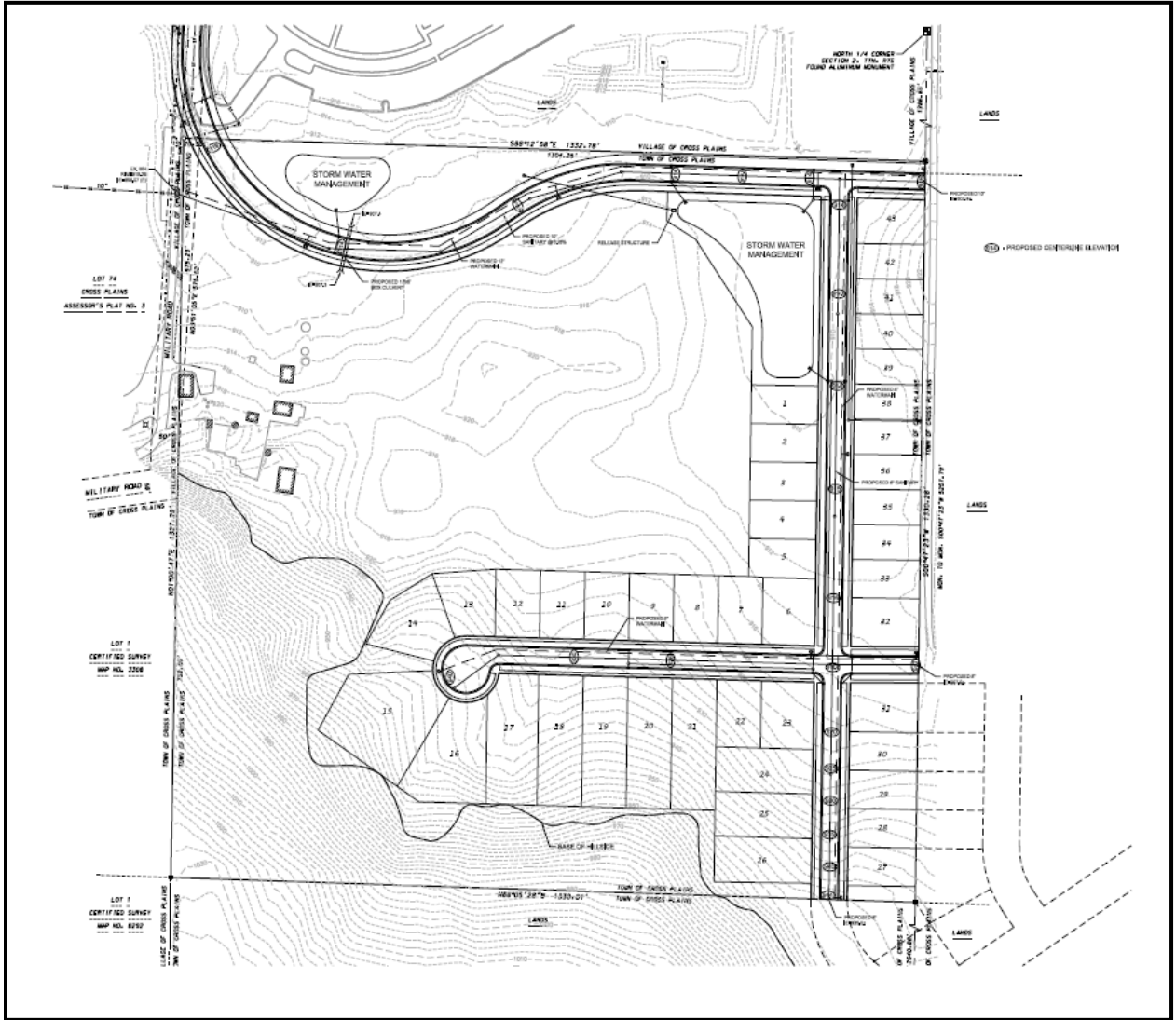
The preliminary location of stormwater management facilities for the development are shown in the proposed development plan (see Map 9).

Performance Standards

The Village of Cross Plains proposes stormwater management performance measures to meet or exceed standards required by the State of Wisconsin (NR 151), Dane County (Chapter 14), and Village of Cross Plains (Chapter 65) stormwater regulations, as follows:

1. Require post-construction sediment control (reduce total suspended solids leaving the site by at least 80%, with a minimum of 60% of that control occurring in a retention pond prior to infiltration) for the 1-year, 24-hour design storm. This is consistent with the standards currently required by Dane County and the State of Wisconsin.
2. Require post-construction peak runoff rate control for the 1-, 2-, 10-, and 100-year, 24-hour design storms to “pre-development” peak runoff rates. This is consistent with the standards currently required by Dane County.
3. Require post-development stay-on volume of at least 100% of pre-development stay-on volume. This is more protective than the stay-on standard for new development currently required by Dane County regulations.
4. Maintain pre-development groundwater annual recharge rate of 10 inches per year for this area as estimated by the Wisconsin Geological and Natural History Survey. This is consistent with the standards currently required by Dane County.
5. Reduce the temperature of stormwater discharge to meet WDNR cold water standards. This is consistent with the standards currently required by Dane County.

Map 9 –Proposed Utilities



i) **Environmental Corridors**

The proposed amendment area does not include any waterbodies, wetlands, hydric soils, or floodplains that are unsuitable for development because of physical or environmental constraints and require preservation in environmental corridors. Approximately 1.8 acres of land in the existing urban service area, which are currently zoned as woodland and/or hillside/hilltop protection areas and conservancy/permanent open space under Village Ordinances, are being added to the environmental corridors as part of this amendment. Stormwater management facilities for the proposed development should also be designated as environmental corridors.

