

Facility Study

January 24, 2012



Jefferson County Highway Department Facility Study

Jefferson, Wisconsin



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architects

solid foundation. forward thinking.

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Acknowledgements

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Introduction

The Jefferson County Highway Department is headquartered in the City of Jefferson along the old highway 26. In recent years a bypass has rerouted highway 26 around the city of Jefferson and separated the highway department from its primary transportation route and service area.

Jefferson County has experienced a moderate amount of growth primarily due to its location midway between the state two largest metropolitan areas, Madison and Milwaukee. The current 15 acre highway department site is border on the west by the Rock River, on the east by the old highway 26, on the north by Puerner St, and on the south by Woolcock St.

Study Objective

In October of 2011, the Jefferson County Highway Department retained Bray Associates Architects, Inc to conduct a thorough facility and site analysis focused on the feasibility of the renovation of the current facility or the possibility of constructing a new facility on various new sites. The objective of this study is to determine the need for a highway department expansion or relocation. The current highway department building program includes department administration, vehicle maintenance, vehicle storage, and yard operations. The study aims to identify the opportunities and challenges of the existing building and site, review the programmatic needs of the department within and propose a series of facility renovation, expansion and new construction options.

Existing Facility

Jefferson County Highway Department
141 W. Woolcock St.
Jefferson, WI 53549

Methodology

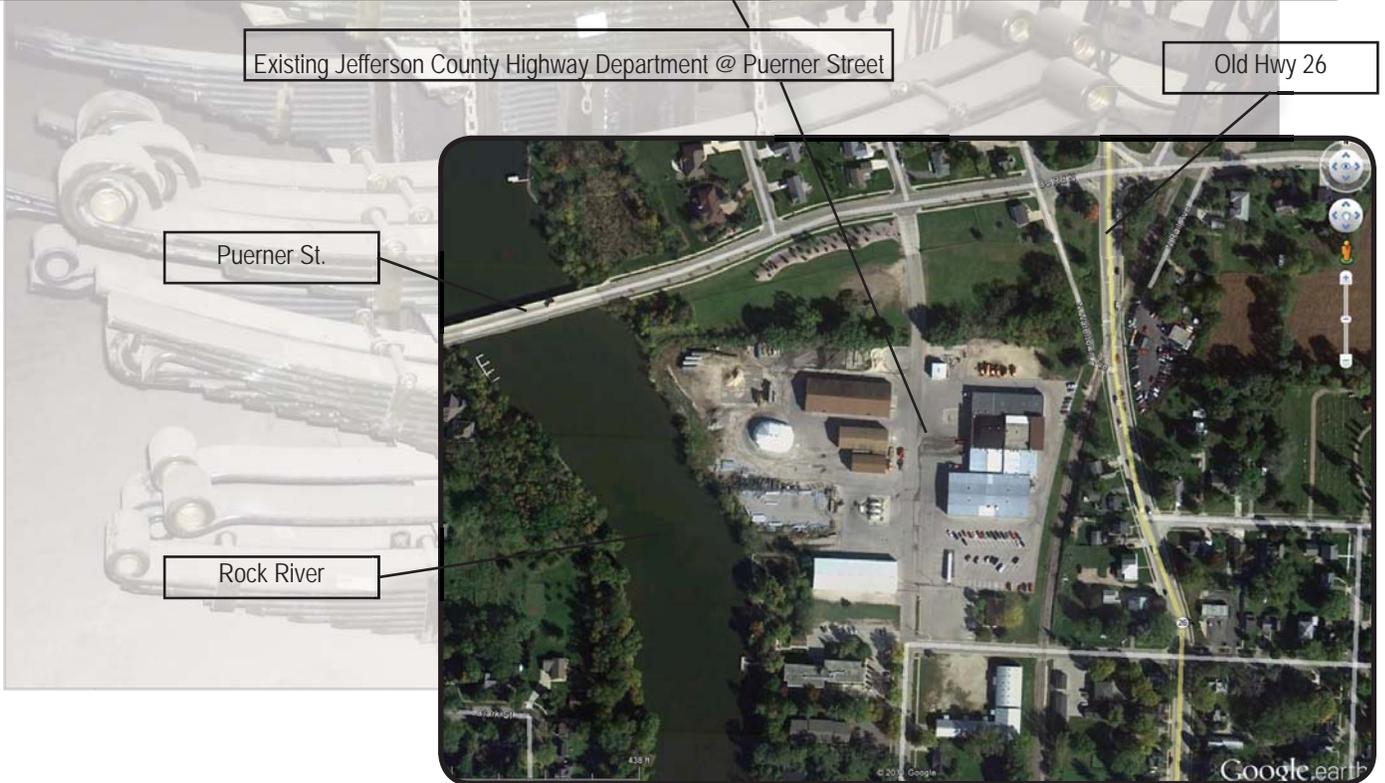
The study process followed the three phased approach reviewing departmental needs, existing facility conditions and studied potential future options.

A departmental needs assessment analysis included programming meetings with department heads and key staff members. In addition, existing spatial utilization was observed and documented upon numerous site visits.

The existing facility condition review was conducted by a series of professional building engineers and architects. These facility reviews were conducted during a complete building tour guided by city staff. Highway Department staff was also interviewed during this discussion.

Options and recommendations were developed in association with highway department staff. All associated cost estimates are based on Bray experience and historic construction cost data.





Executive Summary



Current facility



Historic photo



Historic photo

Through extensive owner interviews, consultant reviews and an inclusive facility study the design team has determined that the existing highway department facilities currently function in an overcrowded, outdated, unsafe and inefficient manner.

The purpose of this study is to analyze the existing highway department facilities and draw a comparison between four candidate sites and the construction of new or renovated facilities on the existing site. The four candidate sites as identified by the highway department are as follows:

Site A – Junction Road – a 40 acre parcel near the north end of the Business Highway 26 Bypass. It is currently a privately owned open farm field.

Site B – Puerner Street – a 15 acre parcel currently housing the Highway Department.

Site C – County Farm – a 40 acre section of the 230 acre County Farm tract of land near the south end of the Business Highway 26 Bypass.

Site E – Briggs and Stratton – a 25 acre parcel current for sale that once housed a Briggs and Stratton manufacturing facility.

Site F – Schweiger Furniture – a 33 acre parcel current for sale that once housed the Schweiger Furniture manufacturing facility.

Interviews with highway department staff and an assessment of department equipment helped us to develop a schematic space program to base a conceptual building and site plan on. These plans provided a baseline to compare the feasibility of construction on various the candidate sites. Each candidate site was laid out to contain all the building and site functions of a modern and efficient highway department identified in the space program. Our analysis shows that 40 acres is the optimal size for the building and site operations to replicate the current department operations and accounting for a small amount of future growth. Three of the five sites do not meet these criteria, but varying degrees of operational compromise may allow them to still be considered.

Site A: Junction Road

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department at Junction Road near Hwy 26. This site is located close to the highway 26 bypass and provides easy access to the highway. The site provides all the necessary building and yard space with the possibility of expansion if needed in the future. Negotiations with the current owner would be required to acquire the property and the City of Jefferson would be required to extend utilities to the site which adds a considerable site expense to the analysis.



Site B: Puerner Street

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department on the existing Highway Department site. The yard area will be reorganized to avoid the flood plain, but will still be insufficient for completely modern and efficient yard operations. The current facility has served the highway department well over the past 75 years, but growth of the city and an increase in equipment size and scale of department operations has seriously compromised the ability of the site to efficiently house the highway department. It is furthest away from highway access and requires heavy trucks to drive through busy urban areas to reach highway 26.



Current facility

Site C: County Farm

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department on the County Farm land near the Hwy 26 bypass. This site is located close to the highway 26 bypass and provides easy access to the highway. The site provides all the necessary building and yard space with the possibility of expansion if needed in the future. The County Farm site takes a small portion of the 230 acre tract of land owned by the county for highway department. This site is bounded by railroad tracks making it less desirable for other development, but acceptable for yard operations that are not disturbed by train traffic.



Facility photo

Site E: Briggs & Stratton

The Highway Department proposes renovating the existing Briggs and Stratton facility to house the administrative, maintenance, and site operational needs of the Highway Department. The existing building on the site is 60% larger than is required for schematic space program and is structurally and operationally incompatible with the movement of large trucks and equipment within it. This leads to structural modification and considerably higher renovation costs in addition to the property acquisition costs.



Historic photo

Site F: Schweiger Furniture

The Highway Department proposes to subdivide the Schweiger Furniture site, demolish the least desirable portion of the existing building, and construct a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department. The site is still far away from highway access and requires heavy trucks to drive through busy urban areas to reach highway 26. The size of the site is smaller than the space program requires, but could work in a less than optimal manner for typical modern yard operations.



1. Phase One: Identify Issues

Review the Highway Department's existing building use and yard operations and generate a current and emerging need space program.



Current facility



Current facility



Current facility

1a. Highway Department Site Needs Assessment:

The Jefferson County Highway Department is currently operated by fifty seven (57) full-time personnel and a varying number of seasonal personnel. The operational functions of the department are divided into three main sections:

Fleet Division: Performs truck maintenance.

Highway Department: Performs roadway maintenance.

Commissioner's Office: Administers department operations.

The site and yard operations include vehicle fueling, salt & sand storage, truck scale & wash, material stockpiles, and general yard storage.

Current Program Assessment / Summary:

The building and site programs were developed through interviews with the highway commissioner, county administrator, and department staff to establish needs of the ideal and most efficient facility possible. Through past studies and review of prior programs the highway department has established that 40 acres of land provides the best option for full building and yard operations as well as areas for stockpiles and buffer area for future use. In addition, the site should require minimal grading and level topography to reduce earthwork costs.

The current site is 15 acres in size. Three of these acres are current used as a buffer to the residential areas to the north and as site drainage to the river. An addition three acres currently used as stockpile areas are in the river floodplain area and put each year valuable highway materials put at risk and the possibility of river contamination occurs as the Rock River is known to occasionally flood. The highway department has taken steps to mitigate runoff from the highway operations, but the small size limits many of the potential options.



Commissioner building



Existing stockpile



Existing snow equipment





Existing maintenance area



Existing vehicle storage



Existing fuel storage



Existing office area



Existing signage

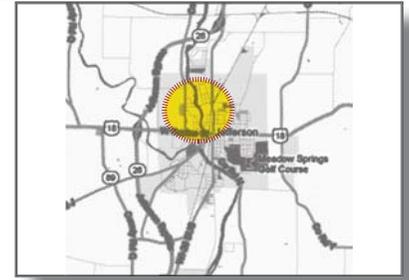
A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture



- Residential areas have grown around the current site in the last 15 years. This has created a need for screening to separate the incompatible uses. The space needed to provide the screening further limits usable area

- Puerner Steet has been extended across the river and restricted any further growth

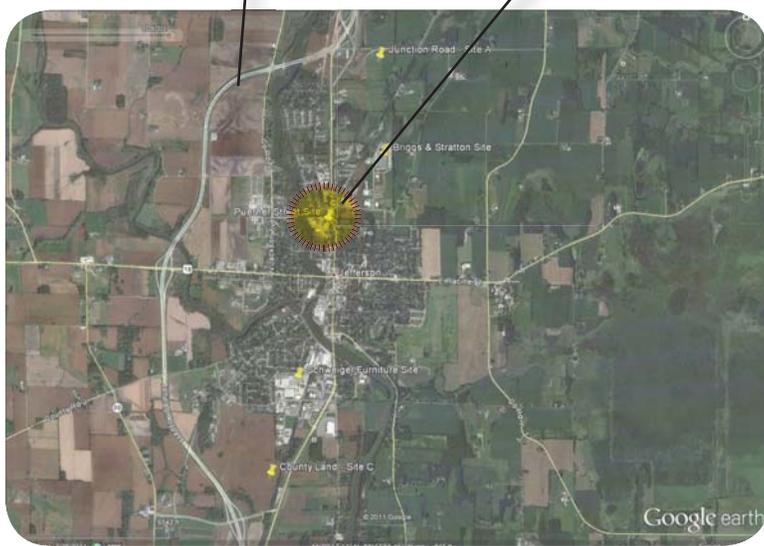


Existing Site Circa 1996



- New Highway 26 Bypass

Current Jefferson County Highway Department



City of Jefferson today

Community Growth

When the Jefferson County Highway Department assembled its first facility it located itself on an open track of land on the outskirts of the city of Jefferson adjacent to state highway 26. Over the following 75 years the city has grown and prospered and the highway department has dutifully managed and maintained the highways for the entire county. In that time the outskirts of the city slowly developed into the city itself as residential areas grew around the highway department.

By constructing the bypass around the City of Jefferson, the highway department was effectively cut away from their prior easy access to the highway and now has to drive through busy urban areas to reach highway 26. Obvious areas for growth in the department were taken for housing and other uses that are incompatible with the heavy truck traffic and yard operations of the highway department. With the extension of Purner Street the highway department

was effectively severed from any link to areas of expansion and was required to use the northern portion of their parcel to screen themselves from the neighborhood beyond.



Current Site

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

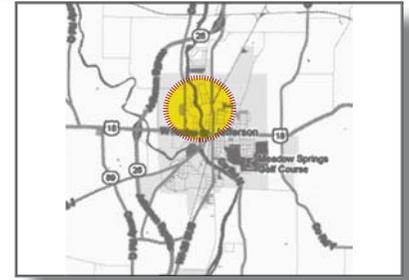


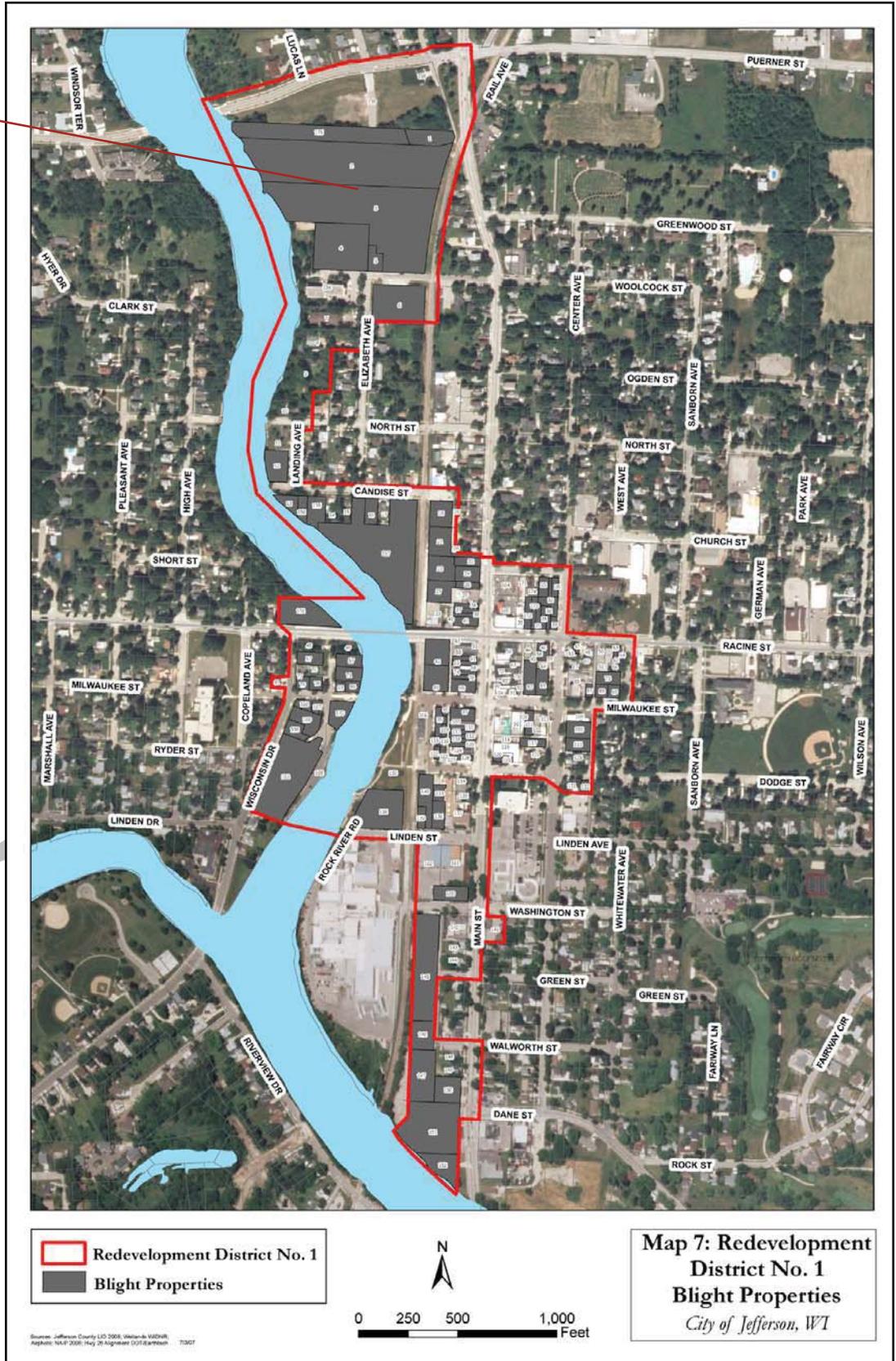
Figure 2.c.2: Existing Site Diagram



Map 7: Redevelopment District No. 1 Blight Properties

- Current Highway Department Location

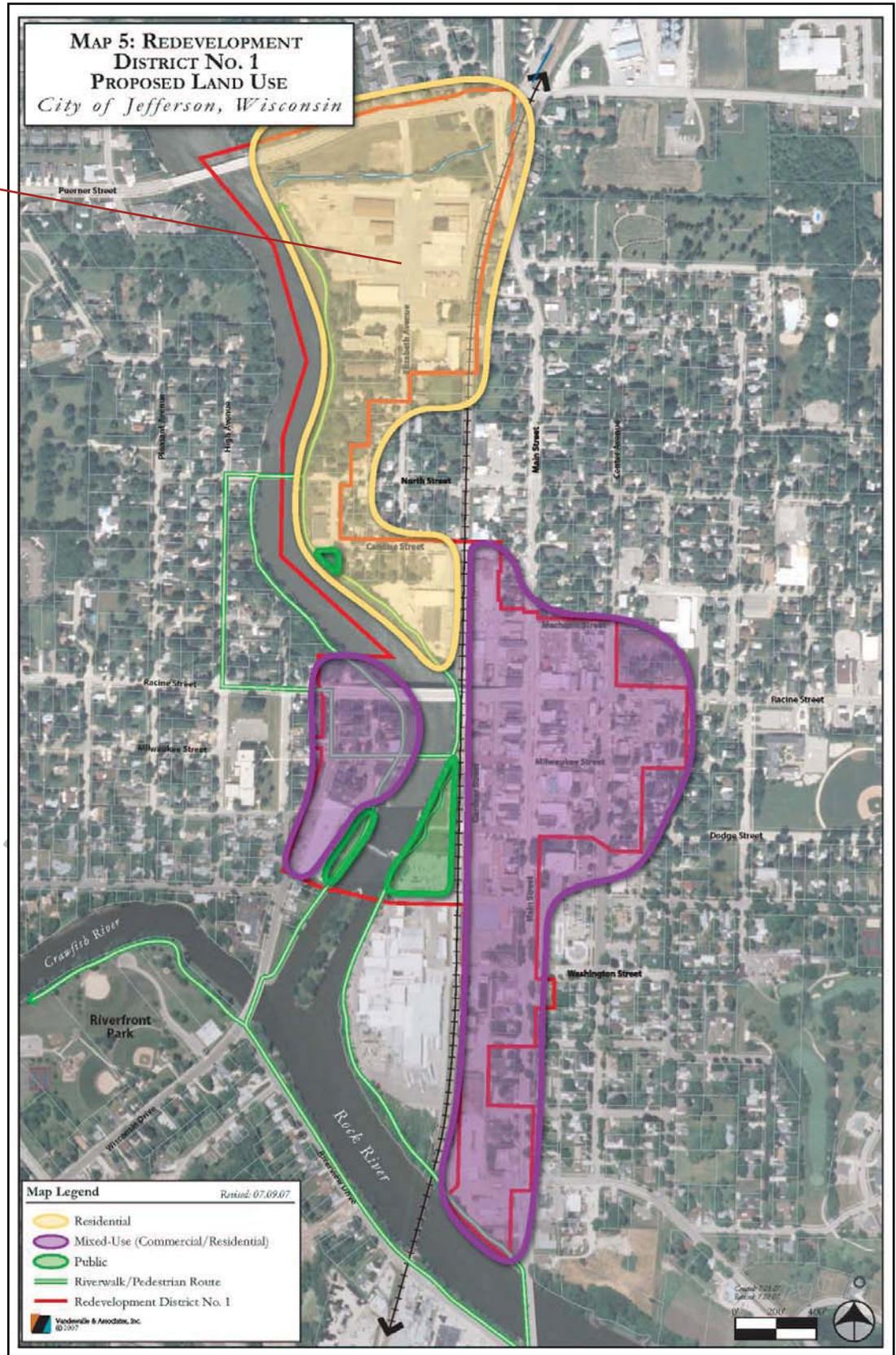
The City of Jefferson has identified properties that do not fit with its vision for redevelopment of the downtown area. Unfortunately the County Highway Department is one of these properties.



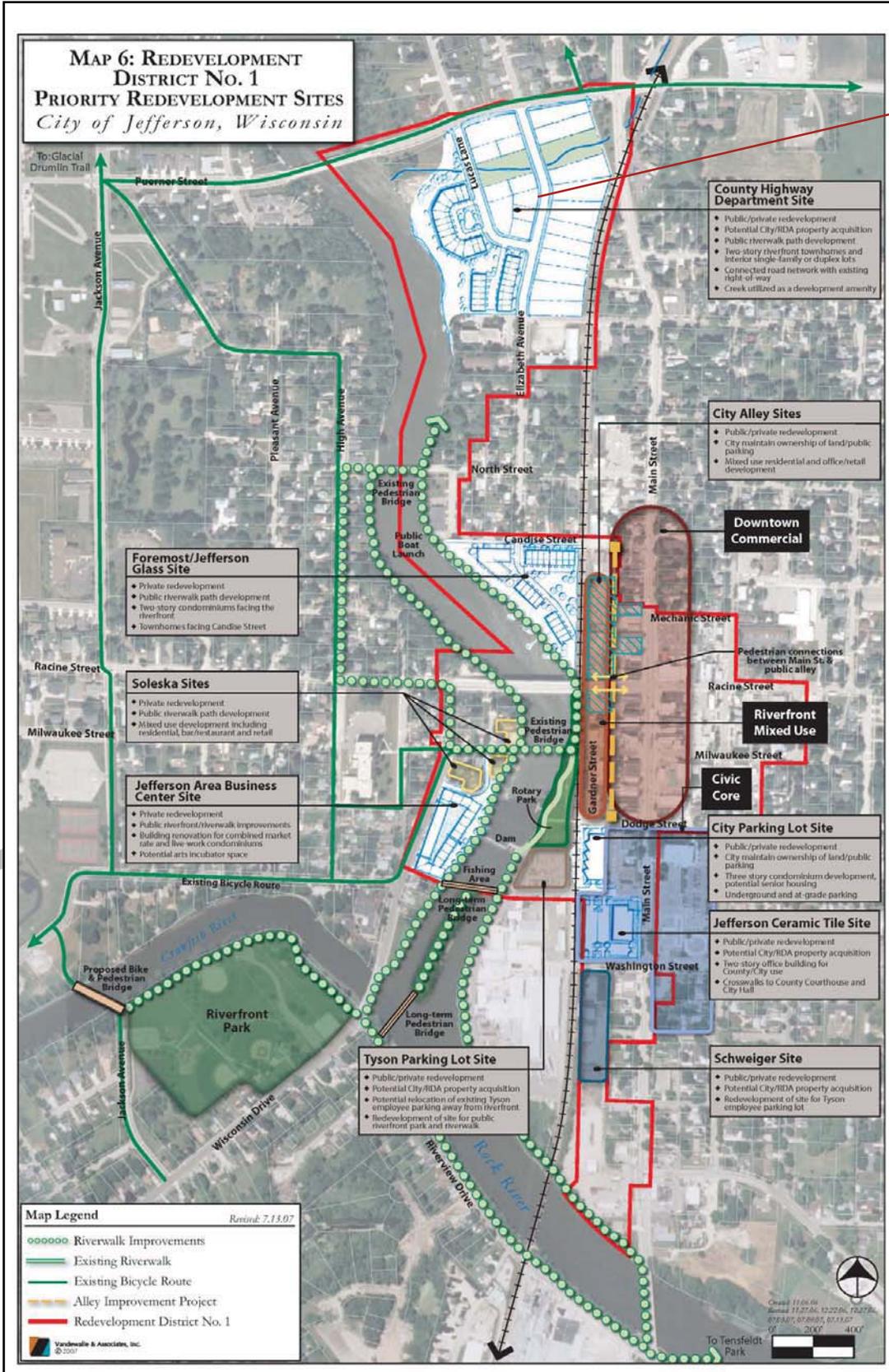
Map 5: Redevelopment District No. 1 Proposed Land Use

- Current Highway Department Location

The redevelopment plan envisions further residential development along the river and in the current location for the Highway Department.



Map 6: Redevelopment District No. 1 Priority Redevelopment Sites



- Current Highway Department Location



2. Phase Two: Current Building Assessment

The Goal of the Current Building Assessment is to evaluate existing building deficiencies in meeting the needs identified in Phase One. This phase will then make recommendations as to how the existing building could be renovated/expanded to meet the needs. If not, recommendations as to size and scope of new buildings are to be produced.



Existing Maintenance Building



Existing sand storage



2b. Building & Site Program

Highway Department Building Needs Assessment:



Current facility



Current metal shop



Current sign shop

The Jefferson County Highway Department was established in 1938 and is currently operated by fifty seven (57) full-time personnel and a varying number of seasonal employees. The current Highway facility located in the City of Jefferson on Puerner Street has been shown in multiple previous studies to be inefficently laid out, undersized and inadequate for many common maintenance operations,

The existing maintenance bays, overhead doors and front/rear aprons were all designed sized to support the apparatus vehicles at the time of the original construction; since then the truck sizes, weights and technical needs have continued to evolve. The existing facilities are well organized and clean, but modern equipment is larger and requires large quantities of hydraulic fluids and lubricating oils. The current facilities may be a efficient a possible, but still have difficulty meeting the need of modern equipment. In addition, the maintenance bays were not designed originally with, nor have they been retrofitted with a vehicle exhaust system. When equipment is running, all overhead doors must be opened, year-round, in order to allow proper air ventilation. Lastly, the exterior concrete apron is currently showing signs of increased stress from large equipment movement.

Current Program Assessment / Summary:

The flooring spreadsheet contains a list of all the major rooms and maintenance and storage areas needed to fully operate a modern highway department of the size and scope of Jefferson County. Each room is described by a net area with an allowance for general circulation and floor space for structure and wall area. The immediate need column describes the spaces needed to replicate the operations of the current facility in a new building. The emerging need column describes facilities identified as necessary for operations within a 5-10 year time span.



