

APPENDIX H

PRELIMINARY WETLAND AND WATERWAYS REPORT

PRELIMINARY WETLAND & WATERWAY REPORT

I-43: Silver Spring Drive to Arrowhead Road

MILWAUKEE AND OZAUKEE COUNTIES, WISCONSIN ID 1229-04-00

Stantec Project # 1937-01774

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TABLE OF CONTENTS

INTRODU	ICTION
	S
	5
	SION
CONCLU	5iUN
ΓABLE 1	Summary of Wetlands Identified within the Study Area
ΓABLE 2	Summary of Waterways Identified within the Study Area
TABLE 3	Summary of High Quality Plant Communities Identified within the Study Area (In Separate Confidential Addendum)

FIGURES

- Figure 1 Project Location and Topography (USGS)
- Figure 2 NRCS Soil Survey Map (SSURGO Data) Figure 3 Wisconsin Wetland Inventory Map
- Figure 4 Preliminary Field Delineated Features
- Figure 5 Identified Remnant Areas Interstate 43 Preliminary Mapping (In Separate **Confidential Addendum)**

SITE PHOTOS

Site Photos on CD

Milwaukee and Ozaukee Counties, WI

INTRODUCTION

Stantec Consulting Services, Inc. (Stantec) performed preliminary wetland delineations and waterway locations along I-43 for the Wisconsin Department of Transportation Southeast Region (WDOT). The Project is located in Milwaukee and Ozaukee Counties, Wisconsin (Figure 1).

The purpose and objective of the work was to preliminarily identify the extent and spatial arrangement of potentially jurisdictional wetlands and waterways for preliminary design purposes in the area shown on Figure 1 as "IH 43 Study Corridor" (Study Area). The wetland and waterway delineations were led by Eric Parker, P.W.S., of Stantec in May, 2012. One hundred fifty-eight (158) wetland areas and seventy-seven (77) waterways (stream segments or ponds without associated wetlands) were identified and mapped in the Study Area. Some of the wetlands are in primary environmental corridor (PEC), secondary environmental corridor (SEC) or isolated natural resource areas (INRA) as designated by Southeastern Wisconsin Regional Planning Commission (SEWRPC). Finally, some wetlands have been identified as ADID wetlands (Advanced Identification) as designated by the U.S. Environmental Protection Agency (EPA).

Wetlands that are considered waters of the U.S. are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the U.S. Army Corps of Engineers (USACE). These wetlands are referred to as "Federal Wetlands". Additionally, the Wisconsin Department of Natural Resources (WDNR) has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapter 30 Wisconsin State Statutes and Act 6. Stantec recommends that during final design a wetland delineation be completed (with flagging and sample points) and a final report be prepared for submittal to the WDNR and USACE for final jurisdictional review, determinations and concurrence.

METHODS

Although sample points were not part of the scope of this work, wetland determinations were based on criteria outlined in the *United States Army Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1 (1987), subsequent guidance documents (USACE 1991, 1992) and the Northcentral & Northeast Regional Supplement (January 2012).

The wetland determinations involved the use of available resources to assist in the assessment such as USGS topographic maps, Natural Resources Conservation Service (NRCS) Web Soil Survey, Wisconsin Wetland Inventory (WWI) mapping and aerial photography. Designations relating to environmental corridors and ADID statuses were determined by reviewing available mapping on the SEWRPC web site.

On-site wetland determinations were made using a two criteria (vegetation and hydrology) and technical approach defined in the USACE 1987 Manual except that soils were not examined. According to procedures described in the 1987 Manual and the applicable regional supplement, areas under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands. The

Milwaukee and Ozaukee Counties, WI

uppermost wetland boundary of each wetland was preliminarily identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software. Dominant species were noted in all wetlands, and where diverse plant communities (remnant) was present in the Study Area, observed plant species were recorded and the location noted.

RESULTS

Site Description

The Study Area is a varying width corridor centered along a 34-mile segment of Interstate Highway 43 (I-43) in Milwaukee and Ozaukee Counties, WI (Figure 1). There are portions of the Study Area that branch off the main corridor at major intersections and a railroad.

Soils mapped in the Study Area by the NRCS are shown on Figure 2 (32 sheets), and listed in Table 1. Generally, the locations of mapped hydric soils were found to be consistent with the locations of wetlands identified in this report.

The Wisconsin Wetland Inventory (WWI) map identifies fewer wetlands than those found in this investigation (Figure 3). Wetlands per this investigation are approximately located where wetlands are depicted on the WWI map (Figure 4 - 32 sheets).

One hundred fifty-eight (158) wetlands and seventy-seven (77) waterways were preliminarily identified and delineated by Stantec. These potentially jurisdictional areas are depicted on Figure 4 (32 sheets). The wetlands and significant attributes are summarized in Table 1, while the waterways are similarly listed in Table 2. Twelve (12) wetlands and five (5) waterways are within PEC, six (6) wetlands and ten (10) waterways are within secondary environmental corridor, three (3) wetlands and five (5) waterways are within isolated natural resource areas, and six (6) wetlands and three (3) waterways are designated as ADID by the U.S. EPA.

A total of eighteen (18) remnant areas with diverse native plant species were observed in the Study Area and are listed on Table 3 (included in a separate document outside this report). One state threatened plant species was also observed and listed in Table 3. All locations are depicted on Figure 5, which is also included in a separate document outside this report.

CONCLUSION

Stantec performed preliminary wetland delineations and waterway locations along I-43 for the WDOT. The Project is located in Milwaukee and Ozaukee Counties, Wisconsin (Figure 1).

The purpose and objective of the work was to preliminarily identify the extent and spatial arrangement of potentially jurisdictional wetlands and waterways for preliminary design purposes in the Study Area. The wetland and waterway delineations were led by Eric Parker, P.W.S., of Stantec in May, 2012. 158 wetland areas, 77 waterways (stream segments or ponds without associated wetlands) and 18 remnant areas were identified and mapped in the Study



I-43 Corridor Improvements Wisconsin Department of Transportation SE Region September, 2012 (Revised April 2013; July 1, 2013) Preliminary Wetland & Waterway Report

Milwaukee and Ozaukee Counties, WI

Area. Some of the wetlands are in PEC, SEC or INRA as designated by SEWRPC.

Wetlands that are considered waters of the U.S. are subject to regulation under Section 404 of the CWA and the jurisdictional regulatory authority lies with the USACE, referred to as "Federal Wetlands". Additionally, the WDNR has regulatory authority over wetlands, navigable waters, and adjacent lands under Chapter 30 Wisconsin State Statutes and Act 6. Stantec recommends that during final design a wetland delineation be completed (with flagging and sample points) and a final report be prepared for submittal to the WDNR and USACE for final jurisdictional review, determinations and concurrence.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the waterway, wetland and upland conditions present on the site at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland and waterway boundaries rests with the USACE and, in some cases, the WDNR or a local unit of government. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the site can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site.

Preliminary Wetland & Waterway Report

Milwaukee and Ozaukee Counties, WI

TABLES 1 & 2



Interstate 43 Corridor Study
Wisconsin Department of Transportation - SE Region
Field Work May 2012
Table Revised 2/1/2013; 2/25/2013

Table 1		Identified within the Study Area (see key below				
Wetland	Type and WDOT Mitigation Banking Acronym	Dominant Species	Major Soil Type(s)	Jurisdiction	SEWRPC Corridor	Comments
W-1	Wet Meadow/ Shallow Marsh (M/SM)	Phalaris arundinacea/ Typha spp.	**Manawa Silt Loam (MaA)	Federal		
W-2	Wet Meadow (RPE)	Phalaris arundinacea/ Zea mays	**Manawa Silt Loam (MaA)	Federal		WW-01 flows south within
W-3	Wet Meadow (M/RPE)	Phalaris arundinacea	**Kewaunee Silty Clay Loam (KoB2)	Federal		WW-02 flows east within
W-4	Wet Meadow (RPE)	Phalaris arundinacea/ Poa pratensis	**Fabius Loam (FaA)	Federal	ADID	WW-03 flows south within
W-5	Wet Meadow/ Floodplain Forest (M/RPF)	Phalaris arundinacea/ Fraxinus pennsylvanica	**Fabius Loam (FaA); **Manawa Silt Loam (MaA)	Federal		
W-6	Wet Meadow (M)	Phalaris arundinacea/ Typha angustifolia/ Scirpus atrovirens	**Kewaunee Silty Clay Loam (KoB2/KoC2)	Federal		WW-04 flows east within southern portion
W-7	Scrub-Shrub (SS)	Salix interior/ Phalaris arundinacea	**Kewaunee Silty Loam (KnB)	Federal		WW-08 flows east within
W-8	Wet Meadow (RPE)	Phalaris arundinacea/ Typha angustifolia	**Manawa Silt Loam (MaA)	Federal		WW-10 flows east within
W-9	Shallow Marsh (SM)	Typha angustifolia	**Manawa Silt Loam (MaA)	Federal		Continuation of WW-10 flows east within
W-10	Wet Meadow (M)	Phalaris arundinacea Salix interior/ Ribes americanum/ Phalaris	Fox Loam (Fo)	Non-Federal		Isolated; likely man-made
W-11	Scrub-Shrub (SS)	arundinacea/ Poa pratensis	*Mussey Loam (MzK)	Federal	SEC	WW-12 at south end
W-12	Wet Meadow (M)	Phalaris arundinacea	Lorenzo Loam (LyA)	Non-Federal		Isolated; likely man-made
W-13	Hardwood Swamp (RPF)	Fraxinus pennsylvanica/ Carex grisea	*Mussey Loam (MzK)	Federal	SEC	WW-14 flows south within
W-14	Wet Meadow (M) Wet Meadow/ Shallow	Phalaris arundinacea Phalaris arundinacea/ Phragmites australis/ Typha	Lorenzo Loam (LyA)	Non-Federal		Isolated; likely man-made
W-15	Marsh (M/SM)	angustifolila	**Fabius Loam (FaA)	Federal		
W-16	Shallow Marsh (SM)	Typha x glauca	**Manawa Silt Loam (MaA); **Kewaunee Silty Clay Loam (KoB2)	Federal		WW-15 flows east through south end
W-17	Wet Meadow (M)	Phalaris arundinacea/ Poa pratensis	**Manawa Silt Loam (MaA)	Federal		WW-16 flows east through north end
W-18	Shallow Marsh/ Hardwood Swamp (SM/WS)	Typha x glauca/ Fraxinus pennsylvanica	**Manawa Silt Loam (MaA)	Federal		
W-19	Wet Meadow (M)	Phalaris arundinaca/ Typha angustifolia	**Manawa Silt Loam (MaA)	Federal		
W-20A	Shallow Marsh (SM)	Typha angustifolia	**Manawa Silt Loam (MaA)	Federal(?)		Adjacent to WW-17
W-20A W-20B	Shallow Marsh (SM) Shallow Marsh (SM)	Typha angustifolia/ Toxicodendron radicans Typha angustifolia/ Toxicodendron radicans	**Manawa Silt Loam (MaA) **Manawa Silt Loam (MaA)	Federal(?) Federal(?)		
W-21	Wet Meadow (M)	Phalaris arundinacea	**Kewaunee Silty Clay Loam	Non-Federal		Possible marginal wetland hydrology
W-22	Shallow Marsh (SM)	Typha angustifolia	(KoC2) **Manawa Silt Loam (MaA)	Federal		J
W-23	Shallow Marsh (SM)	Typha angustifolia/ Phalaris arundinacea	**Manawa Silt Loam (MaA)	Federal		
W-24 W-25	Shallow Marsh (SM) Shallow Marsh/ Hardwood	Typha angustifolia/ Phalaris arundinacea Typha x glauca/ Acer saccharinum	**Manawa Silt Loam (MaA) **Manawa Silt Loam (MaA)	Federal Federal(?)		
W-26	Swamp (SM/WS) Wet Meadow (M)	Phalaris arundinacea	**Manawa Silt Loam (MaA)	Federal(?)		
W-27	Shallow Marsh (SM)	Typha x glauca/ Phalaris arundinacea	**Manawa Silt Loam (MaA)	Federal(?)		
W-28	Wet Meadow/ Hardwood Swamp (M/WS)	Phalaris arundinacea/ Typha x glauca/ Fraxinus pennsylvanica	*Sebewa Silt Loam (Sm)	Federal		
W-29	Wet Meadow (M) Wet Meadow/ Shallow	Phalaris arundinacea	**Kewaunee Silt Loam (KnB) **Kewaunee Silty Clay Loam	Non-Federal		Recent disturbance
W-30 W-31	Marsh (M/SM) Wet Meadow/ Shallow	Phalaris arundinacea/ Typha x glauca Phalaris arundinacea/ Typha x glauca	(KoB2) **Kewaunee Silty Clay Loam	Non-Federal		
W-32	Marsh (M/SM) Wet Meadow (M)	Phalaris arundinacea	(KoB2) **Kewaunee Silty Clay Loam	Non-Federal		
W-33	Wet Meadow (M)	Phalaris arundinacea	(KoB2) *Sebewa Silt Loam (Sm)	Federal		
W-34	Wet Meadow (M)	Phalaris arundinacea	**Kewaunee Silty Clay Loam	Federal		Partially farmed
W-35	Shallow Marsh/ Scrub-	Typha x glauca/ Salix interior/ Fraxinus pennsylvanica	(KoB2) *Sebewa Silt Loam (Sm)	Federal	SEC	Along WW-22 (Ulao Creek)
W-36	Shrub (SM/SS) Wet Meadow/ Scrub- Shrub (M/SS)	Phalaris arundinacea/ Salix interior	*Sebewa Silt Loam (Sm)	Federal		
W-37	Hardwood Swamp (WS)	Fraxinus pennsylvanica/ Alliaria petiolata	*Sebewa Silt Loam (Sm)	Federal	SEC	
W-38	Hardwood Swamp/ Shallow Marsh (WS/SM)	Fraxinus pennsylvanica	*Sebewa Silt Loam (Sm)	Federal	SEC	High quality & HQ adjacent upland mes woods
W-39	Hardwood Swamp (WS)	Fraxinus pennsylvanica/ Typha x glauca/ Carex stricta	*Sebewa Silt Loam (Sm)	Federal	SEC	North end high quality & HQ adjacent upland mesic woods
W-40	Hardwood Swamp (WS)	Fraxinus pennsylvanica	*Sebewa Silt Loam (Sm)	Federal		WW-25 flows west through north end
W-41	Hardwood Swamp (WS)	Fraxinus pennsylvanica/ Phalaris arundinacea	*Sebewa Silt Loam (Sm)	Federal		
W-42	Shallow Marsh/ Hardwood Swamp (SM/WS)	Typha x glauca/ Phalaris arundinacea/ Fraxinus pennsylvanica	**Kewaunee Silt Loam (KnB)	Federal		
W-43	Shallow Marsh/ Scrub- Shrub (RPE/SS)	Phalaris arundinacea/ Salix interior	*Sebewa Silt Loam (Sm)	Federal	PEC	WW-76 (Ulao Creek) flows through eastern side
W-44	Wet Meadow/ Scrub- Shrub (RPE/SS)	Phalaris arundinacea/ Salix interior	*Sebewa Silt Loam; Water (Sm/W)	Federal	PEC	WW-77 (Ulao Creek) flows through central area
W-45	Floodplain Forest/ Wet Meadow (RPF/RPE)	Fraxinus pennsylvanica/ Phalaris arundinacea/ Carex stricta	*Sebewa Silt Loam (Sm)	Federal	PEC	WW-28 (Ulao Creek) flows westerly through it
W-46	Floodplain Forest (RPF)	Fraxinus pennsylvanica/ Phalaris arundinacea	*Sebewa Silt Loam (Sm)	Federal	SEC	WW-27 (Ulao Creek) flows southwesterly through it
W-47	Shallow Marsh (SM)	Typha x glauca	**Kewaunee Silty Loam (KnB)	Non-Federal(?)		Possible man-made from interchange construction
_	Sedge Meadow (M)	Carex praegracilis/ Juncus compressus	**Manawa Silt Loam (MaA); **Kewaunee Silty Clay Loam (KoB2)	Non-Federal(?)		Possible man-made from interchange construction
W-48	Sedge Meadow/ Shallow	Carex praegracilis/ Juncus compressus/ Typha x	**Kewaunee Silt Loam (KnB)	Non-Federal(?)		Possible man-made from interchange construction
W-48 W-49	Marsh (M/SM)	glauca				
		Phalaris arundinacea	**Kewaunee Silt Loam (KnB)	Non-Federal(?)		Possible man-made from historic adjacent fill
W-49	Marsh (M/SM)		**Kewaunee Silt Loam (KnB) **Kewaunee Silt Loam (KnB) **Kewaunee Silty Clay Loam	Non-Federal(?)		