3) Impacts and Effects of Proposal

a) Meeting Projected Demand

Residential land demand within the Cross Plains Service Area is expected to increase by 99 acres due to a projected population increase of around 419 households by the year 2040. The proposal facilitates the construction of 13 single-family units within a larger 43 unit development. The request adds 4.3 developable acres to the Cross Plains Urban Service Area. The request also re-designates 1.8 acres of land already in the USA as Environmental Corridor.

d) Phasing

Phasing is not required for a development of this size and has not been identified.

b) School System Impacts

Based on the percent of the overall population in the Middleton-Cross Plains School District identified as being school aged¹, the 43 unit development may add an additional 9—10 primary school aged children and one or two secondary school aged children at full occupancy.

c) Transportation System Impacts

Thirteen (13) single-family residential dwelling units are planned for the amendment area. When developed and fully occupied, the development could generate around 115 vehicle trips (inbound and outbound total) on an average weekday.

In 2016, the two-way average daily traffic (ADT) volume on Church Street was 6,000 immediately east of Glacier's Edge Square. The addition of 13 single-family homes will not have a significant effect on traffic volumes in the area.

d) Surface Water Impacts

Development typically creates impervious surfaces (i.e., streets, parking areas, and roofs) and has the potential to alter the natural drainage system (e.g., natural swales are replaced by storm sewers) resulting in increased stormwater runoff rates and volumes, as well as reduced infiltration. Development can also cause substantial short-term soil erosion and off-site siltation from construction activities. Scientific research has well documented that without effective mitigation measures, the potential impacts of development on receiving water bodies can include the following:

- Flashier stream flows (i.e., sudden higher peaks)
- Increased frequency and duration of bankfull flows
- Reduced groundwater recharge and stream base flow
- Greater fluctuations in water levels in wetlands
- Increased frequency, level (i.e., elevation), and duration of flooding
- Additional nutrients and urban contaminants entering the receiving water bodies
- Geomorphic changes in receiving streams and wetlands

¹ U.S. Census Bureau, *American Community Survey*, 5-Year Estimate (2010—2014)

Natural drainage systems attempt to adapt to the dominant flow conditions. In the absence of mitigation measures, the frequency of bank-full events often increases with urbanization, and the stream attempts to enlarge its cross section to reach a new equilibrium with the increased channel forming flows. Higher flow velocities and volumes increase the erosive force in a channel, which alters streambed and bank stability. This can result in channel incision, bank undercutting, increased bank erosion, and increased sediment transport. The results are often wider, straighter, sediment laden streams, greater water level fluctuations, loss of riparian cover, and degradation of shoreland and aquatic habitat.

If left unmanaged, these changes in hydrology combined with increased urban pollutant loading, can have a dramatic effect on the aquatic ecosystem of streams. It is important to realize that flow is a major determinant of the physical habitat in a stream, which in turn determines the biotic composition of stream communities. A growing body of literature documents that channel geomorphology, habitat structure, and complexity are determined by prevailing flow conditions, which in turn determine the biota that can inhabit the area. This is true for the fish as well as the aquatic insects upon which they feed. Studies of streams affected by urbanization have shown that fish populations either disappear or become dominated by rough fish that can tolerate the associated lower water quality levels.

The Village proposes to mitigate the urban non-point source impacts of the proposed development by implementing various stormwater best management practices that are designed and constructed to meet or exceed current standards for pollutant reduction, runoff volumes, peak flows, temperature, and groundwater recharge. The existing stormwater ordinance in the Village of Cross Plains includes performance standards that are more stringent than those in NR 151 and the Dane County Chapter 14 in some areas. The ordinance requires practices to infiltrate sufficient runoff volume so that post-development infiltration volume shall be at least 100% of the pre-development infiltration volume, based upon average annual rainfall. This will reduce the likely impacts of the proposed development on the receiving waters.

e) Groundwater Impacts

Without effective mitigation practices, as natural areas are converted to urban development the ground/surface water balance in streams and wetlands shifts from a groundwater-dominated system to one dominated more and more by surface water runoff, with subsequent reductions in stream quality and transitions to more tolerant biological communities.

Modeled baseflow results due to current and anticipated future well water withdrawals (cfs)			
Stream	Pre-Development	2010	2040
Black Earth Creek ²	4.95	3.52	3.51

Groundwater modeling indicates that the cumulative effects of year 2010 water well withdrawals have resulted in a 29 percent (1.43 cfs) decline in base flow in Black Earth Creek above Cross Plains compared to the pre-development (no pumping) base flow of 4.95 cfs. An additional < 1% percent decline is anticipated by the year 2040 according to the modeling, reducing the base flow to 3.51 cfs. Significant changes in fish communities from current conditions are not expected to occur as a result of the

² Above Cross Plains

projected reduction in baseflow in the Black Earth Creek according to the 2014 WDNR report, Ecological Limits of Hydrologic Alteration in Dane County Streams. This is primarily because of the comparatively small effect of projected future pumping overall (0.01 cfs). The anticipated base flow reduction due to the water demand for this small amendment is too small to measure. The loss of baseflow from the cumulative effects of water well pumping is a regional issue, beyond the boundaries of a single Urban Service Area Amendment or a single municipality. This will be discussed along with potential management options in the update to the Dane County Groundwater Protection Plan (Technical Appendix G of the Water Quality Plan) in 2016.

Maintaining pre-development groundwater recharge also helps to maintain baseflow and mitigate this impact. The Village of Cross Plains Stormwater Ordinance requires maintaining the pre-development annual recharge rate (estimated as 10 inches per year for this according to the Wisconsin Geological and Natural History Survey study). Experience has shown that this criterion is generally met when pre-development runoff volume is maintained for the development area through infiltration measures.