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 16, 2012

SPACE PROGRAM | CONDITIONED BUILDINGS

No.	Program Area	Immediate Need			Emerging Need			Long-Term Need		
		Area	No	Total Area	Area	No	Total Area	Area	No	Total Area
1.00	Vehicle Garage									
1.01	Haul Truck Parking	640	15	9,600			-			-
1.02	Patrol Truck Parking	512	16	8,192			-			-
1.03	Small Truck Parking	288	13	3,744			-			-
1.04	Specialized Truck Parking	288	10	2,880			-			-
1.05	Graders & Loaders	600	4	2,400			-			-
1.06	Drive Aisle	17,976	1	17,976			-			-
1.07	Patch Bin	400	1	400			-			-
1.08	Brine Tank	400	1	400			-			-
	Total Garage Area:			45,592			-			-
2.00	Repair Garage									
2.01	Heavy Duty Service	1,120	3	3,360			-			-
2.02	Light Duty Service	1,120	3	3,360			-			-
2.03	Tractor Repair	1,120	1	1,120			-			-
2.04	Preparation Bay	1,120	1	1,120			-			-
2.05	Sheriff Vehicle Service			-			-	1,120	2	2,240
2.06	Bulk Fluid Service	600	1	600			-			-
2.07	Manual Truck Wash	2,520	1	2,520			-			-
2.08	Drive / Walking Aisle	800	1	800			-			-
	Total Department Area:			12,880			-			2,240
3.00	Repair Shops									
3.01	Metal Fabrication	6,000	1	6,000			-			-
3.02	Steel Racks	600	1	600			-			-
3.03	Sign/Carpentry Shop	2,520	1	2,520			-			-
	Total Department Area:			9,120			-			-
4.00	Shop Offices/Parts Stor.									
4.01	Fleet Manager Office	196	1	196			-			-
4.02	Parts Workstation	196	1	196			-			-
4.03	Parts Order Counter	144	1	144	144	1	144			-
4.04	Parts Storage	3,040	1	3,040	800	1	800			-
4.05	Tools & Small Equipment	1,200	1	1,200			-			-
4.06	Tire Storage	200	1	200			-			-
	Total Department Area:			4,976			944			-
5.00	Administration Support									
5.01	Men's Locker Rooms	4,800	1	4,800			-			-
5.02	Women's Locker Room	600	1	600			-			-
5.03	Lunch / Training Room	2,640	1	2,640			-			-
5.04	Simulation Training	-	-	-	600	1	600			-

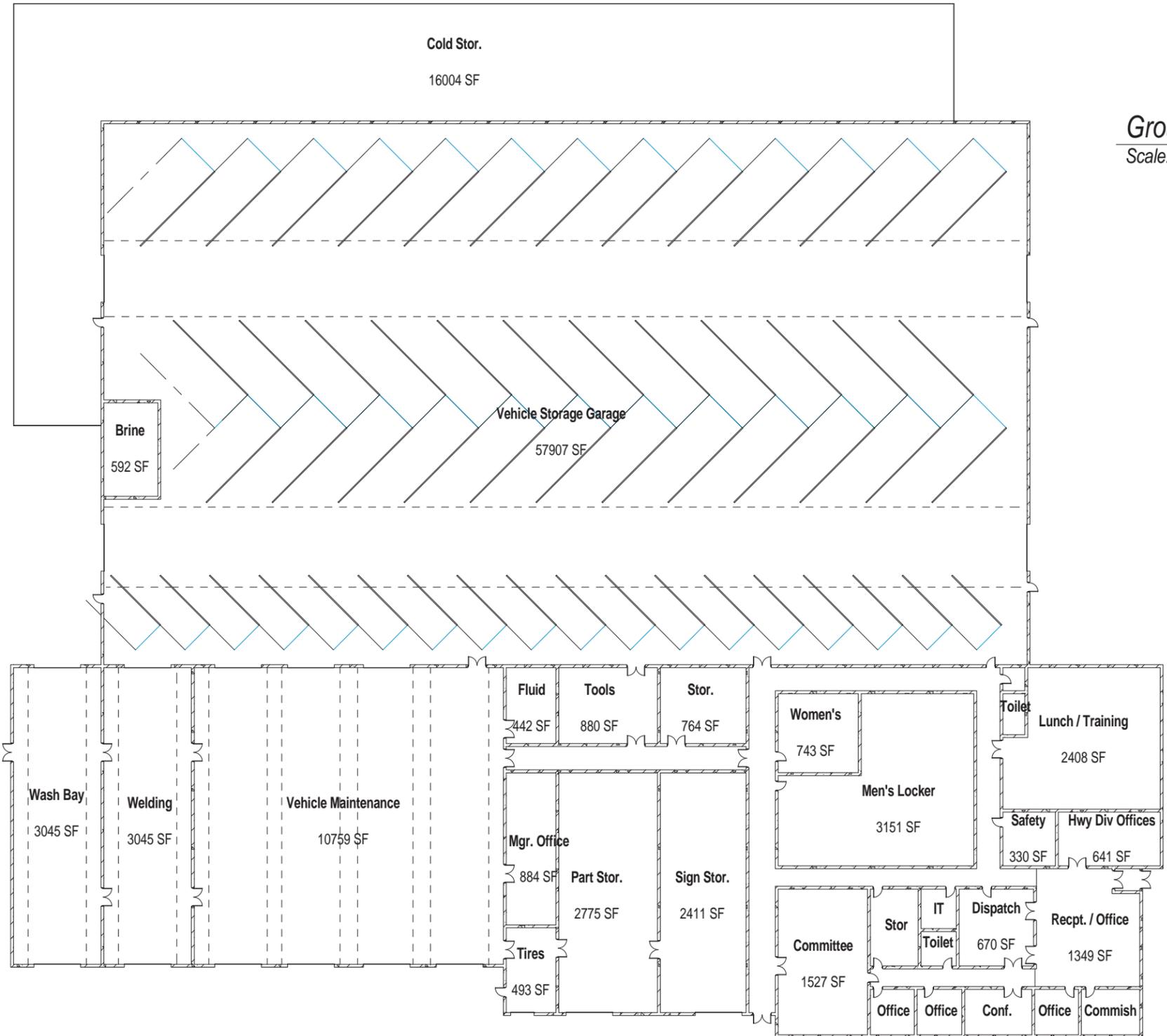


No.	Program Area	Immediate Need			Emerging Need			Long-Term Need					
		Area	No	Total Area	Area	No	Total Area	Area	No	Total Area			
6.00	Highway Division Offices												
6.01	Highway Ops Manager	196	1	196			-					-	
6.00	Hwy Div Offices - cont.												
6.02	Maintenance Supt.	168	1	168			-					-	
6.03	Construction Supt.	168	1	168			-					-	
6.04	Assistant Supt.	144	1	144			-					-	
6.05	Office Equipment	240	1	240			-					-	
6.06	Files / Record Storage	320	1	320			-					-	
6.07	Layout Room	720	1	720			-					-	
	Total Department Area:			1,956			-					-	
7.00	Commissioner's Office												
7.01	Commissioner's Office	224	1	224			-					-	
7.02	Accounting Manager	196	1	196			-					-	
7.03	Accounting Clerks	144	1	144	144	1	144					-	
7.04	Copy / Office Equipment	360	1	360			-					-	
7.05	Plan / Records Storage	600	1	600			-					-	
7.06	IT / Comm. Closet	320	1	320			-					-	
7.07	Reception	360	1	360			-					-	
7.08	Committee Meeting Room	1,280	1	1,280			-					-	
7.09	Kitchenette	288	1	288			-					-	
7.10	Men's Restroom	80	1	80			-					-	
7.11	Women's Restroom	80	1	80			-					-	
	Total Department Area:			3,932			144					-	
8.00	Grossing Factors												
8.01	Circulation - Garage Space	67,592	@	7.5%	5,100	-	@	7.5%	-	2,240	@	7.5%	200
8.02	Circulation - Admin Space	18,904	@	15.0%	2,800	1,688	@	15.0%	300	-	@	15.0%	-
8.03	Mechanical - Garage Space	67,592	@	5.0%	3,400	-	@	5.0%	-	2,240	@	5.0%	100
8.04	Mechanical - Admin Space	18,904	@	10.0%	1,900	1,688	@	10.0%	200	-	@	10.0%	-
8.05	Misc. Grossing Factor	86,496	@	5.0%	4,300	1,688	@	5.0%	100	2,240	@	5.0%	100
	Total Department Area:				17,500				600				400
Total Conditioned Building Area					103,996				2,288				2,640

SPACE PROGRAM | UNCONDITIONED BUILDINGS & SITE

No.	Program Area	Immediate Need			Emerging Need			Long-Term Need		
		Area	No	Total Area	Area	No	Total Area	Area	No	Total Area
9.00	Cold Storage Building									
9.01	Loaders	420	5	2,100			-			-
9.02	Tractor / Backhoes	420	3	1,260			-			-
9.03	Pavers	392	2	784			-			-
9.04	Widner/Spreader, Comp.	216	8	1,728			-			-
9.05	Tractor / Mower	240	10	2,400			-			-
9.06	Sweepers	280	2	560			-			-
9.07	Support Equip.	144	10	1,440			-			-
9.08	Secondary Support Equip	64	11	704			-			-
9.09	Trailers	216	8	1,728			-			-
9.10	Future equipment storage	-	-	-	2,400	2	4,800	-	-	-
9.11	Grossing factor (7.5%)	12,704	@	<u>1,000</u>	4,800	@	<u>400</u>	-	@	<u>-</u>
	Total Department Area:			13,704			5,200			-
10.00	Site Area Requirements									
10.01	Salt Shed - 10,000 Ton	16,000	1	16,000			-			-
10.02	Fueling Station	400	1	400			-			-
10.03	Propane Station	-	-	-			-			-
10.04	Truck Scale	4,000	1	4,000			-			-
10.05	Culvert Storage	840	1	840			-			-
10.00	Site Area - continued									
10.06	Stockpile #1	20,000	1	20,000			-			-
10.07	Stockpile #2	10,000	1	10,000			-			-
10.08	Stockpile #3	10,000	1	10,000			-			-
10.09	Stockpile #4	10,000	1	10,000			-			-
10.10	Stockpile #5	-	-	<u>-</u>	10,000	1	<u>10,000</u>			<u>-</u>
	Total Department Area:			71,240			10,000			-
Total Cold Storage / Site Area				84,944			15,200			-





Ground Floor - Schematic
Scale: Not To Scale

Jefferson Co. Highway Dept.



3. Phase Three: Proposed Design Scenarios

The Goal of the Current Building Assessment is to evaluate existing facility deficiencies in meeting the needs identified in Phase One. This phase will then make recommendations as to how the existing facility could be renovated/expanded to meet the needs. If not, recommendations as to size and scope of new facilities are to be produced.



Current facility



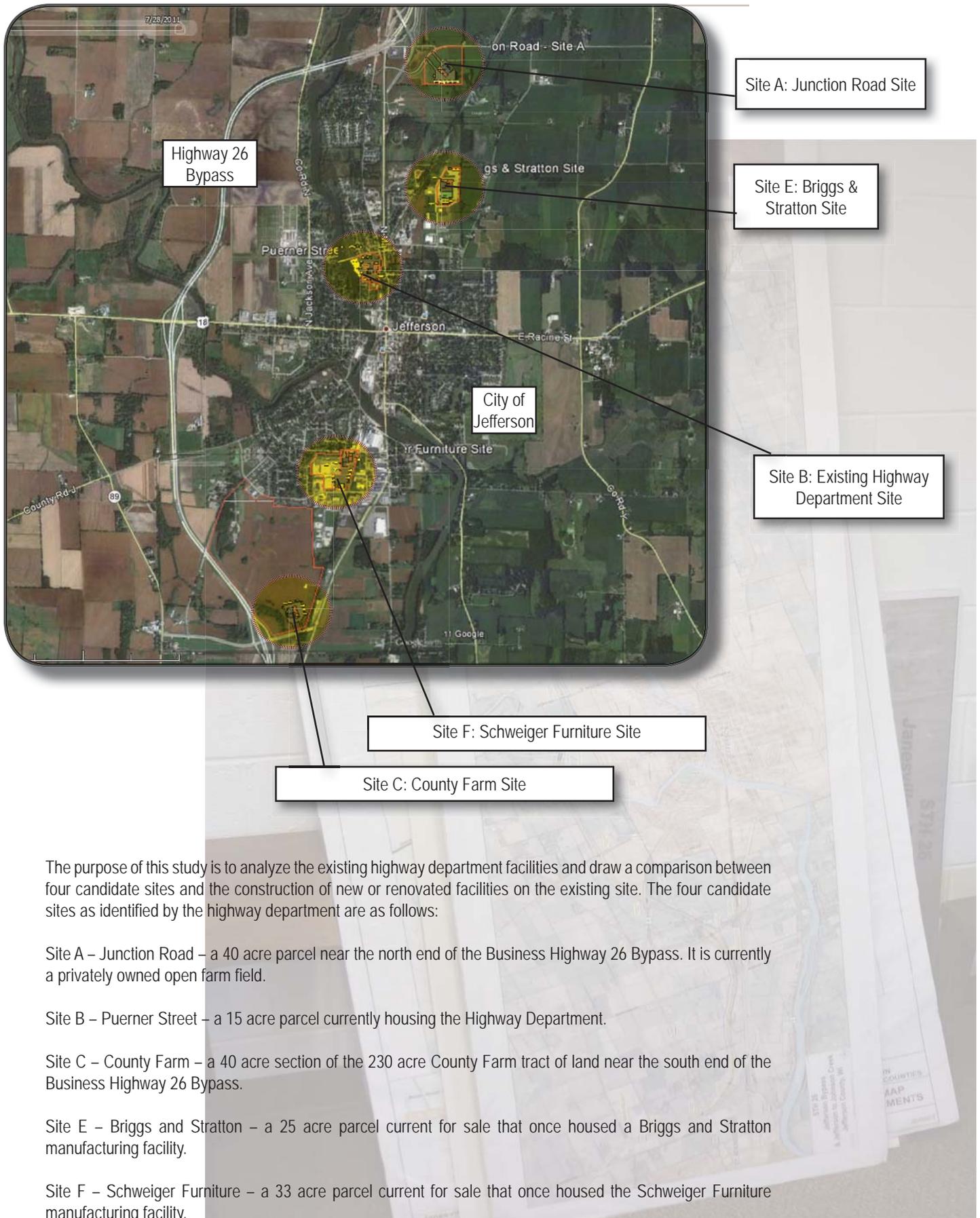
Current metal shop



Current sign shop







The purpose of this study is to analyze the existing highway department facilities and draw a comparison between four candidate sites and the construction of new or renovated facilities on the existing site. The four candidate sites as identified by the highway department are as follows:

Site A – Junction Road – a 40 acre parcel near the north end of the Business Highway 26 Bypass. It is currently a privately owned open farm field.

Site B – Puerner Street – a 15 acre parcel currently housing the Highway Department.

Site C – County Farm – a 40 acre section of the 230 acre County Farm tract of land near the south end of the Business Highway 26 Bypass.

Site E – Briggs and Stratton – a 25 acre parcel current for sale that once housed a Briggs and Stratton manufacturing facility.

Site F – Schweiger Furniture – a 33 acre parcel current for sale that once housed the Schweiger Furniture manufacturing facility.

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site A: Junction Road

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department at Junction Road near Hwy 26.

Detailed Description:

New Construction: (See New Building Construction Cost Analysis)

Office / Administration Program:	16,382 sf	@	=	\$2,133,800
Vehicle Storage Program:	59,270 sf	@	=	\$4,815,700
Vehicle Maintenance Program:	28,634 sf	@	=	\$2,412,300
Storage & Misc. Equip. Program:	14,610 sf	@	=	\$1,210,900
General Cond / Contingency / Soft Costs:			=	\$1,476,200

Site Construction: (See Site A Cost Analysis)

Earthwork:	40 acres	@	\$383,100
Site Improvements:	40 acres	@	\$609,300
Specialities:	40 acres	@	\$829,000

Misc Improvements:

-Fees / Permitting	\$141,700
-Demo / Cleanup Puerner St.	\$100,000
-Puerner St. Site Sale	(\$700,000)
-Land / Building Purchase	\$800,000
-Temp. Facilities	\$0
-Utility Extension	\$1,400,000

Contingency	\$1,476,200
-------------	-------------

Total Option Cost Estimate: **\$15,703,100**

Positives

1. Close proximity and easy access to highway 26.
2. Greenfield development - no contamination concerns.
3. Possible commercial frontage development.
4. Room for future expansion if needed.
5. Removes the majority of truck traffic from city limits.
6. Size meets 40 acre target

Challenges:

1. Negotiating utility expansion costs with City of Jefferson
2. Land purchase and willingness of current owner to sell property.
3. Utilizes 40 acres of agricultural land





Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

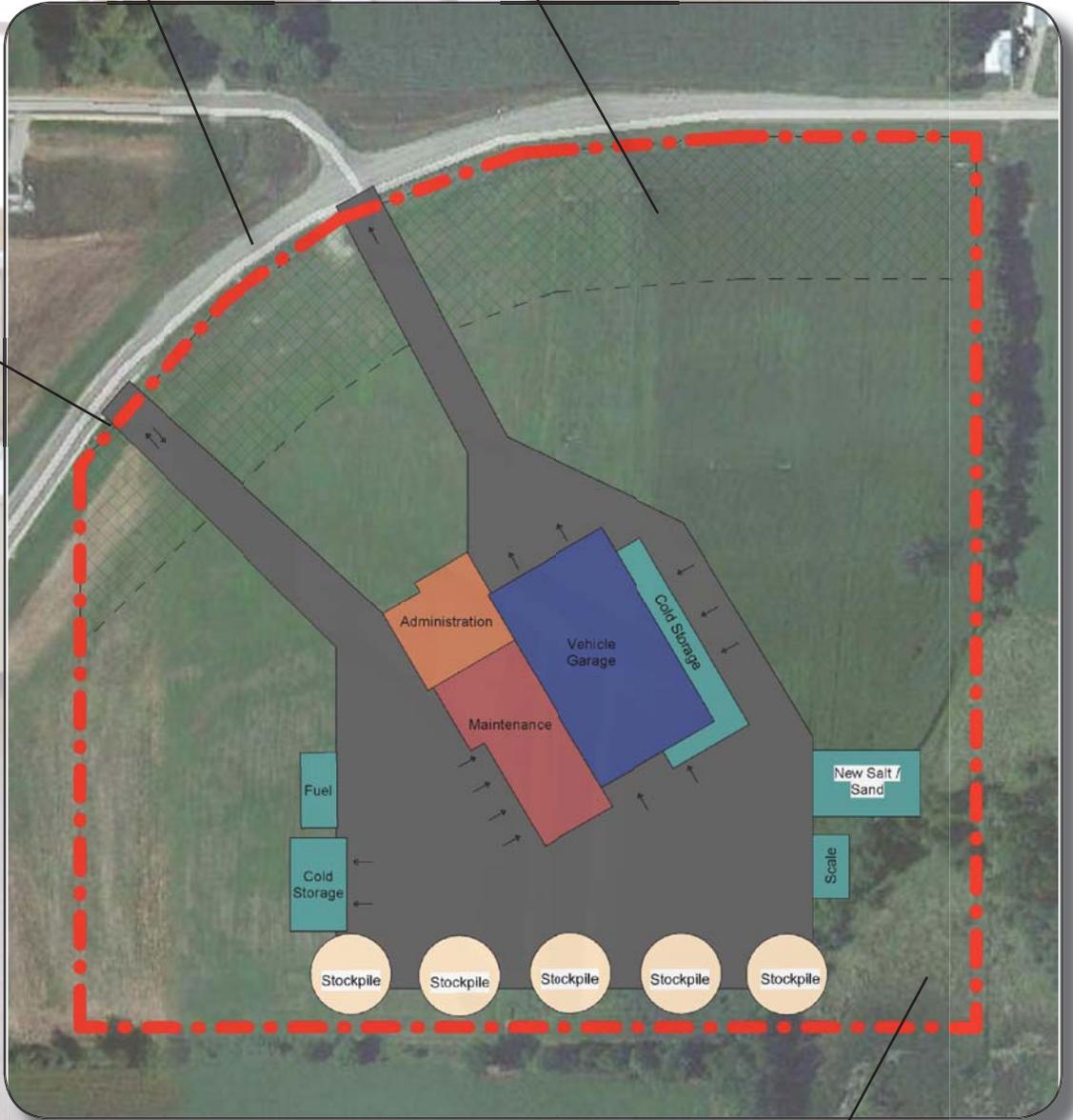
Schweiger Furniture - F

Junction Road

Possibility of future commercial development along frontage

Figure 3.a.1: Junction Road Site Diagram

Easy access to Highway 26 from Junction Road



- Avoid Construction on wetlands

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site Assessment

A. Access Analysis

The Junction Road Site, Site 4, is currently an open farm field with a small field entrance on the north along West Junction Road. The schematic site layout proposes two access points on West Junction Road adjacent to each other near the northwest corner of the site. West Junction Road is currently a Town of Aztalan road that connects to Business 26, approximately ¼ mile to the west. Since West Junction Road is the only street adjacent to the site, all county vehicles entering and leaving the site must use it, along with Business 26 to the west. However, the Jefferson Bypass (S.T.H. 26) is located just to the north along Business 26, and from there, county vehicles can gain quick access to the remainder of the county. In addition, county vehicles would not have to travel through the City and residential neighborhoods when coming from or going to the site. It should also be noted that this site is not currently within the City Limits.

Natural Resources Assessment

B. Wetland Analysis

Wetland Indicator Soils are present on the Southeast corner of the site

C. Floodplain Analysis

The Junction Road Site, Site 4, contains Zone A floodplain associated with an unnamed tributary to the Rock River that flows past the very southeast corner of the site. Zone A is designated as a Special Flood Hazard Area (SFHA), and is subject to flooding by the 1% annual chance flood. In addition, unlike Zone AE floodplain, Zone A floodplain is floodplain for which no base flood elevations have been determined. This floodplain area only consists of the floodfringe. Please refer to sheet 2 in Appendix C for a map that shows the approximate floodplain limits for this site.



Site photo



Facility photo



Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

D. Soil Properties

Soils located at the site include the Houghton, Keowns, Kidder, and Lamartine Series. The Houghton series consists of very deep, very poorly drained soils formed in herbaceous organic materials more than 130 cm (51 inches) thick in depressions on lake plains, outwash plains, ground moraines, end moraines and floodplains. Permeability is moderately slow to moderately rapid. Slope ranges from 0 to 2 percent. The Keowns series consists of very deep, poorly drained soils formed in mostly loamy and fine sandy calcareous outwash or lacustrine deposits on glacial lake basins and outwash plains. Permeability is moderate. Slope ranges from 0 to 3 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Lamartine series consists of very deep, somewhat poorly drained soils formed in loess and in the underlying loamy till on ground moraines and inter-drumlin areas. Permeability is moderate. Slope ranges from 0 to 6 percent.



Site photo

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Houghton and Keowns series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Lamartine series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder series.

Soils on the eastern half of the site are wet, particularly in the southeast corner. It is anticipated that much of the soil will need to be replaced with engineered fill in order to support any building foundations or pavements.



Site photo

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site B-1: Puerner Street

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department on the existing Highway Department site. The yard area will be reorganized to avoid the flood plain, but will still be insufficient for completely modern and efficient yard operations.

Detailed Description:

New Construction: (See New Building Construction Cost Analysis)

Office / Administration Program:	16,382 sf	@	=	\$2,133,800
Vehicle Storage Program:	59,270 sf	@	=	\$4,815,700
Vehicle Maintenance Program:	28,634 sf	@	=	\$2,412,300
Storage & Misc. Equip. Program:	14,610 sf	@	=	\$1,210,900
General Cond / Contingency / Soft Costs:			=	\$1,476,200

Site Construction: (See Site B-1 Cost Analysis)

Earthwork:	12 acres	@		\$117,700
Site Improvements:	12 acres	@		\$272,500
Specialities:	12 acres	@		\$589,000
Misc Improvements:				
-Fees / Permitting				\$99,600
-Demo / Cleanup Puerner St.				\$100,000
-Puerner St. Site Sale				\$0
-Land / Building Purchase				\$0
-Temp. Facilities				\$112,000
-Utility Extension				\$1,200,000
Contingency				\$49,000

Total Option Cost Estimate: **\$14,588,700**

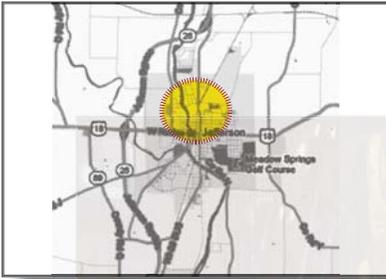
Positives

1. Site is already under county control with no purchase concerns.

Challenges:

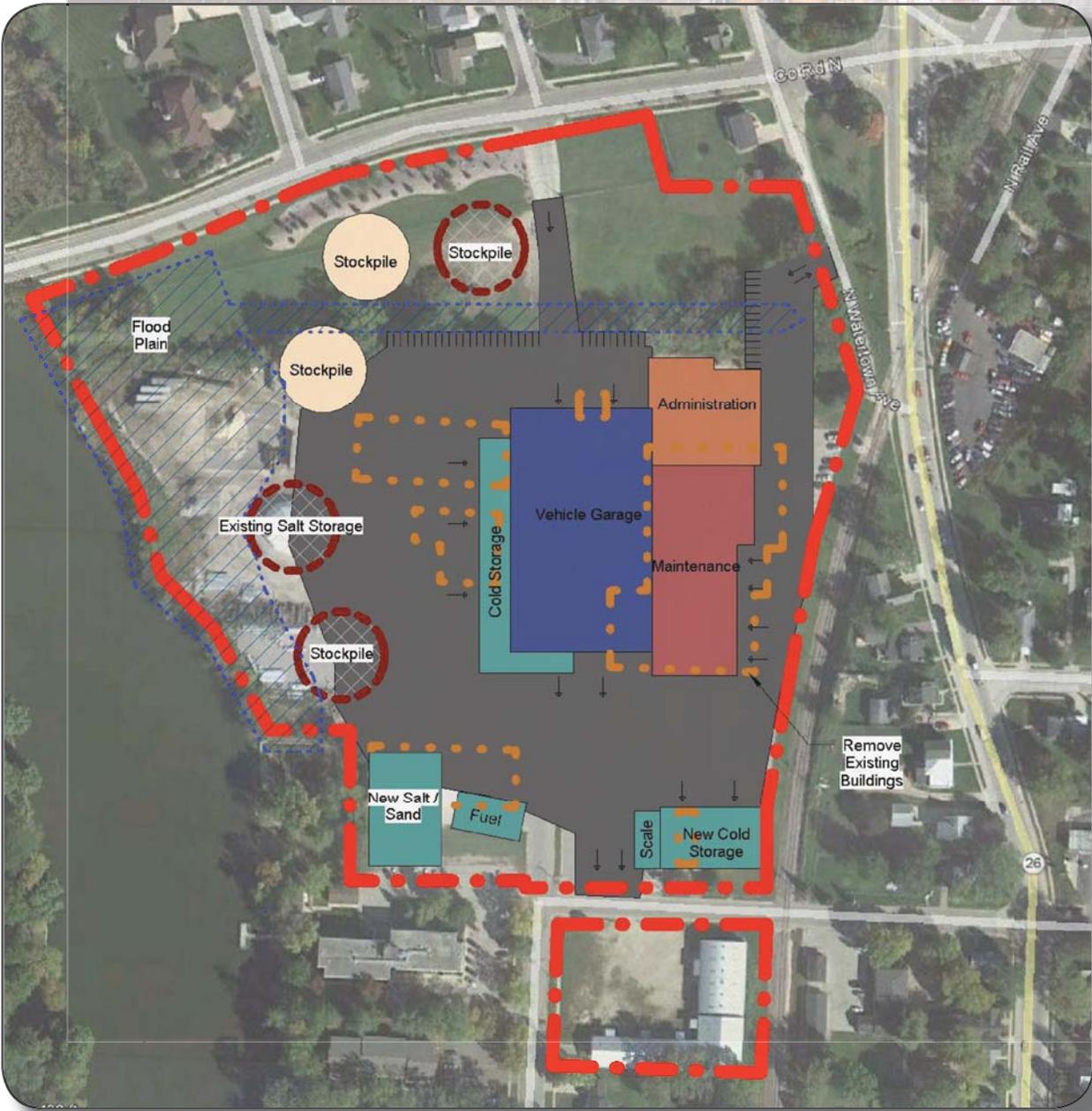
1. Uncertain soils and water table for new construction.
2. Expensive relocation of major underground utilities.
3. Larger distance from highway and heavy truck traffic through the City of Jefferson.
4. Site cannot accommodate proper yard functions and there is no possibility of future expansion.
5. Temporary facilities are needed during construction.
6. Site cannot accommodate 40 acre target size.
7. Highway Department does not fit with city's redevelopment plan
8. Floodplain reduces useful site area by an additional 3 acres.
9. Construction near river brings DNR permitting concerns.
10. Adjacency to residential neighborhoods





- Junction Road - A
- Puerrier Street - B
- County Farm - C
- Briggs & Stratton - E
- Schweiger Furniture - F

Figure 3.b.2: Existing Site New Building Site Diagram



A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site B-2: Puerner Street Renovation

The Highway Department proposes constructing a new storage building and renovating the existing maintenance facilities to house the administrative, maintenance, and site operational needs of the Highway Department on the existing Highway Department site. The yard area will be reorganized to avoid the flood plain, but will still be insufficient for completely modern and efficient yard operations.

Detailed Description:

New Construction: (See Puerner Street Renovation Cost Analysis)

Office / Administration Program:	4,500 sf	@	=	\$ 670,100
Vehicle Storage Program:	59,270 sf	@	=	\$4,815,700
Vehicle Maintenance Program:	28,800 sf	@	=	\$2,224,800
Storage & Misc. Equip. Program:	0 sf	@	=	\$ 495,900
General Cond / Contingency / Soft Costs:			=	\$1,239,400

Site Construction: (See Site B-2 Cost Analysis)

Earthwork:	12 acres	@		\$117,700
Site Improvements:	12 acres	@		\$272,500
Specialties:	12 acres	@		\$589,000
Misc Improvements:				
-Fees / Permitting				\$99,600
-Demo / Cleanup Puerner St.				\$100,000
-Puerner St. Site Sale				\$0
-Land / Building Purchase				\$0
-Temp. Facilities				\$112,000
-Utility Extension				\$480,000
Contingency:				\$49,000

Total Option Cost Estimate: \$11,264,800

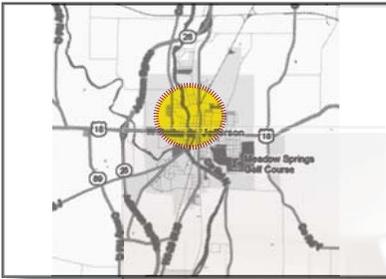
Positives

1. Site is already under county control with no purchase concerns.
2. Reduced need for temporary facilities.
3. Fewer underground utilities disturbed.