Wisconsin Department of Transportation - SE Region

Field Work May 2012 Table Revised 2/1/2013; 2/25/2013

Table 1 - Summary of Wetlands Identified within the Study Area (see key below) Type and WDOT Mitigation Major Soil Type(s) Jurisdiction Comments Poygan Silty Clay Loam (Py) Wet Meadow/ Scrub-Phalaris arundinacea/ Rhamnus frangula/ Fraxinus Possible man-made from interchange W-53 *Manawa Silt Loam (MaA): Federal(2) Shrub (M/SS) ennsylvanica/ Ulmus americana construction Fabius Loam (FaA) Mussey Loam (MzK); **Manawa Wet Meadow/ Scrub-Phalaris arundinacea/ Rhamnus frangula/ Fraxinus Possible man-made from interchange W-54 Silt Loam (MaA); **Kewaunee Silt Federal(?) Shrub (M/SS) ennsylvanica/ Cornus stolonifera construction oam (KnB) Possible man-made from historic W-55 Wet Meadow (M) Non-Federal(?) Phalaris arundinacea/ Agrostis gigantea *Kewaunee Silt Loam (KnB) adjacent fill nallow Marsh/ Scrub ypha angustifolia/ Phalaris arundinacea/ Fraxinus *Kewaunee Silt Loam (KnB) Federal Shrub (SM/SS) ennsylvanica *Kewaunee Silt Loam (KnB): Wet Meadow/ Hardwood W-57 vaunee Silty Clay Loam Phalaris arundinacea/ Fraxinus pennsylvanica Federal Berm and other past grading in vicinity vamp (M/WS) KoB2) Wet Meadow/ Shallow 'Mussey Loam (MzK); *Poygan W-58 Aster firmus/ Carex lacustris/ Typha angustifolia Federal WW-29 flows westerly through south en-Marsh (M/SM) Silty Clay Loam (Py) Polygonum cuspidatum on disturbed W-59 *Manawa Silt Loam (MaA) Federal ADID Shallow Marsh (SM) Typha angustifolia adjacent uplands ligh quality & HQ adjacent up raxinus pennsylvanica/ Carex bromoides/ Caltha PEC W-60 Hardwood Swamp (WS) alustris woods ligh quality & HQ adjacent upland mes raxinus pennsylvanica/ Carex bromoides/ Caltha W-61 Hardwood Swamp (WS) *Kewaunee Silt Loam (KnB) Federal PEC raxinus pennsylvanica/ Carex bromoides/ Caltha ligh quality & HQ adjacent upland mes PEC W-62 Hardwood Swamp (WS) 'Kewaunee Silt Loam (KnB) Federal alustris woods
High quality & HQ adjacent upland mesi axinus pennsylvanica/ Carex bromoides/ Caltha W-63 Hardwood Swamp (WS) Kewaunee Silt Loam (KnB) PEC alustris woods ligh quality & HQ adjacent upland mes raxinus pennsylvanica/ Carex bromoides/ Caltha W-64 Hardwood Swamp (WS) *Kewaunee Silt Loam (KnB) Federal PEC alustris woods Vet Meadow/ Shallow halaris arundinacea/ Typha angustifolia/ Fraxinus Portions High quality & HQ adjacent Poygan Silty Clay Loam (Py) W-65 Marsh/ Hardwood Swami Federal ennsylvanica/ Solidago gigante M/SM/WS) Shallow Marsh/ Sedge Poygan Silty Clay Loam (Py); Typha angustifolia/ Carex praegracilis/ Juncus Federal PEC? In Freeway Median W-66 Meadow (SM/M) ompressus *Manawa Silt Loam (MaA) Fraxinus pennsylvanica/ Ulmus americana/ Iris irginicus/ Solidago gigantea/ Symlocarpus foetidus/ Hardwood Swamp Poygan Silty Clay Loam (Py); Portions High quality & HQ adjacent W-67 Federal Shallow Marsh (WS/SM) *Manawa Silt Loam (MaA) upland mesic woods Caltha palustris/ Typha angustifolia Wet Meadow/ Scrub W-68 halaris arundinacea/ Typha angustifolia/ Salix interio 'Manawa Silt Loam (MaA) Federal WW-30 flows west within Shrub (M/SS) Phalaris arundinacea/ Carex praegracilis/ Equisetum W-69 Wet Meadow (M) *Manawa Silt Loam (MaA) Federal In Freeway Median arvense/ Typha angustifolia Fraxinus pennsylvanica/ Solidago gigantea/ Hardwood Swamp/ Wet W-70 *Manawa Silt Loam (MaA) Federal WW-31 flows northwest within Meadow (WS/M) Hydrophyllum virginianum/ Phalaris arundinad *Manawa Silt Loam (MaA las a western isolated segment: WW-3 W-71 Federal Wet Meadow (M) halaris arundinacea *Kewaunee Silt Loam (KnB) flows through eastern raxinus pennsylvanica/ Acer negundo/ Phalaris W-72 Hardwood Swamp (WS) *Manawa Silt Loam (MaA) Federal WW-33 flows through it High quality wet-mesic woodland and raxinus pennsylvanica/ Hydrophyllum virginianum/ *Manawa Silt Loam (MaA) adj. mesic woodland; W-73 may have been connected to W-74 pre-I-43 Hardwood Swamp (WS) Federal W-73 Ranunculus hispidus/ Carex spp./ Iris virginica Kewaunee Silt Loam (KnB) raxinus pennsylvanica/ Ribes americanum/ Phalari *Manawa Silt Loam (MaA) W-74 Hardwood Swamp (WS) Federal rundinacea/ Viburnum opulus 'Kewaunee Silt Loam (KnB) Kewaunee Silty Clay Loam Partially farmed; unvegetated w/few W-75 Sedge Meadow (M) Carex lacustris Non-Federal(? scattered weeds in farmed portion
WW-37 and WW-38 merge within W-76, (KoB2) Wet Meadow/ Scrub-Phalaris arundinacea/ Poa pratensis/ Cornus Poygan Silty Clay Loam (Py) Shrub (M/SS) tolonifera/ Viburnum lentago flow is southerly Wet Meadow/ Shallow Phalaris arundinacea/ Carex lacustris/ Typha *Manawa Silt Loam (MaA) Marsh/ Hardwood Swam W-77 Federal NW-36 flows westerly through north en Kewaunee Silt Loam (KnB) angustifolia/ Populus tremuloides (M/SM/WS) Wet Meadow/ Scrub-Phalaris arundinacea/ Poa pratensis/ Carex stipata/ WW-39 flows southeasterly through *Poygan Silty Clay Loam (Pv) W-78 Federal hrub (M/SS) Cornus stolonifera/ Viburnum lentago

Phalaris arundinacea/ Carex lacustris/ Typha *Kewaunee Silt Loam (KnA)
Poygan Silty Clay Loam (Py) northeastern corner Wet Meau... Marsh (M/SM) W-79 Federal WW-40 flows southeasterly through it *Kewaunee Silt Loam (KnA) ngustifolia alaris arundinacea/ Poa pratensis/ Carex stipata Federal Shrub (M/SS) ornus stolonifera/ Viburnum lentago raxinus pennsylvanica/ Rhamnus cathartica/ W-81 Hardwood Swamp (WS) 'Kewaunee Silt Loam (KnA) Federal Saxifraga pensylvanica Fraxinus pennsylvanica/ Carex stricta/ Iris virginica/ Hardwood Swamp/ Sedge W-82 *Manawa Silt Loam (MaA) Non-Federal(?) Hydrophyllum virginianum Phalaris arundinacea/ Typha angustifolia/ Carex Meadow (WS/M) W-83 Wet Meadow (M) *Manawa Silt Loam (MaA) Federal acustris/ Carex stricta Wet Meadow/ Shallow Phalaris arundinacea/ Typha angustifolia/ Fraxinus rsh/ Hardwood Swamp *Manawa Silt Loam (MaA) Federal (M/SM/WS) halaris arundinacea *Manawa Silt Loam (MaA W-86 Federal INRA WW-41 flows through it Vet Meadow (M halaris arundinacea Poygan Silty Clay Loam (P W-87 Wet Meadow (M) Phalaris arundinacea *Manawa Silt Loam (MaA) Federal WW-42 flows through it 'Manawa Silt Loam (MaA) W-88 Wet Meadow (M) Tvoha angustifolia Federal *Kewaunee Silt Loam (KnB) W-89 Wet Meadow (M) Phalaris arundinacea Federal *Manawa Silt Loam (MaA) *Kewaunee Silty Clay Loam W-90 Wet Meadow (M) Tvoha angustifolia Federal Wetland surrounds WW-44 (KoB2) W-91 *Manawa Silt Loam (MaA) Non-Federal(?) INRA Saturated at surface Hardwood Swamp (WS) Fraxinus pennsylvanica raxinus pennsylvanica/ Ranunculus hispidus/ Hardwood Swamp (WS) *Manawa Silt Loam (MaA) Non-Federal(?) WW-45b, WW-46, and WW-47 flow W-93 Wet Meadow (M) Phalaris arundinacea *Kewaunee Silt Loam (KnB) Federal through it Poygan Silty Clay Loam (Py W-94 Shallow Marsh (SM) Typha angustifolia Federal *Kewaunee Silt Loam (KnB) raxinus pennsylvanica/ Alnus glutinosa/ Ribes *Poygan Silty Clay Loam (Py) W-95 Hardwood Swamp (WS) Federal WW-49 flows through it mericanum Wet Meadow (M)/ WW-48 flows through it W-96 raxinus pennsylvanica/ Thypha angustifolia Poygan Silty Clay Loam (Py) Federal ardwood Swamp (WS) W-97 Wooded Swamp (WS) Fraxinus nennsylvanica *Kewaunee Silty Clay (KrC3) Non-Federal(2) No hed or bank Kewaunee Silty Clay Loam W-98 Wet Meadow (M) Carex sp./ Phalaris arundinacea Federal Located off ROW (KoB2) W-99 Wooded Swamp (WS) Fraxinus pennsylvanica/ Rhamnus cathartica Non-Fedral(?)