The amendment areas includes some poorly drained soils in areas with seasonal high groundwater tables. These soils can have limited suitability for buildings with basements due to their seasonal high water table (zone of soil saturation), which can cause problems with groundwater induced flooding. On-site soils investigations in are recommended in areas with these soil classifications to determine the actual extent of seasonal high groundwater in the amendment areas and potential problem areas. In response to potential issues related to seasonal high groundwater, the Village should consider requiring that the lowest level of any structure must be built at a minimum of one foot above the seasonal high groundwater table and have this restriction recorded on the plat. This type of restriction is being used in several counties in Wisconsin and will reduce the potential for basement flooding.

As is common throughout much of the upper Midwest, karst features such as enlarged bedrock fractures are prevalent in the local dolomite uplands. Karst features such as vertical fractures and conduits provide primary pathways for groundwater movement and can dramatically increase groundwater susceptibility when present. The location of karst features are difficult to predict, and the thickness and type of the overlying soil greatly affects how much water drains into them. Based on the WGNHS Karst Potential map the amendment is within an area where the depth to bedrock over potential karst units is generally 0 to 50 feet. The collection of site-specific data is recommended for an accurate assessment karst potential in this area. If karst features are found, adequate protection measures must be taken to address the potential for groundwater contamination.

4) Conclusions and Staff Water Quality Recommendations

The proposed amendment area does not include any waterbodies, wetlands, hydric soils, or floodplains that are unsuitable for development because of physical or environmental constraints and require preservation in environmental corridors. Approximately 1.8 acres of land in the existing urban service area, which are currently zoned as woodland and/or hillside / hilltop protection areas and conservancy / permanent open space under Village Ordinances, are being added to the environmental corridors as part of this amendment.

A screening review conducted by CARPC staff identified five species of Special Concern and one Endangered species that have the potential to occur in the proposed amendment area if appropriate habitat exists. CARPC requests that the applicant ask the DNR to complete a formal NHI review for the possible presence of Threatened, Endangered, and Special Concern species in the amendment area. If such resources are identified by WDNR, CARPC staff recommends that the Village of Cross Plains undertake measures to protect the species and their habitat areas by delineating these areas and necessary buffer zones in environmental corridors, and by identifying critical habitat connectivity pathways.

The amendment areas includes some poorly drained soils in areas with seasonal high groundwater tables. These soils can have limited suitability for buildings with basements due to their seasonal high water table (zone of soil saturation), which can cause problems with groundwater induced flooding. Staff recommends that on-site soils investigations in accordance with SPS 385.60 be conducted in areas with these soil classifications to determine the actual extent of seasonal high groundwater in the amendment areas and identify potential problem areas. Staff recommends that the Village consider requiring that the lowest level of any structure be built at a minimum of one foot above the seasonal high groundwater table and have this restriction recorded on the plat. This type of restriction is being used in several counties in Wisconsin and will reduce the potential for basement flooding.

Based on the WGNHS Karst Potential map the amendment is within an area where the depth to bedrock over potential karst units is generally 0 to 50 feet. The collection of site-specific data is recommended for an accurate assessment karst potential in this area. If karst features are found, adequate protection measures must be taken to address the potential for groundwater contamination.

The Village proposes to mitigate the urban non-point source impacts of the proposed development by implementing various stormwater best management practices that are designed and constructed to meet or exceed current standards for pollutant reduction, runoff volumes, peak flows, temperature, and groundwater recharge. This will reduce the likely urban nonpoint runoff impacts of the proposed development on the receiving waters.

a) Conditions

CARPC staff recommends approval of this amendment, based on the land uses and services proposed, and conditioned on the commitment of the Village of Cross Plains to pursuing the following:

1. Submit a detailed stormwater management plan for CARPC and DCL&WCD staff review and approval prior to any land disturbing activities in the amendment area. The stormwater management plan should include the following:
 - a. Install stormwater and erosion control practices prior to other land disturbing activities. Protect infiltration practices from compaction and sedimentation during land disturbing activities.
 - b. Control peak rates of runoff for the 1-, 2-, 10-, and 100-year 24-hour design storms to pre-development levels, using the updated precipitation depth and storm distribution (NRCS MSE4) data developed through the National Oceanic and Atmospheric Administration Atlas 14 project, in accordance with the Dane County Stormwater Ordinance.

- c. Maintain the post development stay-on volume to at least 100% of the pre-development stay-on volume for the one-year average annual rainfall period, in accordance with the Village of Cross Plains Stormwater Ordinance.
 - d. Maintain pre-development groundwater recharge rates from the Wisconsin Geological and Natural History Survey's 2009 report, *Groundwater Recharge in Dane County, Wisconsin, Estimated by a GIS-Based Water-Balance Model* (an average of 10 in./yr. for the amendment area) or by a site specific analysis, in accordance with the Village of Cross Plains Stormwater Ordinance.
 - e. Provide at least 80% sediment control for the amendment area for the 1-year, 24-hour design storm, with a minimum of 60% of that control occurring in a retention pond prior to infiltration, in accordance with the Village of Cross Plains Stormwater Ordinance.
 - f. Reduce the temperature of stormwater discharge to meet WDNR cold water standards, in accordance with the Village of Cross Plains Stormwater Ordinance.
2. All stormwater management facilities should be designated as environmental corridors, and preferably located in public outlots. Stormwater easements should be provided for any stormwater management facilities located on private property.
 3. A preliminary site investigation for location of karst formations be done prior to design placement of stormwater infiltration facilities as required by the State of Wisconsin Technical Standard 1002 - Site Evaluation for Stormwater Infiltration.

b) Recommendations

It is also recommended that the Village of Cross Plains pursue the following measures related to water quality or other State of Wisconsin regulations:

1. Request a formal Endangered Resources review by the WDNR (<http://dnr.wi.gov/topic/erreview/review.html>) or one of their certified reviewers and take necessary habitat protection measures if species are found.
2. Conduct on-site soils investigations in accordance with SPS 385.60 in areas with mapped poorly drained soils and seasonal high groundwater tables to determine the actual extent of seasonal high groundwater in the amendment areas and identify potential problem areas. The Village should consider requiring that the lowest level of any structure be built at a minimum of one foot above the seasonal high groundwater table and have this restriction recorded on the plat. This type of restriction is being used in several counties in Wisconsin and will reduce the potential for basement flooding.
3. Given the position of the parcel on the landscape and its proximity to Black Earth Creek, which supported a dense pre-Contact population, archaeological survey of the parcel is recommended.
4. If anyone suspects that a Native American burial mound or an unmarked or marked burial is present in an area, the Wisconsin Historical Society should be notified. If human bone is unearthed during any phase of a project, **all work must cease**, and the Wisconsin Historical Society **must be contacted** at 1-800-342-7834 to be in compliance with Wis. Stat. 157.70 which provides for the protection of all human burial sites. **Work cannot resume until the Burial Sites Preservation Office gives permission.** Please contact Mr. Chip Brown, 608-164-6508, with questions or for further information.