Challenges:

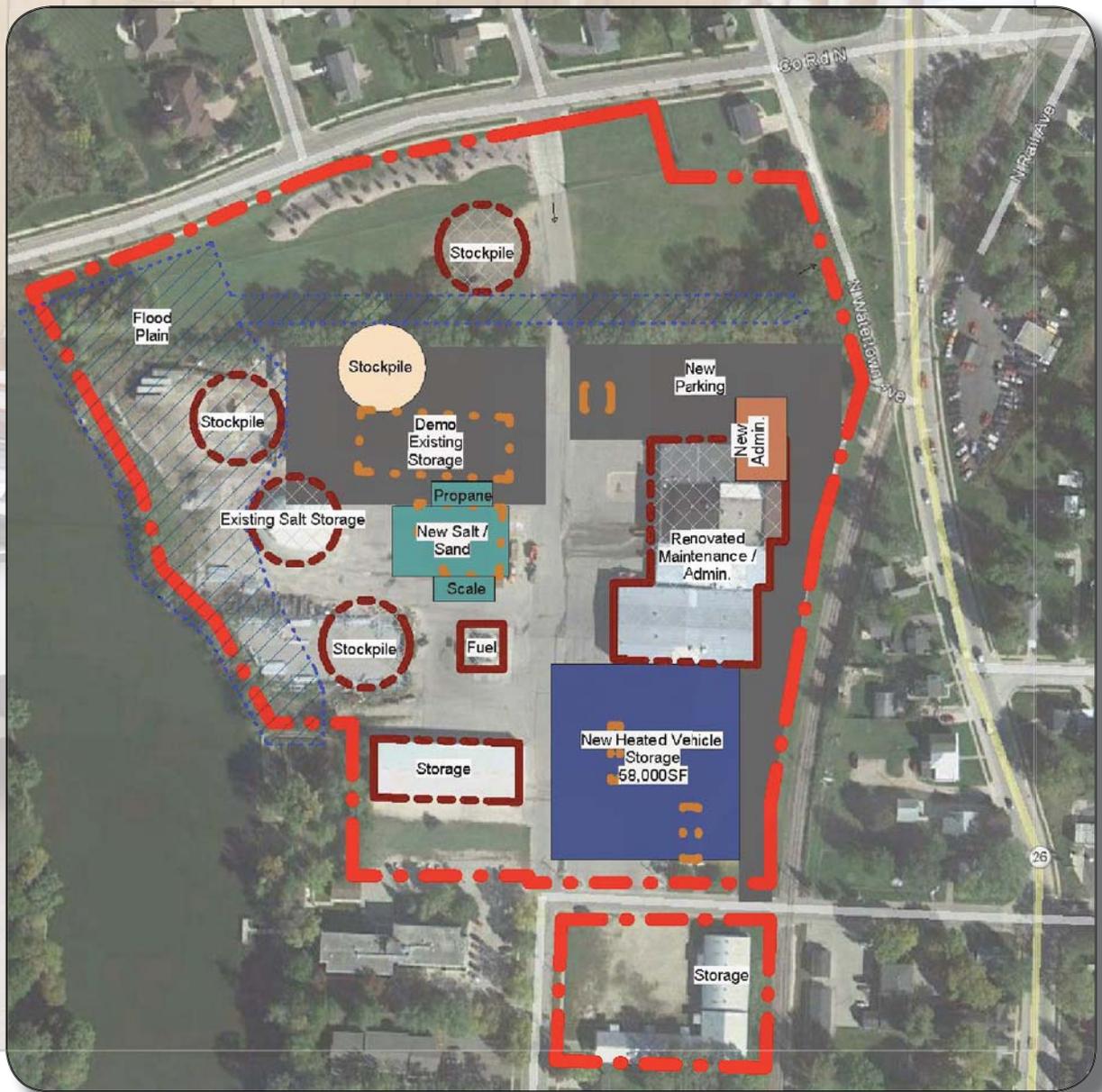
1. Uncertain soils and water table for new construction.
2. Larger distance from highway and heavy truck traffic through the City of Jefferson.
3. Site cannot accommodate proper yard functions and there is no possibility of future expansion.
4. Temporary facilities are needed during construction.
5. Site cannot accommodate 40 acre target size.
6. Department does not fit with city's redevelopment plan
7. Floodplain reduces useful site area by an additional 3 acres.
8. Construction near river brings DNR permitting concerns.
9. Adjacency to residential neighborhoods





- Junction Road - A
- Puerner Street - B
- County Farm - C
- Briggs & Stratton - E
- Schweiger Furniture - F

Figure 3.b.1: Existing Site Renovation Diagram



A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site Assessment

A. Access Analysis

The Existing Puerner Street Site, Site 1, is the current location of the Jefferson County Highway Department Facility, and it has existing access points on the north end of the site and the south end of the site. The north access point connects to West Puerner Street (C.T.H. "N") and the south access point forms the north leg of the intersection of North Elizabeth Avenue and West Woolcock Street. West Woolcock Street provides access to Business 26, approximately 2 blocks to the east. In addition, a second access point would be proposed at the northeast corner of the site and connect to the south leg of the intersection of West Puerner Street (C.T.H. "N") and North Watertown Avenue. These three access points provide county vehicles with multiple ways of entering and leaving the site, eliminating the need for all vehicles to use a single road/entrance. However, county vehicles must still travel through portions of the City, including some residential areas, regardless of what direction they are heading in, except north on Business 26.

Natural Resources Assessment

B. Wetland Analysis

Large area present in Northwest corner

C. Floodplain Analysis

The existing Puerner Street Site, Site 1, contains Zone AE and Zone X floodplain associated with the Rock River that flows along the western edge of the site. Zone AE is designated as a Special Flood Hazard Area (SFHA), and is subject to flooding by the 1% annual chance flood. In addition, Zone AE floodplain is floodplain for which base flood elevations have been determined. The floodplain consists of the floodfringe and the floodway, both of which impact the site. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. The floodfringe is the portion of the floodplain outside the floodway which is covered by floodwaters during the 1% annual chance flood and associated with standing water rather than flowing water. Zone X designates areas subject to flooding by the 0.20% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. Please refer to sheet 1 in Appendix C for a map that shows the approximate floodplain limits for this site.

The Junction Road Site, Site 4, contains Zone A floodplain associated with an unnamed tributary to the Rock River that flows past the very southeast corner of the site. Zone A is designated as a Special Flood Hazard Area (SFHA), and is subject to flooding by the 1% annual chance flood. In addition, unlike Zone AE floodplain, Zone A floodplain is floodplain for which no base flood elevations have been determined. This floodplain area only consists of the floodfringe. Please refer to sheet 2 in Appendix C for a map that shows the approximate floodplain limits for this site.

D. Soil & Groundwater Contamination

The Existing Puerner Street Site, Site 1, is the current location of the Jefferson County Highway Department Facility. The BRRTS website indicated that there were three occurrences of soil contamination on the site. The first occurrence (Site #1) happened at the location of two underground fuel tanks and an associated fuel pump island, all of which have since been removed. It was granted closure by the WDNR on October 12, 1998. The second occurrence (Site #2) happened at the location of two other underground fuel tanks and an associated fuel pump island, all of which have also been removed.



Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

It was granted closure by the WDNR on February 15, 1996. The third occurrence (Site #3) happened at the location of an aboveground propane tank and seven aboveground fuel tanks. The propane tank remained, but the fuel tanks have been removed. It was granted closure by the WDNR on January 27, 1998. Even though all three of these occurrences have been closed by the WDNR, it should be noted that the closure documents for Site #1 and Site #3 indicate that residual soil contamination remains on site. In addition, if either of these contamination areas become accessible due to a site condition change, the property owner at the time will be required to sample and analyze the excavated material in order to properly store, treat, or dispose of it, and special precautions may need to be taken during construction to prevent a direct contact threat to humans. Please refer to sheet 1 in Appendix D for a map that shows the approximate locations of the closed soil contamination occurrences on the site.

E. Soil Properties

Soils located at the site include the Boyer, Del Rey, Kidder, Sebewa, and Wacousta Series. The Boyer series consists of very deep, well drained soils formed in sandy and loamy drift underlain by sand or gravelly sand outwash. The soils are on outwash plains, valley trains, kames, beach ridges, river terraces, lake terraces, deltas, and moraines. Permeability is moderately rapid in the solum and very rapid in the substratum. Slope ranges from 0 to 50 percent. The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Sebewa Series consists of very deep, poorly drained or very poorly drained soils formed in loamy outwash and the underlying gravelly and sandy outwash on outwash plains, valley trains, and stream terraces on terrace landscapes. They are moderately deep to the gravelly and sandy outwash. Permeability is moderate in the loamy materials and rapid or very rapid in the underlying gravelly and sandy materials. Slope ranges from 0 to 3 percent. The Wacousta series consists of very deep, very poorly drained soils formed in silty lacustrine sediments. These soils are in broad depressions and swales on till plains, moraines, and stream terraces. Permeability is slow. Slope ranges from 0 to 2 percent.



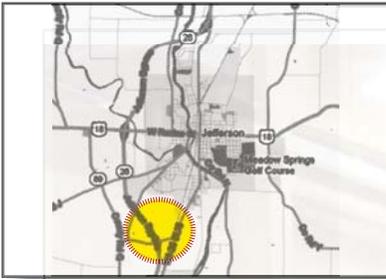
Facility photo

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Sebewa and Wacousta series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Del Rey Series, and greater than 200 centimeters (80 inches) below the ground surface in the Boyer and Kidder series.

Soils on the northwestern ½ of the site are very wet and will need to be replaced with engineered fill in order to support any building foundations or pavements.

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Site C: County Farm

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department on the County Farm land near the Hwy 26 bypass.

Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F



County Farm looking East



County Farm looking North



County Farm looking West

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site C: County Farm

The Highway Department proposes constructing a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department on the County Farm land near the Hwy 26 bypass.

Detailed Description:

New Construction: (See New Building Construction Cost Analysis)

Office / Administration Program:	16,382 sf	@	=	\$2,133,800
Vehicle Storage Program:	59,270 sf	@	=	\$4,815,700
Vehicle Maintenance Program:	28,634 sf	@	=	\$2,412,300
Storage & Misc. Equip. Program:	14,610 sf	@	=	\$1,210,900
General Cond / Contingency / Soft Costs:			=	\$1,476,200

Site Construction: (See Site C Cost Analysis)

Earthwork:	40 acres	@		\$363,100
Site Improvements:	40 acres	@		\$559,300
Specialties:	40 acres	@		\$829,000

Misc Improvements:

-Fees / Permitting				\$138,200
-Demo / Cleanup Puerner St.				\$100,000
-Puerner St. Site Sale				(\$700,000)
-Land / Building Purchase				\$0
-Temp. Facilities				\$0
-Utility Extension				\$150,500

Contingency:				\$87,600
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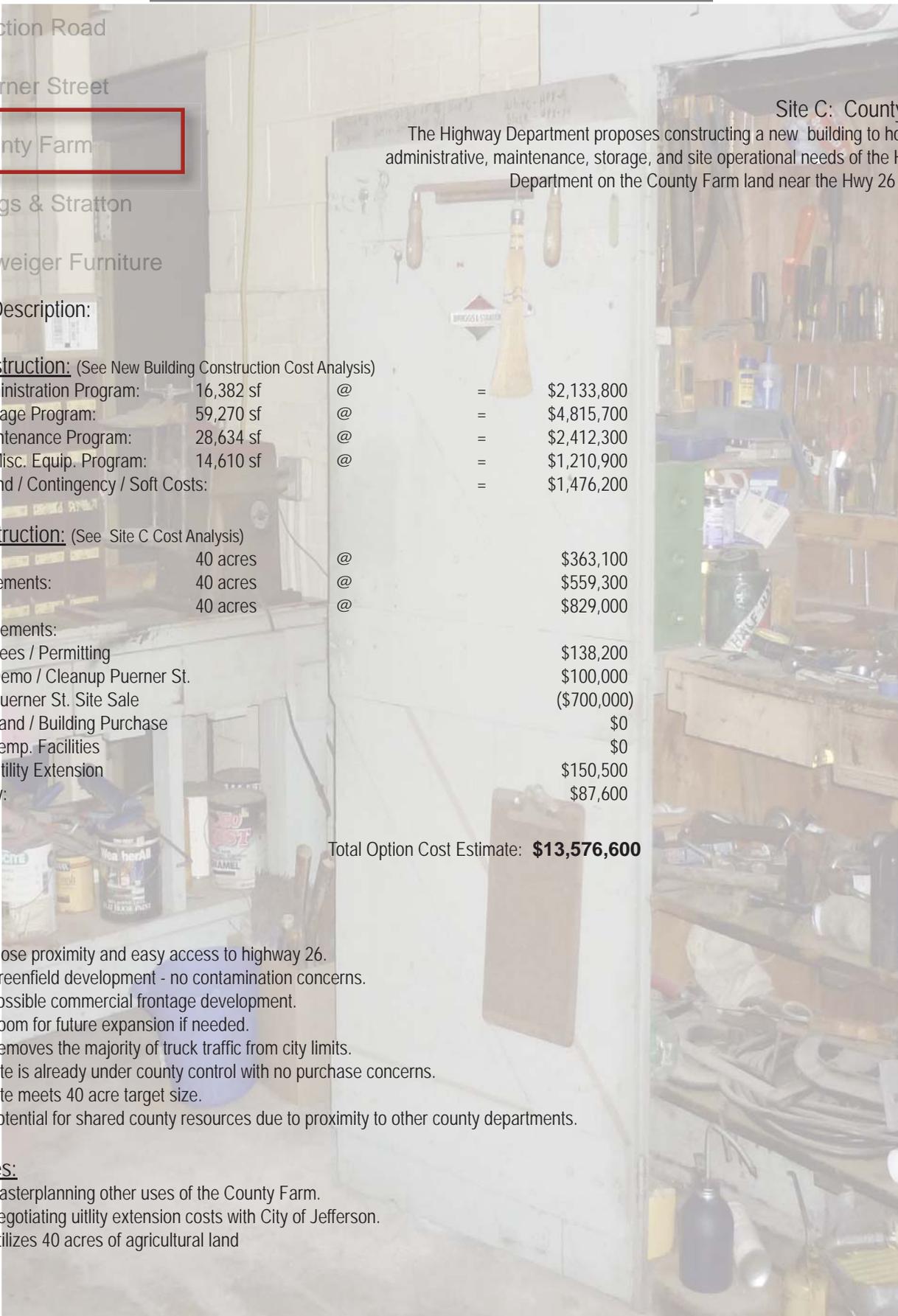
Total Option Cost Estimate: **\$13,576,600**

Positives

1. Close proximity and easy access to highway 26.
2. Greenfield development - no contamination concerns.
3. Possible commercial frontage development.
4. Room for future expansion if needed.
5. Removes the majority of truck traffic from city limits.
6. Site is already under county control with no purchase concerns.
7. Site meets 40 acre target size.
8. Potential for shared county resources due to proximity to other county departments.

Challenges:

1. Masterplanning other uses of the County Farm.
2. Negotiating utility extension costs with City of Jefferson.
3. Utilizes 40 acres of agricultural land





Alternate more efficient site possibility

- Junction Road - A
- Puerner Street - B
- County Farm - C
- Briggs & Stratton - E
- Schweiger Furniture - F

Alternate County Farm Site Diagram

Railroad Tracks



Possibility of future commercial development along frontage

Highway 26 Bypass

Alternate County Farm Site Diagram

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site Assessment

A. **Access Analysis**

The County Farms Site, Site 5, is also currently an open farm field with a small field entrance on the south along Business 26. The schematic site layout proposes one or two access points on Business 26 along the south property line. Business 26 also runs north-south just to the east of the site, but a railroad track lies between the site and the roadway, making an access point to the east difficult. Thus, all county vehicles entering and leaving the site must use Business 26. However, the Jefferson Bypass (S.T.H. 26) is located immediately west of the site, and from there, county vehicles can gain quick access to the remainder of the county. Furthermore, county vehicles would not have to travel through the City and residential neighborhoods when coming from or going to the site, except when heading east. This site is also not currently within the City Limits.

Natural Resources Assessment

B. **Wetland Analysis**

None present

C. **Floodplain Analysis**

None present on selected portion.

D. **Soil & Groundwater Contamination**

Unlikely.

E. **Soil Properties**

Soils located at the site include the Aztalan, Del Rey, Hebron, Keowns, Kidder, and Milford Series. The Aztalan series consists of very deep, somewhat poorly drained soils formed in loamy outwash and in the underlying mostly clayey and silty stratified lacustrine deposits on glacial lake basins and stream terraces. Permeability is moderate in the loamy outwash mantle and moderately slow in the underlying stratified lacustrine deposit. Slope ranges from 0 to 6 percent.



Site photo



Facility photo



Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

E. Soil Properties

The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Hebron series consists of very deep, moderately well drained soils formed in loamy outwash and in the underlying mostly clayey and silty stratified lacustrine deposits on glacial lake basins and stream terraces. Permeability is moderate in the loamy outwash and moderately slow in the stratified lacustrine deposits. Slope ranges from 0 to 6 percent. The Keowns series consists of very deep, poorly drained soils formed in mostly loamy and fine sandy calcareous outwash or lacustrine deposits on glacial lake basins and outwash plains. Permeability is moderate. Slope ranges from 0 to 3 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent.

The Milford series consists of very deep, poorly drained and very poorly drained soils formed in lacustrine sediments. These soils are on glacial lake plains. Permeability is moderately slow. Slope ranges from 0 to 2 percent.

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Keowns and Milford series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Aztalan and Del Rey series, between 100 to 150 centimeters (40 to 60 inches) below the ground surface in the Kidder series, and greater than 200 centimeters (80 inches) below the ground surface in the Hebron series.

Soils on most of the site are wet. It is anticipated that much of the soil will need to be replaced with engineered fill in order to support any building foundations or pavements.



Site photo



Site photo

- A - Junction Road
- B - Puerner Street
- C - County Farm
- E - Briggs & Stratton
- F - Schweiger Furniture

Site E: Briggs & Stratton

The Highway Department proposes renovating the existing Briggs and Stratton facility to house the administrative, maintenance, and site operational needs of the Highway Department.

Detailed Description:

New Construction: (See Briggs & Stratton Renovation Cost Analysis)

Office / Administration Program:	16,000 sf	@	=	\$1,095,200
Vehicle Storage Program:	40,000sf	@	=	\$4,580,000
Vehicle Maintenance Program:	80,000 sf	@	=	\$3,090,000
Storage & Misc. Equip. Program:	122,000 sf	@	=	\$ 495,000
General Cond / Contingency / Soft Costs:			=	\$1,345,000

Site Construction: (See Site E Cost Analysis)

Earthwork:	25 acres	@		\$139,600
Site Improvements:	25 acres	@		\$195,000
Specialities:	25 acres	@		\$829,000
Misc Improvements:				
-Fees / Permitting				\$108,800
-Demo / Cleanup Puerner St.				\$100,000
-Puerner St. Site Sale				(\$700,000)
-Land / Building Purchase				\$5,850,000
-Temp. Facilities				\$0
-Utility Extension				\$0
Contingency				\$58,200

Total Option Cost Estimate: \$17,185,800

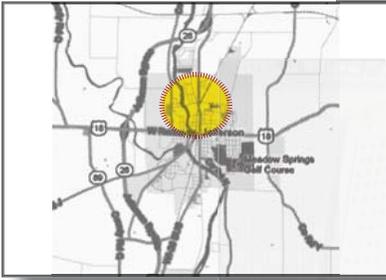
Positives

1. Existing facility is in good condition
2. Minimal site work
3. Room for future expansion on adjacent parcels if needed.

Challenges:

1. Existing building is 60% larger than programmed new construction.
2. Existing short span structural layout leads to inefficient space layout.
3. Limited ceiling height in maintenance areas.
4. Larger distance from highway and heavy truck traffic through the City of Jefferson.
5. Existing building floor not engineered or drained for heavy truck traffic.
6. Site does not meet 40 acre target without additional land purchase.
7. Site removes functional industrial site from community.





Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

- Renovated office areas

Briggs and Stratton Site Diagram



- Highway access through the City of Jefferson

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site Assessment

A. **Access Analysis**

The Briggs & Stratton Site, Site 2, is the site of a former Briggs & Stratton factory, and it has multiple existing access points on both North Parkway Street and Generac Way. However, both streets are local roads that dead end at the site. As a result, all county vehicles entering and leaving the site must use North Parkway Street and East Puerner Street to the south. It should be noted that East Puerner Street is not part of C.T.H. "C" at this location. North Parkway Street is located within an industrial park with businesses on either side, whereas East Puerner Street has a mix of residential, office, and industrial uses on both sides. Thus, county vehicles will have to travel along East Puerner Street through portions of the City, including some residential areas, to gain access to any of the nearby major roadways and the remainder of the county.



Site photo

Natural Resources Assessment

B. **Wetland Analysis**

None present

C. **Floodplain Analysis**

None present

D. **Soil & Groundwater Contamination**

Unlikely.



Facility photo



Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

E. Soil Properties

Soils located at the site include the Kibbie, Kidder, Mayville, and Wasepi Series. The Kibbie series consists of very deep, somewhat poorly drained soils on lake plains, ground moraines, outwash plains, and deltas. They are formed in stratified loamy and silty glaciofluvial or glaciolacustrine deposits. Permeability is moderate. Slope ranges from 0 to 6 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Mayville series consists of very deep, moderately well drained soils formed in loess and the underlying till on ground moraines. Permeability is moderate in the solum and



Site photo

moderately slow in the substratum. Slope ranges from 0 to 15 percent. The Wasepi series consists of very deep, somewhat poorly drained soils formed in loamy and sandy glaciofluvial deposits underlain by sand and gravel. Wasepi soils are on outwash plains, deltas, valley trains, glacial drainageways, and lake plains. Permeability is moderately rapid in the solum and rapid in underlying sand and gravel. Slope ranges from 0 to 6 percent.

Groundwater is anticipated between 25 to 50 centimeters (10 to 20 inches) below the ground surface in the Kibbie and Wasepi series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Mayville series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder series.



Facility photo

A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site F: Schweiger Furniture

The Highway Department proposes to subdivide the Schweiger Furniture site, demolish the least desirable portion of the existing building, and construct a new building to house the administrative, maintenance, storage, and site operational needs of the Highway Department.

Detailed Description:

New Construction: (See New Building Construction Cost Analysis)

Office / Administration Program:	16,382 sf	@	=	\$2,133,800
Vehicle Storage Program:	59,270 sf	@	=	\$4,815,700
Vehicle Maintenance Program:	28,634 sf	@	=	\$2,412,300
Storage & Misc. Equip. Program:	14,610 sf	@	=	\$1,210,900
General Cond / Contingency / Soft Costs:			=	\$1,476,200

Site Construction: (See Site F Cost Analysis)

Earthwork:	33 acres	@		\$159,600
Site Improvements:	33 acres	@		\$338,000
Specialities:	33 acres	@		\$829,000
Misc Improvements:				
-Fees / Permitting				\$116,900
-Demo / Cleanup Puerner St.				\$100,000
-Puerner St. Site Sale				(\$700,000)
-Land / Building Purchase				\$3,000,000
-Temp. Facilities				\$0
-Utility Extension				\$150,500
Contingency:				\$66,300

Total Option Cost Estimate: **\$15,958,700**

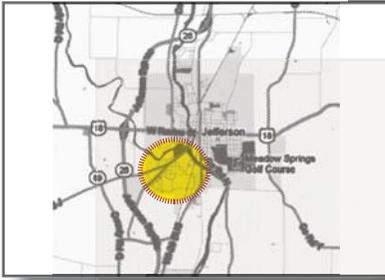
Positives

1. Cold storage building can be reused

Challenges:

1. Site is restricted by similar urban developments as the current location.
2. Land purchase and willingness of current owner to divide and sell property.
3. Unknown soil conditions and possible brownfield concerns.
4. Site does not meet 40 acre target.
5. Site removes functional industrial site from community.
6. Larger distance from highway and heavy truck traffic through the City of Jefferson.





Junction Road - A

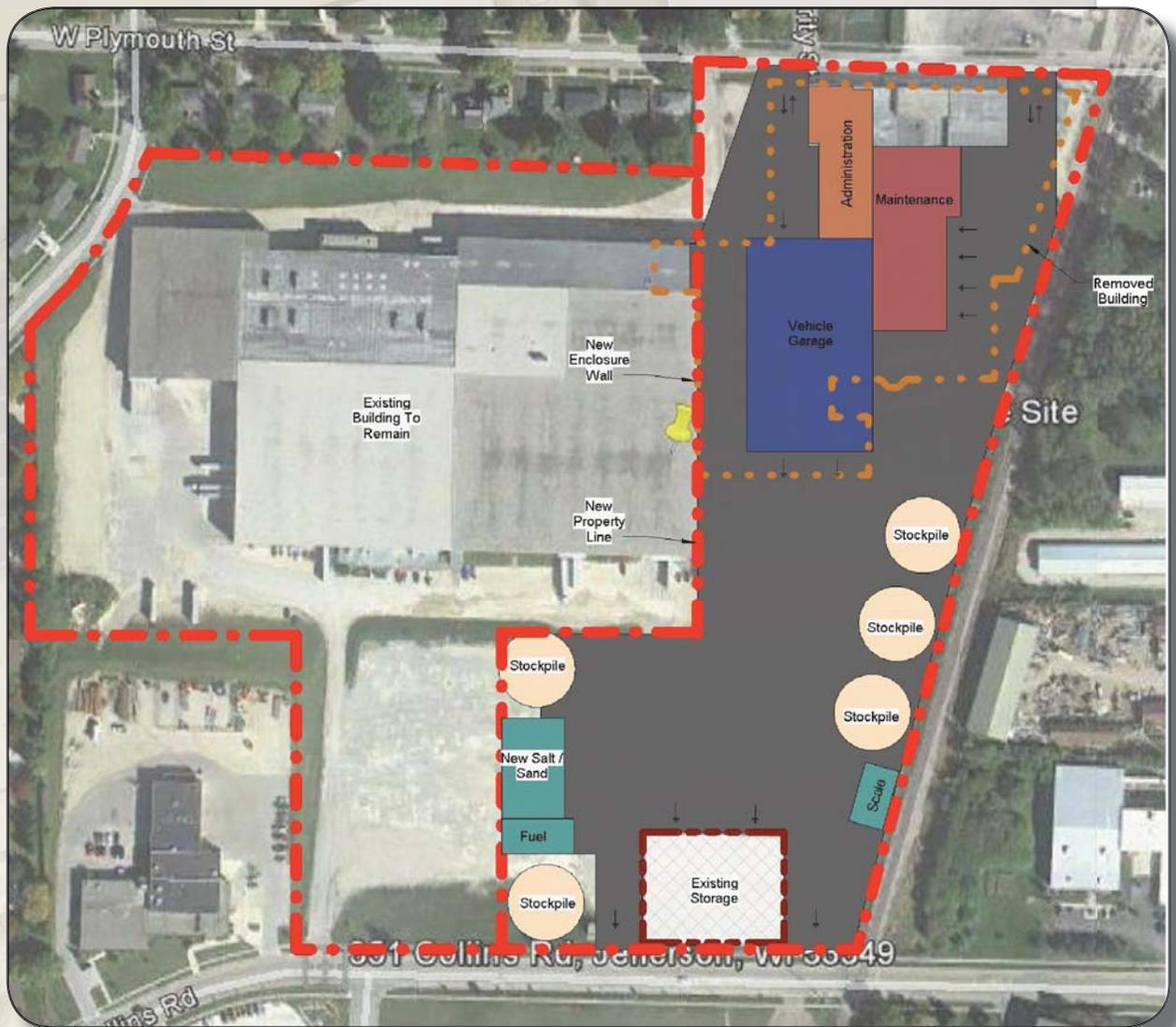
Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

Schweiger Furniture Site Diagram



A - Junction Road

B - Puerner Street

C - County Farm

E - Briggs & Stratton

F - Schweiger Furniture

Site Access Assessment

A. Access Analysis

The Schweiger Site, Site 3, is the site of the former Schweiger Furniture factory, and it has existing access points on the north end of the site and the south end of the site. The north access point connects to West Plymouth Street and the south access point connects to Collins Road. Both streets are east-west running local roads that provide access to Business 26, located approximately ¼ mile to the east. These two access points provide county vehicles with two ways of entering and leaving the site, eliminating the need for all vehicles to use a single road/entrance. In addition, there are no residential properties along West Plymouth Street or Collins Road between the site and Business 26. However, county vehicles must still travel through portions of the City, including some residential areas, once they reach Business 26 and need to head somewhere north, east, or west in the county.

Natural Resources Assessment

B. Wetland Analysis

None present

C. Floodplain Analysis

None present

D. Soil & Groundwater Contamination

The Schweiger Site, Site 3, is the site of the former Schweiger Furniture factory. The BRRS website indicated that there was one occurrence of soil contamination and one occurrence of groundwater contamination on this site. The soil contamination happened at the southeast corner of the main building. It was granted closure by the WDNR on September 1, 1997. The groundwater contamination happened at the location of six underground fuel/storage tanks and associated fuel pumps. It was granted closure by the WDNR on July 13, 1999. Even though both of these occurrences have been closed by the WDNR, it should be noted that the closure documents for the groundwater contamination occurrence include a Groundwater Use Restriction that has been filed



Site photo



Site photo



Junction Road - A

Puerner Street - B

County Farm - C

Briggs & Stratton - E

Schweiger Furniture - F

with the deed running with the property. The Groundwater Use restriction states that residual groundwater contamination remains at the site and that additional remedial action is not feasible at this time. In addition, anyone who proposes to construct or reconstruct a well on this property is required to contact the WD-NR's Bureau of Drinking Water and Groundwater, or its successor, to determine what specific prohibitions or requirements are applicable prior to constructing or reconstructing a well on this property. No well may be constructed or reconstructed on this property unless applicable requirements are met. Please refer to sheet 2 in Appendix D for a map that shows the approximate locations of the closed contamination occurrences on the site.

E. Soil Properties

Soils located at the site include the Del Rey, Kidder, McHenry, and Wauconda Series. The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The McHenry series consists of very deep, well drained soils formed in loess or other silty material and in the underlying loamy till on moraines and till plains. Permeability is moderate in the solum and moderately rapid in the underlying material. Slope ranges from 0 to 30 percent. The Wauconda series consists of very deep, somewhat poorly drained soils on outwash plains and lake plains. These soils developed in loess or silty material and in the underlying calcareous loamy outwash. Permeability is moderate. Slope ranges from 0 to 5 percent.

Groundwater is anticipated between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Del Rey and Wauconda series, between 100 to 150 centimeters (40 to 60 inches) below the ground surface in the Kidder series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder and McHenry series.



Site photo

Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin



Monday | January 16, 2012

SITE ANALYSIS

Access Assessment

Wetland Summary

Site	Access Assessment				Wetland Summary			
	Direct Access to Major Roadway	Quick Access to Jefferson Bypass (S.T.H 26)	Travel Through City/ Residential Areas Required	Located Within Current City Limits	Wetland Indicator Soils Present	Wetlands Present	Number of Wetlands	Wetland Location(s)
Site A - Junction Road	No	Yes	No	No	Yes	Yes	1	Southeast corner of the site
Site B - Puerner Street	Yes	No	Yes	Yes	Yes	Yes	1	Northwest corner of the site
Site C - County Farm	Yes	Yes	No	No	Yes	Yes	2	Southwest corner of the site & possibly around the midpoint of the eastern boundary
Site E - Briggs & Stratton	No	No	Yes	Yes	Yes	No	0	-
Site F - Schweiger Furniture	No	No	Yes	Yes	Yes	No	0	-



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin



Monday | January 16, 2012

SITE ANALYSIS #2

Site	Floodplain Summary			Soil & Groundwater Contamination Summary			
	Floodplain Present	Floodplain Zone(s)	Floodplain Location	Possible Soil or Groundwater Contamination	Number of Locations	Locations Open or Closed	Residual Contamination Present
Site A - Junction Road	Yes, consisting of just the floodfringe	Zone A	Very southeast corner of the site	Not likely	-	-	-
Site B - Puerner Street	Yes, consisting of both the floodfringe and the floodway	Zone AE & Zone X	Along the western boundary of the site	Yes, soil contamination	3	All locations are closed	Yes, at two of the locations
Site C - County Farm	No, not within the site boundary	-	-	Not likely	-	-	-
Site E - Briggs & Stratton	No, not within the site boundary	-	-	Not likely	-	-	-
Site F - Schweiger Furniture	No, not within the site boundary	-	-	Yes, soil and groundwater contamination	2	All locations are closed	Yes, at one of the locations



4a. Detailed Cost Estimates

The following spreadsheets add detail to the cost estimates included with each of the design scenarios.