Wisconsin Department of Transportation - SE Region

Field Work May 2012 Table Revised 2/1/2013; 2/25/2013

Table 1 - Summary of Wetlands Identified within the Study Area (see key below) Type and WDOT Mitigation Dominant Species Major Soil Type(s) Jurisdiction Comments Banking Acronym Hardwood Swamp (WS)/ 'Manawa Silt Loam (MaA) W-100 Phalaris arundinacea Federal Shallow Marsh (SM) 'Kewaunee Silt Loam (KnB) Hardwood Swamp(WS)/ Cornus racemosa/ Fraxinus pennsylvanica/ Solidago W-101 *Kewaunee Silt Loam (KnB) Federal Shrub Scrub (SS) igaintea W-102 Non-Federal(?) Hardwood Swamp (WS) raxinus pennsylvanica/ Poa pratensis *Manawa Silt Loam (MaA) Ponded area 'Manawa Silt Loam (MaA) W-103 Hardwood Swamp (WS) raxinus pennsylvanica/ Rhamnus cathartica Federal WW-51 located at north end *Kewaunee Silt Loam (KnB) Possible man-made from interchange raxinus pennsylvanica/ Carex vulpinoidea *Manawa Silt Loam (MaA) W-104 Wet Meadow (M) Federal(?) 'Manawa Silt Loam (MaA) W-105 Hardwood Swamp (WS) Fraxinus pennsylvanica/ Rhamnus cathartica Federal oamy Land (Lu) Possible man-made from interchange Wet Meadow (M) halaris arundinacea/ Aster firmus/ Poa pratensis *Manawa Silt Loam (MaA) Federal(?) construction Agrostis gigantea/ Cornus racemosa/ Rhamnus W-107 Shrub Scrub (SS) *Manawa Silt Loam (MaA) Federal atharicus/ Poa pratensis W-108 Hardwood Swamp (WS) Fraxinus pennsylvanica/ Rhamnus cathartica *Manawa Silt Loam (MaA) Federal WW-53 and WW-54 flow through it Hardwood Swamp (WS)/ W-109 Federal? raxinus pennsylvanica/ Rhamnus cathartica 'Manawa Silt Loam (MaA) Shrub Scrub (SS) *Manawa Silt Loam (MaA) W-110 Hardwood Swamp (WS) raxinus pennsylvanica/ Carex stipata 'Kewaunee Silt Loam (KnB' Possible man-made from interchange W-111 Hardwood Swamp (WS) raxinus pennsylvanica/ Rhamnus cathartica *Manawa Silt Loam (MaA) Federal? construction W-112 Hardwood Swamp (WS) raxinus pennsylvanica/ Alliaria petiolata *Manawa Silt Loam (MaA) Federal? Possible man-made from interchange W-113 Hardwood Swamp (WS) raxinus pennsylvanica/ Ulmus americanan *Manawa Silt Loam (MaA) Federal construction W-114 Hardwood Swamp (WS) Populus deltoides/ Fraxinus pennsylvanica *Manawa Silt Loam (MaA) Federal WW-57 flows through it *Manawa Silt Loam (MaA) W-115 Wet Meadow (M) Phalaris arundinacea Federal Kewaunee Silt Loam (KnB)
Manawa Silt Loam (MaA)/ halaris arundinacea/ Typha angustifolia/ Solidago W-116 Wet Meadow (M) Federal gigantea *Kewaunee Silt Loam (KnB) Fraxinus pennsylvanica/ Rhamnus cathartica W-117 Hardwood Swamp (WS) *Kewaunee Silt Loam (KnB) Federal? W-118 Hardwood Swamp (WS) raxinus pennsylvanica/ Rhamnus cathartica *Kewaunee Silt Loam (KnB) Federal W-119 Wet Meadow (M) Typha angustifolia Federal Loamy Land (Lu) raxinus pennsylvanica/ Rhamnus cathartica W-120 Shrub Scrub (SS) Federal Possible man-made from interchange W-121 Wet Meadow (M) Typha angustifolia *Loamy Land (Lu) Federal(?) construction Possible man-made from interchange W-122 Shallow Marsh (SM) ypha angustifolia/ Elymus riparius Federal(?) *Loamy Land (Lu) construction W-123 Shallow Marsh (SM) Typha angustifolia *Loamy Land (Lu) Federal Federal Manawa Silt Loam (MaA ypha angustifolia Possible man-made from interchange W-125 Wet Meadow (M) Tvoha angustifolia *Loamy Land (Lu) Federal(?) construction W-126 Shallow Marsh (SM) Federal Typha angustifolia *Loamy Land (Lu) W-127 Wet Meadow (M) alaris arundinacea/Tyoha *Manawa Silt Loam (MaA Federal W-128 Hardwood Swamp (WS) Fraxinus pennsylvanica/ Poa pratensis *Kewaunee Silt Loam (KnB) Federal W-129 Shrub Scrub (SS) ornus racemosa *Kewaunee Silt Loam (KnB) Federal *Manawa Silt Loam (MaA) W-130 Shallow Marsh (SM) Tvoha angustifolia Federal *Kewaunee Silt Loam (KnC2) raxinus pennsylvanica/ Cornus racemosa/ Phalaris W-131 Shrub Scrub (SS) *Clayey Land (Cv) Federal arundinacea W-132 Wooded Swamp (WS) raxinus pennsylvanica/ Phalaris arundinacea *Clayey Land (Cv) Federal WW-59/60 flows through south end W-133 Shallow Marsh (SM) Typha angustifolia *Kewaunee Silt Loam (KnB) Federal W-134 Wet Meadow (M)
Wet Meadow (M)/ Riparia *Kewaunee Silt Loam (KnB) Federal raxinus pennsylvanica/ Phalaris arundinacea/ WW-61 flows near the southern W-135 *Manawa Silt Loam (MaA) Federal Wetland (RPF) Solidago gigantea boundary Wet Meadov Marsh (SM) dow (M), Shallo *Manawa Silt Loam (MaA W-136 Carex pellita/ Typha angustifolia Federal *Kewaunee Silt Loam (KnB) Shrub Scrub (SS)/ Phalaris arundinacea/ Fraxinus pennsylvanica/ W-137 *Kewaunee Silt Loam (KnB) Federal Wooded Swamp (WS)
Wet Meadow (M)/ Shrub Rhamnus cathartica/ Populus tremuloides
Fraxinus pennsylvanica/ Rhamnus cathartica/ Poa W-138 *Kewaunee Silt Loam (KnB) Federal Scrub (SS) ratensis W-139 Wet Meadow (M) *Kewaunee Silt Loam (KnB) Federal Typha angustifolia/ Carex pellita WW-63 and WW-64 flow into the west Shrub Scrub (SS)/ raxinus pennsylvanica/ Rhamnus cathartica W-140 *Kewaunee Silt Loam (KnB) Federal Wooded Swamp (WS) /iburnum trilobum Shrub Scrub (SS)/ Fraxinus pennsylvanica/ Rhamnus cathartica W-141 *Manawa Silt Loam (MaA) Federal Wooded Swamp (WS) Federal W-142 Hardwood Swamp (WS) raxinus pennsylvanica *Manawa Silt Loam (MaA) W-143 Shallow Marsh (SM) ypha angustifolia/ Agrostis gigantea *Manawa Silt Loam (MaA) Federal Federal W-144 raxinus pennsylvanica/ Phalaris arundinacea *Manawa Silt Loam (MaA) Shrub Scrub (SS) W-145 Hardwood Swamp (WS) raxinus pennsylvanica/ Alliaria petiolata 'Kewaunee Silt Loam (KnB' Federal Marginal wetland raxinus pennsylvanica/ Acer negundo/ Rhamnus W-146 *Kewaunee Silt Loam (KnC2) WW-66 flows through it Hardwood Swamp (WS) Federal athartica/ Alliaria petiolata W-147 Hardwood Swamp (WS) raxinus pennsylvanica/ Rhamnus cathartica *Kewaunee Silt Loam (KnB) Federal? raxinus pennsylvanica/ Rhamnus cathartica/ Typha Hardwood Swamp (WS)/ W-148 *Loamy Land (Lu) Federal? Shrub Scrub (SS) ngustifolia/ Solidago riddellii/ Poa pratensis W-149 Shrub Scrub (SS) ornus stolonifera/ Carex pellita *Loamy Land (Lu) Federal? W-150 Hardwood Swamp (WS) *Loamy Land (Lu) Federal? athartica raxinus pennsylvanica/ Agrostis gigantea raxinus pennsylvanica/ Acer negundo/ Alliaria W-151 Shrub Scrub (SS) Loamy Land (Lu) Federal? W-152 Hardwood Swamp (WS) *Loamy Land (Lu) Federal? etiolata W-153 Hardwood Swamp (WS) Jlmus americana/ Acer negundo Jnmapped area Federal? Wet Meadow (M)/ Shrub Agrostis alba/ Poa pratensis/ Fraxinus pennsylvanica/ W-154 Unmapped area Federal?



Interstate 43 Corridor Study
Wisconsin Department of Transportation - SE Region
Field Work May 2012
Table Revised 2/1/2013; 2/25/2013

Wetland & Waterway Investigation Report Ozaukee/Milwaukee Counties, WI ID 1229-04-00 (Stantec Project 1937-01774)

Table 1	Table 1 - Summary of Wetlands Identified within the Study Area (see key below)					
Wetland	Type and WDOT Mitigation Banking Acronym	Dominant Species	Major Soil Type(s)		SEWRPC Corridor	Comments
W-155	Shrub Scrub (SS)	Alliaria petiolata/ Fraxinus pennsylvanica	Unmapped area	Federal?		
W-156	Hardwood Swamp (WS)	Fraxinus pennsylvanica/ Rhamnus cathartica	Unmapped area	Federal?		WW-73 located at west end
W-157	Shrub Scrub (SS)	Alliaria petiolata/ Ribes americanum	Unmapped area	Federal?		WW-73 located at east end
W-158	Shrub Scrub (SS)	Caltha palustris/ Rhamnus frangula	Unmapped area	Federal?		WW-74 flows through it

KEY

Wetland = Corresponds with wetland number shown on the maps in this report

Type = Type of wetland plant community

WDOT Mitigation Banking Acronym = Type-acronym using WDOT Mitigation Banking criteria

Dominant Species = Species generally dominating the wetland

Major Soil Type = The one or two predominant soil types mapped in the wetland

* Hydric soil included in mapping unit

Jurisdiction = Professional opinion of USACE jurisdiction (JD) based on federal criteria

SEWRPC Corridor = based on SEWRPC mapping / criteria: PEC is Primary Environmental Corridor;

SEC is Secondary Environmental Corridor; IMRA is Isolated Natural Resource Area

ADID

Wetland that is designated as an ADID (Advanced Identification) Wetland by the U.S. Environmental Protection Agency



Wisconsin Department of Transportation - SE Region

Field Work May 2012 - Revised 2/25/2013

Wetland & Waterway Investigation Report
Ozaukee/Milwaukee Counties, WI
ID 1229-04-00 (Stantec Project 1937-01774)

Table 2 -	Summary of Waterways Identified wi	thin the Study A	rea (see key b	elow)	
Water- way #	Waterway Name/Description	State Navigable	Jurisdiction	SEWRPC Corridor	Comments
WW-1	Tributary to Ulao Creek	Yes	Federal		Ditch-channel in mapped somewhat poorly drained soils
WW-2	Tributary to Ulao Creek	No	Federal		Ditch-channel in mapped somewhat poorly drained soils within W-3
WW-3	Tributary to Ulao Creek	Yes	Federal	ADID	Ditch-channel in mapped somewhat poorly drained soils within W-4
WW-4	Tributary to Ulao Creek	Yes	Federal		Channel in mapped somewhat poorly drained soils within W-5
WW-5	Stormwater Pond - Trib to Ulao Creek	Yes	Federal		Created for adjacent development
WW-6	Stormwater Pond - Trib to Ulao Creek	Yes	Federal		Created for adjacent development
WW-7	Outlet for WW-6 - Trib to Ulao Creek	Yes	Federal		Short stream segment - provides outlet for WW-6
WW-8	Outlet for WW-6 - Trib to Ulao Creek	Yes	Federal		Continuation of WW-7; flows through W-7
WW-9	Stormwater Pond - Trib to Ulao Creek	Yes	Federal		Created for adjacent development
WW-10	Outlet for WW-6 - Trib to Ulao Creek	Yes	Federal		Continuation of WW-7 and WW-8; flows through W-8
WW-11	Stormwater Pond - Trib to Ulao Creek	Yes	Federal		Created for adjacent development
	Tributary to Ulao Creek	Yes	Federal	SEC	Provides outlet for W-11
	Tributary to Ulao Creek	Yes	Federal	SEC	Part of navigable ditch along railroad
	Tributary to Ulao Creek	Yes	Federal	SEC	Associated with W-13
	Tributary to Ulao Creek	Yes	Federal		Associated with W-16
WW-16	Tributary to Ulao Creek	Yes	Federal		Associated with W-17
WW-17	Stormwater Pond	Yes	Federal (?)		Excavated in mapped somewhat poorly drained soils; divided from W-20 via fill for a walkway
WW-18	Tributary to Ulao Creek	Yes	Federal (?)		Ditch waterway cut into mapped non-hydric soil and connected to WW-19 and WW-20 via culvert
WW-19	Ulao Creek	Yes	Federal	SEC	Channel w/excavation history
WW-20	Ulao Creek	Yes	Federal	SEC	Channel w/excavation history connected to WW-19 via box culvert
WW-21	Tributary to Ulao Creek	No	Federal	SEC	Road ditch cut into hydric soils - feeds into WW-20
WW-22	Ulao Creek / Tributary to Ulao Creek	Yes	Federal	SEC	North segment is tributary and in non-SEC
WW-23	Tributary to Ulao Creek	Yes	Federal		Cut into mapped hydric soils and feeds into Ulao Creek; WW-23 provides outlet for W-36
WW-24	Ulao Creek	Yes	Federal	SEC	Flows into box culvert under I-43
WW-25	Tributary to Ulao Creek	Yes	Federal	SEC?	Within W-40 and mapped hydric soils
WW-26	Tributary to Ulao Creek	Yes	Federal		Within mapped hydric soils
WW-27	Ulao Creek	Yes	Federal	SEC	Within W-46
	Ulao Creek	Yes	Federal	PEC	Within W-45
	Tributary to Ulao Creek	No	Federal	INRA	Within W-58
	Tributary to Ulao Creek	Yes	Federal	PEC	Within W-68
	Tributary to Ulao Creek	Yes	Federal		Flows into box culvert under I-43 to WW-30
	Tributary to Ulao Creek	No	Federal		Within W-71
	Tributary to Ulao Creek Tributary to Ulao Creek	Yes Yes	Federal Federal		Within W-72 In mapped somewhat poorly drained soils; flows
	,				into WW-35 pond system
	Ponds tributary to Ulao Creek	Yes	Federal		Excavated pond system in golf course
	Tributary to Ulao Creek Tributary to Ulao Creek	Yes	Federal		Within W-77
	,	Yes	Federal		Merges w/M/W 37 within W 76
	Tributary to Ulao Creek	Yes	Federal		Merges w/WW-37 within W-76
	Tributary to Ulao Creek	Yes	Federal	1	Within W-78 Within W-79
WW-41	Tributary to Ulao Creek Tributary to Milwaukee River	Yes	Federal	INID A	
	Tributary to Milwaukee Kiver	Yes	Federal	INRA	Within W-86
WW-42	Tributary to Milwaukee River	Yes	Federal	INRA- ADID	Within W-87
WW-43	Tributary to Milwaukee River	Yes	Federal		<u> </u>
WW-44	Stormwater Pond	No	Federal (?)		Excavated in mapped poorly drained soils; adjacent to W-90



Wisconsin Department of Transportation - SE Region

Field Work May 2012 - Revised 2/25/2013

Wetland & Waterway Investigation Report
Ozaukee/Milwaukee Counties, WI
ID 1229-04-00 (Stantec Project 1937-01774)