Review of Advisory CARPC Goals

a) Consistency with Adopted Plans and Policies.

The proposal Village of Cross Plains Planning Commission has found the proposal consistent with its relevant planning documents.

b) Support of Advisory Goals

The proposed amendment area itself is roughly 4 acres and the larger surrounding development is around 40 acres. (Additionally, a small quantity of land currently within the USA is being designated as Environmental Corridor.) Given the size of the request, it is difficult to quantify its effects in relationship to the goals outlined in the *Dane County Land Use and Transportation Plan*. Any attempt to assess the support of or conflict with these goals is likely to be highly speculative. There is simply not enough information available at this time to reach meaningful conclusions. To the extent possible, information is given below that indicates how the amendment request may fit into the larger development picture in the Village and the region.

- 1) *Promote the development of balanced communities throughout the county with sufficient commercial, industrial, residential, and open space land to meet the needs of existing and future residents.*

The proposal facilitates the construction of 13 single-family units within a larger 43 unit development. The *Cross Plains Comprehensive Plan Future Land Use Map* indicates the amendment area is a part of a “Planned Neighborhood.” However, there is insufficient detail regarding the broader (non-single-family residential) planning context of the request to assess it in terms of community balance and land needs of future residents. This proposal is only one portion of an as-yet-to-be-planned neighborhood further to the east.

- 2) *Promote compact urban development in new areas adjacent to existing urban areas and in the redevelopment or infill development of existing neighborhoods.*

The proposal is adjacent to existing single-family development. Residential lots within 0.3 miles from the amendment area averaged just over one third of an acre (2.7 dwelling units/acre).

- 3) *Promote the development of functionally and visually distinct communities encouraging compact, mixed-use neighborhoods and the efficient provision of a full range of public services.*

Application materials do not articulate functional or visual distinction from other communities. A full range of public services will be provided to the site.

- 4) *Provide a full range of safe and affordable housing opportunities and choices for all residents throughout the county.*

The amendment area and surrounding development is aimed at expanding options in the upper range of home values in Cross Plains. The project’s developer estimates home values for the 43 unit development to be in the range of \$325,00—\$435,000. At least three quarters of home values fall below this estimated range.³ The U.S. Census Bureau estimates the median housing value in Cross Plains to be \$236,100⁴.

³ *American Community Survey, 5-Year Estimate (2010—2014): Upper Quartile Value \$286,200 +/-10,896*

⁴ +/-10,568

5) *Provide an integrated, all-mode transportation system which offers the efficient, effective and safe movement of people and goods, and provides mode choice wherever possible while enhancing and, where relevant, preserving the character and livability of the neighborhoods and residential areas where transportation facilities are located.*

n/a

6) *Encourage concentration of employment and activity centers at nodes and along transit corridors to maximize the efficiency of the existing and future transportation system.*

n/a

7) *Support and maintain the central urban core as the region's major activity center and seek greater diversity and vitality in that area.*

n/a

8) *Promote an economic development strategy that will provide suitable employment opportunities and a stable and diversified economic base.*

n/a

9) *Protect agricultural lands and limit non-farm developments in order to maintain the county as one of the nation's most productive agricultural areas.*

The amendment area and the larger development it is a part of are greenfield development. All lands in the 4.3 acre development area are either agriculture, woodland, or other open lands. The remaining land area in the development project is currently within the Urban Service Area and is—for the time being—in agricultural use.

10) *Promote planning and design that preserves and restores environmental functions and protects important environmental, cultural and historic resources.*

(See #14 below)

11) *Develop and promote a county-wide system of open space corridors as a framework to protect the natural environment and scenic values, and provide outdoor recreation opportunities.*

n/a

12) *Promote, conserve and restore all water resources in the region as to both quality and quantity.*

(See #14 below)

13) *Promote a sustainable capital area region. A sustainable region is one that is far-seeing enough, flexible enough, and wise enough to maintain and enhance its physical, environmental, and social systems of support.*

The topic of sustainability—physical, environmental, or social—is not explicitly addressed by this application nor is it cited as the rationale for the design decisions in the development proposal.

14) *The CARPC shall work with communities to update the Dane County Water Quality Plan. In addition to the elements required by NR 121 of the Wisconsin Administrative Code, the Water Quality Plan shall also define areas that should be protected from development based on provisions to protect water quality as contained in NR 121 of the Wisconsin Administrative Code. The Plan shall also define areas that can be developed with measures to protect, restore or minimize degradation of water quality.*

The proposed amendment defines areas that are suitable for development with measures to protect from adverse impacts on water quality. Areas unsuitable for development due to physical or environmental constraints have been designated for preservation within environmental corridors.

c) Comments Received and Unresolved Issues

No comments have been received in response to this amendment request as of the publication of this staff analysis.

d) Advisory Recommendations. It is also recommended that the Village of Cross Plains pursue the following:

1. Consider working with CARPC staff to conduct an Environmental Conditions Report (ECR) and develop a Future Urban Development Area (FUDA) plan for Cross Plains as a complement to its upcoming Comprehensive Plan update.
2. Also consider drafting an neighborhood plan for the amendment area and future development areas to the east in order to provide a variety of housing choices and land use types. As indicated in the Village's Comprehensive Plan, the "Planned Neighborhood" should carefully consider composition and pattern of development to promote a sense of community.
3. Continue to work with Dane County to plan and budget for reconstruction of Church Street (CTH P). Bike lanes and sidewalk on both sides are recommended for the project due to the moderately high and increasing traffic volumes on the street and the many destinations it serves, including the Glaciers Edge Square commercial area, park, and middle school.
4. Provide sidewalk on both sides of the planned Military Road extension, which serves the middle school. Traffic volumes on the road will increase as planned residential development occurs on the east side.
5. Consider requiring developer to construct the path connection identified on the Development Plan from the cul-de-sac west to the south section of Military Road/Baer Park and the planned municipal complex as part of other infrastructure/utility work. The connection will become increasingly important in the future as planned development occurs on the east side.



February 09, 2016

NOTICE OF PUBLIC HEARING March 10, 2016

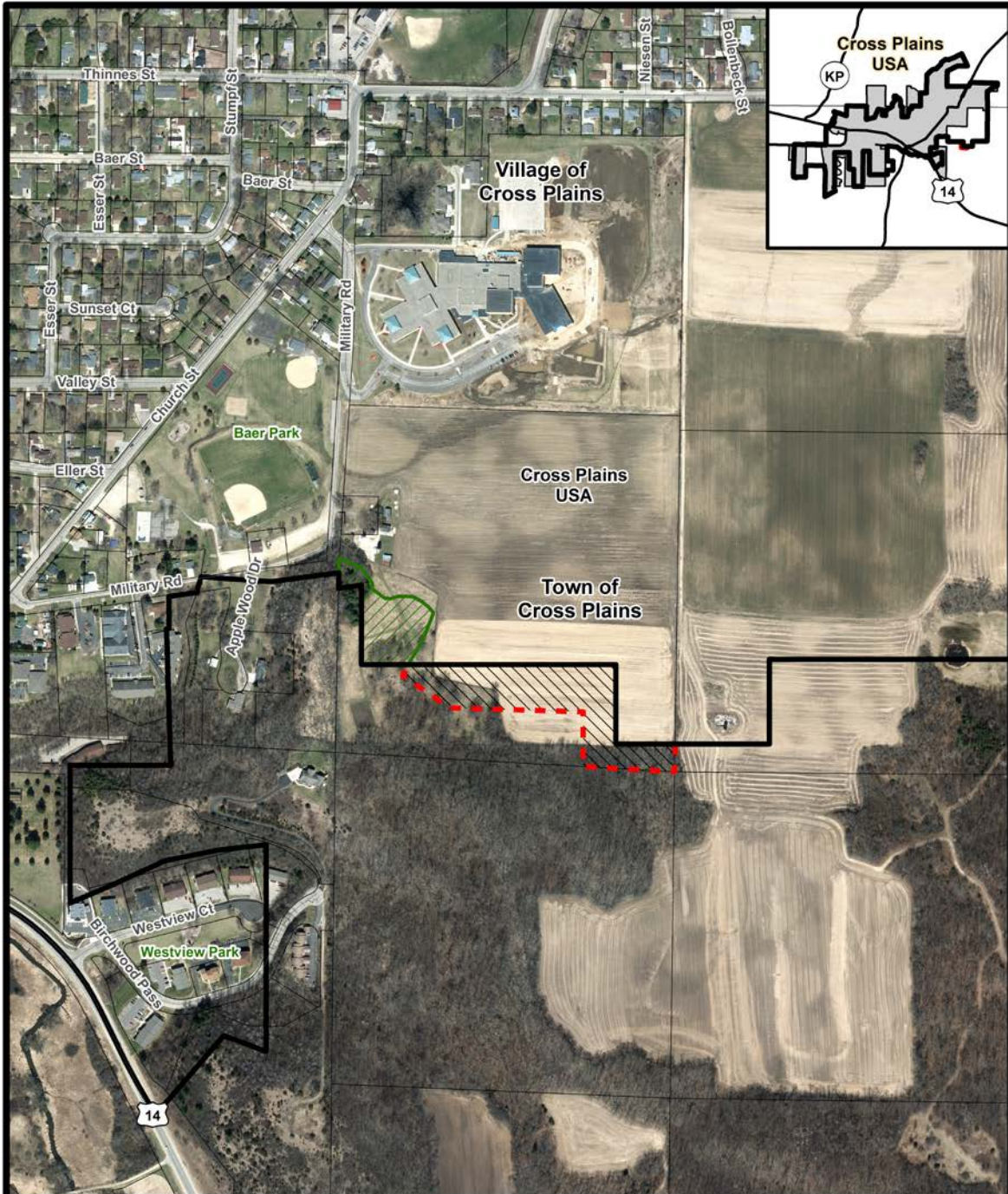
Amendment to Cross Plains Urban Service Area in Village of Cross Plains (4.3 Acres)

PLEASE TAKE NOTICE, that the Capital Area Regional Planning Commission will be meeting at 7:00pm on March 10, 2016 **at the Village of Cross Plains Fire Station, located at 1501 Bourbon Road, Cross Plains, WI 53528**, for the purpose of consideration of amendments to the *Dane County Land Use and Transportation Plan and the Dane County Water Quality Plan* revising the Cross Plains Urban Service Area boundary, as requested by the Village of Cross Plains. The proposed amendment totals 4.3 acres and is located southeast of the Village in the Town of Cross Plains. The requested amendment facilitates a larger development on approximately 40 acres already within the Cross Plains Urban Service Area. The request would also designate 1.8 acres of land within the current service area boundary as Environmental Corridor.





For information or questions, contact Sean Higgins at 608-283-1267.