Existing Maintenance Building



Existing sand storage



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | December 19, 2011

DRAFT

PRELIMINARY COST ANALYSIS
New Building Construction

Size

Administration	16,328	square feet	13.74%
Vehicle Maintenance	28,634	square feet	24.09%
Vehicle Garage	59,270	square feet	49.87%
Cold Storage	<u>14,610</u>	square feet	<u>12.29%</u>
	118,842	square feet	100.00%

Office / Administration Construction

Structure	16,328	sq.ft. @ \$	18.00	\$	293,900.00
Foundations					
Slab-on-grade					
Shell	16,328	sq.ft. @ \$	42.00		685,800.00
Superstructure					
Exterior enclosure					
Roofing					
Interiors	16,328	sq.ft. @ \$	25.00		<u>408,200.00</u>
Partitions					
Interior doors					
Finishes (walls, floors & ceilings)					
					1,387,900.00

Plumbing / Fire Protection

Plumbing	16,328	sq.ft. @ \$	8.00		130,600.00
Fire protection	16,328	sq.ft. @ \$	1.75		<u>28,600.00</u>
					159,200.00

HVAC	16,328	sq.ft.	@	\$	20.00	\$	<u>326,600.00</u>	
								326,600.00

Electrical / Technology Wiring

Electrical	16,328	sq.ft.	@	\$	8.00		130,600.00	
Fire & smoke detection system	16,328	sq.ft.	@	\$	1.00		<u>16,300.00</u>	
				\$	123.75			219,900.00

Equipment / Casework / Specialties

Intrusion alarm	1	L.S.	@	\$	5,000.00		5,000.00	
Generator	1	ea.	@	\$	68,000.00		68,000.00	
CCTV (Closed circuit television / 6 int., 6 ext. cameras)	1	L.S.	@	\$	30,000.00		30,000.00	
Keyless entry (3 doors)	1	L.S.	@	\$	10,000.00		10,000.00	
Reception desk	24	ln.ft.	@	\$	300.00		7,200.00	
Casework	80	ln.ft.	@	\$	300.00		24,000.00	
60 Lockers	60	ea.	@	\$	150.00		9,000.00	
Markerboards / tackboards / poster cases	5	ea.	@	\$	1,000.00		<u>5,000.00</u>	
								<u>40,200.00</u>

Office / Admin Subtotal: \$ 2,133,800.00

Vehicle Garage Construction

Structure	59,270	sq.ft.	@	\$	16.00	\$	948,300.00	
Foundations								
Slab-on-grade								
Shell	59,270	sq.ft.	@	\$	32.00		1,896,600.00	
Superstructure								
Exterior enclosure								
Roofing								
Interiors	59,270	sq.ft.	@	\$	10.00		<u>592,700.00</u>	
								3,437,600.00

Plumbing / Fire Protection

Plumbing	59,270	sq.ft.	@	\$	3.00		177,800.00	
Fire protection	59,270	sq.ft.	@	\$	1.25		<u>74,100.00</u>	
								251,900.00

HVAC	59,270	sq.ft.	@	\$	8.00	\$	<u>474,200.00</u>	
								474,200.00

Electrical / Technology Wiring

Electrical	59,270	sq.ft.	@	\$	10.00		592,700.00	
Fire & smoke detection system	59,270	sq.ft.	@	\$	1.00		<u>59,300.00</u>	
				\$	81.25			652,000.00

Vehicle Garage Subtotal: \$ 4,815,700.00

Vehicle Maintenance Construction

Structure	28,634	sq.ft.	@ \$	18.00	\$	515,400.00	
Foundations							
Slab-on-grade							
Shell	28,634	sq.ft.	@ \$	32.00		916,300.00	
Superstructure							
Exterior enclosure							
Roofing							
Interiors	28,634	sq.ft.	@ \$	10.00		<u>286,300.00</u>	
							1,718,000.00

Plumbing / Fire Protection

Plumbing	28,634	sq.ft.	@ \$	4.00		114,500.00	
Fire protection	28,634	sq.ft.	@ \$	1.25		<u>35,800.00</u>	
							150,300.00

HVAC

	28,634	sq.ft.	@ \$	8.00	\$	<u>229,100.00</u>	
							229,100.00

Electrical / Technology Wiring

Electrical	28,634	sq.ft.	@ \$	10.00		286,300.00	
Fire & smoke detection system	28,634	sq.ft.	@ \$	<u>1.00</u>		28,600.00	
				\$	84.25		314,900.00

Vehicle Maintenance Subtotal: \$ 2,412,300.00

Cold Storage

Enclosure	14,610	sq.ft.	@ \$	45.00	\$	657,500.00	
Electrical	14,610	sq.ft.	@ \$	<u>4.00</u>		<u>58,400.00</u>	
				\$	49.00		715,900.00

Equipment / Specialties

7 ton bridge crane	1	ea.	@ \$	44,000.00		44,000.00	
Vehicle Exhaust - 4 Vents	1	ea.	@ \$	24,000.00		24,000.00	
10 ton bridge crane	1	ea.	@ \$	112,000.00		112,000.00	
75,000 lb. Lift	2	ea.	@ \$	100,000.00		200,000.00	
12,000 lb. 4-Post Lift	2	ea.	@ \$	11,500.00		23,000.00	
Fluid distribution system	1	ea.	@ \$	92,000.00		92,000.00	
Material storage bunks	8	ea.	@	750.00		6,000.00	
Welding curtain/booth/hood	1	ea.	@	10,000.00		<u>10,000.00</u>	
							<u>495,000.00</u>

Office / Garage / Maintenance Subtotal: \$ 10,572,700.00

General Conditions

349,000.00

Total Construction Cost \$ 10,921,700.00

Design/Construction/Estimating Contingency (5%) \$ 546,100.00

Soft Costs

Architectural / engineering fees (5.0%)	\$ 546,100.00	
Reimbursable / permits	15,000.00	
Telephone system	20,000.00	
Environmental identification / abatement (allowance)	not included	
Traffic impact analysis	not included	
Land survey	not included	
Land acquisition/demolition/relocation	not included	
Local assessments and/or permits	not included	
Construction management / owners representative fees	not included	
Multiple bid packages	not included	
Design of non-conventional foundations	not included	
Building commissioning	not included	
LEED documentation	not included	
Builders risk insurance	not included	
Legal or other professional service fees	not included	
Moving / relocation expenses	not included	
Borrowing / bond council and/or fees	not included	
Loose technology (switches, routers, etc.)	not included	
SCADA Relocation	not included	
		<u>581,100.00</u>

TOTAL PROJECT COST **\$ 12,048,900.00**



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY COST ANALYSIS

Puerner Street Renovation

Size

New Administration	4,500	square feet	4.86%
Renovated Vehicle Maintenance	28,800	square feet	31.11%
Vehicle Garage	59,270	square feet	64.03%
Cold Storage (Existing Reused)	0	square feet	0.00%
	92,570	square feet	100.00%

Office / Administration Construction

Structure	4,500	sq.ft. @ \$	18.00	\$	81,000.00	
Foundations						
Slab-on-grade						
Shell	4,500	sq.ft. @ \$	42.00		189,000.00	
Superstructure						
Exterior enclosure						
Roofing						
Interiors	4,500	sq.ft. @ \$	25.00		<u>112,500.00</u>	
Partitions						
Interior doors						
Finishes (walls, floors & ceilings)						
						382,500.00

Plumbing / Fire Protection

Plumbing	4,500	sq.ft. @ \$	8.00		36,000.00	
Fire protection	4,500	sq.ft. @ \$	1.75		<u>7,900.00</u>	
						43,900.00

HVAC	4,500	sq.ft. @	\$	20.00	\$	<u>90,000.00</u>	
							90,000.00

Electrical / Technology Wiring

Electrical	4,500	sq.ft. @	\$	8.00		36,000.00	
Fire & smoke detection system	4,500	sq.ft. @	\$	1.00		<u>4,500.00</u>	
			\$	123.75			113,500.00

Equipment / Casework / Specialties

Intrusion alarm	1	L.S. @	\$	5,000.00		5,000.00	
Generator	1	ea. @	\$	68,000.00		68,000.00	
CCTV (Closed circuit television / 6 int., 6 ext. cameras)	1	L.S. @	\$	30,000.00		30,000.00	
Keyless entry (3 doors)	1	L.S. @	\$	10,000.00		10,000.00	
Reception desk	24	ln.ft. @	\$	300.00		7,200.00	
Casework	80	ln.ft. @	\$	300.00		24,000.00	
60 Lockers	60	ea. @	\$	150.00		9,000.00	
Markerboards / tackboards / poster cases	5	ea. @	\$	1,000.00		<u>5,000.00</u>	
							<u>40,200.00</u>

Office / Admin Subtotal: \$ 670,100.00

Vehicle Garage Construction

Structure	59,270	sq.ft. @	\$	16.00	\$	948,300.00	
Foundations							
Slab-on-grade							
Shell	59,270	sq.ft. @	\$	32.00		1,896,600.00	
Superstructure							
Exterior enclosure							
Roofing							
Interiors	59,270	sq.ft. @	\$	10.00		<u>592,700.00</u>	
							3,437,600.00

Plumbing / Fire Protection

Plumbing	59,270	sq.ft. @	\$	3.00		177,800.00	
Fire protection	59,270	sq.ft. @	\$	1.25		<u>74,100.00</u>	
							251,900.00

HVAC	59,270	sq.ft. @	\$	8.00	\$	<u>474,200.00</u>	
							474,200.00

Electrical / Technology Wiring

Electrical	59,270	sq.ft. @	\$	10.00		592,700.00	
Fire & smoke detection system	59,270	sq.ft. @	\$	1.00		<u>59,300.00</u>	
			\$	81.25			652,000.00

Vehicle Garage Subtotal: \$ 4,815,700.00

Vehicle Maintenance Renovation

Structure	28,800	sq.ft.	@	\$	22.00	\$	633,600.00	
Wash Bay								
Slab-on-grade replacement								
Shell	28,800	sq.ft.	@	\$	12.00		345,600.00	
New Roof								
Interiors	28,800	sq.ft.	@	\$	10.00		<u>288,000.00</u>	
								1,267,200.00

Plumbing / Fire Protection

Plumbing	28,800	sq.ft.	@	\$	6.00		172,800.00	
Fire protection	28,800	sq.ft.	@	\$	1.25		<u>36,000.00</u>	
								208,800.00

HVAC

Exhaust system	28,800	sq.ft.	@	\$	15.00		<u>\$ 432,000.00</u>	432,000.00
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Electrical / Technology Wiring

Electrical	28,800	sq.ft.	@	\$	10.00		288,000.00	
Fire & smoke detection system	28,800	sq.ft.	@	\$	1.00		<u>28,800.00</u>	
				\$	77.25			316,800.00

Vehicle Maintenance Subtotal: \$ 2,224,800.00

Cold Storage - Existing

Enclosure	0	sq.ft.	@	\$	45.00	\$	-	
Electrical	0	sq.ft.	@	\$	4.00		<u>-</u>	
				\$	49.00			-

Equipment / Casework / Specialties

7 ton bridge crane	1	ea.	@	\$	44,000.00		44,000.00	
Vehicle Exhaust - 4 Vents	1	ea.	@	\$	24,000.00		24,000.00	
10 ton bridge crane	1	ea.	@	\$	112,000.00		112,000.00	
75,000 lb. Lift	2	ea.	@	\$	100,000.00		200,000.00	
12,000 lb. 4-Post Lift	2	ea.	@	\$	11,500.00		23,000.00	
Fluid distribution system	1	ea.	@	\$	92,000.00		92,000.00	
Material storage bunks	8	ea.	@		750.00		6,000.00	
Welding curtain/booth/hood	1	ea.	@		10,000.00		<u>10,000.00</u>	
								495,000.00

Office / Garage / Maintenance Subtotal: \$ 8,205,600.00

Building Demolition						\$	115,000.00	
General Conditions							<u>349,000.00</u>	

Total Construction Cost \$ 8,554,600.00

Design/Construction/Estimating Contingency (5%) \$ 427,700.00

Soft Costs

Architectural / engineering fees (5.0%)	\$ 427,700.00	
Reimbursable / permits	15,000.00	
Telephone system	20,000.00	
Environmental identification / abatement (allowance)	not included	
Traffic impact analysis	not included	
Land survey	not included	
Land acquisition/demolition/relocation	not included	
Local assessments and/or permits	not included	
Construction management / owners representative fees	not included	
Multiple bid packages	not included	
Design of non-conventional foundations	not included	
Building commissioning	not included	
LEED documentation	not included	
Builders risk insurance	not included	
Legal or other professional service fees	not included	
Moving / relocation expenses	not included	
Borrowing / bond council and/or fees	not included	
Loose technology (switches, routers, etc.)	not included	
SCADA Relocation	not included	

462,700.00

TOTAL PROJECT COST **\$ 9,445,000.00**



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY COST ANALYSIS

Briggs & Stratton Renovation

Size

Renovated Administration	16,000	square feet		6.20%
Renovated Vehicle Maintenance	40,000	square feet		15.50%
Renovated Vehicle Garage	80,000	square feet		31.01%
Renovated Cold Storage	<u>122,000</u>	square feet		<u>47.29%</u>
	258,000	square feet		100.00%

Office / Administration Construction

Structure	0	sq.ft. @ \$	-	\$	-
Foundations					
Slab-on-grade					
Shell	1,000	sq.ft. @ \$	42.00		42,000.00
Superstructure					
Exterior enclosure					
Roofing					
Interiors	16,000	sq.ft. @ \$	22.00		<u>352,000.00</u>
Partitions					
Interior doors					
Finishes (walls, floors & ceilings)					
					394,000.00

Plumbing / Fire Protection

Plumbing	16,000	sq.ft. @ \$	6.00		96,000.00
Fire protection	16,000	sq.ft. @ \$	1.75		<u>28,000.00</u>
					124,000.00

HVAC	16,000	sq.ft.	@ \$	20.00	\$ 320,000.00	
						320,000.00

Electrical / Technology Wiring

Electrical	16,000	sq.ft.	@ \$	8.00	128,000.00	
Fire & smoke detection system	16,000	sq.ft.	@ \$	1.00	<u>16,000.00</u>	
			\$	100.75		217,000.00

Equipment / Casework / Specialties

Intrusion alarm	1	L.S.	@ \$	5,000.00	5,000.00	
Generator	1	ea.	@ \$	68,000.00	68,000.00	
CCTV (Closed circuit television / 6 int., 6 ext. cameras)	1	L.S.	@ \$	30,000.00	30,000.00	
Keyless entry (3 doors)	1	L.S.	@ \$	10,000.00	10,000.00	
Reception desk	24	ln.ft.	@ \$	300.00	7,200.00	
Casework	80	ln.ft.	@ \$	300.00	24,000.00	
60 Lockers	60	ea.	@ \$	150.00	9,000.00	
Markerboards / tackboards / poster cases	5	ea.	@ \$	1,000.00	<u>5,000.00</u>	
						<u>40,200.00</u>

Office / Admin Subtotal: \$ 1,095,200.00

Vehicle Garage Renovation

Structure	80,000	sq.ft.	@ \$	16.00	\$ 1,280,000.00	
Foundations						
Slab-on-grade						
Shell	80,000	sq.ft.	@ \$	12.00	960,000.00	
Superstructure						
Exterior enclosure						
Roofing						
Interiors	80,000	sq.ft.	@ \$	6.00	<u>480,000.00</u>	
						2,720,000.00

Plumbing / Fire Protection

Plumbing	80,000	sq.ft.	@ \$	3.00	240,000.00	
Fire protection	80,000	sq.ft.	@ \$	1.25	<u>100,000.00</u>	
						340,000.00

HVAC	80,000	sq.ft.	@ \$	8.00	\$ 640,000.00	
						640,000.00

Electrical / Technology Wiring

Electrical	80,000	sq.ft.	@ \$	10.00	800,000.00	
Fire & smoke detection system	80,000	sq.ft.	@ \$	1.00	<u>80,000.00</u>	
			\$	57.25		880,000.00

Vehicle Garage Subtotal: \$ 4,580,000.00

Vehicle Maintenance Renovation

Structure	40,000	sq.ft.	@	\$	22.00	\$	880,000.00	
Wash Bay								
Slab-on-grade replacement								
Shell	40,000	sq.ft.	@	\$	12.00		480,000.00	
New Roof								
Interiors	40,000	sq.ft.	@	\$	10.00		<u>400,000.00</u>	
								1,760,000.00

Plumbing / Fire Protection

Plumbing	40,000	sq.ft.	@	\$	6.00		240,000.00	
Fire protection	40,000	sq.ft.	@	\$	1.25		<u>50,000.00</u>	
								290,000.00

HVAC

Exhaust system	40,000	sq.ft.	@	\$	15.00		<u>\$ 600,000.00</u>	
								600,000.00

Electrical / Technology Wiring

Electrical	40,000	sq.ft.	@	\$	10.00		400,000.00	
Fire & smoke detection system	40,000	sq.ft.	@	\$	<u>1.00</u>		40,000.00	
				\$	77.25			440,000.00

Vehicle Maintenance Subtotal: \$ 3,090,000.00

Cold Storage - Existing

Enclosure	122,000	sq.ft.	@	\$	-	\$	-	
Electrical	122,000	sq.ft.	@	\$	<u>-</u>		<u>-</u>	
				\$	-			-

Equipment / Casework / Specialties

7 ton bridge crane	1	ea.	@	\$	44,000.00		44,000.00	
Vehicle Exhaust - 4 Vents	1	ea.	@	\$	24,000.00		24,000.00	
10 ton bridge crane	1	ea.	@	\$	112,000.00		112,000.00	
75,000 lb. Lift	2	ea.	@	\$	100,000.00		200,000.00	
12,000 lb. 4-Post Lift	2	ea.	@	\$	11,500.00		23,000.00	
Fluid distribution system	1	ea.	@	\$	92,000.00		92,000.00	
Material storage bunks	8	ea.	@		750.00		6,000.00	
Welding curtain/booth/hood	1	ea.	@		10,000.00		<u>10,000.00</u>	
								495,000.00

Office / Garage / Maintenance Subtotal: \$ 9,260,200.00

Building Demolition						\$	115,000.00	
General Conditions							<u>349,000.00</u>	

Total Construction Cost \$ 9,609,200.00

Design/Construction/Estimating Contingency (5%) \$ 480,500.00

Soft Costs

Architectural / engineering fees (5.0%)	\$ 480,500.00	
Reimbursable / permits	15,000.00	
Telephone system	20,000.00	
Environmental identification / abatement (allowance)	not included	
Traffic impact analysis	not included	
Land survey	not included	
Land acquisition/demolition/relocation	not included	
Local assessments and/or permits	not included	
Construction management / owners representative fees	not included	
Multiple bid packages	not included	
Design of non-conventional foundations	not included	
Building commissioning	not included	
LEED documentation	not included	
Builders risk insurance	not included	
Legal or other professional service fees	not included	
Moving / relocation expenses	not included	
Borrowing / bond council and/or fees	not included	
Loose technology (switches, routers, etc.)	not included	
SCADA Relocation	not included	

515,500.00

TOTAL PROJECT COST **\$ 10,605,200.00**



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site A - Junction Road

Size

Site Area 40 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	70,000.00	\$	70,000.00
Strip & Stockpile	96,800	Sq. Yd.	@ \$	1.61	\$	155,800.00
Finish Grade	96,800	Sq. Yd.	@ \$	0.85	\$	82,300.00
Utilities	1	Ea	@ \$	75,000.00	\$	<u>75,000.00</u>
					\$	383,100.00

Site Improvements

Drainage	1	Ea	@ \$	125,000.00	\$	125,000.00
Paving	32,000	Sq. Yd.	@ \$	6.50	\$	208,000.00
Road	850	L. Ft.	@ \$	125.00	\$	106,300.00
Site Lighting	1	Ea	@ \$	30,000.00	\$	30,000.00
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00
Fencing, signage	1	Ea	@ \$	125,000.00	\$	<u>125,000.00</u>
					\$	609,300.00

Specialties & Misc.

Salt Storage	18,000	sq.ft.	@ \$	30.00	\$	540,000.00
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	<u>64,000.00</u>
					\$	829,000.00

Site Subtotal: \$ 1,821,400.00

Design/Construction/Estimating Contingency (5%) \$ 91,100.00

Misc. Project Costs

Architectural / engineering fees (5.0%)				\$	91,100.00
Reimbursable / permits				Included in building costs	
Geotechnical feasibility study					7,590.00
Geotechnical					12,925.00
Storm water management calculation					11,770.00
Natural Resources permitting					4,125.00
Wisconsin BER review					2,420.00
Chapter 30 permitting					4,290.00
NOI					7,480.00
Demolition / Cleanup of Puerner site					100,000.00
Land Purchase	40	Acre	@ \$	20,000.00	\$ 800,000.00
Puerner Site Sale	1	Ea	@ \$	(700,000.00)	\$ (700,000.00)
Temporary offices	0	Mo.	@ \$	8,000.00	\$ -
City improvements (underground utilities)	1	Ea	@ \$	1,400,000.00	\$ 1,400,000.00
Environmental identification / abatement (allowance)					not included
Traffic impact analysis					not included
Land survey					not included
Land acquisition/demolition/relocation					not included
Local assessments and/or permits					not included
Borrowing / bond council and/or fees					not included
					<u>1,741,700.00</u>

TOTAL SITE COST \$ 3,654,200.00



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site B-1 - Puerner Street - New Construction

Size

Site Area 12 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	40,000.00	\$	40,000.00
Strip & Stockpile	20,000	Sq. Yd.	@ \$	1.61	\$	32,200.00
Finish Grade	30,000	Sq. Yd.	@ \$	0.85	\$	25,500.00
Utilities	1	Ea	@ \$	20,000.00	\$	<u>20,000.00</u>

\$ 117,700.00

Site Improvements

Drainage	1	Ea	@ \$	50,000.00	\$	50,000.00
Paving	25,000	Sq. Yd.	@ \$	6.50	\$	162,500.00
Road	0	L. Ft.	@ \$	125.00	\$	-
Site Lighting	1	Ea	@ \$	25,000.00	\$	25,000.00
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00
Fencing, signage	1	Ea	@ \$	20,000.00	\$	<u>20,000.00</u>

\$ 272,500.00

Specialties & Misc.

Salt Storage	10,000	sq.ft.	@ \$	30.00	\$	300,000.00
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	<u>64,000.00</u>

\$ 589,000.00

Site Subtotal: \$ 979,200.00

Design/Construction/Estimating Contingency (5%)

\$ 49,000.00

Misc. Project Costs

Architectural / engineering fees (5.0%)					\$	49,000.00
Reimbursable / permits						Included in building costs
Geotechnical feasibility study						7,590.00
Geotechnical						12,925.00
Storm water management calculation						11,770.00
Natural resources permitting						4,125.00
Wisconsin BER review						2,420.00
Chapter 30 permitting						4,290.00
NOI						7,480.00
Demolition / Cleanup of Puerner site						100,000.00
Land Purchase	0	Acre	@ \$	-	\$	-
Puerner site sale	0	Ea	@ \$	(700,000.00)	\$	-
Temporary offices	14	Mo.	@ \$	8,000.00	\$	112,000.00
City improvements (underground utilities)	1,000	L. Ft	@ \$	1,200.00	\$	1,200,000.00
Environmental identification / abatement (allowance)						not included
Traffic impact analysis						not included
Land survey						not included
Land acquisition/demolition/relocation						not included
Local assessments and/or permits						not included
Borrowing / bond council and/or fees						not included

1,511,600.00

TOTAL SITE COST \$ 2,539,800.00



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site B-2 - Puerner Street Renovation

Size

Site Area 12 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	40,000.00	\$	40,000.00
Strip & Stockpile	20,000	Sq. Yd.	@ \$	1.61	\$	32,200.00
Finish Grade	30,000	Sq. Yd.	@ \$	0.85	\$	25,500.00
Utilities	1	Ea	@ \$	20,000.00	\$	<u>20,000.00</u>
					\$	117,700.00

Site Improvements

Drainage	1	Ea	@ \$	50,000.00	\$	50,000.00
Paving	25,000	Sq. Yd.	@ \$	6.50	\$	162,500.00
Road	0	L. Ft.	@ \$	125.00	\$	-
Site Lighting	1	Ea	@ \$	25,000.00	\$	25,000.00
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00
Fencing, signage	1	Ea	@ \$	20,000.00	\$	<u>20,000.00</u>
					\$	272,500.00

Specialties & Misc.

Salt Storage	10,000	sq.ft.	@ \$	30.00	\$	300,000.00
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	<u>64,000.00</u>
					\$	589,000.00

Site Subtotal: \$ 979,200.00

Design/Construction/Estimating Contingency (5%) \$ 49,000.00

Misc. Project Costs

Architectural / engineering fees (5.0%)				\$	49,000.00
Reimbursable / permits					Included in building costs
Geotechnical feasibility study					7,590.00
Geotechnical					12,925.00
Storm water management calculation					11,770.00
Natural resources permitting					4,125.00
Wisconsin BER review					2,420.00
Chapter 30 permitting					4,290.00
NOI					7,480.00
Demolition / Cleanup of Puerner site					100,000.00
Land Purchase	0	Acre	@ \$	-	\$ -
Puerner site sale	0	Ea	@ \$	(700,000.00)	\$ -
Temporary offices	14	Mo.	@ \$	8,000.00	\$ 112,000.00
City improvements (underground utilities)	400	L. Ft	@ \$	1,200.00	\$ 480,000.00
Environmental identification / abatement (allowance)					not included
Traffic impact analysis					not included
Land survey					not included
Land acquisition/demolition/relocation					not included
Local assessments and/or permits					not included
Borrowing / bond council and/or fees					not included
					<u>791,600.00</u>

TOTAL SITE COST \$ 1,819,800.00



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site C - County Farms

Size

Site Area 40 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	50,000.00	\$	50,000.00
Strip & Stockpile	96,800	Sq. Yd.	@ \$	1.61	\$	155,800.00
Finish Grade	96,800	Sq. Yd.	@ \$	0.85	\$	82,300.00
Utilities	1	Ea	@ \$	75,000.00	\$	<u>75,000.00</u>

\$ 363,100.00

Site Improvements

Drainage	1	Ea	@ \$	75,000.00	\$	75,000.00
Paving	32,000	Sq. Yd.	@ \$	6.50	\$	208,000.00
Road	850	L. Ft.	@ \$	125.00	\$	106,300.00
Site Lighting	1	Ea	@ \$	30,000.00	\$	30,000.00
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00
Fencing, signage	1	Ea	@ \$	125,000.00	\$	<u>125,000.00</u>

\$ 559,300.00

Specialties & Misc.

Salt Storage	18,000	sq.ft.	@ \$	30.00	\$	540,000.00
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	<u>64,000.00</u>

\$ 829,000.00

Site Subtotal: \$ 1,751,400.00

Design/Construction/Estimating Contingency (5%)

\$ 87,600.00

Misc. Project Costs

Architectural / engineering fees (5.0%)					\$	87,600.00
Reimbursable / permits						Included in building costs
Geotechnical feasibility study						7,590.00
Geotechnical						12,925.00
Storm water management calculation						11,770.00
Natural resources permitting						4,125.00
Wisconsin BER review						2,420.00
Chapter 30 permitting						4,290.00
NOI						7,480.00
Demolition / Cleanup of Puerner site						100,000.00
Land Purchase	0	Acre	@ \$	-	\$	-
Puerner site sale	1	Ea	@ \$	(700,000.00)	\$	(700,000.00)
Temporary offices	0	Mo.	@ \$	8,000.00		
City improvements (underground utilities)	350	L. Ft	@ \$	430.00	\$	150,500.00
Environmental identification / abatement (allowance)						not included
Traffic impact analysis						not included
Land survey						not included
Land acquisition/demolition/relocation						not included
Local assessments and/or permits						not included
Borrowing / bond council and/or fees						not included

(311,300.00)

TOTAL SITE COST \$ 1,527,700.00



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site E - Briggs & Stratton

Size

Site Area 25 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	40,000.00	\$	40,000.00
Strip & Stockpile	10,000	Sq. Yd.	@ \$	1.61	\$	16,100.00
Finish Grade	10,000	Sq. Yd.	@ \$	0.85	\$	8,500.00
Utilities	1	Ea	@ \$	75,000.00	\$	<u>75,000.00</u>

\$ 139,600.00

Site Improvements

Drainage	1	Ea	@ \$	15,000.00	\$	15,000.00
Paving	10,000	Sq. Yd.	@ \$	6.50	\$	65,000.00
Road	0	L. Ft.	@ \$	125.00	\$	-
Site Lighting	1	Ea	@ \$	20,000.00	\$	20,000.00
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00
Fencing, signage	1	Ea	@ \$	80,000.00	\$	<u>80,000.00</u>

\$ 195,000.00

Specialties & Misc.