Water-	Waterway Name/Description	State Navigable	Jurisdiction	SEWRPC	Comments	
way#	waterway Name/Description	State Navigable	Jurisdiction	Corridor	Comments	
WW-45A	Tributary to Milwaukee River	Yes	Federal	INRA	Surrounded by non-wetlands in Study Corridor	
WW-45B	Tributary to Milwaukee River	Yes	Federal		Within, and outlet for, W-93. Flows through culvert to WW-45A	
WW-46	Tributary to Milwaukee River	Yes	Federal		Within W-93	
WW-47	Tributary to Milwaukee River	Yes	Federal		Within W-93	
WW-48	Tributary to Milwaukee River	Yes	Federal		Within W-96	
WW-49	Tributary to Milwaukee River	Yes	Federal		Within W-95	
WW-50	Unknown	No	Federal (?)		Within mapped somewhat poorly drained soils	
WW-51	Tributary to Fairy Chasm Creek	Yes	Federal		Adjacent to and outlet for W-103	
WW-52	Tributary to Fairy Chasm Creek	Yes	Federal		Potentially flows into WW-51 through long culvert under freeway system	
WW-53	Tributary to Fairy Chasm Creek	Yes	Federal		Connected to WW-54	
WW-54	Tributary to Fairy Chasm Creek	Yes	Federal		Connected to WW-53	
WW-55	Tributary to Fairy Chasm Creek	Yes	Federal		Connected to WW-54 via culvert	
WW-56	Tributary to Fairy Chasm Creek	Yes	Federal		Connected to WW-57 via culvert	
WW-57	Tributary to Fairy Chasm Creek	Yes	Federal		Associated w/W-114; connected to WW-56 via culvert	
WW-58	Tributary to Indian Creek	Yes	Federal		Flows parallel to I-43	
WW-59	Indian Creek	Yes	Federal	INRA	Connected to WW-60 via box culvert	
WW-60	Indian Creek	Yes	Federal		Connected to WW-59 via box culvert	
WW-61	Tributary to Indian Creek	Yes	Federal		Associated with W-135	
WW-62	Tributary to Indian Creek	Yes	Federal		Flows into WW-61	
WW-63	Tributary to Milwaukee River	No	Federal		Flows into WW-64	
WW-64	Tributary to Milwaukee River	Yes	Federal		Provides outlet for W-140	
WW-65	Tributary to Milwaukee River	Yes	Federal			
WW-66	Tributary to Milwaukee River	Yes	Federal		Associated with W-146	
WW-67	Tributary to Milwaukee River	Yes	Federal		Provides outlet for W-148	
WW-68	Tributary to Milwaukee River	Yes	Federal		Provides outlet for W-149	
WW-69	Tributary to Milwaukee River	Yes	Federal		Provides outlet for W-152	
WW-70	Tributary to Milwaukee River	Yes	Federal		Connected to WW-68 and WW-69	
WW-71	Tributary to Milwaukee River	No	Federal		Connected to WW-72 via culvet	
WW-72	Tributary to Milwaukee River	No	Federal		Connected to WW-71 via culvet	
WW-73	Tributary to Milwaukee River	Yes	Federal		Associated with W-157; connected to WW-74	
WW-74	Tributary to Milwaukee River	Yes	Federal		Associated with W-158; connected to WW-73	
WW-75	Milwaukee River	Yes	Federal	PEC - ADID	OHWM along east bank mapped; noise reduction wall divides freeway and river	
WW-76	Ulao Creek	Yes	Federal	PEC	Associated with W-43	
WW-77	Ulao Creek	Yes	Federal	PEC	Associated with W-44	

KEY

State Navigable = Appears to be navigable based on the standards of the State of Wisconsin Jurisdiction = Professional opinion of USACE jurisdiction (JD) based on federal criteria SEWRPC Corridor = based on SEWRPC mapping / criteria: PEC is Primary Environmental Corridor;

 $\underline{\mathtt{SEC}}$ is Secondary Environmental Corridor; $\underline{\mathsf{INRA}}$ is Isolated Natural Resource Area

Wetland that is designated as an ADID (Advanced Identification) Wetland by the U.S. Environmental Protection Agency

Preliminary Wetland & Waterway Report

Milwaukee and Ozaukee Counties, WI

FIGURES





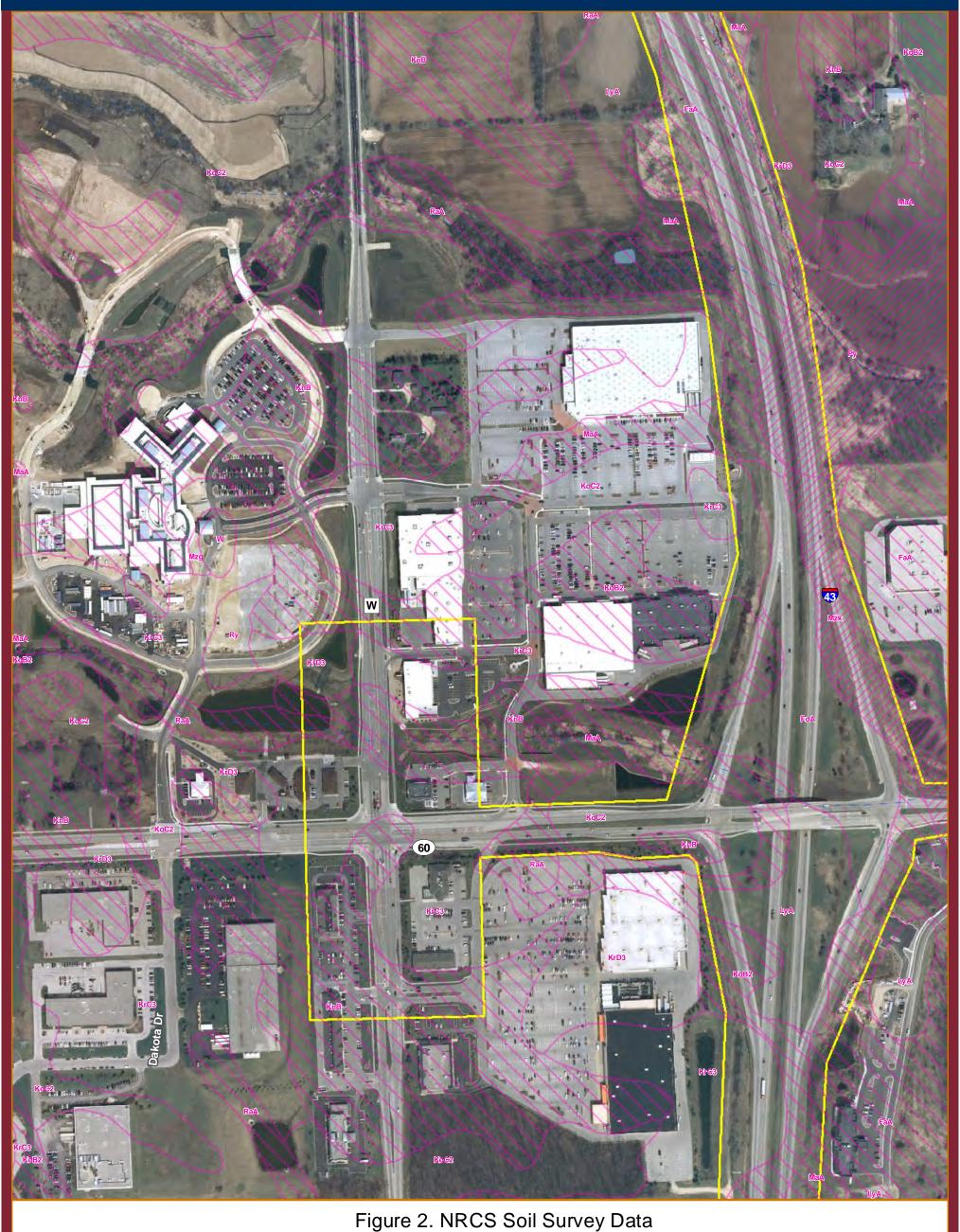


Figure 2. NRCS Soil Survey Data Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Location

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

Last Modified: September 23, 2012 0 100 200

Feet

<u>Legend</u>

// IH43 Study Corridor NRCS Soil Survey Data

Whydric Soils

Possible Hydric Inclusions

Non-Hydric Soils DNR 24k Hydrography

Perennial Stream Intermittent Stream

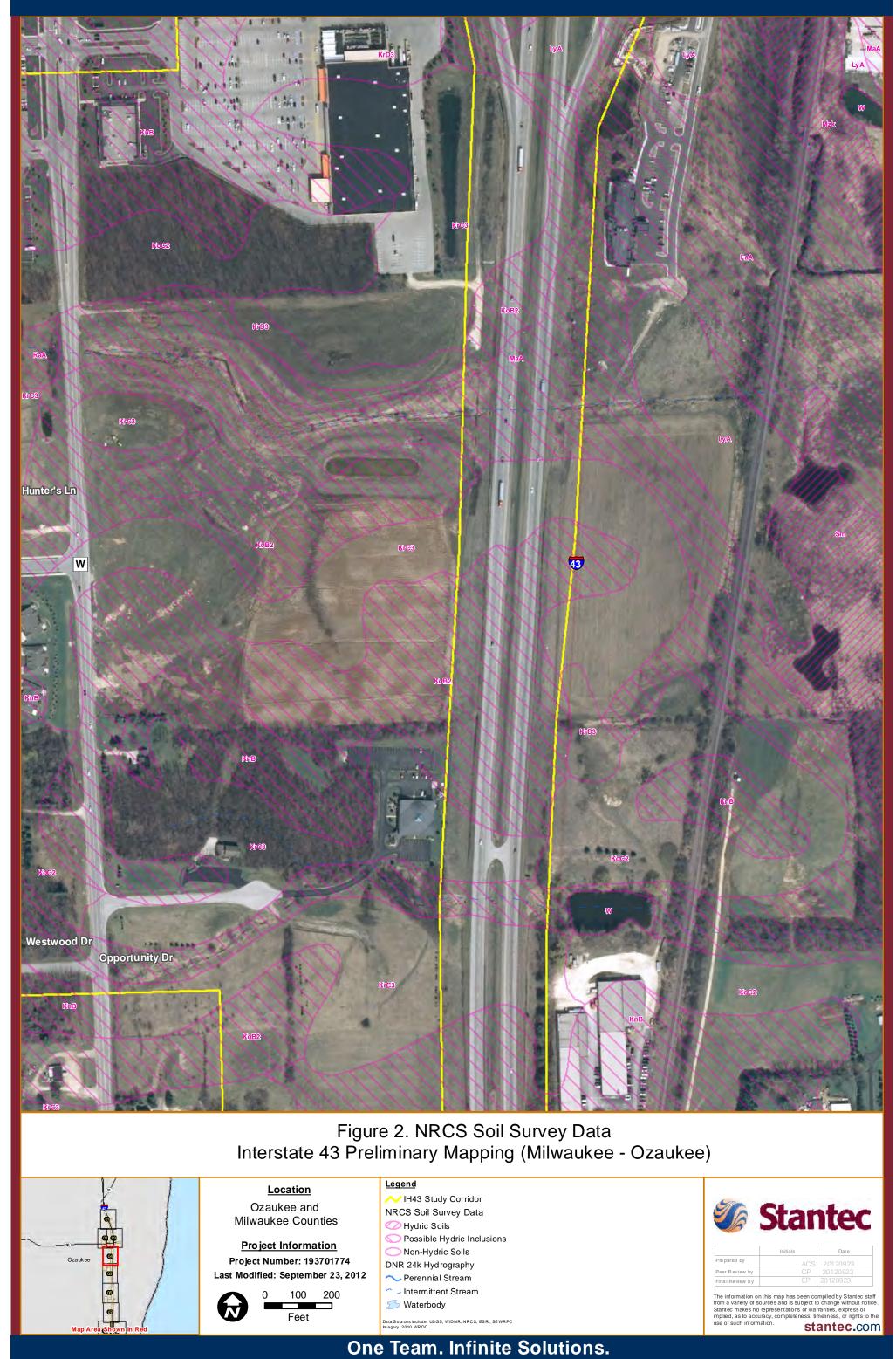
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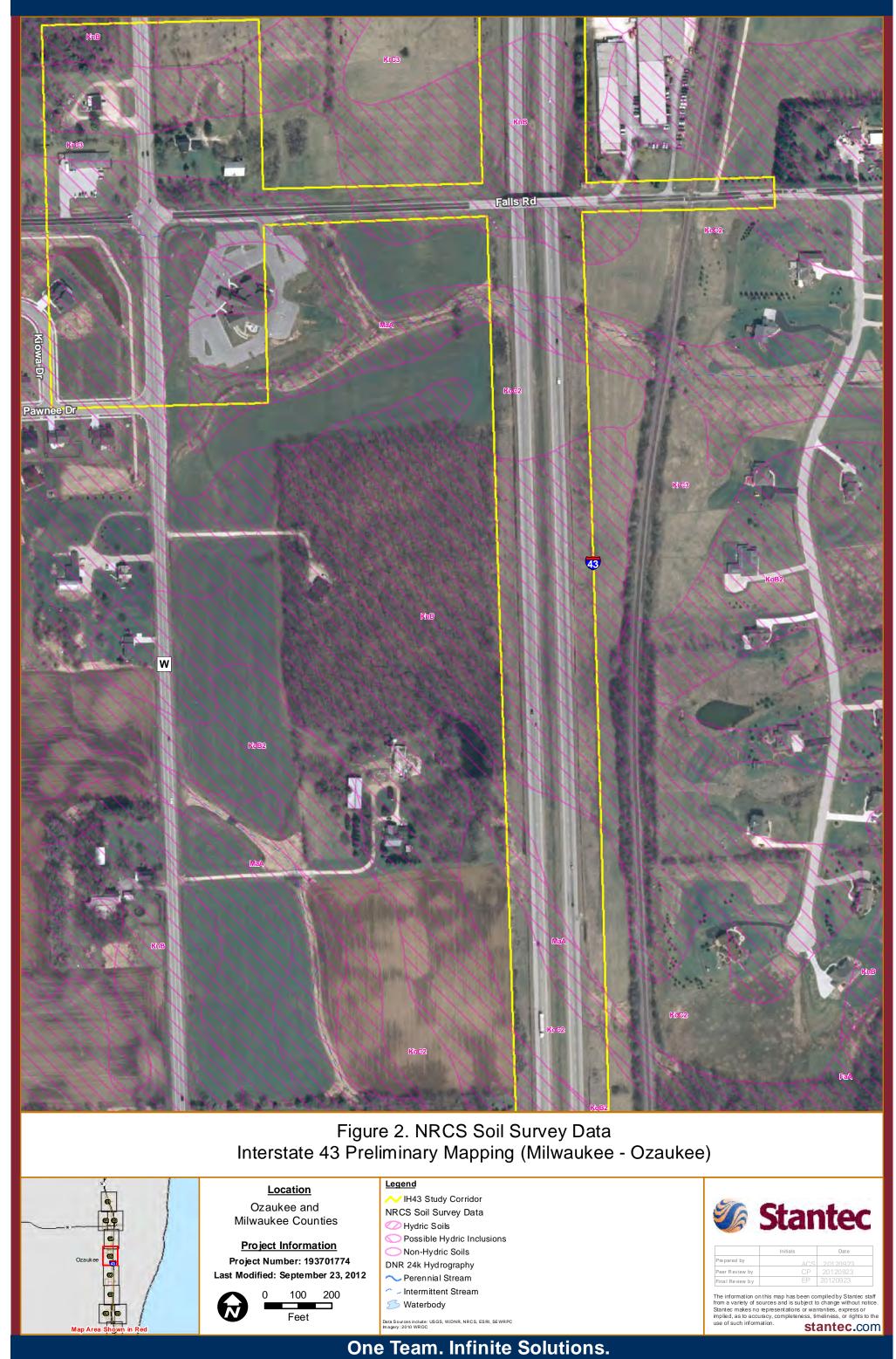