E-mailed to: Matt Schuenke, Administrator, Village of Cross Plains
Pat Andreoni, President, Village of Cross Plains
Greg Hyer, Chair, Town of Cross Plains
Nancy Meinholz, Clerk, Town of Cross Plains
City, Village and Town Clerks
Joe Parisi, Dane County Executive
Paul Soglin, Mayor, City of Madison
Jerry Derr, President, Dane County Towns Association
Jon Hochkammer, President, Dane County Cities and Villages Association
Scott McDonell, Dane County Clerk
Sharon Corrigan, Chair, Dane County Board of Supervisors
Patrick Miles, Chair, Dane County Zoning and Land Regulation Committee
Patrick Downing, Chair, Dane County Environment and Nat'l Resources Committee
Jeff Pertl, Chair, Dane County Personnel and Finance Committee
Lyle Updike, Chair, Dane County Lakes and Watershed Commission
Al Matano, Chair, Madison Area Transportation Planning Board
Bill Schaefer, Manager, Madison Area Transportation Planning Board
Todd Violante, Dane County Department of Planning and Development
Michael Mucha, Director and Chief Engineer, MMSD
Kevin Connors, Director, Dane County Land and Water Resources Dept.
Charles Hicklin, Dane County Controller
Robert Phillips, City Engineer, City of Madison
Tom Heikkinen, General Manager, Madison Water Utility
James Kuehn, WisDOT
Sandra Beaupre, WisDOT
Diane Paoni, WisDOT
Lloyd Eagan, Director, WDNR South Central Region

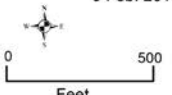
Lisa Helmuth, WDNR Central Office



Map 2 Aerial
 Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains

-  Service Area to be added (4.3 acres)
-  Proposed Environmental Corridors (1.8 acres)
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary

9 Feb. 2016



Feet
 Prepared by staff of the CARPC.

AGENDA
of the
Capital Area Regional Planning Commission

March 10, 2016

1501 Bourbon Road, Cross Plains, WI 53528

7:00 p.m.

RPC Meeting Policies and Deadlines

Registering and Speaking at RPC Public Hearings and Meetings: Persons wishing to speak must register and give the registration form to the meeting recorder before the corresponding "Public Comment..." or Public Hearing item is taken up. Oral comments will not be heard for individual agenda items not designated for public hearing, but will be heard under the "Public Comment..." agenda item. The time limit for testimony by each registrant will be 3 minutes, unless additional time is granted at the discretion of the Chair. However, for public hearings on USA/LSA amendments, applicants are granted a maximum of 15 minutes to testify, and other groups of registrants may pool their time of 3 minutes each up to a maximum of 15 minutes. Commissioners may direct questions to speakers. The RPC may alter the order of the agenda items at the meeting.

Deadlines for Written Communications: Written communications intended to be provided to the Commission and considered as part of the information package for a public hearing or agenda item should be received in the RPC office no later than noon, 7 days prior to the meeting. Written communications received after this deadline will be reported and provided to the Commission at the meeting.

RPC Action Scheduling: If significant controversy or unresolved issues are raised at the public hearing, the RPC will usually defer or postpone action to a future meeting.

1. Roll Call
2. Review of Agenda
3. **Approval of Minutes of the February 11, 2016 Meeting (*actionable item*)**
4. Public Comment on Matters not for Public Hearing
5. Discussion of Budget & Personnel Panel (*note: any members of BPP present at this meeting are invited to speak and will be included in all discussions under this item*)
6. Presentation of Plan4Health Grant Activities (Malissa Dietsch)
7. Presentation of Cross Plains Planning and Development (Village of Cross Plains)
8. Public Hearing: Amending the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan* by Revising the Cross Plains Urban Service Area Boundaries in the Town of Cross Plains
 - a. Amendment Overview (Sean Higgins)
 - b. Water Quality Plan/Water Quality Standards Compliance Staff Presentation (Mike Rupiper)
 - c. Open Public Hearing to Take Testimony from Registrants; Close Public Hearing
 - d. **Approval of CARPC Resolution 2016-04 Amending the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan* by Revising the Cross Plains Urban Service Area Boundaries in the Town of Cross Plains (*actionable item, 8 votes required for approval*)**
9. Report on Potential Future Amendments to Urban Service or Limited Service Areas / Implementation of Past USA or LSA Amendments (Sean Higgins, Mike Rupiper)
10. **Authorization for Chair to Submit a Comment Letter on the WDNR Draft Revised Administrative Decision for the Fitchburg Northeast Neighborhood Amendment to the Central Urban Service Area (*actionable item*)**
11. Approval of Revised CARPC Bylaws
 - a. **Approval of Version 1 of the Revised Bylaws (*actionable item*)**
 - b. **Approval of Version 2 of the Revised Bylaws (*actionable item*)**

12. Discussion of March 4th CARPC Retreat
13. **Authorization for the Chair and Secretary to Sign the 2015-16 Agreement with the Wisconsin Department of Natural Resources to Provide Water Quality Management Planning Assistance to the Department (*actionable item*)**
14. **Authorization of Deputy Director to Execute Consulting Agreement with Brian Stewart for Professional Services to Design, Develop and Implement a New CARPC Website (*actionable item*)**
15. **Approval of March 2016 Disbursements and Treasurer's Report for February 2016 (*actionable item*)**
16. Report of Deputy Director / Report and Discussion on Division of Community and Regional Planning Activities (Steve Steinhoff)
 - Personnel Manual Update
 - A Greater Madison Vision
17. Report and Discussion on Division of Environmental Resources Planning Activities (Mike Rupiper)
18. Report of Chair / Discussion
19. Future Agenda Items (Next meeting is April 14, 2016)
20. Adjournment

Re: **Amending the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan* by Revising the Cross Plains Urban Service Area Boundaries in the Town of Cross Plains (*actionable item; 8 votes required for approval*)**

Decision Items:

1. Approval of CARPC Resolution 2016-04 Amending the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan* by Revising the Cross Plains Urban Service Area in the Town of Cross Plains

The Village of Cross Plains has submitted a request to amend the Cross Plains Urban Service Area by adding 4.3 acres to the south of and undeveloped section within the current USA boundary. The current land uses in the amendment area are predominantly agriculture and woodlands. Land on and adjacent the site is planned to be annexed into the Village of Cross Plains from the Town of Cross Plains. The development proposal includes a single-family residential subdivision as a part of a larger, surrounding development that will contain 43 housing units. *The amendment proposal itself directly facilitates the development of 13 of these units.* Additional civic uses are proposed northwest of the amendment request as a part of the larger development plan for the area. The Village is also proposing to designate 1.8 acres currently within the Cross Plains USA as environmental corridor.