Salt Storage	18,000	sq.ft.	@ \$	30.00	\$	540,000.00
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	<u>64,000.00</u>

\$ 829,000.00

Site Subtotal: \$ 1,163,600.00

Design/Construction/Estimating Contingency (5%)

\$ 58,200.00

Misc. Project Costs

Architectural / engineering fees (5.0%)					\$	58,200.00
Reimbursable / permits					Included in building costs	
Geotechnical feasibility study						7,590.00
Geotechnical						12,925.00
Storm water management calculation						11,770.00
Natural resources permitting						4,125.00
Wisconsin BER review						2,420.00
Chapter 30 permitting						4,290.00
NOI						7,480.00
Demolition / Cleanup of Puerner site						100,000.00
Land Purchase	1	Ea	@ \$	5,850,000.00	\$	5,850,000.00
Puerner site sale	1	Ea	@ \$	(700,000.00)	\$	(700,000.00)
Temporary offices	0	Mo.	@ \$	8,000.00		
City improvements	0	L. Ft	@ \$	430.00	\$	-
Environmental identification / abatement (allowance)						not included
Traffic impact analysis						not included
Land survey						not included
Land acquisition/demolition/relocation						not included
Local assessments and/or permits						not included
Borrowing / bond council and/or fees						not included

5,358,800.00

TOTAL SITE COST \$ 6,580,600.00



Bray Associates Architects, Inc.
 Sheboygan & Milwaukee, Wisconsin

Monday | January 02, 2012

PRELIMINARY SITE COST ANALYSIS

Site F - Schweiger Furniture

Size

Site Area 33 Acres

Earthwork

Mobilization & site prep	1	Ea	@ \$	60,000.00	\$	60,000.00	
Strip & Stockpile	10,000	Sq. Yd.	@ \$	1.61	\$	16,100.00	
Finish Grade	10,000	Sq. Yd.	@ \$	0.85	\$	8,500.00	
Utilities	1	Ea	@ \$	75,000.00	\$	<u>75,000.00</u>	
					\$		159,600.00

Site Improvements

Drainage	1	Ea	@ \$	15,000.00	\$	15,000.00	
Paving	32,000	Sq. Yd.	@ \$	6.50	\$	208,000.00	
Road	0	L. Ft.	@ \$	125.00	\$	-	
Site Lighting	1	Ea	@ \$	20,000.00	\$	20,000.00	
Landscaping	1	Ea	@ \$	15,000.00	\$	15,000.00	
Fencing, signage	1	Ea	@ \$	80,000.00	\$	<u>80,000.00</u>	
					\$		338,000.00

Specialties & Misc.

Salt Storage	18,000	sq.ft.	@ \$	30.00	\$	540,000.00	
Fueling Station	1	ea.	@ \$	225,000.00	\$	225,000.00	
Vehicle Scale	1	ea.	@ \$	64,000.00	\$	64,000.00	
Ext. Building Enclosure	330	L. Ft.	@ \$	300.00	\$	<u>99,000.00</u>	
					\$		829,000.00

Site Subtotal: \$ 1,326,600.00

Design/Construction/Estimating Contingency (5%) \$ 66,300.00

Misc. Project Costs

Architectural / engineering fees (5.0%)					\$	66,300.00	
Reimbursable / permits						Included in building costs	
Geotechnical feasibility study						7,590.00	
Geotechnical						12,925.00	
Storm water management calculation						11,770.00	
Natural resources permitting						4,125.00	
Wisconsin BER review						2,420.00	
Chapter 30 permitting						4,290.00	
NOI						7,480.00	
Demolition / Cleanup of Puerner site						100,000.00	
Land Purchase	1	Ea	@ \$	3,000,000.00	\$	3,000,000.00	
Puerner site sale	1	Ea	@ \$	(700,000.00)	\$	(700,000.00)	
Temporary offices	0	Mo.	@ \$	8,000.00			
City improvements	0	L. Ft	@ \$	430.00	\$	-	
Environmental identification / abatement (allowance)						not included	
Traffic impact analysis						not included	
Land survey						not included	
Land acquisition/demolition/relocation						not included	
Local assessments and/or permits						not included	
Borrowing / bond council and/or fees						not included	
							<u>2,516,900.00</u>

TOTAL SITE COST \$ 3,909,800.00



4b. Civil Engineer Report & Site Maps



Existing Maintenance Building



Existing sand storage



Jefferson County Highway Department New Facility Selection Study

Evaluation of Prospective Sites

Kapur & Associates was retained by Bray Architects to provide a Phase I evaluation of five (5) prospective sites for a new Jefferson County Highway Department Facility. Items to be provided in the evaluation included: (1) a Site Access Assessment (2) a Natural Resources Assessment, (3) an Environmental Assessment, (4) an Infrastructure Assessment, and (3) a Storm Water Management Assessment.

The five (5) potential sites that were analyzed as part of the Phase I evaluation were as follows:

- Existing Puerner Street Site – Site 1
- Briggs & Stratton Site – Site 2
- Schweiger Site – Site 3
- Junction Road Site – Site 4
- County Farms Site – Site 5

For the purposes of this report, these potential sites will be referred to as Sites 1-5.

Site Access Assessment

A. Access Analysis

Since the new highway department facility will be the main facility for the entire county, it is imperative that the site have easy and convenient access to major roadways so county equipment can be quickly dispatched to where it is needed. It is also advantageous for the new highway department facility to be located on major roadways, because most highway equipment is large and heavy. Major roadways are typically wider and constructed to handle heavy vehicles at higher frequencies, and the roads directly adjacent to the new facility will have a high concentration of county vehicles as they leave and return throughout the day. Please refer to Sheets 1-7 in Appendix A for maps that show where the potential sites are located, along with schematic layouts of the new highway department facility on each site.

1.) Existing Puerner Street Site

The Existing Puerner Street Site, Site 1, is the current location of the Jefferson County Highway Department Facility, and it has existing access points on the north end of the site and the south end of the site. The north access point connects to West Puerner Street (C.T.H. “N”) and the south access point forms the north leg of the intersection of North Elizabeth Avenue and West Woolcock Street. West Woolcock Street provides access to Business 26, approximately 2 blocks to the east. In addition, a second access point would be proposed at the northeast corner of the site and connect to the south leg of the intersection of West Puerner Street (C.T.H. “N”) and North Watertown Avenue. These

three access points provide county vehicles with multiple ways of entering and leaving the site, eliminating the need for all vehicles to use a single road/entrance. However, county vehicles must still travel through portions of the City, including some residential areas, regardless of what direction they are heading in, except north on Business 26.

2.) Briggs & Stratton Site

The Briggs & Stratton Site, Site 2, is the site of a former Briggs & Stratton factory, and it has multiple existing access points on both North Parkway Street and Generac Way. However, both streets are local roads that dead end at the site. As a result, all county vehicles entering and leaving the site must use North Parkway Street and East Puerner Street to the south. It should be noted that East Puerner Street is not part of C.T.H. "C" at this location. North Parkway Street is located within an industrial park with businesses on either side, whereas East Puerner Street has a mix of residential, office, and industrial uses on both sides. Thus, county vehicles will have to travel along East Puerner Street through portions of the City, including some residential areas, to gain access to any of the nearby major roadways and the remainder of the county.

3.) Schweiger Site

The Schweiger Site, Site 3, is the site of the former Schweiger Furniture factory, and it has existing access points on the north end of the site and the south end of the site. The north access point connects to West Plymouth Street and the south access point connects to Collins Road. Both streets are east-west running local roads that provide access to Business 26, located approximately ¼ mile to the east. These two access point provide county vehicles with two ways of entering and leaving the site, eliminating the need for all vehicles to use a single road/entrance. In addition, there are no residential properties along West Plymouth Street or Collins Road between the site and Business 26. However, county vehicles must still travel through portions of the City, including some residential areas, once they reach Business 26 and need to head somewhere north, east, or west in the county.

4.) Junction Road Site

The Junction Road Site, Site 4, is currently an open farm field with a small field entrance on the north along West Junction Road. The schematic site layout proposes two access points on West Junction Road adjacent to each other near the northwest corner of the site. West Junction Road is currently a Town of Aztalan road that connects to Business 26, approximately ¼ mile to the west. Since West Junction Road is the only street adjacent to the site, all county vehicles entering and leaving the site must use it, along with Business 26 to the west. However, the Jefferson Bypass (S.T.H. 26) is located just to the north along Business 26, and from there, county vehicles can gain quick access to the remainder of the county. In addition, county vehicles would not have to travel through the City and residential neighborhoods when coming from or going to the site. It should also be noted that this site is not currently within the City Limits.

5.) County Farms Site

The County Farms Site, Site 5, is also currently an open farm field with a small field entrance on the south along Business 26. The schematic site layout proposes one or two access points on Business 26 along the south property line. Business 26 also runs north-south just to the east of the site, but a railroad track lies between the site and the roadway, making an access point to the east difficult. Thus, all county vehicles entering and leaving the site must use Business 26. However, the Jefferson Bypass (S.T.H. 26) is located immediately west of the site, and from there, county vehicles can gain quick access to the remainder of the county. Furthermore, county vehicles would not have to travel through the City and residential neighborhoods when coming from or going to the site, except when heading east. This site is also not currently within the City Limits.

Site Access Summary

Site	Description	Direct Access to Major Roadway	Quick Access to Jefferson Bypass (S.T.H 26)	Travel Through City/Residential Areas Required	Located Within Current City Limits
1	Existing Puerner Street Site	Yes	No	Yes	Yes
2	Briggs & Stratton Site	No	No	Yes	Yes
3	Schweiger Site	No	No	Yes	Yes
4	Junction Road Site	No	Yes	No	No
5	County Farms Site	Yes	Yes	Yes	No

Natural Resources Assessment

A. Wetland Analysis

A preliminary off-site wetland reconnaissance has been conducted for the five potential sites. Please note however, the off-site wetland reconnaissance work does not rule out the need for a wetland delineation of the site selected for development. The off-site wetland reconnaissance analysis included reviewing various maps including the Wisconsin Wetlands Inventory Map, the Soil Survey of Jefferson County, groundwater mapping, and various aerial photography databases. Below is a general summary of each site. Once a site is selected, an on-site field analysis will be necessary after snow melt and ground thaw. Pending this field analysis, a wetland delineation and wetland survey may be necessary. Please refer to Sheets 1-5 in Appendix B for maps showing the approximate location of wetland indicator soils and wetlands on each site.

Wetland Summary

Site	Description	Wetland Indicator Soils Present	Wetlands Present	Number of Wetlands	Wetland Location(s)
1	Existing Puerner Street Site	Yes	Yes	1	Northwest corner of the site
2	Briggs & Stratton Site	Yes	No	0	-
3	Schweiger Site	Yes	No	0	-
4	Junction Road Site	Yes	Yes	1	Southeast corner of the site
5	County Farms Site	Yes	Yes	2	Southwest corner of the site & possibly around the midpoint of the eastern boundary

B. Bureau of Endangered Resources (BER)

In order to find out if threatened and/or endangered vegetation or animals are located within the site that is selected, the BER needs to be enlisted to complete a Wisconsin Natural Heritage Inventory (NHI) Endangered Resource Review.

C. Notice of Intent (NOI)

The NOI is a document that must be submitted to assure that a construction site stormwater permit has been obtained. The WDNR has been delegated under the U.S. E.P.A. to implement the Federal stormwater program in Wisconsin. All construction sites yielding one acre or more of land disturbance, including clearing and grubbing, need an NOI. Thus, an NOI will be required from the Department of Natural Resources once a site is selected.

Environmental Assessment

A. Floodplain Analysis

The Federal Emergency Management Agency (FEMA) has updated the Flood Insurance Rate Mapping (FIRM) in the Jefferson area. The updated FIRMs went into affect on June 2, 2009, and are available online. For all practical purposes, the updated mapping has been utilized for this analysis, and it has been found that two (2) of the five (5) potentials sites contain floodplain.

The existing Puerner Street Site, Site 1, contains Zone AE and Zone X floodplain associated with the Rock River that flows along the western edge of the site. Zone AE is designated as a Special Flood Hazard Area (SFHA), and is subject to flooding by the 1% annual chance

flood. In addition, Zone AE floodplain is floodplain for which base flood elevations have been determined. The floodplain consists of the floodfringe and the floodway, both of which impact the site. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. The floodfringe is the portion of the floodplain outside the floodway which is covered by floodwaters during the 1% annual chance flood and associated with standing water rather than flowing water. Zone X designates areas subject to flooding by the 0.20% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. Please refer to sheet 1 in Appendix C for a map that shows the approximate floodplain limits for this site.

The Junction Road Site, Site 4, contains Zone A floodplain associated with an unnamed tributary to the Rock River that flows past the very southeast corner of the site. Zone A is designated as a Special Flood Hazard Area (SFHA), and is subject to flooding by the 1% annual chance flood. In addition, unlike Zone AE floodplain, Zone A floodplain is floodplain for which no base flood elevations have been determined. This floodplain area only consists of the floodfringe. Please refer to sheet 2 in Appendix C for a map that shows the approximate floodplain limits for this site.

Floodplain Summary

Site	Description	Floodplain Present	Floodplain Zone(s)	Floodplain Location
1	Existing Puerner Street Site	Yes, consisting of both the floodfringe and the floodway	Zone AE & Zone X	Along the western boundary of the site
2	Briggs & Stratton Site	No, not within the site boundary	-	-
3	Schweiger Site	No, not within the site boundary	-	-
4	Junction Road Site	Yes, consisting of just the floodfringe	Zone A	Very southeast corner of the site
5	County Farms Site	No, not within the site boundary	-	-

B. Soil & Groundwater Contamination

The soils and groundwater at all five potential sites were analyzed for possible contamination. Soil and groundwater contamination can create liability issues and adversely affect construction, which can result in delays and extra construction costs. The WDNR's Bureau for Remediation and Redevelopment Tracking System (BRRTS) website was used to determine if there is any record of soil or groundwater contamination at any of the potential sites. It was found that two (2) of the five (5) potential sites have had soil or groundwater contamination occur.

The Existing Puerner Street Site, Site 1, is the current location of the Jefferson County Highway Department Facility. The BRRTS website indicated that there were three occurrences of soil contamination on the site. The first occurrence (Site #1) happened at the location of two underground fuel tanks and an associated fuel pump island, all of which have since been removed. It was granted closure by the WDNR on October 12, 1998. The second occurrence (Site #2) happened at the location of two other underground fuel tanks and an associated fuel pump island, all of which have also been removed. It was granted closure by the WDNR on February 15, 1996. The third occurrence (Site #3) happened at the location of an aboveground propane tank and seven aboveground fuel tanks. The propane tank remained, but the fuel tanks have been removed. It was granted closure by the WDNR on January 27, 1998. Even though all three of these occurrences have been closed by the WDNR, it should be noted that the closure documents for Site #1 and Site #3 indicate that residual soil contamination remains on site. In addition, if either of these contamination areas become accessible due to a site condition change, the property owner at the time will be required to sample and analyze the excavated material in order to properly store, treat, or dispose of it, and special precautions may need to be taken during construction to prevent a direct contact threat to humans. Please refer to sheet 1 in Appendix D for a map that shows the approximate locations of the closed soil contamination occurrences on the site.

The Schweiger Site, Site 3, is the site of the former Schweiger Furniture factory. The BRRTS website indicated that there was one occurrence of soil contamination and one occurrence of groundwater contamination on this site. The soil contamination happened at the southeast corner of the main building. It was granted closure by the WDNR on September 1, 1997. The groundwater contamination happened at the location of six underground fuel/storage tanks and associated fuel pumps. It was granted closure by the WDNR on July 13, 1999. Even though both of these occurrences have been closed by the WDNR, it should be noted that the closure documents for the groundwater contamination occurrence include a Groundwater Use Restriction that has been filed with the deed running with the property. The Groundwater Use restriction states that residual groundwater contamination remains at the site and that additional remedial action is not feasible at this time. In addition, anyone who proposes to construct or reconstruct a well on this property is required to contact the WDNR's Bureau of Drinking Water and Groundwater, or its successor, to determine what specific prohibitions or requirements are applicable prior to constructing or reconstructing a well on this property. No well may be constructed or reconstructed on this property unless applicable requirements are met. Please refer to sheet 2 in Appendix D for a map that shows the approximate locations of the closed contamination occurrences on the site.

Soil & Groundwater Contamination Summary

Site	Description	Possible Soil or Groundwater Contamination	Number of Locations	Locations Open or Closed	Residual Contamination Present
1	Existing Puerner Street Site	Yes, soil contamination	3	All locations are closed	Yes, at two of the locations
2	Briggs & Stratton Site	Not likely	-	-	-
3	Schweiger Site	Yes, soil and groundwater contamination	2	All locations are closed	Yes, at one of the locations
4	Junction Road Site	Not likely	-	-	-
5	County Farms Site	Not likely	-	-	-

C. Soil Properties

The soils at all five potential sites were analyzed to determine the soil type, soil drainage, and depth to groundwater. Please refer to Appendix E for maps depicting soil types and depth to groundwater for each of the potential sites

1.) Existing Puerner Street Site

Soils located at the site include the Boyer, Del Rey, Kidder, Sebewa, and Wacousta Series. The Boyer series consists of very deep, well drained soils formed in sandy and loamy drift underlain by sand or gravelly sand outwash. The soils are on outwash plains, valley trains, kames, beach ridges, river terraces, lake terraces, deltas, and moraines. Permeability is moderately rapid in the solum and very rapid in the substratum. Slope ranges from 0 to 50 percent. The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Sebewa Series consists of very deep, poorly drained or very poorly drained soils formed in loamy outwash and the underlying gravelly and sandy outwash on outwash plains, valley trains, and stream terraces on terrace landscapes. They are moderately deep to the gravelly and sandy outwash. Permeability is moderate in the loamy materials and rapid or very rapid in the underlying gravelly and sandy materials. Slope ranges from 0 to 3 percent. The Wacousta series consists of very deep, very poorly drained soils formed in silty lacustrine sediments. These soils are in broad depressions and swales on till plains, moraines, and stream terraces. Permeability is slow. Slope ranges from 0 to 2 percent.

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Sebewa and Wacousta series, between 50 to 100 centimeters (20 to

40 inches) below the ground surface in the Del Rey Series, and greater than 200 centimeters (80 inches) below the ground surface in the Boyer and Kidder series.

Soils on the northwestern ½ of the site are very wet and will need to be replaced with engineered fill in order to support any building foundations or pavements.

2.) Briggs & Stratton Site

Soils located at the site include the Kibbie, Kidder, Mayville, and Wasepi Series. The Kibbie series consists of very deep, somewhat poorly drained soils on lake plains, ground moraines, outwash plains, and deltas. They are formed in stratified loamy and silty glaciofluvial or glaciolacustrine deposits. Permeability is moderate. Slope ranges from 0 to 6 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Mayville series consists of very deep, moderately well drained soils formed in loess and the underlying till on ground moraines. Permeability is moderate in the solum and moderately slow in the substratum. Slope ranges from 0 to 15 percent. The Wasepi series consists of very deep, somewhat poorly drained soils formed in loamy and sandy glaciofluvial deposits underlain by sand and gravel. Wasepi soils are on outwash plains, deltas, valley trains, glacial drainageways, and lake plains. Permeability is moderately rapid in the solum and rapid in underlying sand and gravel. Slope ranges from 0 to 6 percent.

Groundwater is anticipated between 25 to 50 centimeters (10 to 20 inches) below the ground surface in the Kibbie and Wasepi series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Mayville series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder series.

3.) Schweiger Site

Soils located at the site include the Del Rey, Kidder, McHenry, and Wauconda Series. The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The McHenry series consists of very deep, well drained soils formed in loess or other silty material and in the underlying loamy till on moraines and till plains. Permeability is moderate in the solum and moderately rapid in the underlying material. Slope ranges from 0 to 30 percent. The Wauconda series consists of very deep, somewhat poorly drained soils on outwash plains and lake plains. These soils developed in loess or silty

material and in the underlying calcareous loamy outwash. Permeability is moderate. Slope ranges from 0 to 5 percent.

Groundwater is anticipated between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Del Rey and Wauconda series, between 100 to 150 centimeters (40 to 60 inches) below the ground surface in the Kidder series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder and McHenry series.

4.) Junction Road Site

Soils located at the site include the Houghton, Keowns, Kidder, and Lamartine Series. The Houghton series consists of very deep, very poorly drained soils formed in herbaceous organic materials more than 130 cm (51 inches) thick in depressions on lake plains, outwash plains, ground moraines, end moraines and floodplains. Permeability is moderately slow to moderately rapid. Slope ranges from 0 to 2 percent. The Keowns series consists of very deep, poorly drained soils formed in mostly loamy and fine sandy calcareous outwash or lacustrine deposits on glacial lake basins and outwash plains. Permeability is moderate. Slope ranges from 0 to 3 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Lamartine series consists of very deep, somewhat poorly drained soils formed in loess and in the underlying loamy till on ground moraines and interdrumlin areas. Permeability is moderate. Slope ranges from 0 to 6 percent.

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Houghton and Keowns series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Lamartine series, and greater than 200 centimeters (80 inches) below the ground surface in the Kidder series.

Soils on the eastern half of the site are wet, particularly in the southeast corner. It is anticipated that much of the soil will need to be replaced with engineered fill in order to support any building foundations or pavements.

5.) County Farms Site

Soils located at the site include the Aztalan, Del Rey, Hebron, Keowns, Kidder, and Milford Series. The Aztalan series consists of very deep, somewhat poorly drained soils formed in loamy outwash and in the underlying mostly clayey and silty stratified lacustrine deposits on glacial lake basins and stream terraces. Permeability is moderate in the loamy outwash mantle and moderately slow in the underlying stratified lacustrine deposit. Slope ranges from 0 to 6 percent. The Del Rey series consists of very deep, somewhat poorly drained soils, formed in lacustrine materials on lake plains. Permeability is slow. Slope ranges from 0 to 7 percent. The Hebron series consists of very deep, moderately well drained soils formed in loamy outwash and in the underlying

mostly clayey and silty stratified lacustrine deposits on glacial lake basins and stream terraces. Permeability is moderate in the loamy outwash and moderately slow in the stratified lacustrine deposits. Slope ranges from 0 to 6 percent. The Keowns series consists of very deep, poorly drained soils formed in mostly loamy and fine sandy calcareous outwash or lacustrine deposits on glacial lake basins and outwash plains. Permeability is moderate. Slope ranges from 0 to 3 percent. The Kidder series consists of very deep, well drained soils formed in thin loess and in loamy till or just in loamy till on moraines and drumlins. Permeability is moderate in the solum and moderately rapid in the substratum. Slope ranges from 0 to 35 percent. The Milford series consists of very deep, poorly drained and very poorly drained soils formed in lacustrine sediments. These soils are on glacial lake plains. Permeability is moderately slow. Slope ranges from 0 to 2 percent.

Groundwater is anticipated between 0 to 25 centimeters (0 to 10 inches) below the ground surface in the Keowns and Milford series, between 50 to 100 centimeters (20 to 40 inches) below the ground surface in the Aztalan and Del Rey series, between 100 to 150 centimeters (40 to 60 inches) below the ground surface in the Kidder series, and greater than 200 centimeters (80 inches) below the ground surface in the Hebron series.

Soils on most of the site are wet. It is anticipated that much of the soil will need to be replaced with engineered fill in order to support any building foundations or pavements.

Soil Properties Summary

Site	Description	Hydrologic Soil Group(s)	Soil Drainage	Depth to Groundwater	Slopes
1	Existing Puerner Street Site	B, C, & B/D	Good to Poor	0-10 Inches, 20-40 Inches, & > 80 Inches	0 to 50%
2	Briggs & Stratton Site	B	Good	10-20 Inches, 20-40 Inches, & > 80 Inches	0 to 35 %
3	Schweiger Site	B & C	Good to Poor	20-40 Inches, 40-60 Inches, & > 80 Inches	0 to 35%
4	Junction Road Site	A/D, B/D, B, & C	Good	0-10 Inches, 20-40 Inches, & > 80 Inches	0 to 35%
5	County Farms Site	B, B/D, & C	Good to Poor	0-10 Inches, 20-40 Inches, 40-60 Inches, & > 80 Inches	0 to 35%

*It should be noted that a complete boring report will be recommended for which ever site is selected, to determine the exact soil characteristics that exist on the site. The information provided in this section is a general summary that was generated using available on-line mapping and database sources.

Infrastructure Assessment

A. Roadway Improvements

The administration building, storage areas, and vehicle garage and maintenance buildings associated with the new highway department facility are expected to generate a relatively low volume of traffic during the typical peak traffic hours of the day. Based on this information, along with the preliminary site plan information provided by Bray Architects for each site (Appendix A), it is anticipated that the additional traffic resulting from this development will not negatively impact traffic operations on any of the adjacent roadways at any of the sites. Depending on the site selected, however, some roadway improvements may be needed. These improvements would possibly include acceleration lanes (for the larger county vehicles), right-turn lanes, and left-turn lanes.

Roadway Improvements Summary

Site	Description	Acceleration Lanes	Right-Turn Lanes	Left-Turn Lanes
1	Existing Puerner Street Site	*		
2	Briggs & Stratton Site	*		
3	Schweiger Site	*		
4	Junction Road Site	Add a northbound acceleration lane to Business 26 at the intersection of Business 26 and W. Junction Rd.	A northbound right-turn lane already exists at the intersection of Business 26 and W. Junction Rd.	A southbound left-turn lane already exists at the intersection of Business 26 and W. Junction Rd.
5	County Farms Site	Add a westbound acceleration lane to Business 26 from the site entrance heading west on Business 26.	Add a westbound right-turn lane to Business 26 at the site entrance for right-turn movements into the site	An eastbound left-turn lane already exists at the site entrance for left-turn movements into the site

* Acceleration lanes are not necessary on lower speed urban streets.

B. Availability of Utilities

The availability of utilities was checked at each of the five (5) potential sites. Please refer to Appendix F for maps showing the locations of existing sanitary sewers at Sites 1-3. The findings are summarized in the table below.

Site	Description	Existing Utilities	
		Sanitary Sewer	Water Main
1	Existing Puerner Street Site		
	West Puerner Street	*	X
	West Woolcock Street/North Elizabeth Avenue	X	X
2	Briggs & Stratton Site		
	North Parkway Street	X	X
	Generac Way		
3	Schweiger Site		
	West Plymouth Street	X	X
	Collins Road	X	X
4	Junction Road Site		
	West Junction Road		
5	County Farms Site		
	Business 26		

* Even though there is not a sanitary sewer line in West Puerner Street, there are two sanitary sewer lines that run through the site. One line runs north to south through the middle of the site between North Browning Avenue on the north and North Elizabeth Street on the south, and the other line runs east to west on the north edge of the site and connects into the north-south line. The locations of these sanitary sewers need to be taken into account with any redevelopment plans for this site.

As can be seen in the table above, there are currently no utilities located within the adjacent roadways by the Junction Road Site or the County Farms Site. As a result, utilities will have to be extended for either one of these sites to be developed.

The City Engineering Department has developed preliminary plans and costs for extending water and sanitary sewer service northward, and the lines would run along West Junction Road. The City will require the County to share in the improvement costs based on lineal frontage of the lines on West Junction Road. The City does intend on extending its industrial park north toward the Junction Road Site, so extending the lines would be beneficial for both the City and the County.

The City Engineering Department has also developed preliminary plans and costs for extending water and sanitary sewer service southward, and the lines would run along Business 26. Again, the City will require the County to share in the improvement costs based on lineal frontage of the lines on Business 26.

Storm Water Management Assessment

A. City of Jefferson Storm Water Requirements

Since the Existing Puerner Street Site, the Briggs & Stratton Site, and the Schweiger Site are all located within the city limits of Jefferson, if any one of them is chosen as the site for the new County Highway Facility, storm water runoff from the site will need to comply with the City of Jefferson ordinance, *Chapter 232, Erosion Control and Storm Water Management*. Under this ordinance, an erosion control and storm water management permit is required for any of the following activities within the City:

1. Any development that results in land disturbing activity in excess of one acre;
2. Any development that requires a subdivision or condominium plat;
3. Any development that requires a certified survey map;
4. Redevelopment
5. Other land development activities, including but not limited to redevelopment or alteration of existing buildings or other structures, that the local approval authority determines may significantly increase downstream runoff volumes, flooding, soil erosion, water pollution or property damage or significantly impact a lake, stream or wetland area.

1.) Storm Water Management Performance Standards: Proposed design, suggested location, and phased implementation of effective, practicable, storm water management measures for plans shall be designed, engineered, and implemented to achieve the following results:

a) *Sediment Control*

- For new construction, design practices to retain soil particles greater than five microns on the site (80% reduction) resulting from a one-year, twenty-four-hour storm event (2.5 inches over 24-hour duration), according to approved procedures, and assuming no sediment re-suspension.
- For redevelopment resulting in exposed surface parking lots and associated traffic areas, design practice to retain soil particles greater than 20 microns on the entire site (40% reduction) resulting from a one-year, twenty-four hour storm event, according to approved procedures, and assuming no sediment re-suspension. Under no circumstances shall the site's existing sediment control level or trapping efficiency be reduced as a result of the redevelopment.

b) *Oil and Grease Control*

- For all stormwater plans for commercial or industrial developments and all other uses where the potential for pollution by oil or grease, or both, exists, the first 0.5 inch of runoff will be treated using the best oil and grease removal technology available. This requirement may be waived by the City Engineer only when the applicant can demonstrate that installation of such practices is not necessary.

c) *Runoff Rate Control*

- All storm water facilities shall be designed, installed and maintained to effectively accomplish the following:
 - 1) Maintain predevelopment peak runoff rates for the 2-year, 24-hour storm event (2.9 inches over a 24 hour duration).
 - 2) Maintain predevelopment peak runoff rates for the 10-year, 24-hour storm event (4.2 inches over a 24 hour duration).
 - 3) Maintain predevelopment peak runoff rates for the 100-year, 24-hour storm event (six inches over a 24 hour duration).

d) *Infiltration*

- Design practices to infiltrate sufficient runoff volume so that post-development infiltration volume shall be at least 90% of the pre-development infiltration volume, based upon average annual rainfall. If, when designing appropriate infiltration systems more than one percent (1%) of the site is required to be used as effective infiltration area for residential development or more than two percent (2%) of the site is required to be used as effective area for nonresidential development, the applicant may alternately design infiltration systems and pervious surfaces to meet or exceed an annual recharge rate of 7.6. inches per year. If this alternative design approach is taken at least one percent (1%) of the site must be used for infiltration in residential developments and at least two percent (2%) of the site must be used for infiltration in non-residential developments. For re-development projects the infiltration requirements shall be applied only to the area that was not impervious when the project began.
- Before infiltrating runoff, pre-treatment shall be required. The pre-treatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality. Where appropriate, pretreatment for other runoff constituents that represent a threat of groundwater contamination may be required.