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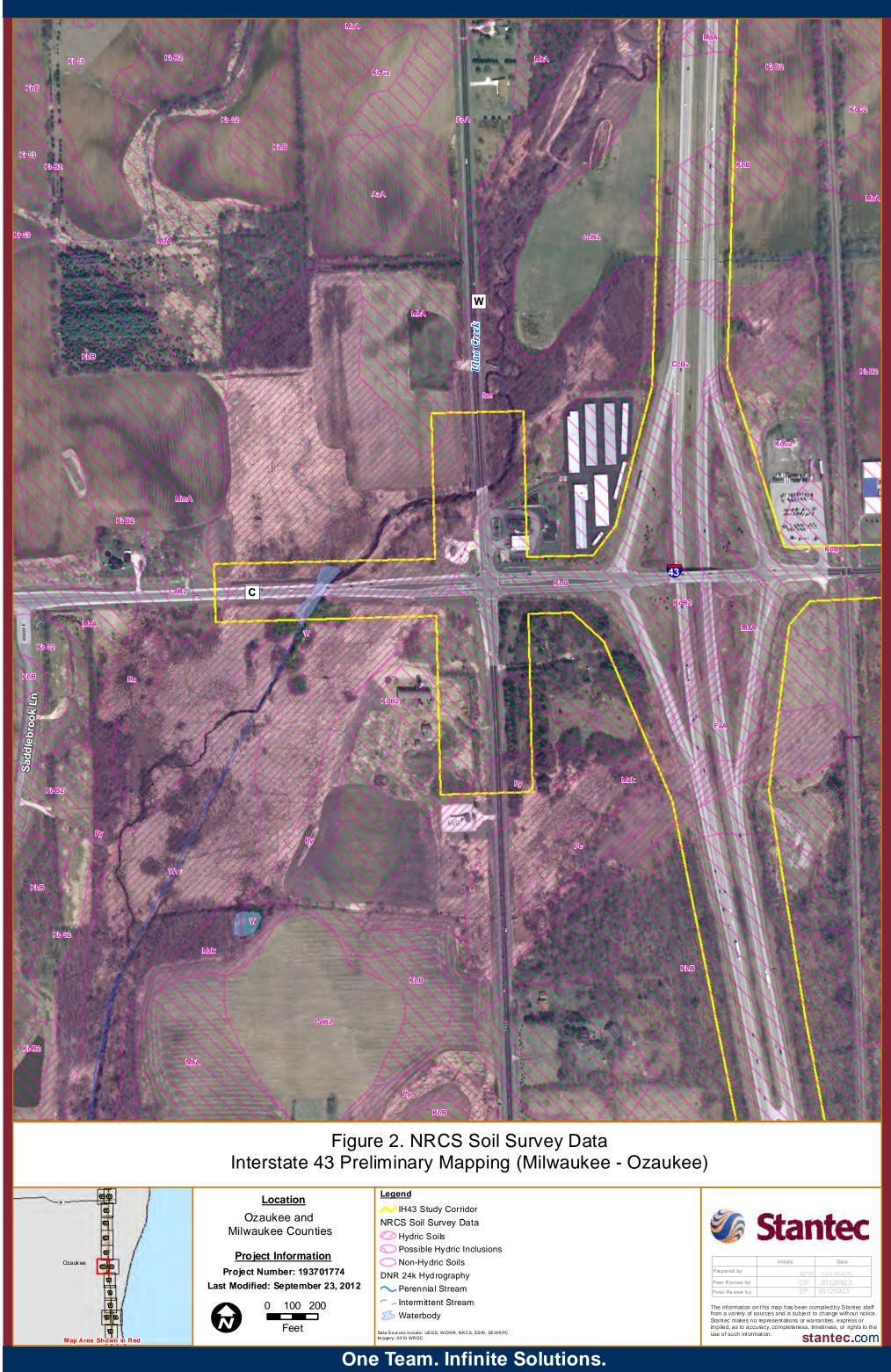


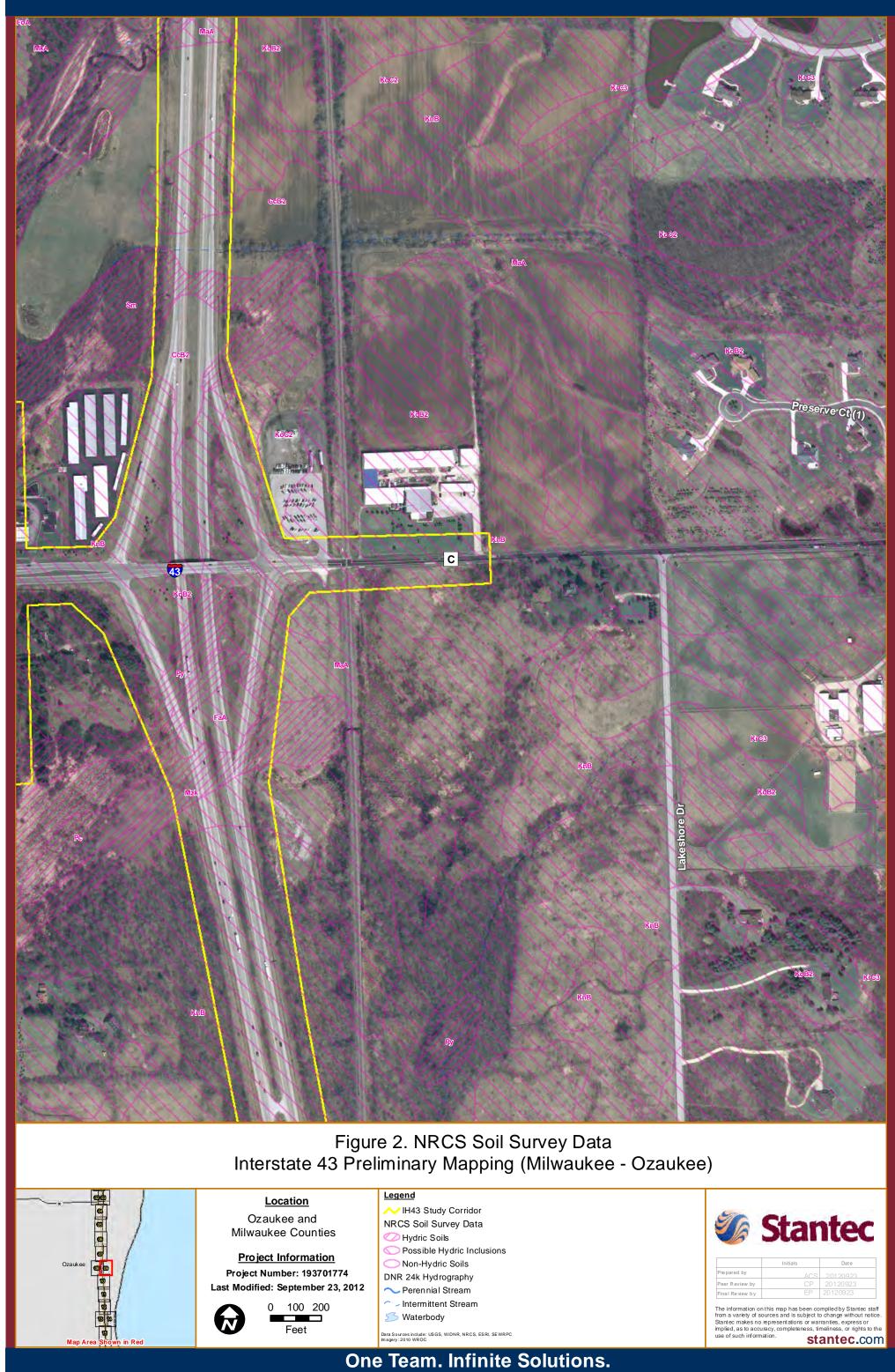


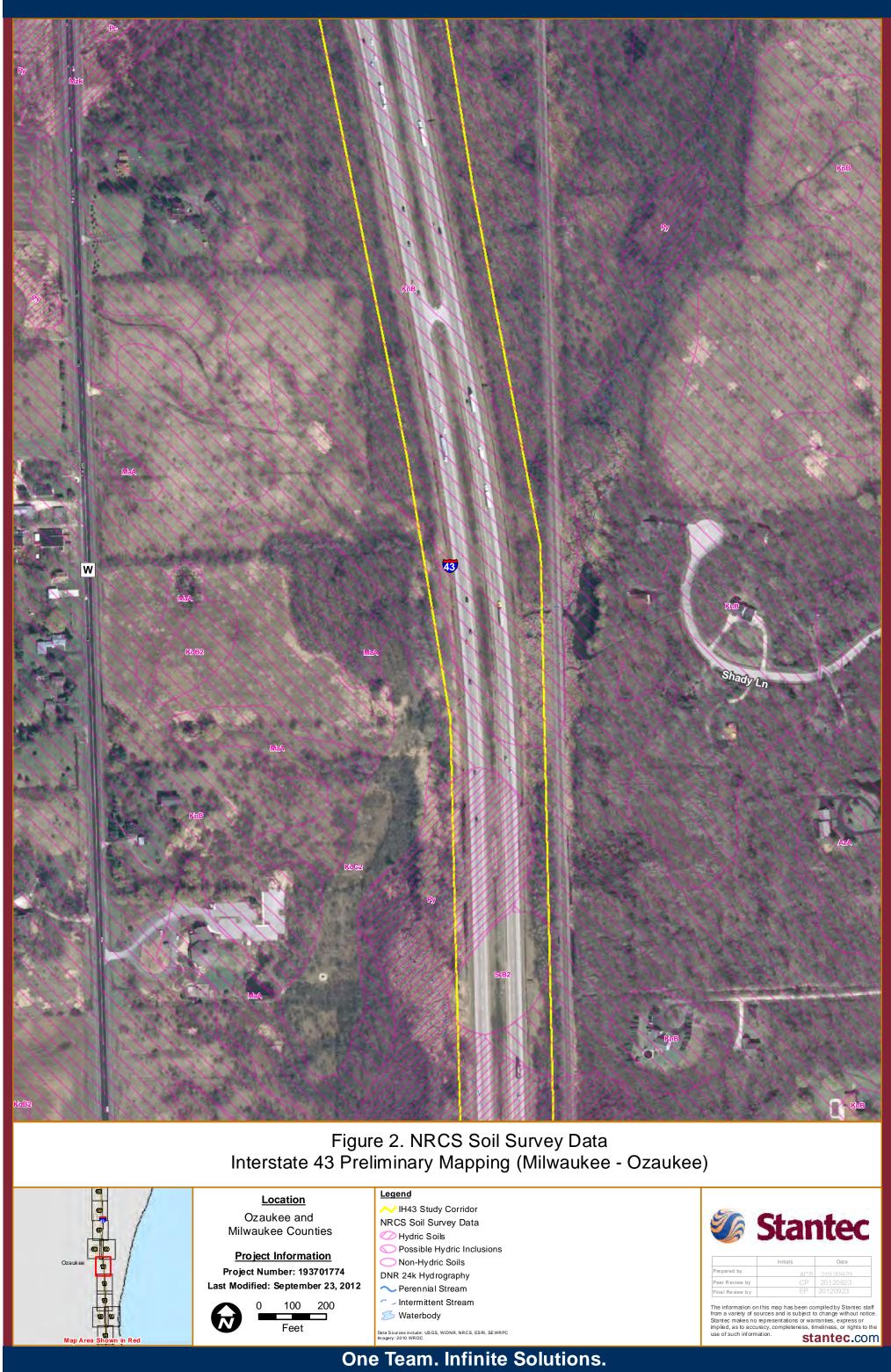
















Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)

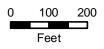


Location

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774 Last Modified: September 23, 2012





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// IH43 Study Corridor NRCS Soil Survey Data

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Possible Hydric Inclusions

Non-Hydric Soils DNR 24k Hydrography

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Waterbody Data Sources include: USGS, WIDNR, NRCS, ESRI, SEWRPC Imagery: 2010 WROC

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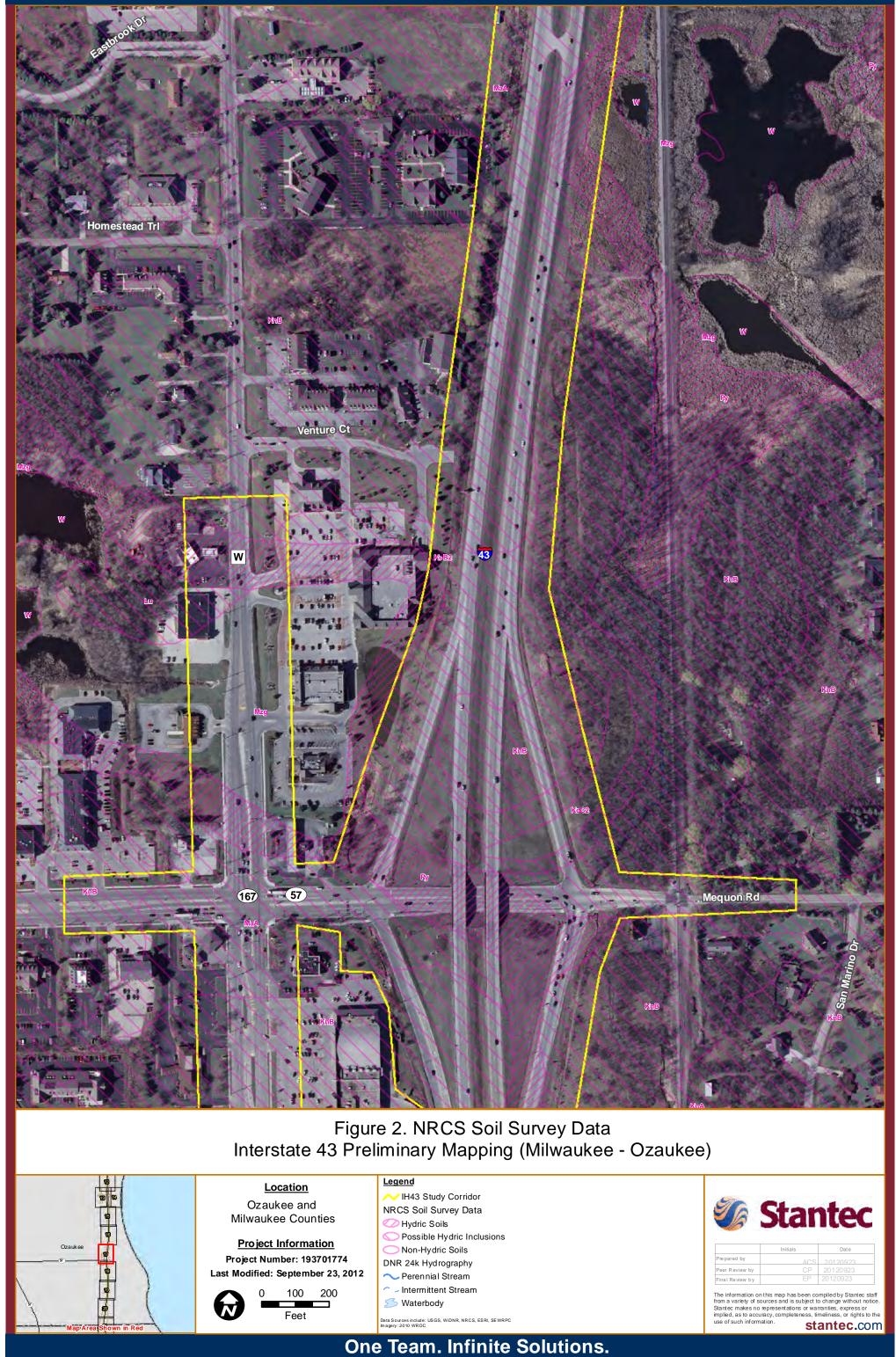
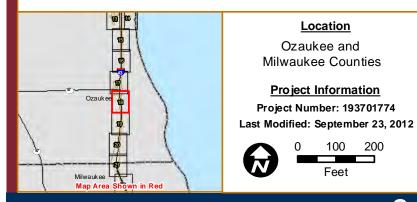