Materials Presented with Item:

1. Draft Resolution CARPC No. 2016-04 with Map
Note: Staff analysis report was posted online and noticed by e-mail on February 9, 2016.

For a copy of the staff analysis, please visit: www.CapitalAreaRPC.org/USA_List.html

Contact for Further Information:

Sean Higgins, Community Planner
Community and Regional Development Planning
608-283-1267
SeanH@CapitalAreaRPC.org



Resolution CARPC No. 2016-04

Amending the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan* by Revising the Cross Plains Urban Service Area Boundaries in the Town of Cross Plains

WHEREAS, the Capital Area Regional Planning Commission has adopted, amended and reaffirmed the *Dane County Land Use and Transportation Plan* and *Water Quality Plan*; and

WHEREAS, said plans delineate urban and limited service areas and environmental corridors as amended through February, 2016; and

WHEREAS, the Village of Cross Plains has requested an addition to the Cross Plains Urban Service Area; and

WHEREAS, a staff analysis of the proposed amendment has been prepared, which indicates that the amendment is generally consistent with adopted regional plans and policies.

NOW, THEREFORE, BE IT RESOLVED that in accordance with Wis. Stats. § 66.0309, and Sec. 208 of Public Law 92-500, the Capital Area Regional Planning Commission amends the *Dane County Land Use and Transportation Plan* and recommends the amendment of the *Dane County Water Quality Plan* by revising the Cross Plains Urban Service Area and environmental corridors boundaries as shown on the attached map.

Adoption of this amendment is based on the land use and urban service plans submitted in support of this amendment, and conditioned on the Village of Cross Plains pursuing the following:

1. Submit a detailed stormwater management plan for CARPC and DCL&WCD staff review and approval prior to any land disturbing activities in the amendment area. The stormwater management plan ~~should~~ shall include the following:
 - a. Install stormwater and erosion control practices prior to other land disturbing activities. Protect infiltration practices from compaction and sedimentation during land disturbing activities.
 - b. Control peak rates of runoff for the 1-, 2-, 10-, and 100-year 24-hour design storms to pre-development levels, using the updated precipitation depth and storm distribution (NRCS MSE4) data developed through the National Oceanic and Atmospheric Administration Atlas 14 project, in accordance with the Dane County Stormwater Ordinance.
 - c. Maintain the post development stay-on volume to at least 100% of the pre-development stay-on volume for the one-year average annual rainfall period, in accordance with the Village of Cross Plains Stormwater Ordinance.
 - d. Maintain pre-development groundwater recharge rates from the Wisconsin Geological and Natural History Survey's 2009 report, *Groundwater Recharge in Dane County, Wisconsin, Estimated by a GIS-Based Water-Balance Model* (an average of 10 in./yr. for the amendment area) or by a site specific analysis, in accordance with the Village of Cross Plains Stormwater Ordinance.

- e. Provide at least 80% sediment control for the amendment area for the 1-year, 24-hour design storm, with a minimum of 60% of that control occurring in a retention pond prior to infiltration, in accordance with the Village of Cross Plains Stormwater Ordinance.
 - f. Reduce the temperature of stormwater discharge to meet WDNR cold water standards, in accordance with the Village of Cross Plains Stormwater Ordinance.
2. All stormwater management facilities ~~should~~ shall be designated as environmental corridors, and preferably located in public outlots. Stormwater easements ~~should~~ shall be provided for any stormwater management facilities located on private property.
 3. A preliminary site investigation for location of karst formations be done prior to design placement of stormwater infiltration facilities as required by the State of Wisconsin Technical Standard 1002 - Site Evaluation for Stormwater Infiltration.

It is also recommended that the Village of Cross Plains pursue the following measures related to water quality or other State of Wisconsin regulations:

1. Request a formal Endangered Resources review by the WDNR (<http://dnr.wi.gov/topic/erreview/review.html>) or one of their certified reviewers and take necessary habitat protection measures if species are found.
2. Conduct on-site soils investigations in accordance with SPS 385.60 in areas with mapped poorly drained soils and seasonal high groundwater tables to determine the actual extent of seasonal high groundwater in the amendment areas and identify potential problem areas. The Village should consider requiring that the lowest level of any structure be built at a minimum of one foot above the seasonal high groundwater table and have this restriction recorded on the plat. This type of restriction is being used in several counties in Wisconsin and will reduce the potential for basement flooding.
3. Given the position of the parcel on the landscape and its proximity to Black Earth Creek, which supported a dense pre-Contact population, archaeological survey of the parcel is recommended.
4. If anyone suspects that a Native American burial mound or an unmarked or marked burial is present in an area, the Wisconsin Historical Society should be notified. If human bone is unearthed during any phase of a project, **all work must cease**, and the Wisconsin Historical Society **must be contacted** at 1-800-342-7834 to be in compliance with Wis. Stats. § 157.70 which provides for the protection of all human burial sites. **Work cannot resume until the Burial Sites Preservation Office gives permission.** Please contact Mr. Chip Brown, 608-264-6508, with questions or for further information.