B. Jefferson County Storm Water Requirements

Since the Junction Road Site and the County Farms Site are both located outside the current city limits of Jefferson, if either one of them is chosen as the site for the new County Highway Facility, storm water runoff from the site will need to comply with Jefferson County's requirements. However, it was determined that Jefferson County does not currently have their own Storm Water Regulations, so as a result, the standards outlined in *NR 151, Runoff Management*, of the State of Wisconsin Administrative Code, would have to be followed. Under this code, an erosion control and storm water management plan is required for the following:

1. Any construction site that consists of one acre or more of land disturbing construction activity.

1.) Storm Water Management Performance Standards: Proposed design, suggested location, and phased implementation of effective, practicable, storm water management measures for plans shall be designed, engineered, and implemented to achieve the following results:

a) *Sediment Control (Total Suspended Solids)*

- For new development, by design, reduce to the maximum extent practicable, the total suspended solids load by 80%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed an 80% total suspended solids reduction to meet the requirements of this subdivision.
- For redevelopment, by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on an average annual rainfall, as compared to no runoff management controls. No person shall be required to exceed a 40% total suspended solids reduction to meet the requirements of this subdivision.

b) *Runoff Rate Control (Peak Discharge)*

- For new development, by design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions for the 2-year, 24-hour design storm applicable to the post-construction site.
- Redevelopment is exempt from this requirement.

c) *Infiltration*

- Design practices to infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 60% of the pre-development infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site required as an effective infiltration area.

Or

Design practices to infiltrate 10% of the post-development runoff volume from the 2-year, 24-hour design storm with a type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes and not composite curve numbers as defined in TR-55. However, when designing appropriate infiltration systems to meet his requirement, no more than 2% of the project site is required as an effective infiltration area.

- Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial, industrial, and institutional areas that will enter an infiltration system. The pretreatment shall be designed to protect

the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality.

Storm Water Management Requirements Summary

Site	Description	Type of Development	Sediment Control Requirement	Peak Discharge Requirement	Infiltration
1	Existing Puerner Street Site	Re-development	40% TSS Removal	Maintain or reduce 2-yr, 10-yr, & 100-yr storm event	Required for only the area that was not impervious when the project began.
2	Briggs & Stratton Site	Re-development	40% TSS Removal	Maintain or reduce 2-yr, 10-yr, & 100-yr storm event	Required for only the area that was not impervious when the project began.
3	Schweiger Site	Re-development	40% TSS Removal	Maintain or reduce 2-yr, 10-yr, & 100-yr storm event	Required for only the area that was not impervious when the project began.
4	Junction Road Site	New Development	80% TSS Removal	Maintain or reduce 2-yr, storm event	Required for the entire site.
5	County Farms Site	New Development	80% TSS Removal	Maintain or reduce 2-yr, storm event	Required for the entire site.

Appendix B

Wetland Indicator Soils & Wetland Maps

Map Created on Dec 14, 2011



0 325 650 975 ft.

Map created on Dec 14, 2011



Legend

- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
- Civil Towns**
- Civil Town**
- USDA Wetspots**
- DNR Wetland Points**
 - Excavated Pond
 - Dammed Pond
 - Wetland Too Small to Delineate
 - Filled Excavated Pond
 - Filled Dammed Pond
 - Filled Wetland Too Small to Delineate
 - Excavated or Drained Wetland
- DNR Wetland Areas**
 - Upland
 - Wetland
 - Filled or Drained Wetland
 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:3,405

Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined by a professional trained in wetland delineation techniques. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Map Created on Dec 14, 2011



Map created on Dec 14, 2011



Legend

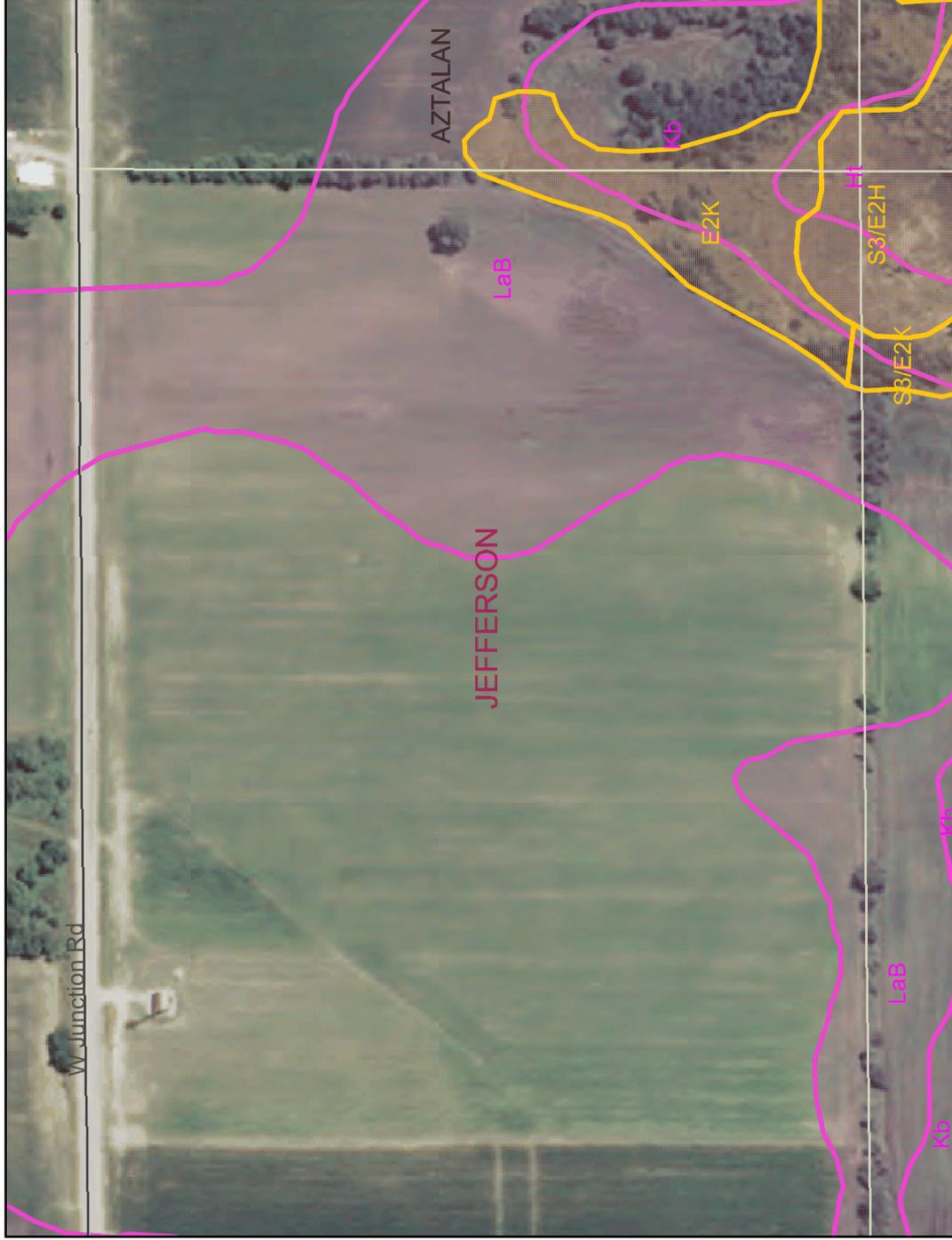
- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
- Civil Towns**
- Civil Town**
- USDA Wetspots**
- DNR Wetland Points**
 - Excavated Pond
 - Dammed Pond
 - Wetland Too Small to Delineate
 - Filled Excavated Pond
 - Filled Dammed Pond
 - Filled Wetland Too Small to Delineate
 - Excavated or Drained Wetland
- DNR Wetland Areas**
 - Upland
 - Wetland
 - Filled or Drained Wetland
 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:3,514

Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined and mapped. The objective of the WVI is to produce reconnaissance level information on the location, type, size of these habitats such that they are accurate at the nominal scale of the 1:24,000 (1 inch = 2000 feet) base map. The DNR recognizes the limitations of using remotely sensed information as the primary data source. They are to be used as a guide for planning purposes. There is no attempt, in either the design or products of this inventory, to define the limits of jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government. Agencies concerning specialized agency regulatory programs and jurisdictions that may affect such activities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Map Created on Dec 14, 2011



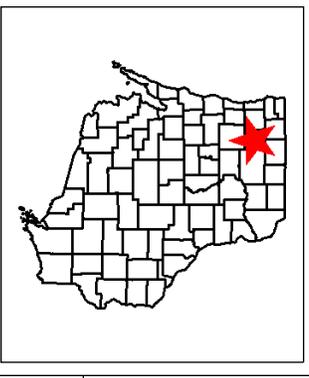
Map created on Dec 14, 2011



Scale: 1:3,445

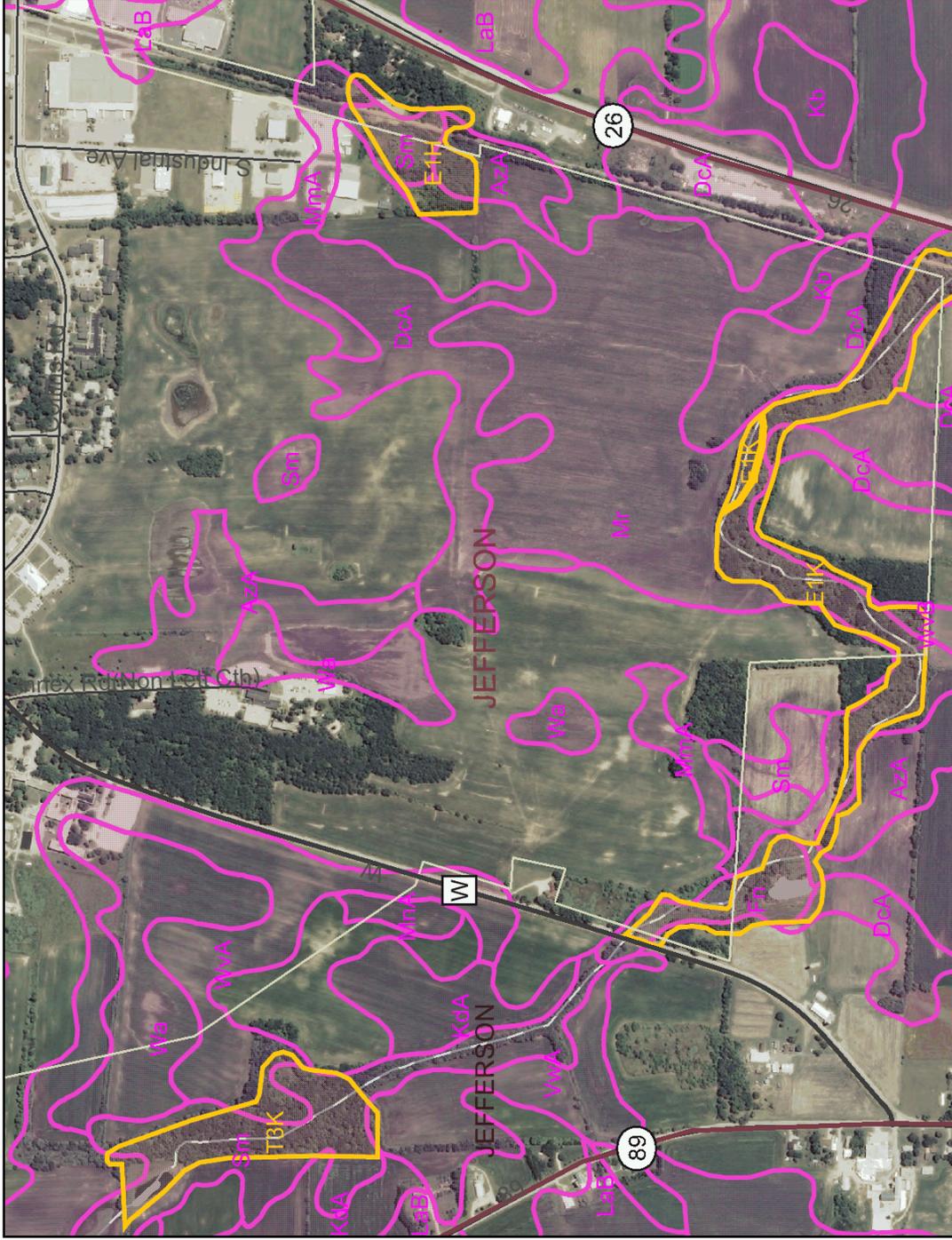
Legend

- Major Highways
- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads
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- Filled Excavated Pond
- Filled Dammed Pond
- Filled Wetland Too Small to Delineate
- Filled or Drained Wetland
- DNR Wetland Areas
- Upland
- Wetland
- Filled or Drained Wetland
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- 24K Open Water
- 24K Rivers and Shorelines
- Intermittent
- Fluctuating
- Perennial



Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined by a professional trained in wetland delineation techniques. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques. Agencies concerning regulatory programs and jurisdictions that may affect such activities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Map Created on Dec 14, 2011



0 1100 2200 3300 ft.

Map created on Dec 14, 2011



Legend

- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
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 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:11,500

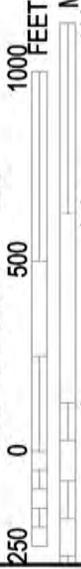
Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined and mapped. The objective of the WVI is to produce reconnaissance level information on the location, type, size of these habitats such that they are accurate at the nominal scale of the 1:24,000 (1 inch = 2000 feet) base map. The DNR recognizes the limitations of using remotely sensed information as the primary data source. There is no attempt, in either the design or products of this inventory, to define the limits of jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government. Agencies concerning special agency regulatory programs and jurisdictions that may affect such activities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Appendix C

Floodplain Maps



MAP SCALE 1" = 500'



PANEL 0193E

FIRM FLOOD INSURANCE RATE MAP JEFFERSON COUNTY, WISCONSIN AND INCORPORATED AREAS

PANEL 193 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	550191	0193	E
JEFFERSON CITY OF	555551	0193	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
55055C0193E

EFFECTIVE DATE
JUNE 2, 2009

Federal Emergency Management Agency

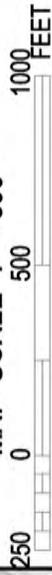
NATIONAL FLOOD INSURANCE PROGRAM

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov





MAP SCALE 1" = 500'



PANEL 0193E

FIRM FLOOD INSURANCE RATE MAP JEFFERSON COUNTY, WISCONSIN AND INCORPORATED AREAS

PANEL 193 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	550191	0193	E
JEFFERSON, CITY OF	555551	0193	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
55055C0193E
EFFECTIVE DATE
JUNE 2, 2009

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

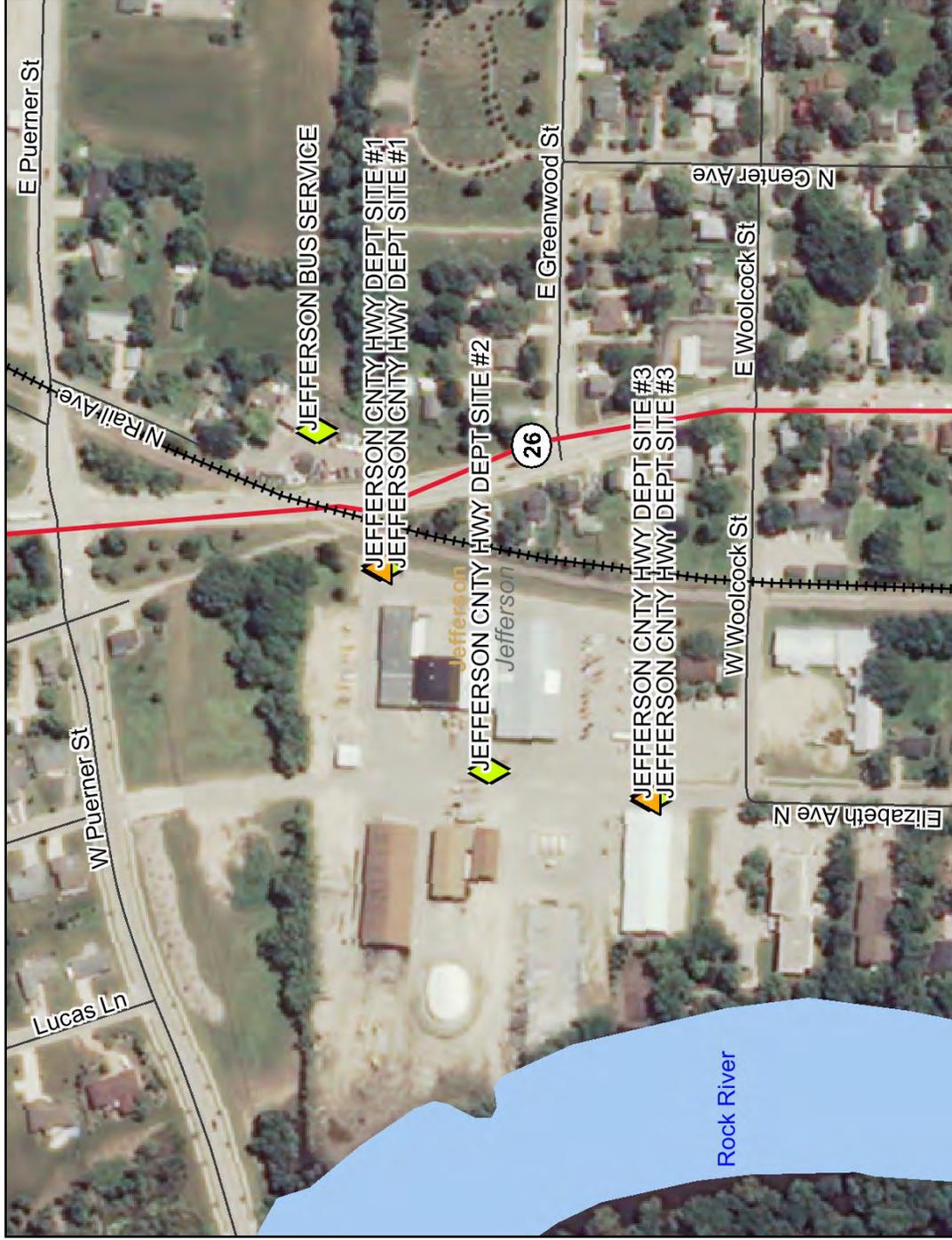
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov



Appendix D

Soil & Groundwater Contamination Maps

Map Created on Dec 15, 2011



Map created on Dec 15, 2011
 Note: Not all RR Sites have been geo-located yet.

0 325 650 975 ft.
 This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



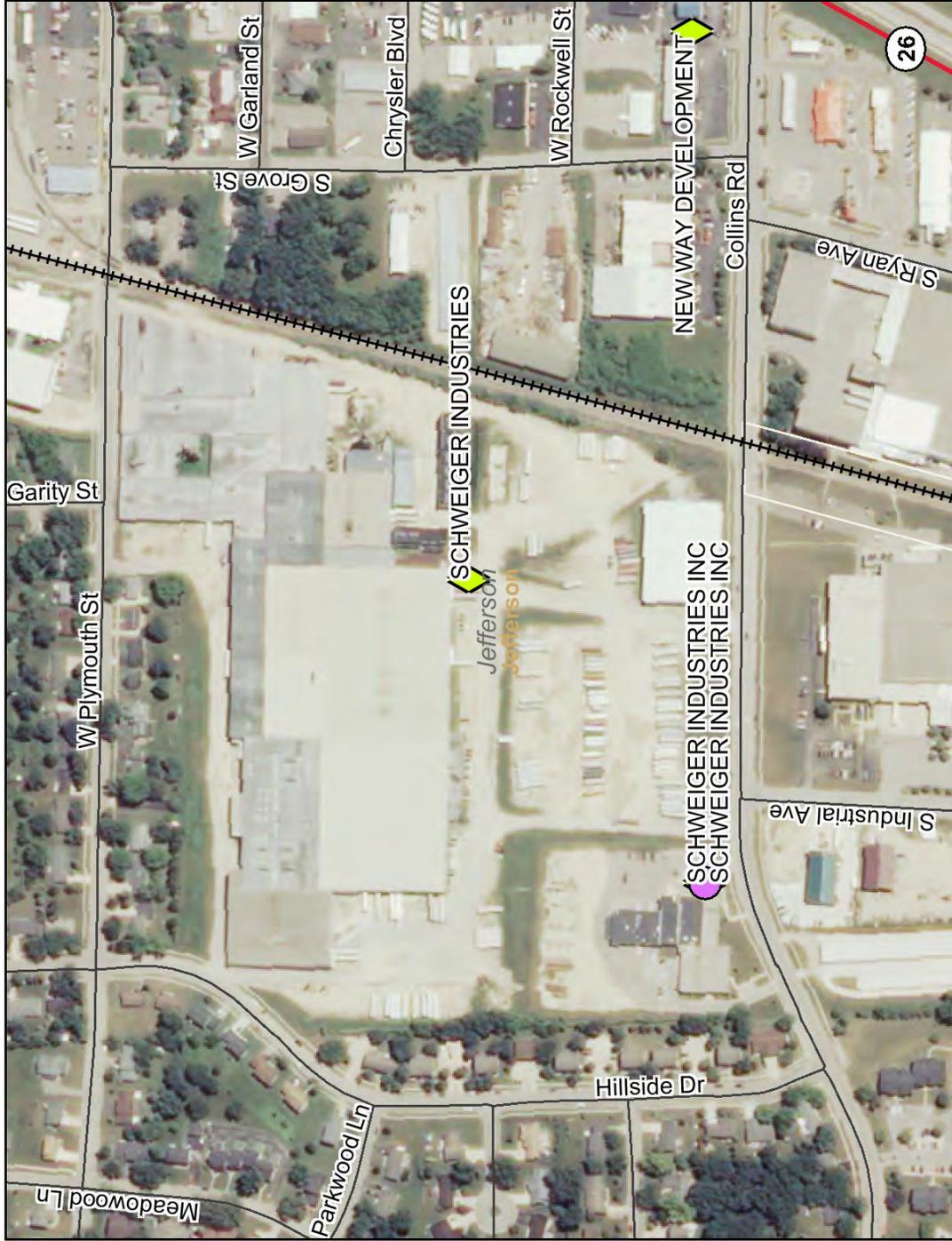
Legend

- Soil contamination only
- Groundwater and Soil contamination
- Groundwater contamination only
- Open Sites (ongoing cleanups)
- Open Sites (ongoing cleanups) - site boundaries shown
- Closed Sites (completed cleanups)
- Closed Sites (completed cleanups) - site boundaries shown
- County Boundary
- Railroads
- County Roads (WDOT)
- County Trunk Highway
- State and U.S. Highways (WDOT)
- State Trunk Highway
- US Highway
- Interstate Highways (WDOT)
- Interstate Highway
- Local Roads (WDOT)
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Municipalities



Scale: 1:3,363

Map Created on Dec 15, 2011



0 400 800 1200 ft.

Map created on Dec 15, 2011
 Note: Not all RR Sites have been geo-located yet.

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



Legend

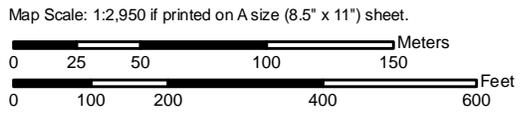
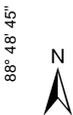
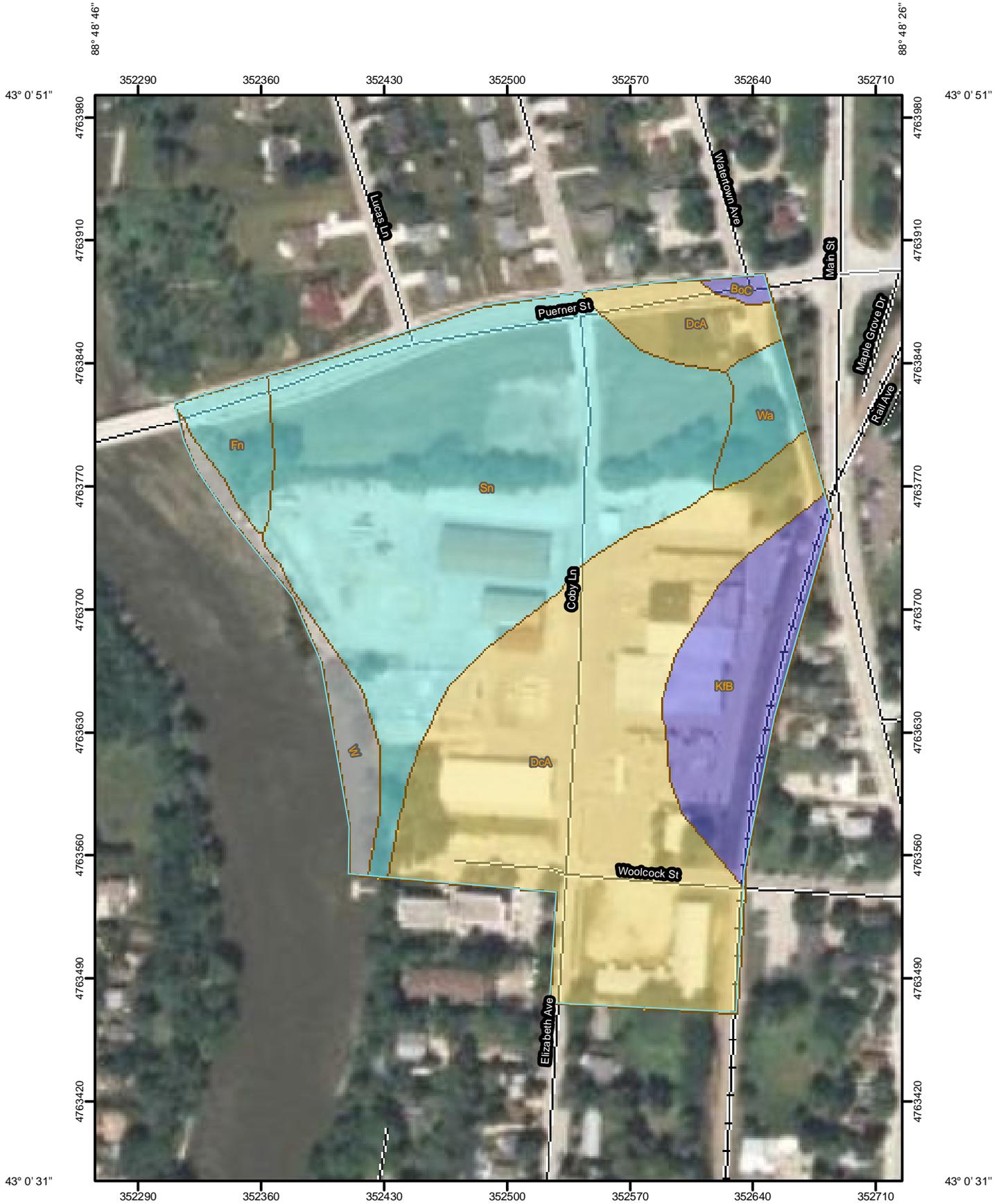
- Soil contamination only
- Groundwater and Soil contamination
- Groundwater contamination only
- Open Sites (ongoing cleanups)
- Open Sites (ongoing cleanups) - site boundaries shown
- Closed Sites (completed cleanups)
- Closed Sites (completed cleanups) - site boundaries shown
- County Boundary
- Railroads
- County Roads (WDOT)
- County Trunk Highway
- State and U.S. Highways (WDOT)
- State Trunk Highway
- US Highway
- Interstate Highways (WDOT)
- Interstate Highway
- Local Roads (WDOT)
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Municipalities



Scale: 1:4,319

Appendix E

Soil & Groundwater Depth Maps



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils
 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:2,950 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BoC	Boyer loamy sand, 6 to 12 percent slopes	B	0.1	0.4%
DcA	Del Rey silt loam, 0 to 3 percent slopes	C	9.9	39.3%
Fn	Fluvaquents	B/D	0.7	2.7%
KfB	Kidder loam, 2 to 6 percent slopes	B	2.5	10.1%
Sn	Sebewa silt loam, clayey substratum	B/D	10.4	41.5%
W	Water		0.8	3.3%
Wa	Wacousta silty clay loam	B/D	0.6	2.6%
Totals for Area of Interest			25.1	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