Figure 2. NRCS Soil Survey Data Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Location

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

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<u>Legend</u>

// IH43 Study Corridor NRCS Soil Survey Data

Whydric Soils

Possible Hydric Inclusions Non-Hydric Soils

DNR 24k Hydrography

Perennial Stream Intermittent Stream

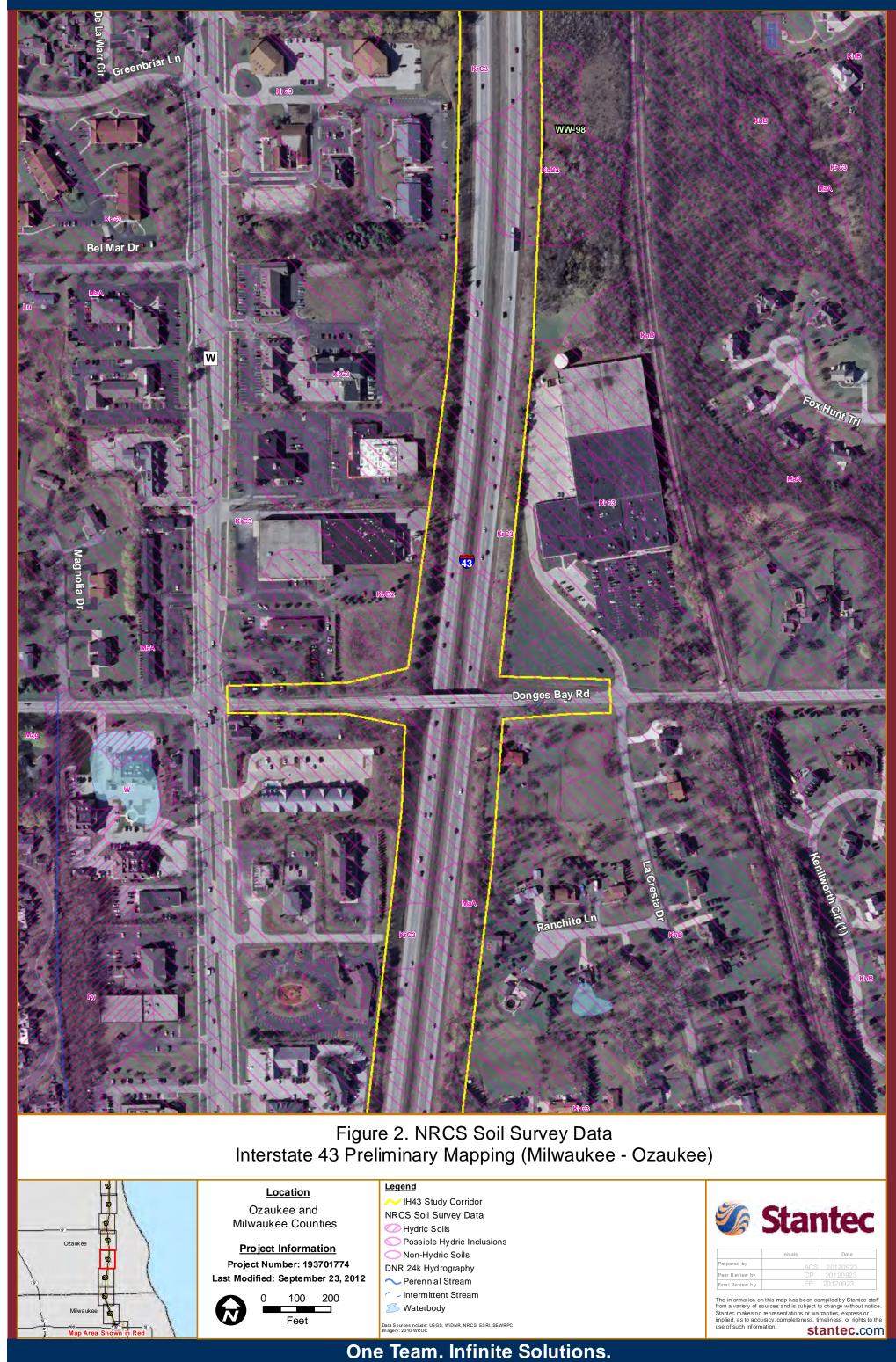
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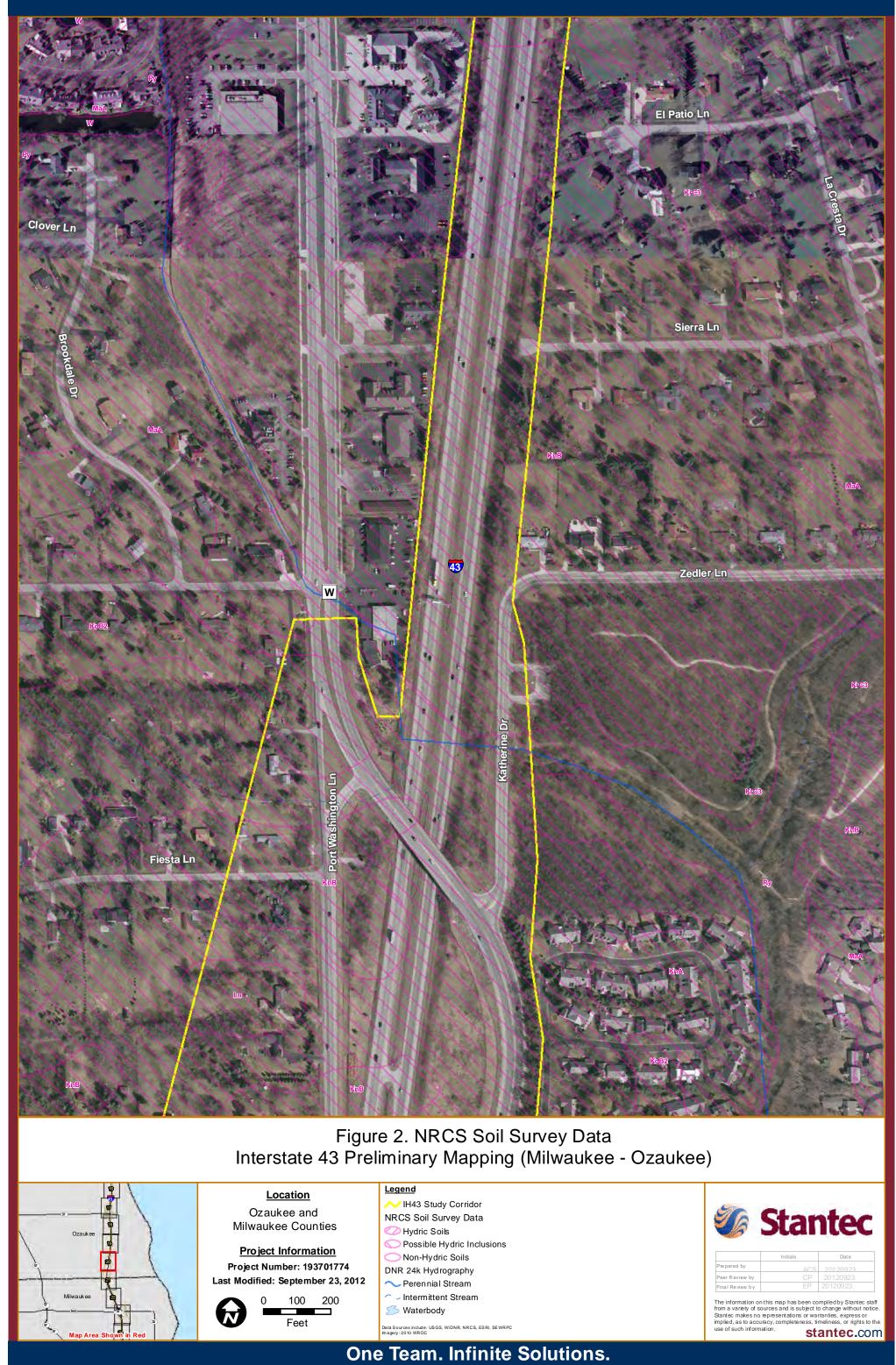
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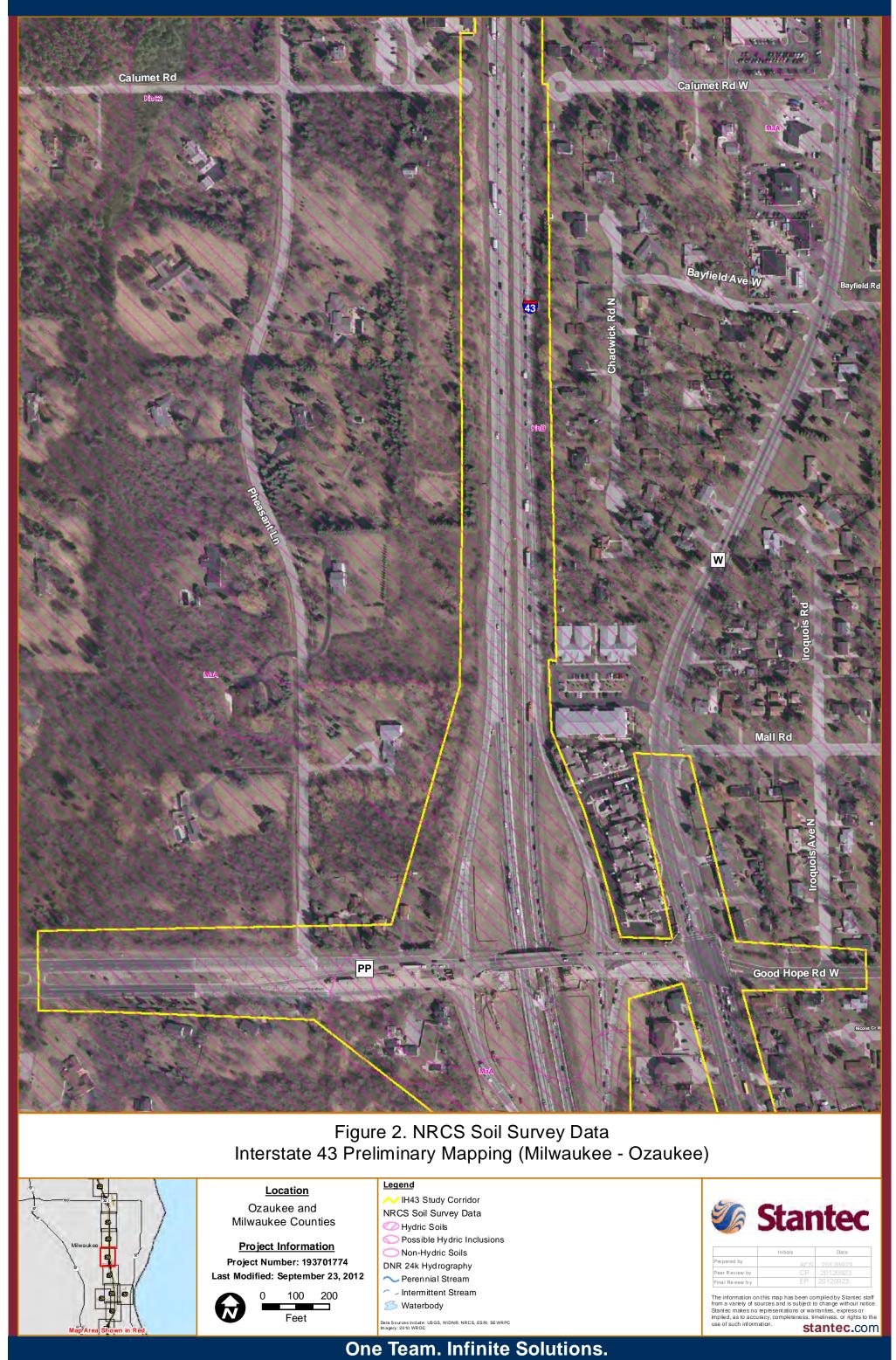