It is further advised that the Village of Cross Plains pursue the following measures related to planning best practices, long-range/regional planning, and the advisory goals outlined in the *Dane County Land Use and Transportation Plan*:

1. Consider working with CARPC staff and the Towns of Berry and Cross Plains to conduct an Environmental Conditions Report (ECR) and develop a Future Urban Development Area (FUDA) plan for Cross Plains as a complement to its upcoming Comprehensive Plan update.
2. Also consider drafting a neighborhood plan for the amendment area and future development areas to the east in order to provide a variety of housing choices and land use types. As indicated in the Village's Comprehensive Plan, the "Planned Neighborhood" should carefully consider composition and pattern of development to promote a sense of community.

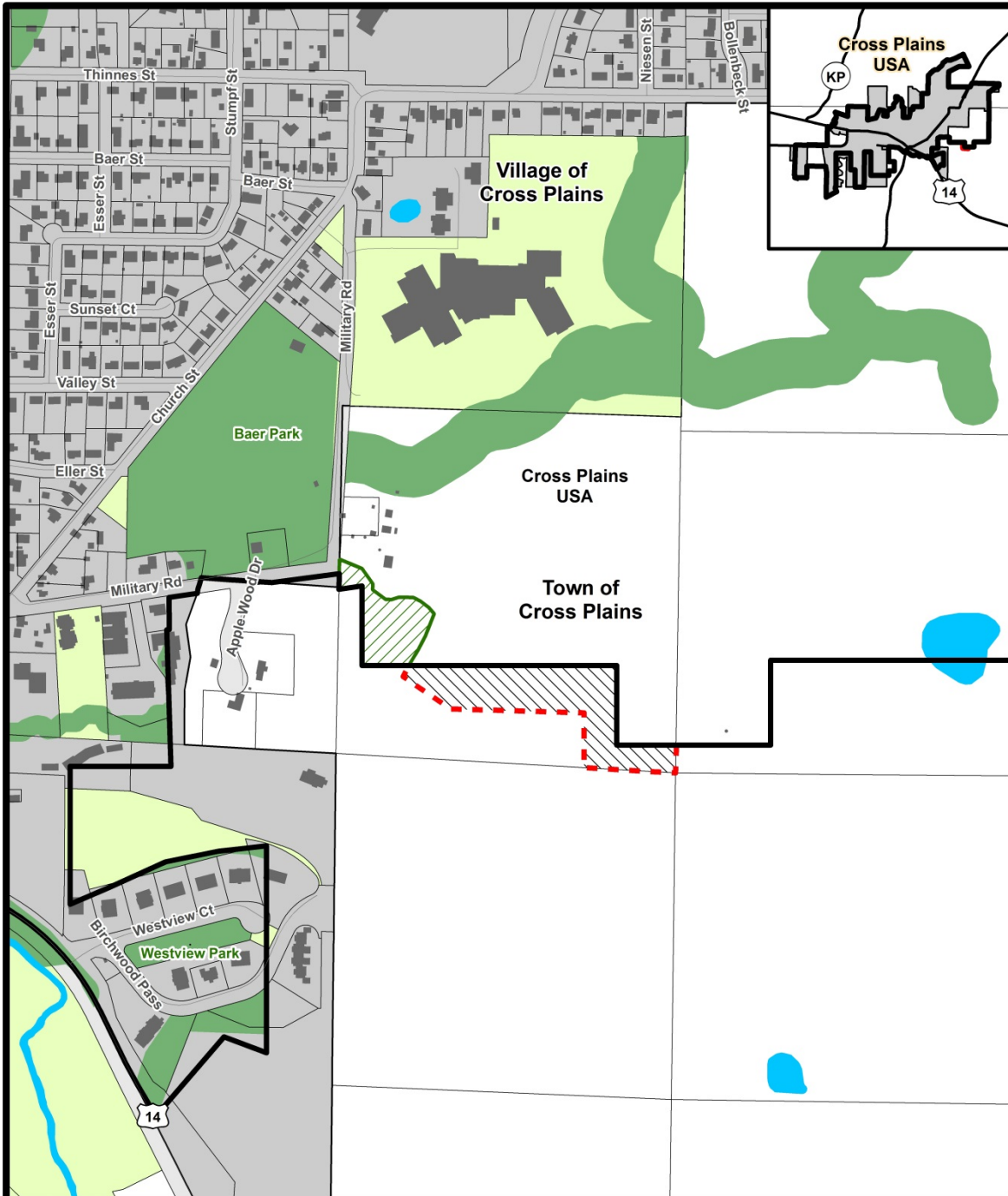
3. Continue to work with Dane County to plan and budget for reconstruction of Church Street (CTH P). Bike lanes and sidewalk on both sides are recommended for the project due to the moderately high and increasing traffic volumes on the street and the many destinations it serves, including the Glaciers Edge Square commercial area, park, and middle school.
4. Provide sidewalk on both sides of the planned Military Road extension, which serves the middle school. Traffic volumes on the road will increase as planned residential development occurs on the east side.
5. Consider requiring developer to construct the path connection identified on the Development Plan from the cul-de-sac west to the south section of Military Road/Baer Park and the planned municipal complex as part of other infrastructure/utility work. The connection will become increasingly important in the future as planned development occurs on the east side.

Revised March 10, 2016

March 10, 2016
Date Adopted



Larry Palm, Chairperson



Map 1 Amendment Area

Proposed Amendment to the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan, Revising the Cross Plains Urban Service Area Boundary and Environmental Corridors in the Town of Cross Plains

- Service Area to be added (4.3 acres)
- Proposed Environmental Corridors (1.8 acres)
- Public Land
- Existing Environmental Corridors
- Incorporated Area
- Existing Urban Service Area Boundary
- Proposed Urban Service Area Boundary

9 Feb. 2016

0 500 Feet

Prepared by staff of the CARPC.