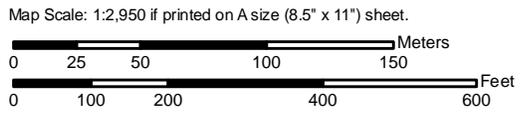
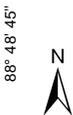
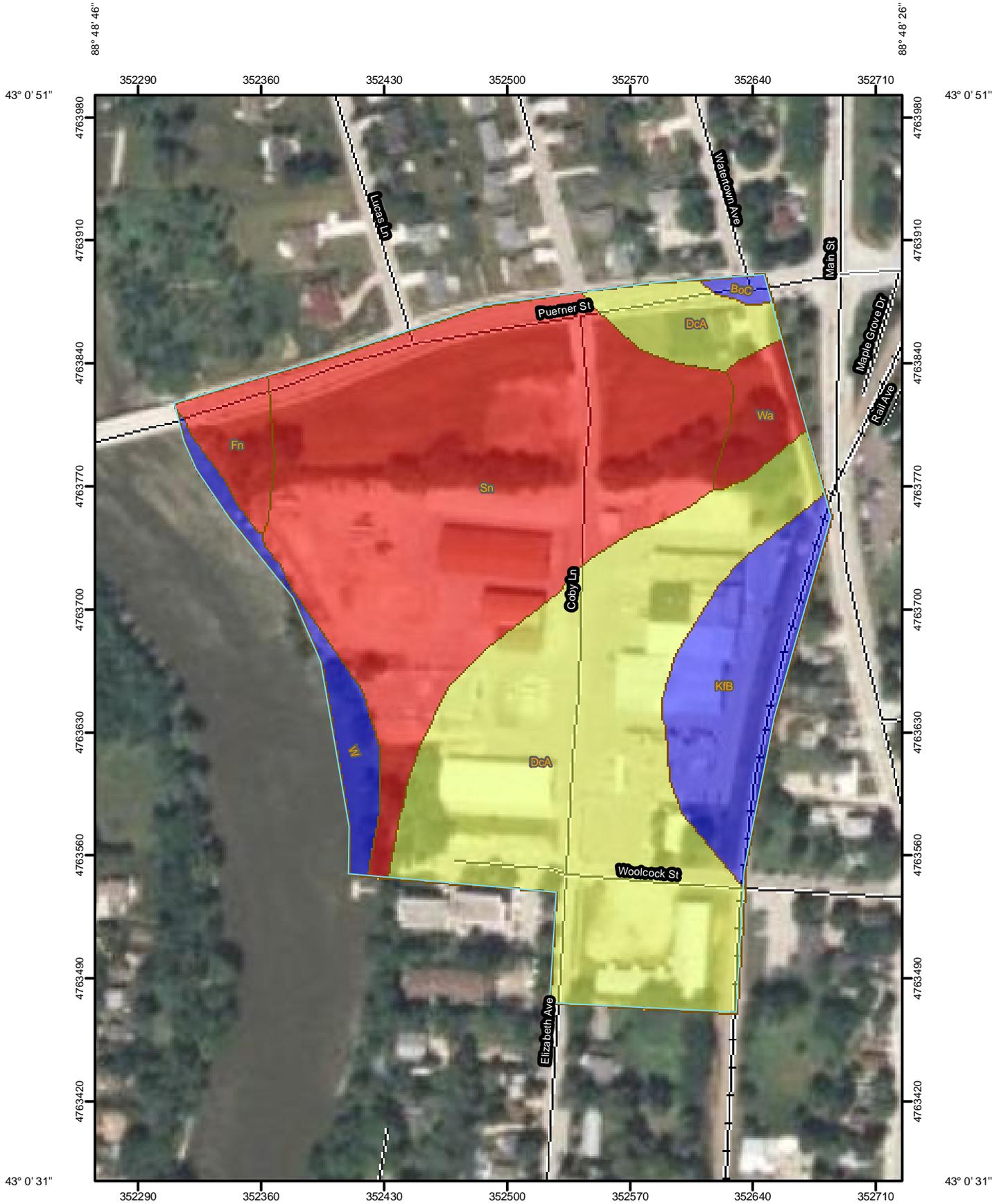
Rating Options

Aggregation Method: Dominant Condition

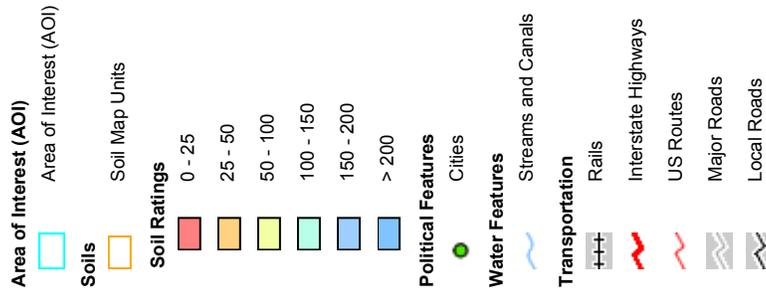
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Water Table—Jefferson County, Wisconsin



MAP LEGEND



MAP INFORMATION

Map Scale: 1:2,950 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin
 Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
BoC	Boyer loamy sand, 6 to 12 percent slopes	>200	0.1	0.4%
DcA	Del Rey silt loam, 0 to 3 percent slopes	61	9.9	39.3%
Fn	Fluvaquents	0	0.7	2.7%
KfB	Kidder loam, 2 to 6 percent slopes	>200	2.5	10.1%
Sn	Sebewa silt loam, clayey substratum	0	10.4	41.5%
W	Water	>200	0.8	3.3%
Wa	Wacousta silty clay loam	0	0.6	2.6%
Totals for Area of Interest			25.1	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

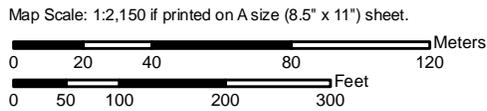
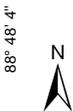
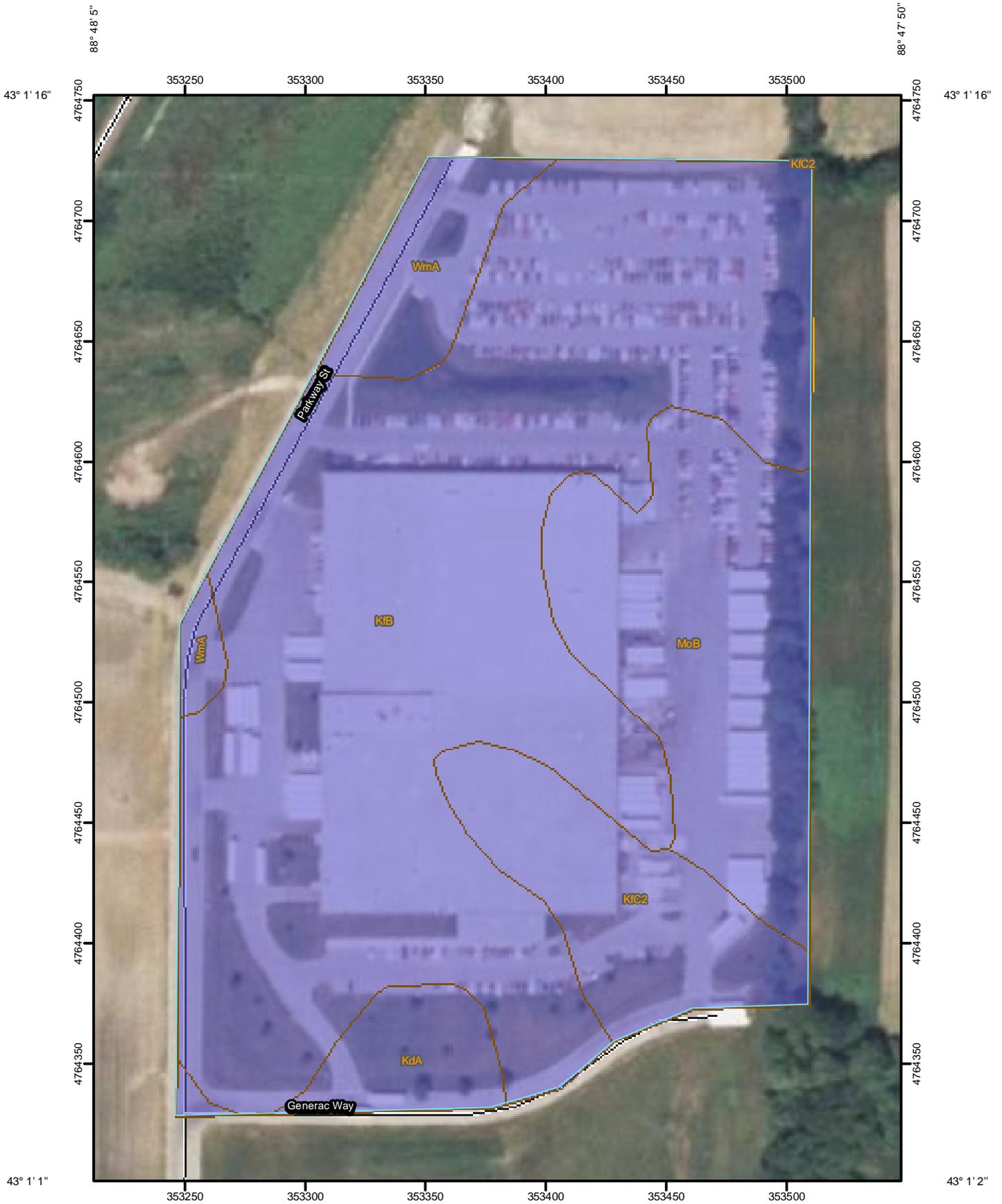
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:2,150 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KdA	Kibbie fine sandy loam, 0 to 3 percent slopes	B	0.9	4.1%
KfB	Kidder loam, 2 to 6 percent slopes	B	14.1	63.2%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	B	2.1	9.5%
MoB	Mayville silt loam, 2 to 6 percent slopes	B	3.9	17.5%
WmA	Wasepi sandy loam, 0 to 3 percent slopes	B	1.3	5.6%
Totals for Area of Interest			22.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

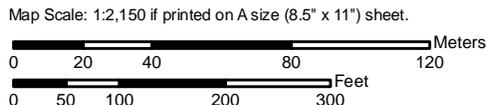
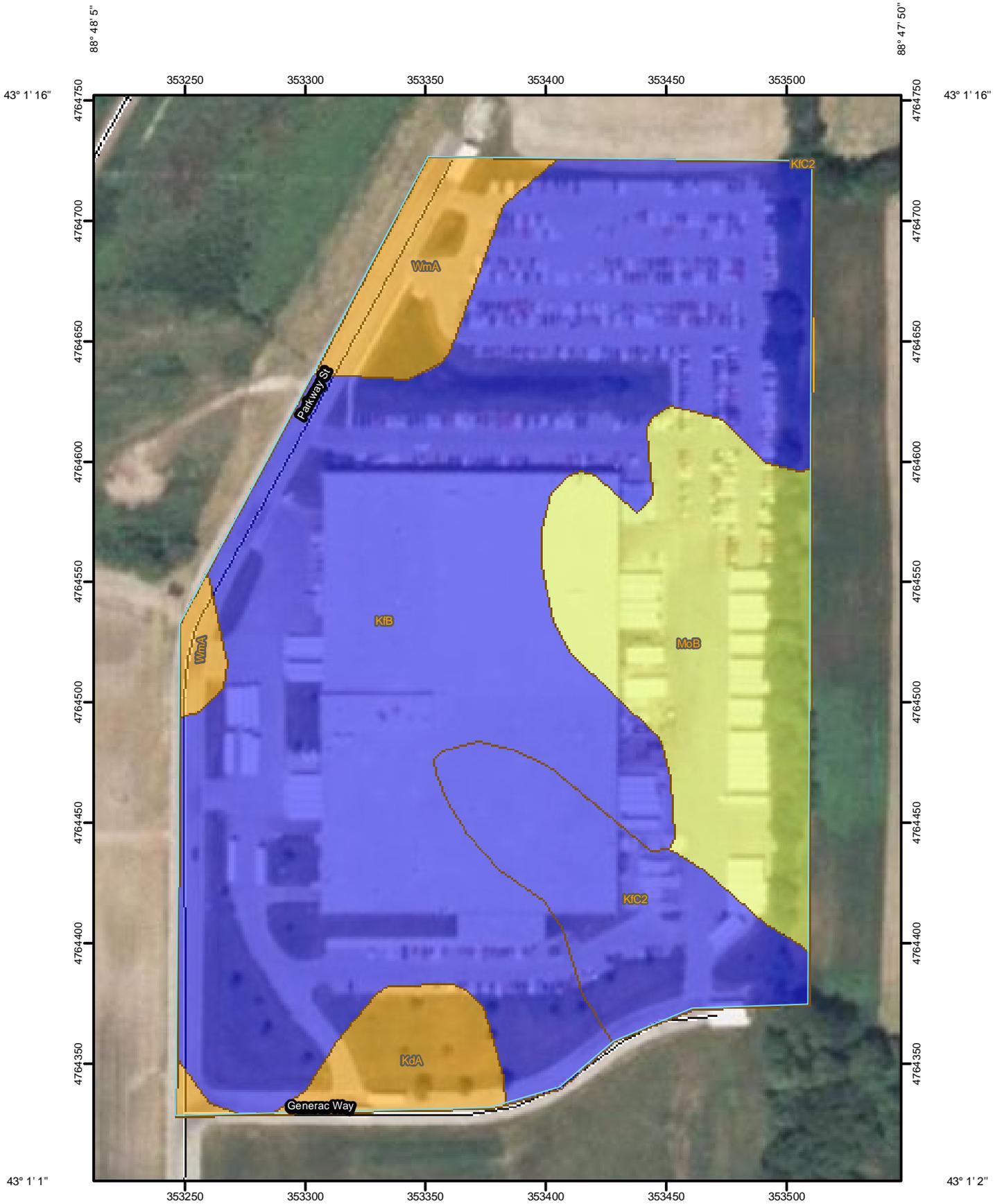
Rating Options

Aggregation Method: Dominant Condition

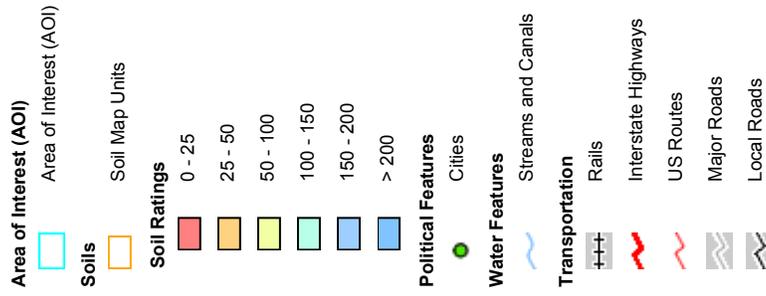
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Water Table—Jefferson County, Wisconsin



MAP LEGEND



MAP INFORMATION

Map Scale: 1:2,150 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin
 Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
KdA	Kibbie fine sandy loam, 0 to 3 percent slopes	46	0.9	4.1%
KfB	Kidder loam, 2 to 6 percent slopes	>200	14.1	63.2%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	>200	2.1	9.5%
MoB	Mayville silt loam, 2 to 6 percent slopes	91	3.9	17.5%
WmA	Wasepi sandy loam, 0 to 3 percent slopes	46	1.3	5.6%
Totals for Area of Interest			22.2	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

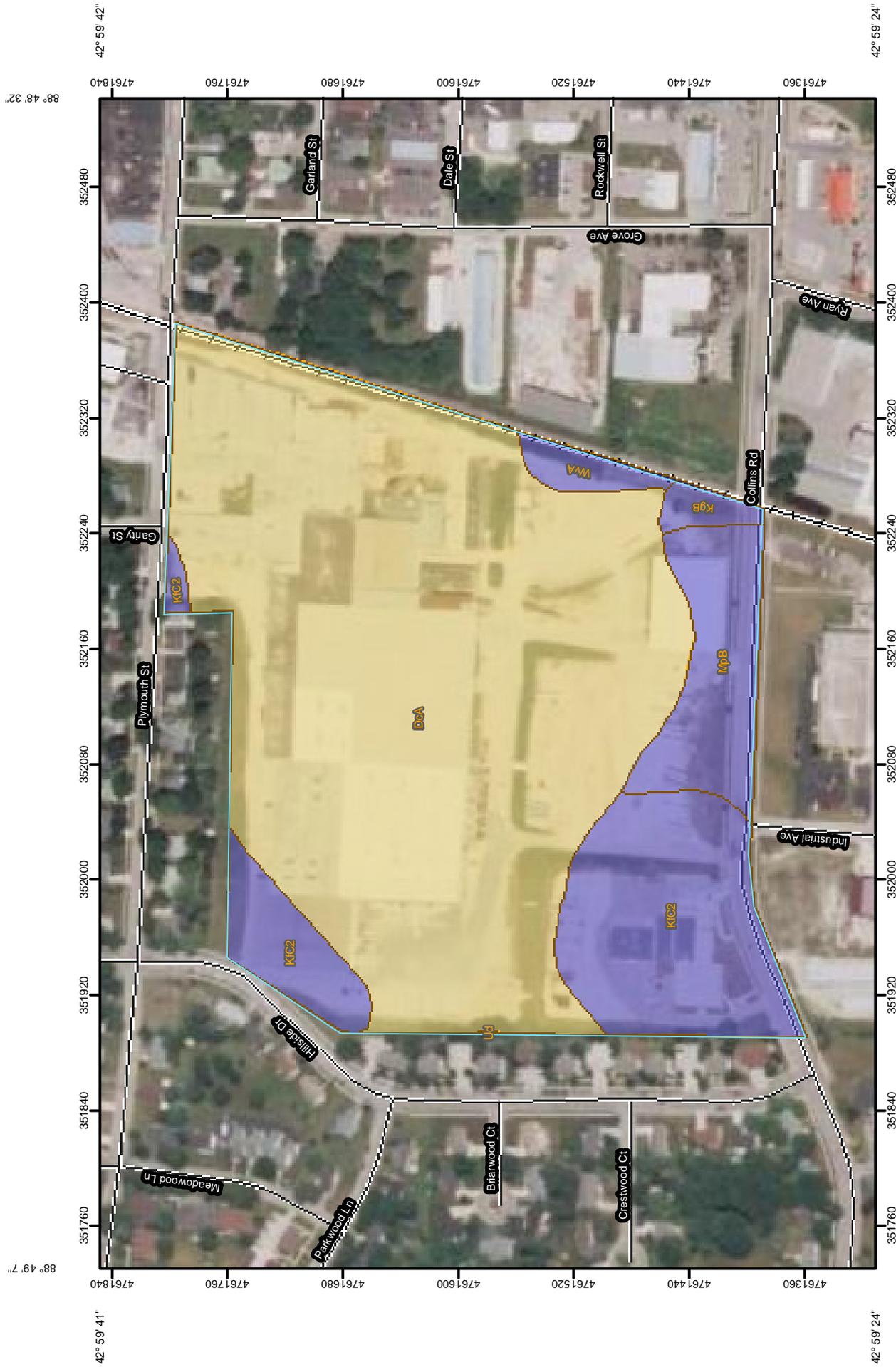
Tie-break Rule: Lower

Interpret Nulls as Zero: No

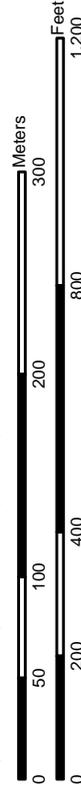
Beginning Month: January

Ending Month: December

Hydrologic Soil Group—Jefferson County, Wisconsin



Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DcA	Del Rey silt loam, 0 to 3 percent slopes	C	29.0	72.5%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	B	7.1	17.9%
KgB	Kidder loam, moderately well-drained, 2 to 6 percent slopes	B	0.4	1.0%
MpB	McHenry silt loam, 2 to 6 percent slopes	B	2.9	7.1%
Ud	Udorthents	B	0.0	0.0%
WvA	Wauconda silt loam, 0 to 2 percent slopes	B	0.6	1.5%
Totals for Area of Interest			40.0	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Map Created on Dec 14, 2011



0 325 650 975 ft.

Map created on Dec 14, 2011



Legend

- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
- Civil Towns**
- Civil Town**
- USDA Wetspots**
- DNR Wetland Points**
 - Excavated Pond
 - Dammed Pond
 - Wetland Too Small to Delineate
 - Filled Excavated Pond
 - Filled Dammed Pond
 - Filled Wetland Too Small to Delineate
 - Wetland Too Small to Delineate
- DNR Wetland Areas**
 - Upland
 - Wetland
 - Filled or Drained Wetland
 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:3,405

Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined and mapped. The objective of the WVI is to produce reconnaissance level information on the location, type, size of these habitats such that they are accurate at the nominal scale of the 1:24,000 (1 inch = 2000 feet) base map. The DNR recognizes the limitations of using remotely sensed information as the primary data source. There is no attempt, in either the design or products of this inventory, to define the limits of jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government. Agencies concerning specialized agency regulatory programs and jurisdictions that may affect such facilities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Map Created on Dec 14, 2011



Map created on Dec 14, 2011



Legend

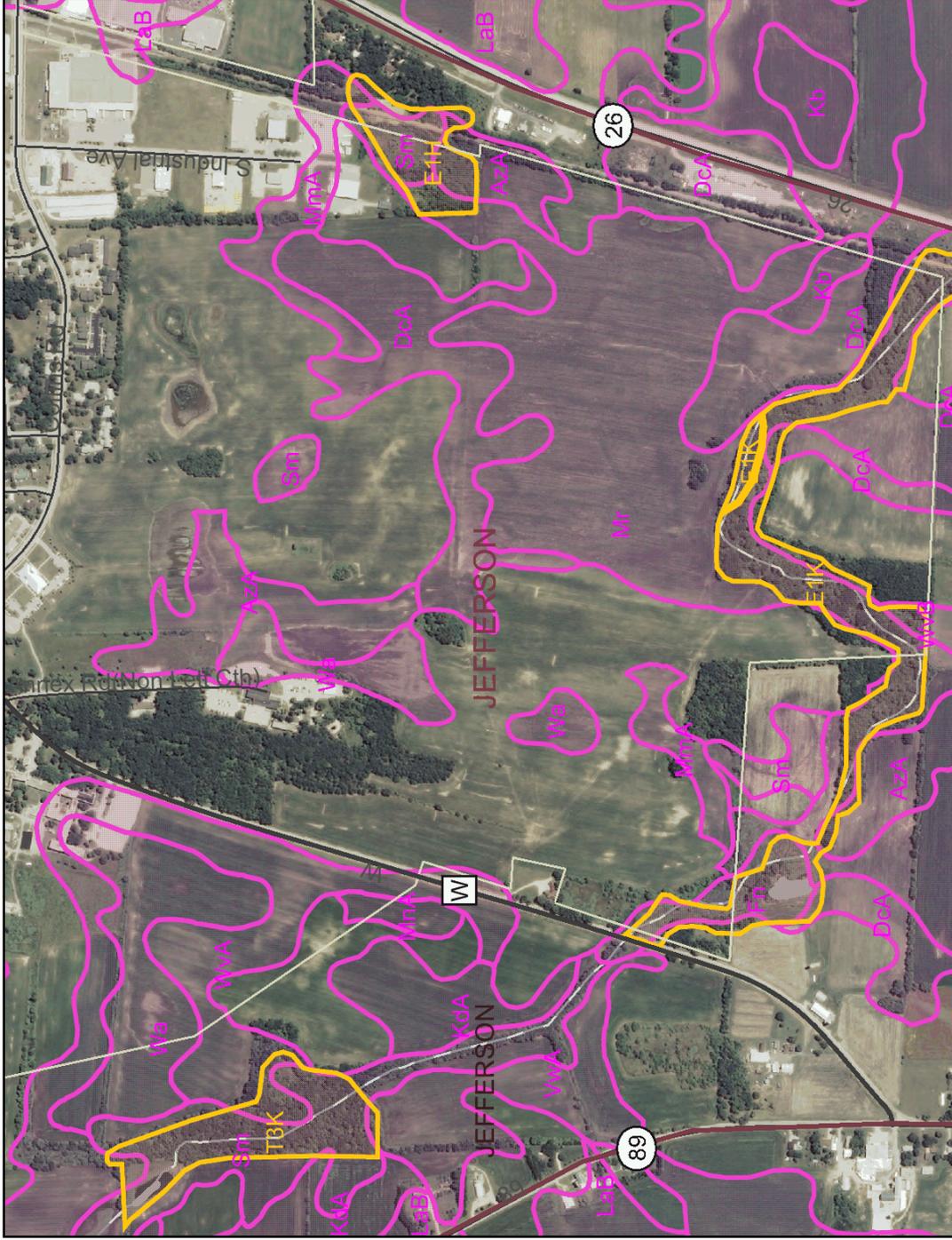
- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
- Civil Towns**
- USDA Wetspots**
- DNR Wetland Points**
 - Excavated Pond
 - Dammed Pond
 - Wetland Too Small to Delineate
 - Filled Excavated Pond
 - Filled Dammed Pond
 - Filled Wetland Too Small to Delineate
 - Excavated or Drained Wetland
- DNR Wetland Areas**
 - Upland
 - Wetland
 - Filled or Drained Wetland
 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:3,514

Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined and mapped. The objective of the WVI is to produce reconnaissance level information on the location, type, size of these habitats such that they are accurate at the nominal scale of the 1:24,000 (1 inch = 2000 feet) base map. The DNR recognizes the limitations of using remotely sensed information as the primary data source. There is no attempt, in either the design or products of this inventory, to define the limits of jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government. Agencies concerning specialized agency regulatory programs and jurisdictions that may affect such activities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.

Map Created on Dec 14, 2011



0 1100 2200 3300 ft.

Map created on Dec 14, 2011



Legend

- Major Highways**
 - Interstate
 - State Highway
 - U.S. Highways
- County Roads**
- Local Roads**
- 24K County Boundaries**
- Civil Towns**
- Civil Town**
- USDA Wetspots**
- DNR Wetland Points**
 - Excavated Pond
 - Dammed Pond
 - Wetland Too Small to Delineate
 - Filled Excavated Pond
 - Filled Dammed Pond
 - Filled Wetland Too Small to Delineate
 - Filled or Drained Wetland
- DNR Wetland Areas**
 - Upland
 - Wetland
 - Filled or Drained Wetland
 - Wetland Indicator Soils
 - 24K Open Water
- 24K Rivers and Shorelines**
 - Intermittent
 - Fluctuating
 - Perennial



Scale: 1:11,500

Wisconsin Wetland Inventory (WVI) maps show graphic representations of the type, size and location of wetlands in Wisconsin. These maps have been prepared from the analysis of high altitude imagery in conjunction with soil surveys, topographic maps, previous wetland inventories and field work. State statutes require that the location of wetlands in Wisconsin be determined and mapped. The objective of the WVI is to produce reconnaissance level information on the location, type, size of these habitats such that they are accurate at the nominal scale of the 1:24,000 (1 inch = 2000 feet) base map. The DNR recognizes the limitations of using remotely sensed information as the primary data source. There is no attempt, in either the design or products of this inventory, to define the limits of jurisdiction of any Federal, State, or local government or to establish the geographical scope of the regulatory jurisdiction of any Federal, State, or local government. Agencies concerning special agency regulatory programs and jurisdictions that may affect such activities. The most accurate method of determining the legal extent of a wetland for federal or state regulations is a field delineation by a professional trained in wetland delineation techniques.



MAP SCALE 1" = 500'



PANEL 0193E

FIRM FLOOD INSURANCE RATE MAP JEFFERSON COUNTY, WISCONSIN AND INCORPORATED AREAS

PANEL 193 OF 495
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	550191	0193	E
JEFFERSON CITY OF	555561	0193	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
55055C0193E
EFFECTIVE DATE
JUNE 2, 2009

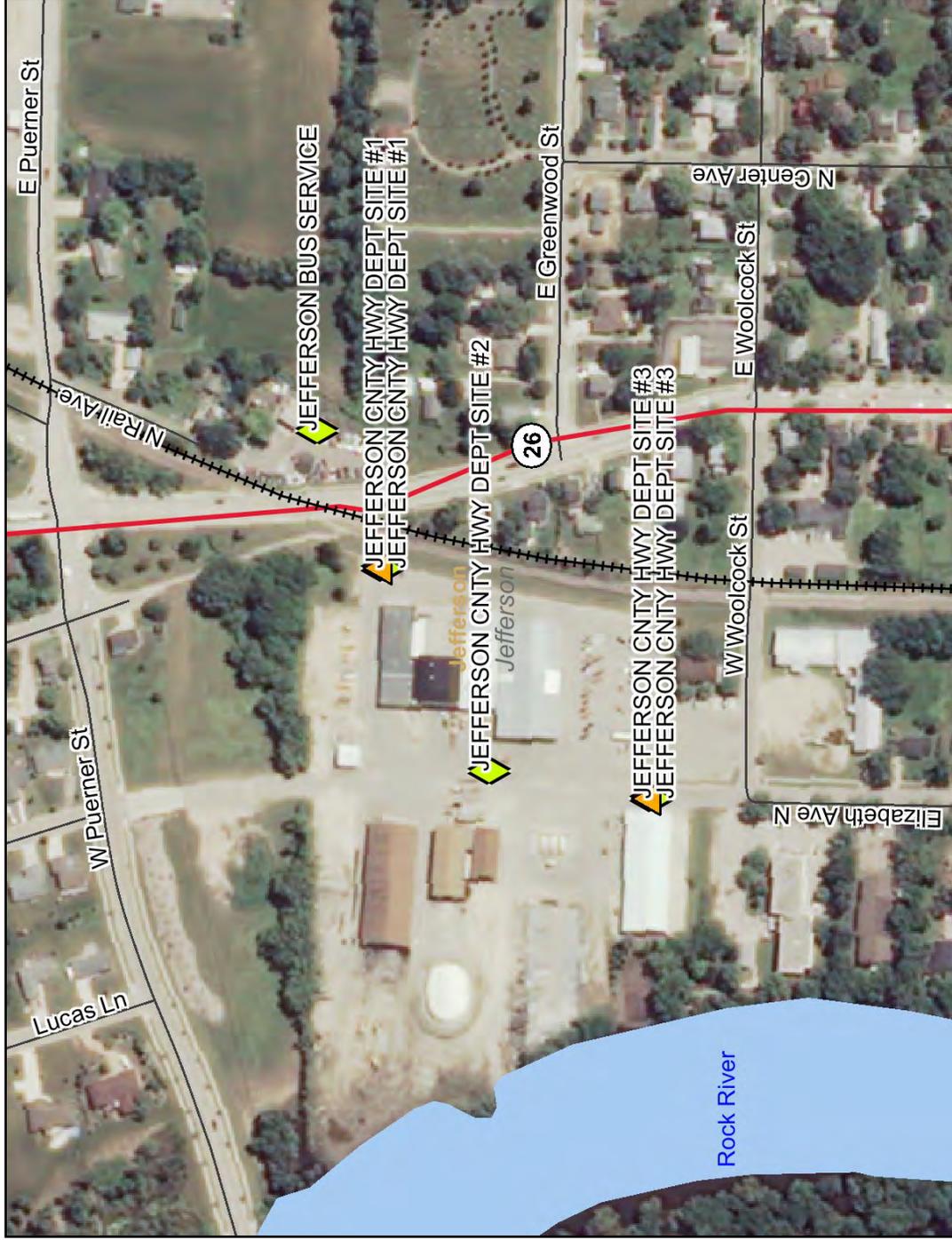
Federal Emergency Management Agency

INPUT
NATIONAL FLOOD INSURANCE PROGRAM



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov

Map Created on Dec 15, 2011



Map created on Dec 15, 2011
 Note: Not all RR Sites have been geo-located yet.