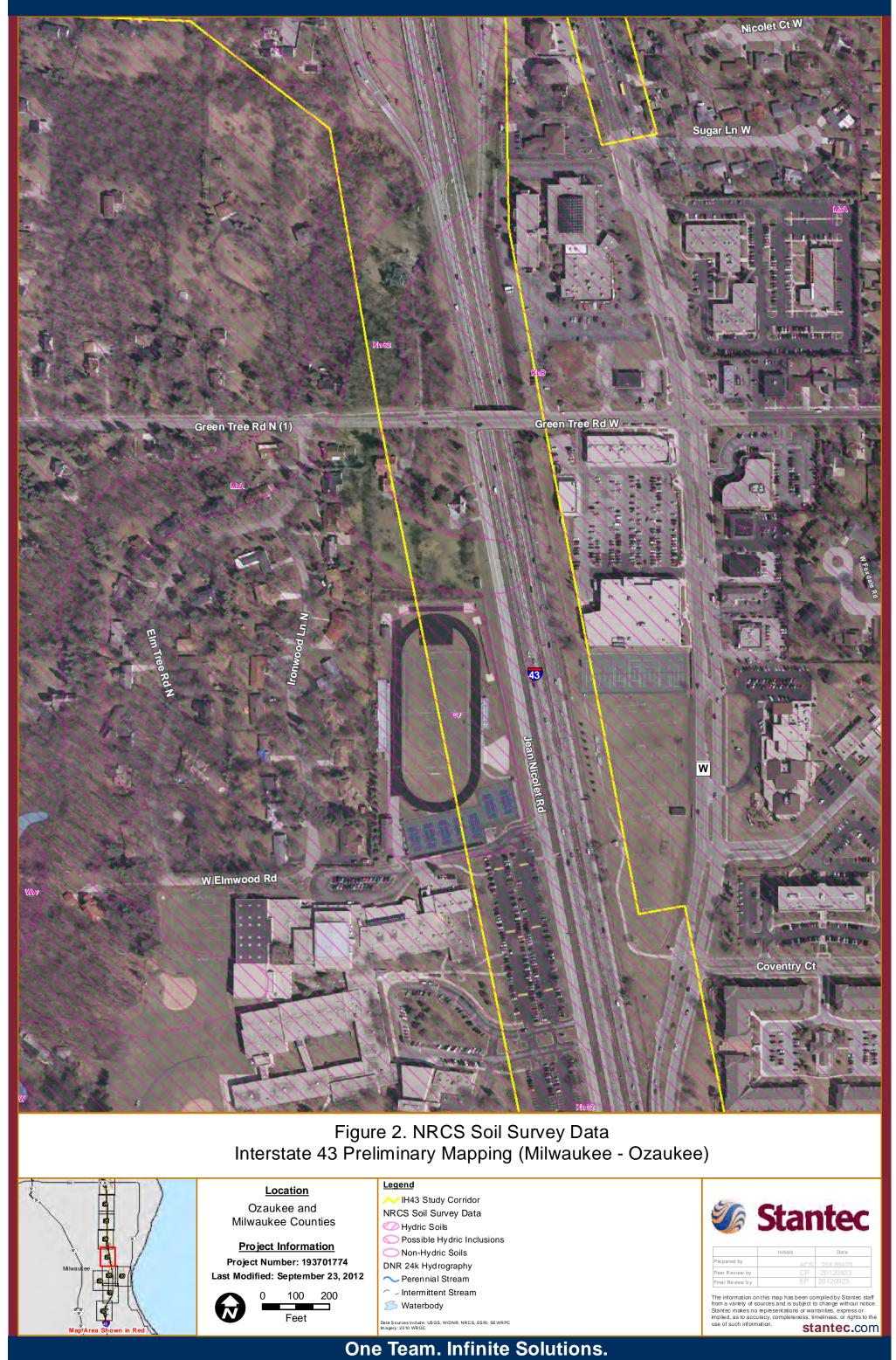






















Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

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Last Modified: September 23, 2012 100 200

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✓ IH43 Study Corridor NRCS Soil Survey Data

Hydric Soils

Possible Hydric Inclusions Non-Hydric Soils

DNR 24k Hydrography

Nerennial Stream Intermittent Stream

Waterbody Data Sources include: USGS, WIDNR, NRCS, ESRI, SEWRPC Imagery: 2010 WROC

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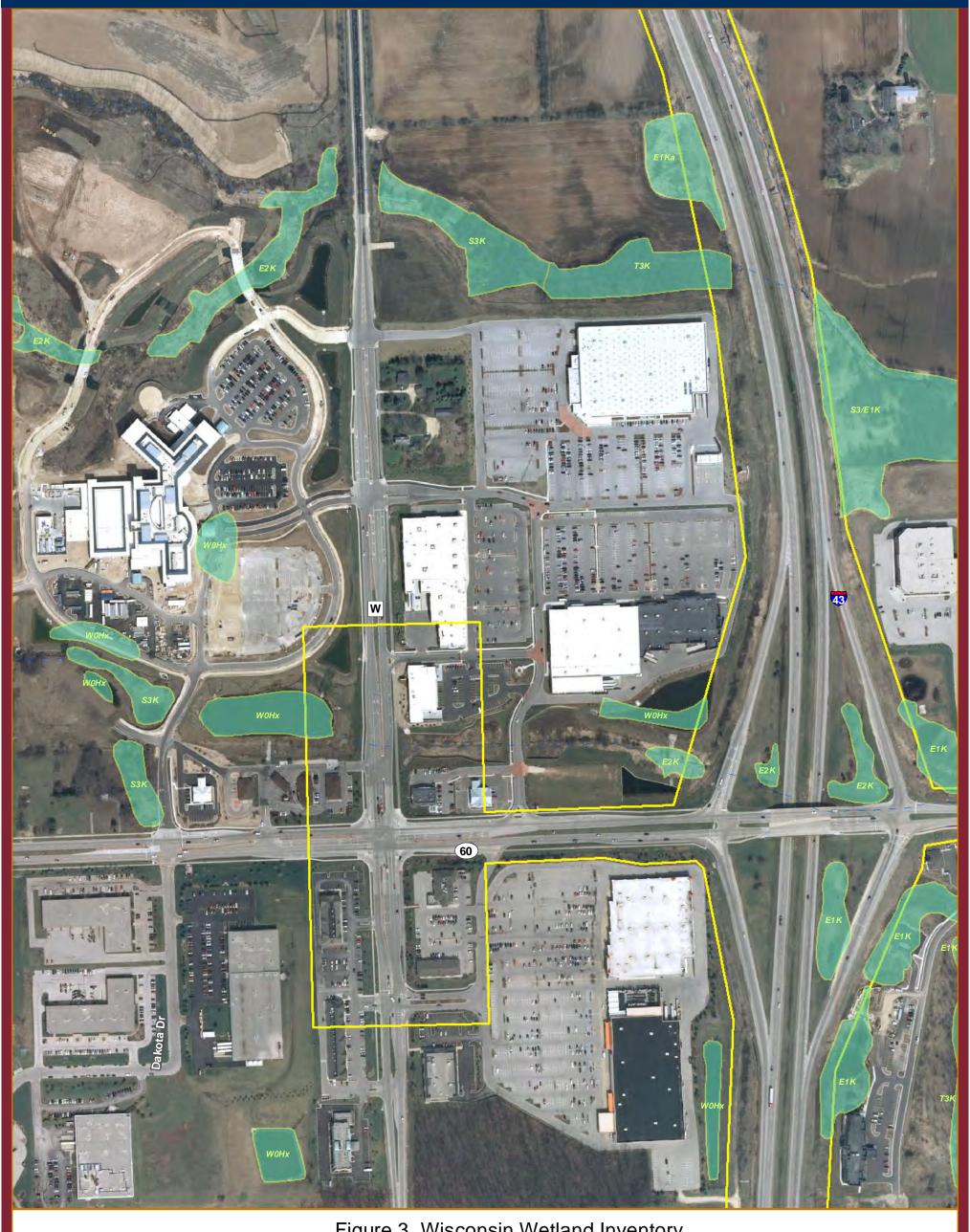
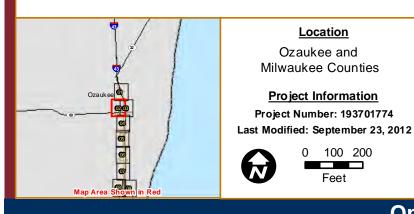


Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

0 100 200 Feet

<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography

Nerennial Stream Intermittent Stream





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Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



<u>Location</u>

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774 Last Modified: September 23, 2012

0 100 200 Feet

<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography
Perennial Stream

Intermittent Stream

Data Sources include: USGS, WiDNR, ESRI, SEWRPC Imageny: 2010 WROC



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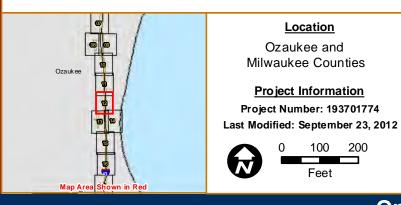








Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

Feet

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<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography > Perennial Stream

Intermittent Stream



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Data Sources include: USGS, WiDNR, ESRI, SEWRPC Imagery: 2010 WROC

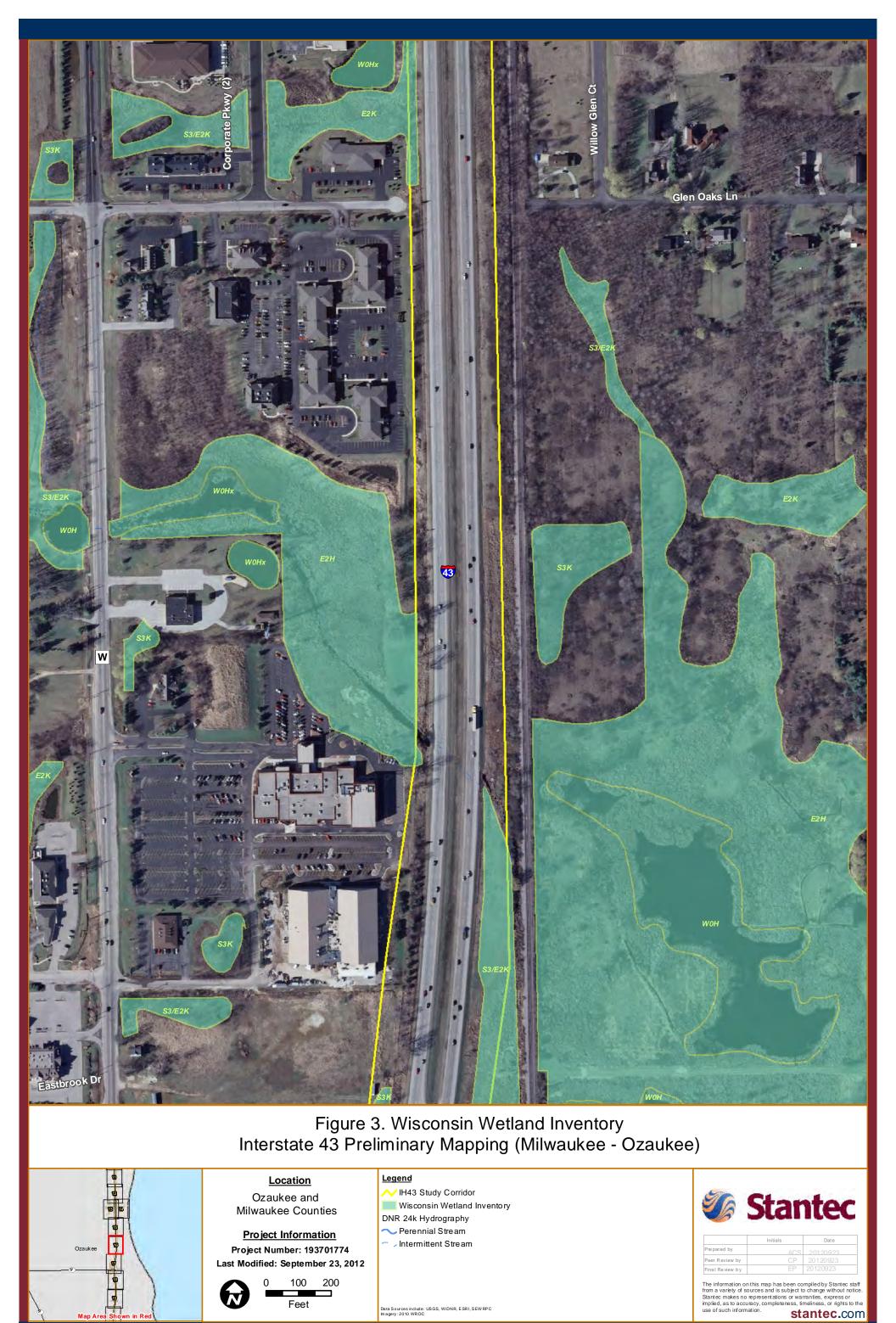
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Data Sources include: USGS, WiDNR, ESRI, SEWRPC Imagery: 2010 WROC

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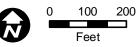


Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774



<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography > Perennial Stream

Intermittent Stream

Data Sources include: USGS, WiDNR, ESRI, SEWRPC Imagery: 2010 WROC One Team. Infinite Solutions.