0 325 650 975 ft.
 This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



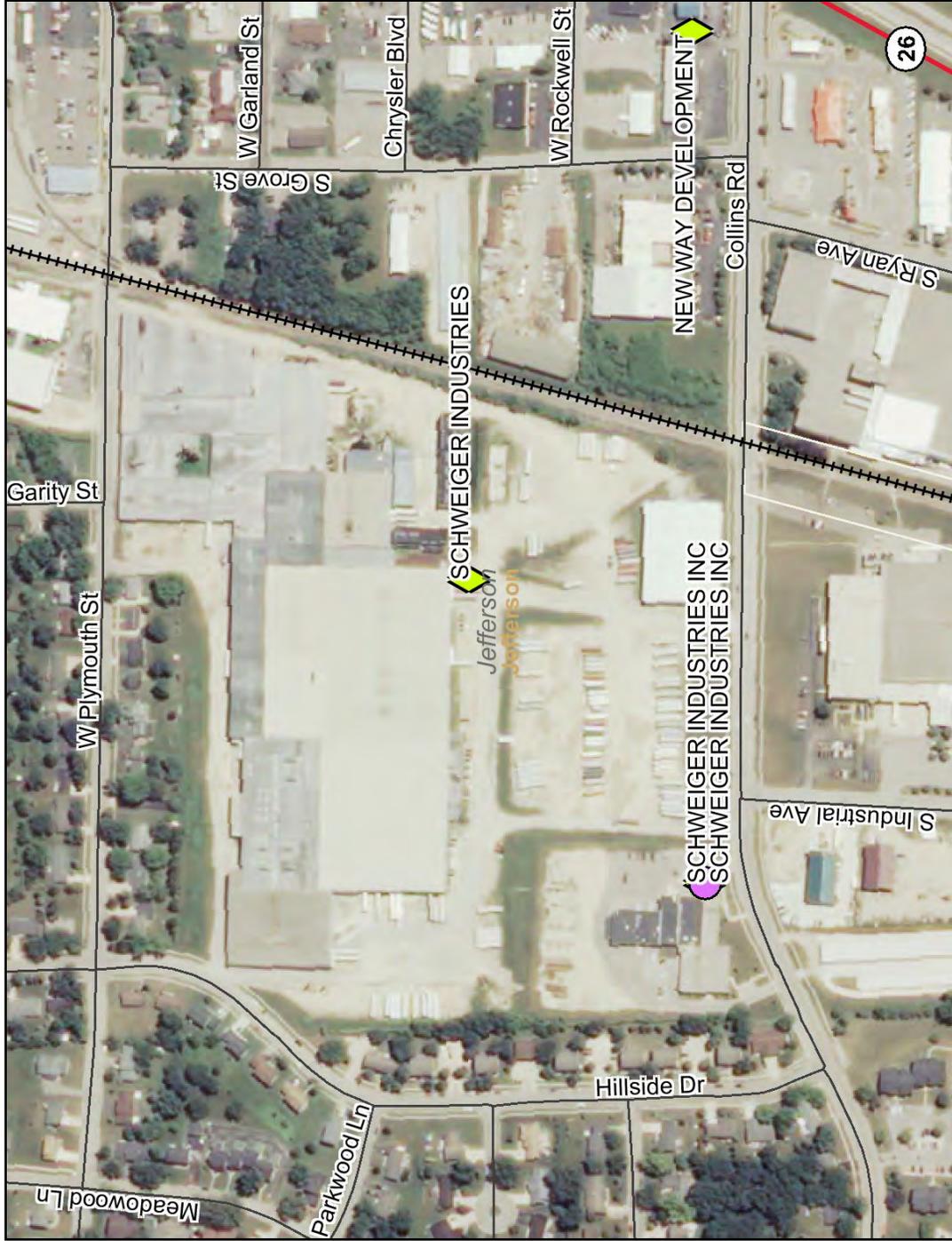
Legend

- Soil contamination only
- Groundwater and Soil contamination
- Groundwater contamination only
- Open Sites (ongoing cleanups)
- Open Sites (ongoing cleanups) - site boundaries shown
- Closed Sites (completed cleanups)
- Closed Sites (completed cleanups) - site boundaries shown
- County Boundary
- Railroads
- County Roads (WDOT)
- County Trunk Highway
- State and U.S. Highways (WDOT)
- State Trunk Highway
- US Highway
- Interstate Highways (WDOT)
- Interstate Highway
- Local Roads (WDOT)
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Municipalities



Scale: 1:3,363

Map Created on Dec 15, 2011



0 400 800 1200 ft.

Map created on Dec 15, 2011
 Note: Not all RR Sites have been geo-located yet.

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



Legend

- Soil contamination only
- Groundwater and Soil contamination
- Groundwater contamination only
- Open Sites (ongoing cleanups)
- Open Sites (ongoing cleanups) - site boundaries shown
- Closed Sites (completed cleanups)
- Closed Sites (completed cleanups) - site boundaries shown
- County Boundary
- Railroads
- County Roads (WDOT)
- County Trunk Highway
- State and U.S. Highways (WDOT)
- State Trunk Highway
- US Highway
- Interstate Highways (WDOT)
- Interstate Highway
- Local Roads (WDOT)
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Municipalities



Scale: 1:4,319

MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils
 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:2,950 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

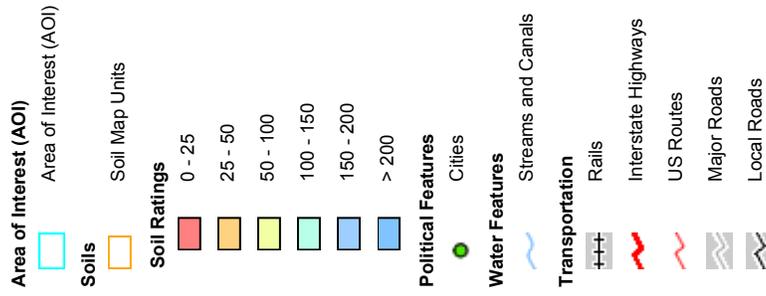
Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND



MAP INFORMATION

Map Scale: 1:2,950 if printed on A size (8.5" x 11") sheet.
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Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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 Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

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MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:2,150 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

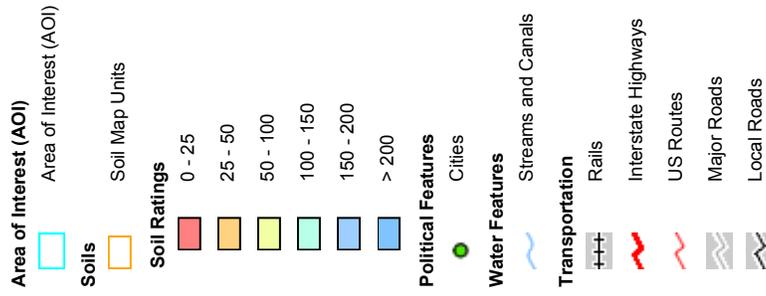
Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND



MAP INFORMATION

Map Scale: 1:2,150 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:15,840.

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Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

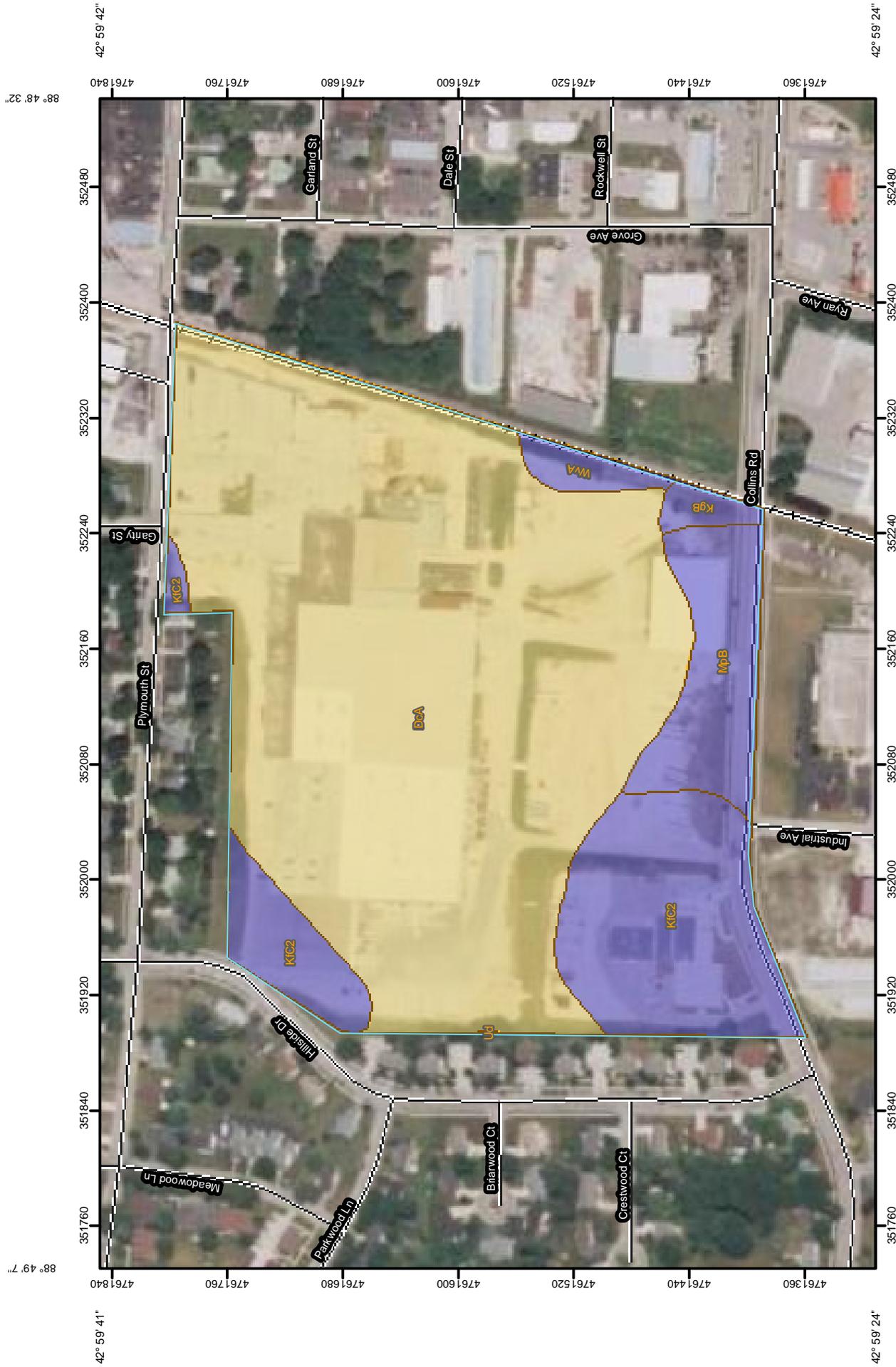
This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin
 Survey Area Data: Version 9, Aug 14, 2010

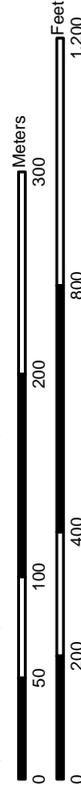
Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group—Jefferson County, Wisconsin



Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

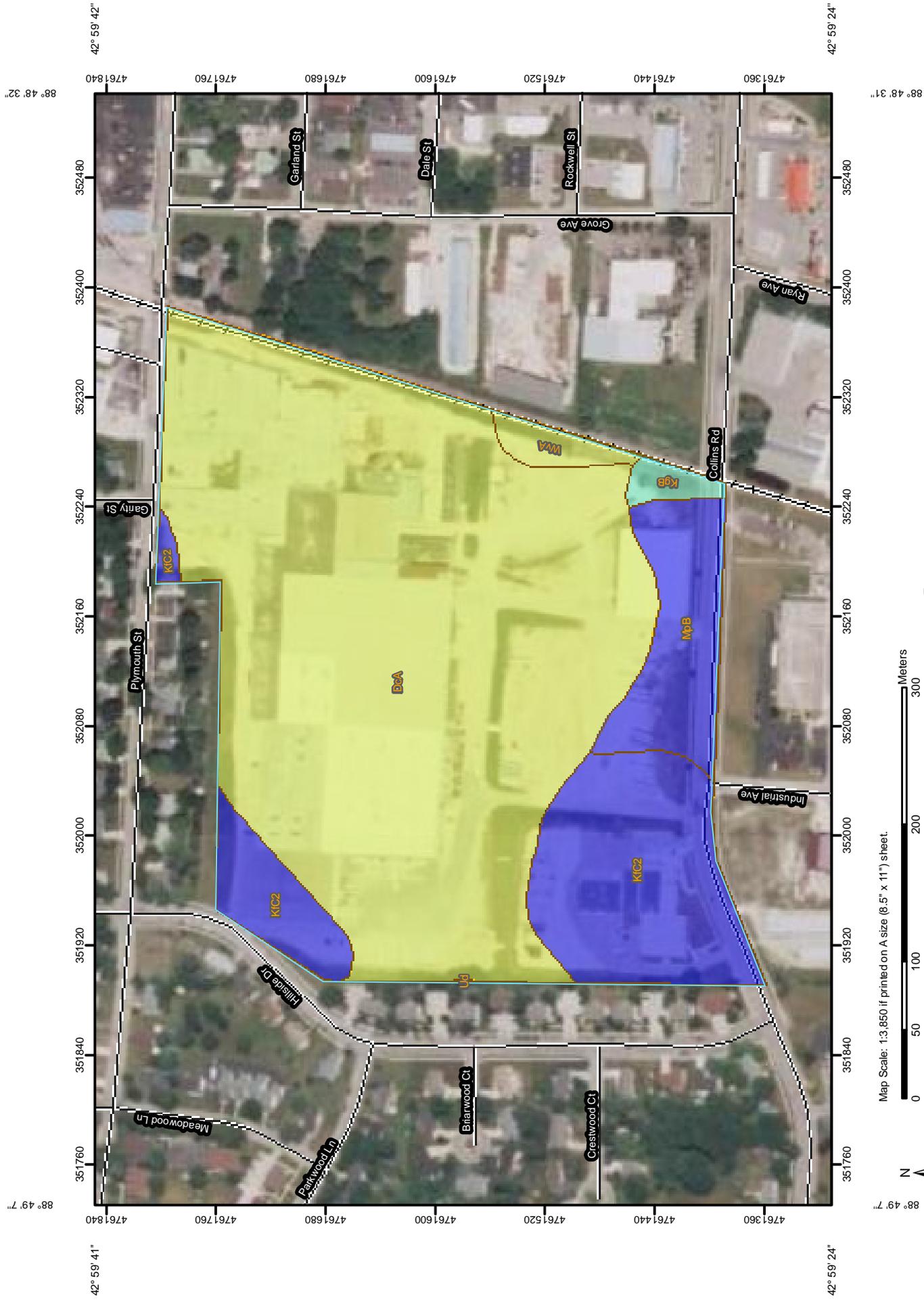
Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

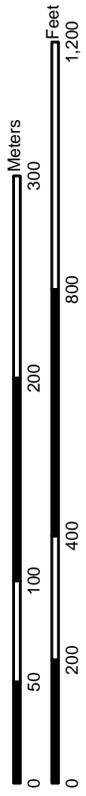
Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

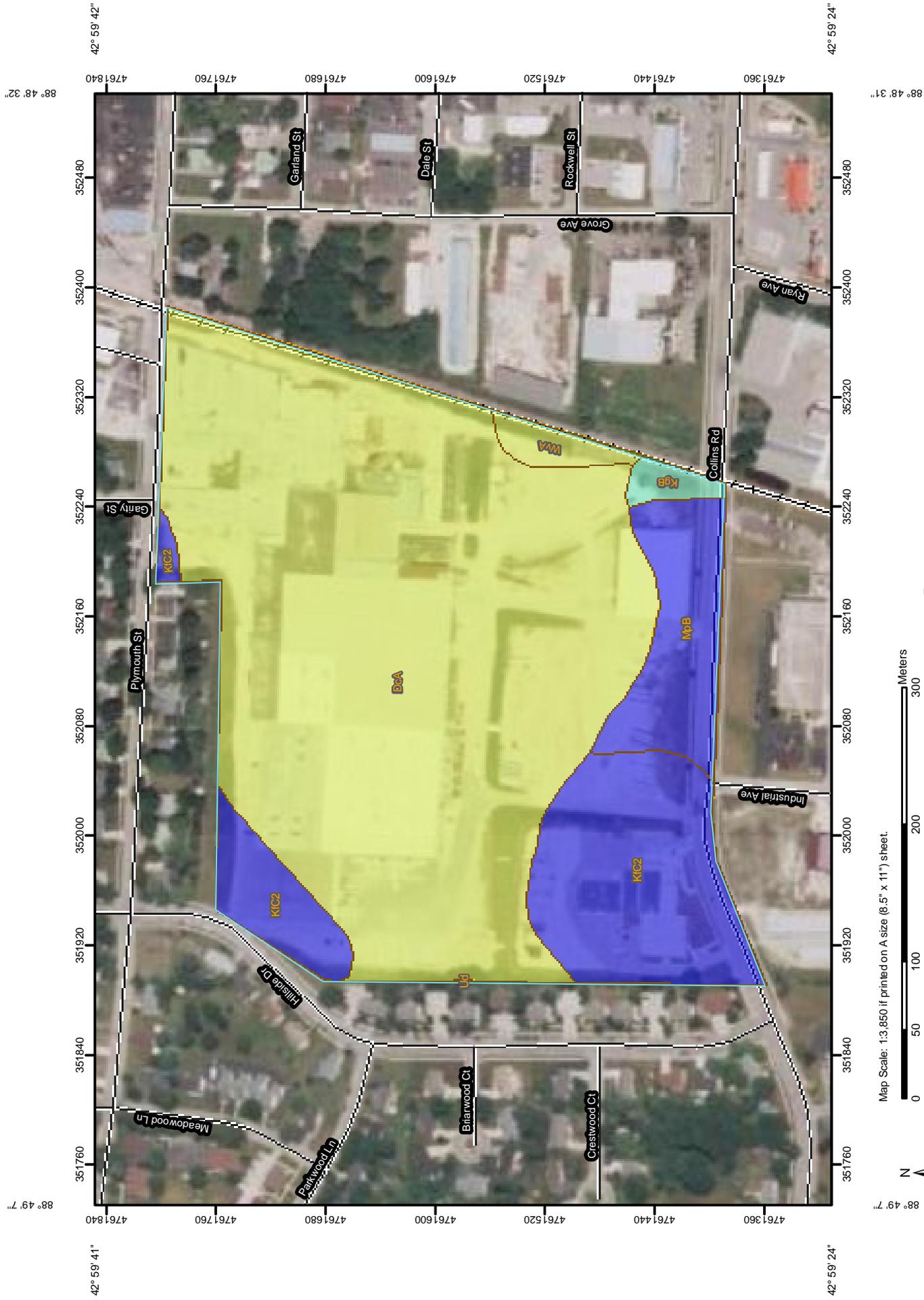
Depth to Water Table—Jefferson County, Wisconsin



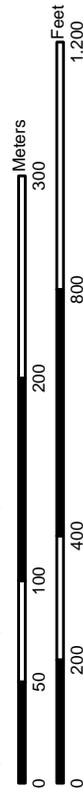
Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.



Depth to Water Table—Jefferson County, Wisconsin



Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI) 
- Soils**
 - Soil Map Units 
- Soil Ratings**
 - 0 - 25 
 - 25 - 50 
 - 50 - 100 
 - 100 - 150 
 - 150 - 200 
 - > 200 
- Political Features**
 - Cities 
- Water Features**
 - Streams and Canals 
- Transportation**
 - Rails 
 - Interstate Highways 
 - US Routes 
 - Major Roads 
 - Local Roads 

MAP INFORMATION

Map Scale: 1:3,850 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.
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Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin
 Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
DcA	Del Rey silt loam, 0 to 3 percent slopes	61	29.0	72.5%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	>200	7.1	17.9%
KgB	Kidder loam, moderately well-drained, 2 to 6 percent slopes	130	0.4	1.0%
MpB	McHenry silt loam, 2 to 6 percent slopes	>200	2.9	7.1%
Ud	Udorthents	>200	0.0	0.0%
WvA	Wauconda silt loam, 0 to 2 percent slopes	61	0.6	1.5%
Totals for Area of Interest			40.0	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

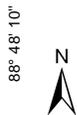
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December



Map Scale: 1:3,210 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:3,210 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ht	Houghton muck	A/D	0.5	1.2%
Kb	Keowns silt loam	B/D	1.7	4.0%
KfB	Kidder loam, 2 to 6 percent slopes	B	25.4	59.1%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	B	0.0	0.1%
LaB	Lamartine silt loam, 2 to 6 percent slopes	C	15.3	35.6%
Totals for Area of Interest			42.9	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

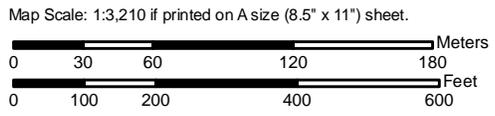
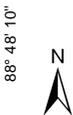
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Water Table—Jefferson County, Wisconsin



MAP LEGEND

- Area of Interest (AOI)**
 - Area of Interest (AOI) 
- Soils**
 - Soil Map Units 
- Soil Ratings**
 - 0 - 25 
 - 25 - 50 
 - 50 - 100 
 - 100 - 150 
 - 150 - 200 
 - > 200 
- Political Features**
 - Cities 
- Water Features**
 - Streams and Canals 
- Transportation**
 - Rails 
 - Interstate Highways 
 - US Routes 
 - Major Roads 
 - Local Roads 

MAP INFORMATION

Map Scale: 1:3,210 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin
 Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
Ht	Houghton muck	0	0.5	1.2%
Kb	Keowns silt loam	0	1.7	4.0%
KfB	Kidder loam, 2 to 6 percent slopes	>200	25.4	59.1%
KfC2	Kidder loam, 6 to 12 percent slopes, eroded	>200	0.0	0.1%
LaB	Lamartine silt loam, 2 to 6 percent slopes	61	15.3	35.6%
Totals for Area of Interest			42.9	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

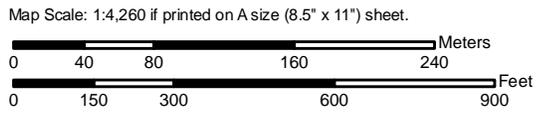
Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

Hydrologic Soil Group—Jefferson County, Wisconsin



MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils
 Soil Map Units

Soil Ratings

 A

 A/D

 B

 B/D

 C

 C/D

 D

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:4,260 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 9, Aug 14, 2010

Date(s) aerial images were photographed: 6/16/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AzA	Aztalan fine sandy loam, 0 to 3 percent slopes	C	3.8	5.4%
DcA	Del Rey silt loam, 0 to 3 percent slopes	C	21.7	31.2%
HeB	Hebron loam, 1 to 6 percent slopes	B	1.5	2.1%
Kb	Keowns silt loam	B/D	2.8	4.0%
KgB	Kidder loam, moderately well-drained, 2 to 6 percent slopes	B	3.1	4.4%
Mr	Milford silty clay loam	B/D	36.7	52.8%
Totals for Area of Interest			69.6	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

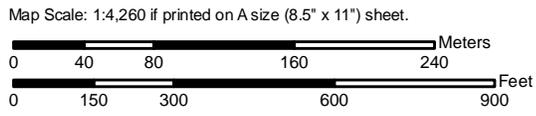
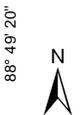
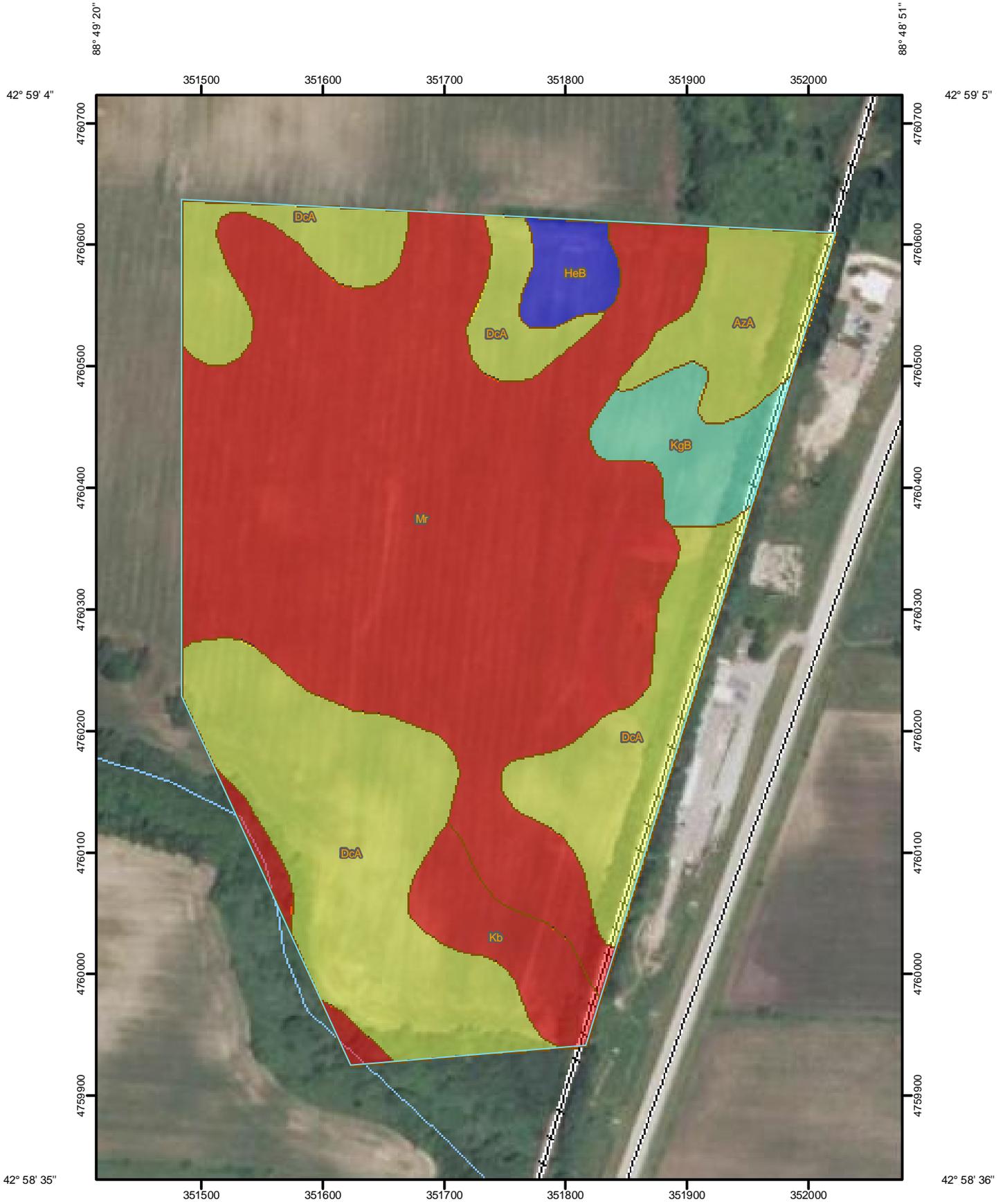
Rating Options

Aggregation Method: Dominant Condition

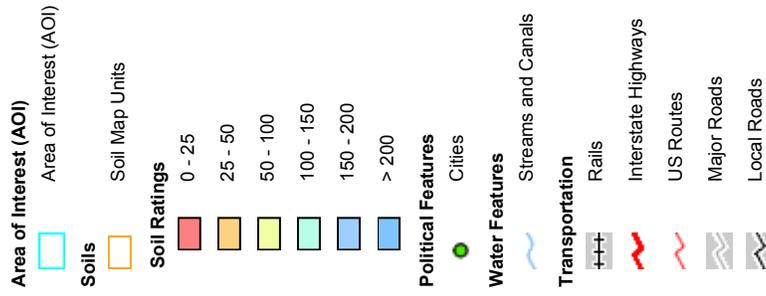
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Water Table—Jefferson County, Wisconsin



MAP LEGEND



MAP INFORMATION

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Depth to Water Table

Depth to Water Table— Summary by Map Unit — Jefferson County, Wisconsin (WI055)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
AzA	Aztalan fine sandy loam, 0 to 3 percent slopes	61	3.8	5.4%
DcA	Del Rey silt loam, 0 to 3 percent slopes	61	21.7	31.2%
HeB	Hebron loam, 1 to 6 percent slopes	>200	1.5	2.1%
Kb	Keowns silt loam	0	2.8	4.0%
KgB	Kidder loam, moderately well-drained, 2 to 6 percent slopes	130	3.1	4.4%
Mr	Milford silty clay loam	0	36.7	52.8%
Totals for Area of Interest			69.6	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

Appendix F

Existing Sanitary Sewer Maps



354

353

362

365A

354A

352

W PUERNER ST

365

366

369

W PUERNER ST

361

367

359

360

368

351

350

328

331

332

330

E GREENWOOD ST

348

LS 3

347

326

329

E WOOLCOCK ST

348A

W WOOLCOCK ST

325

METZGER HWY

346

N MAIN ST

349

345

318

319A

E OGDEN ST



824

823

822

821

820

805

IN-PARK WAY

GENERAC WAY