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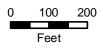
Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information
Project Number: 193701774
Last Modified: September 23, 2012





<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography

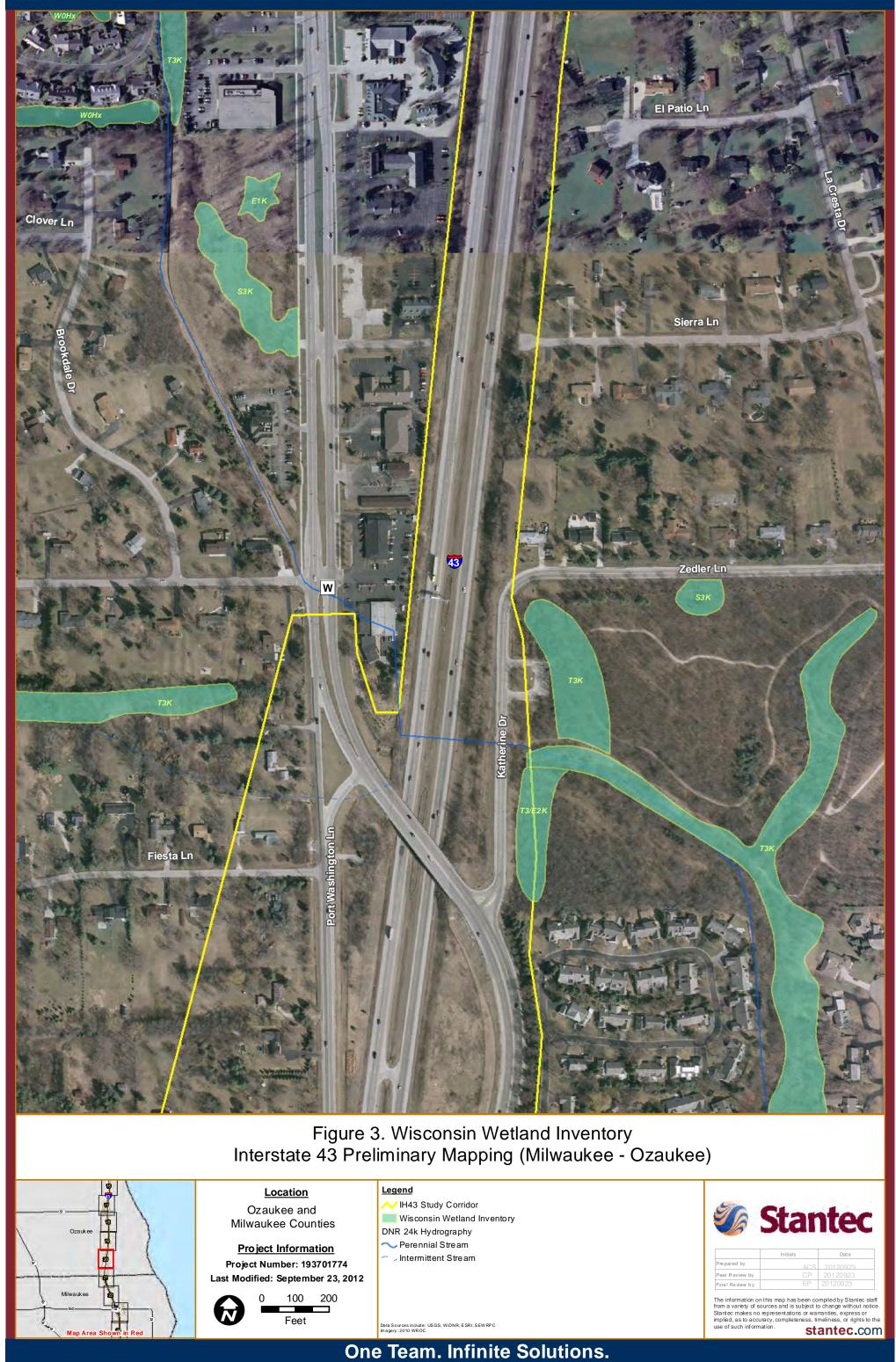
Perennial Stream
Intermittent Stream

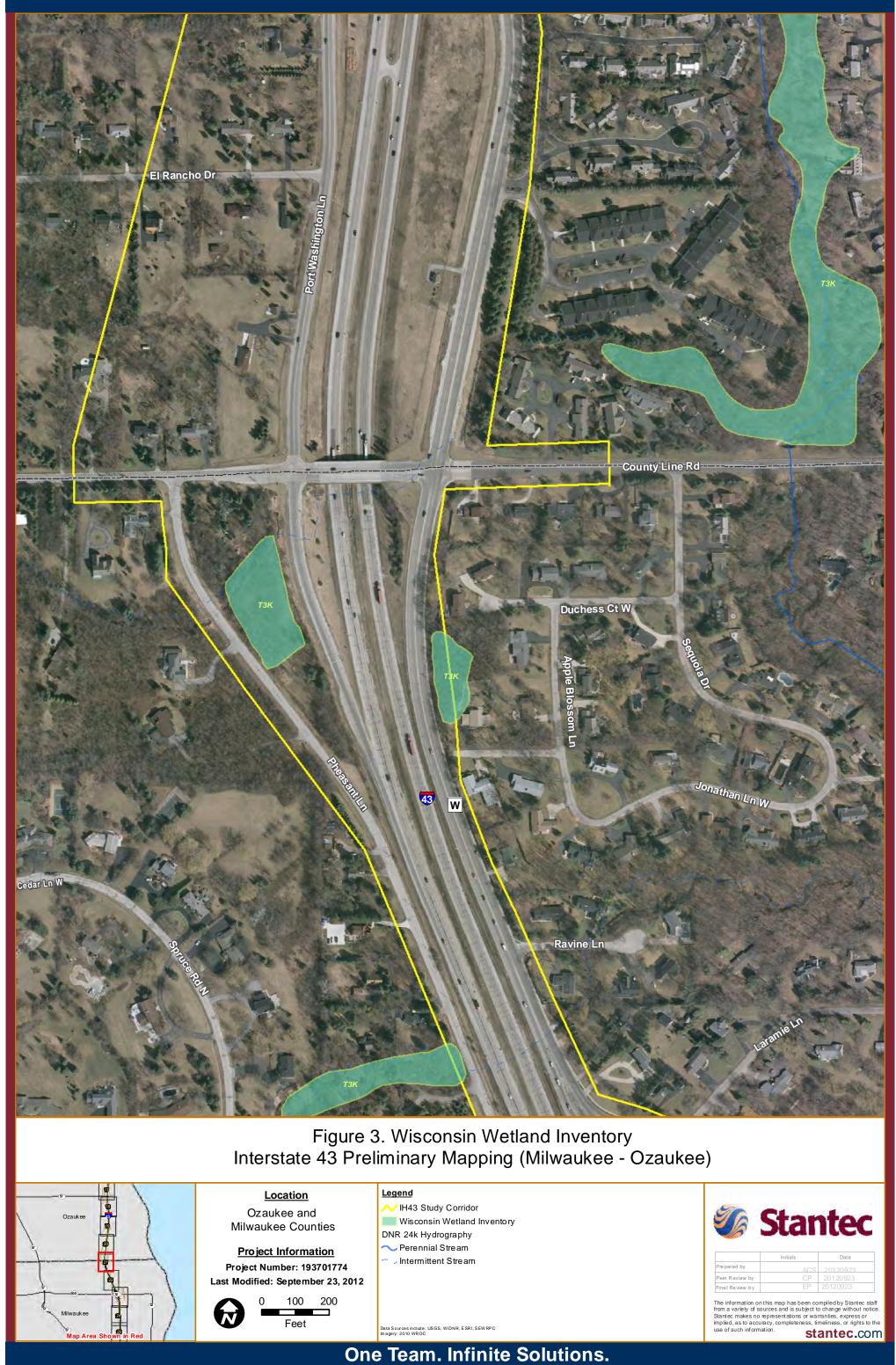




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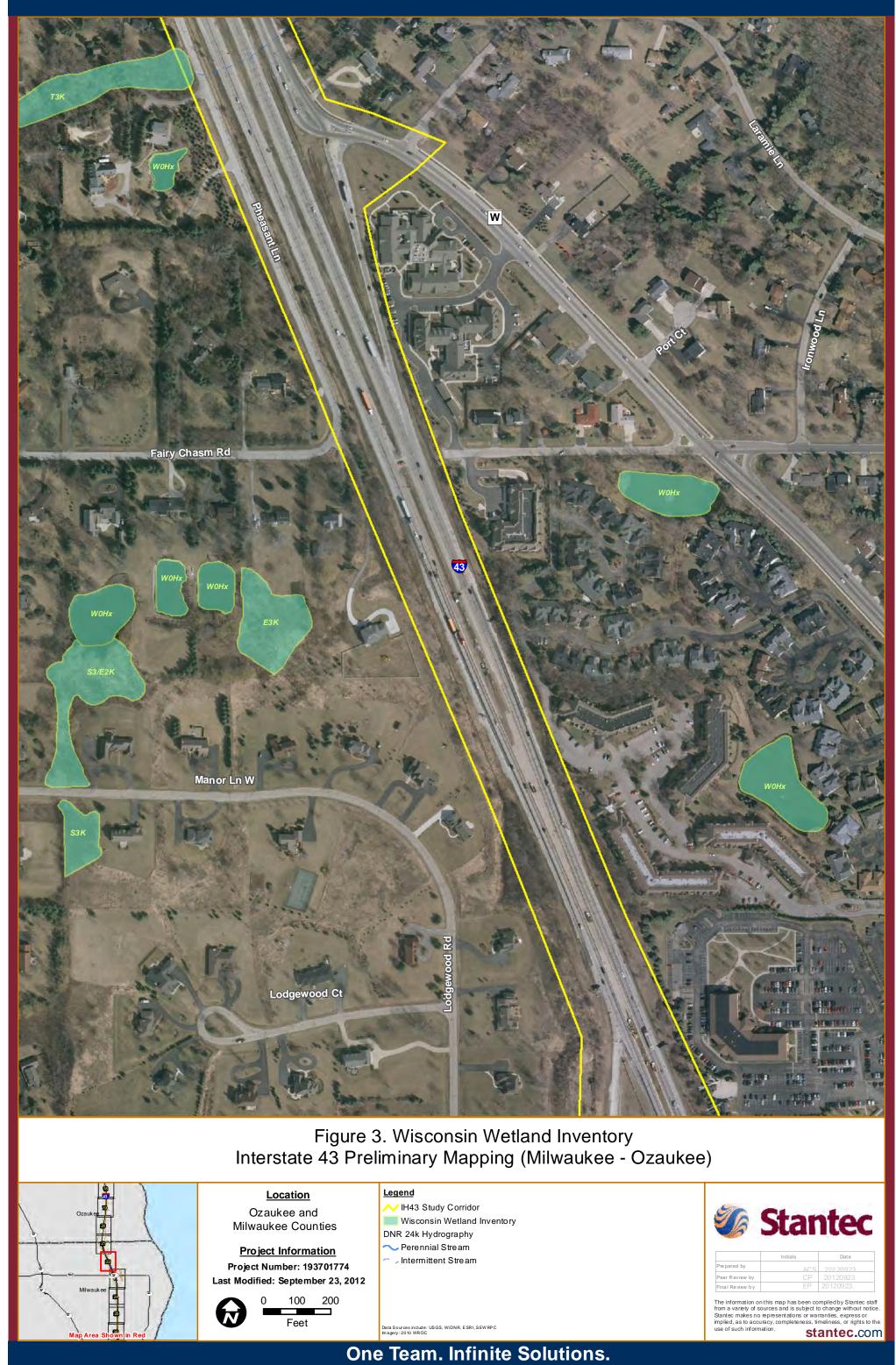






Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774 Last Modified: September 23, 2012

100 200 Feet

<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography Nerennial Stream

Intermittent Stream

Data Sources include: USGS, WiDNR, ESRI, SEW RPC Imagery: 2010 WROC One Team. Infinite Solutions.



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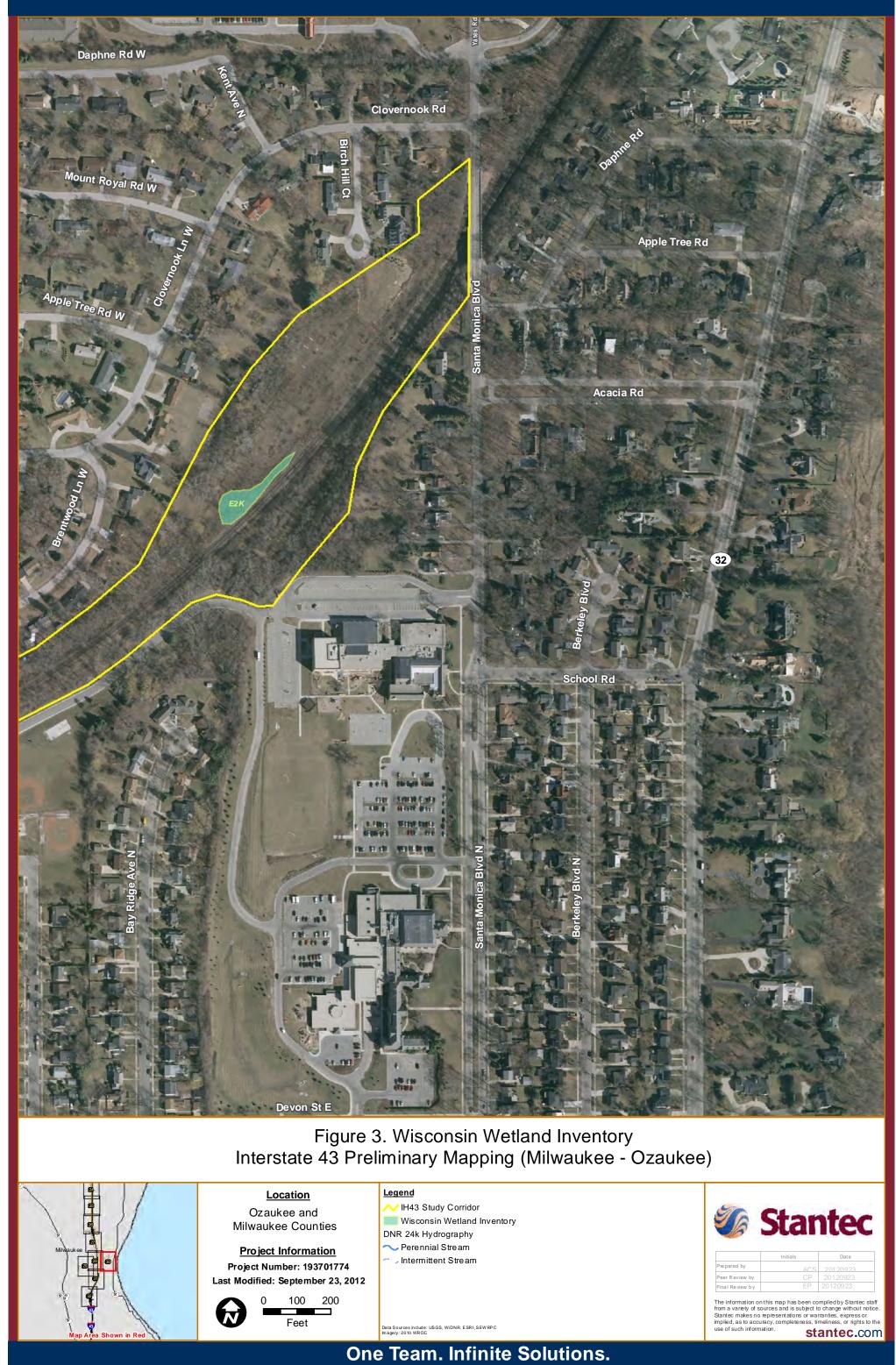






Figure 3. Wisconsin Wetland Inventory Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Location

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774

Feet

Last Modified: September 23, 2012 100 200

<u>Legend</u>

✓ IH43 Study Corridor

Wisconsin Wetland Inventory

DNR 24k Hydrography Nerennial Stream

Intermittent Stream

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Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Location

Ozaukee and Milwaukee Counties

Project Information Project Number: 193701774 Last Modified: September 23, 2012



<u>Legend</u>

✓ IH43 Study Corridor
Field Delineated Wetlands

Field Delineated Wetland Area

Field Delineated Waterway

Field Delineated Waterway BankField Delineated Waterbodies

Secondary Environmental Corridor

Data Sources include: USGS, WIDNR, ESRI, SEWRPO Imagery: 2010 WR OC

DNR 24k Hydrography

Perennial Stream

Intermittent Stream

Stantec

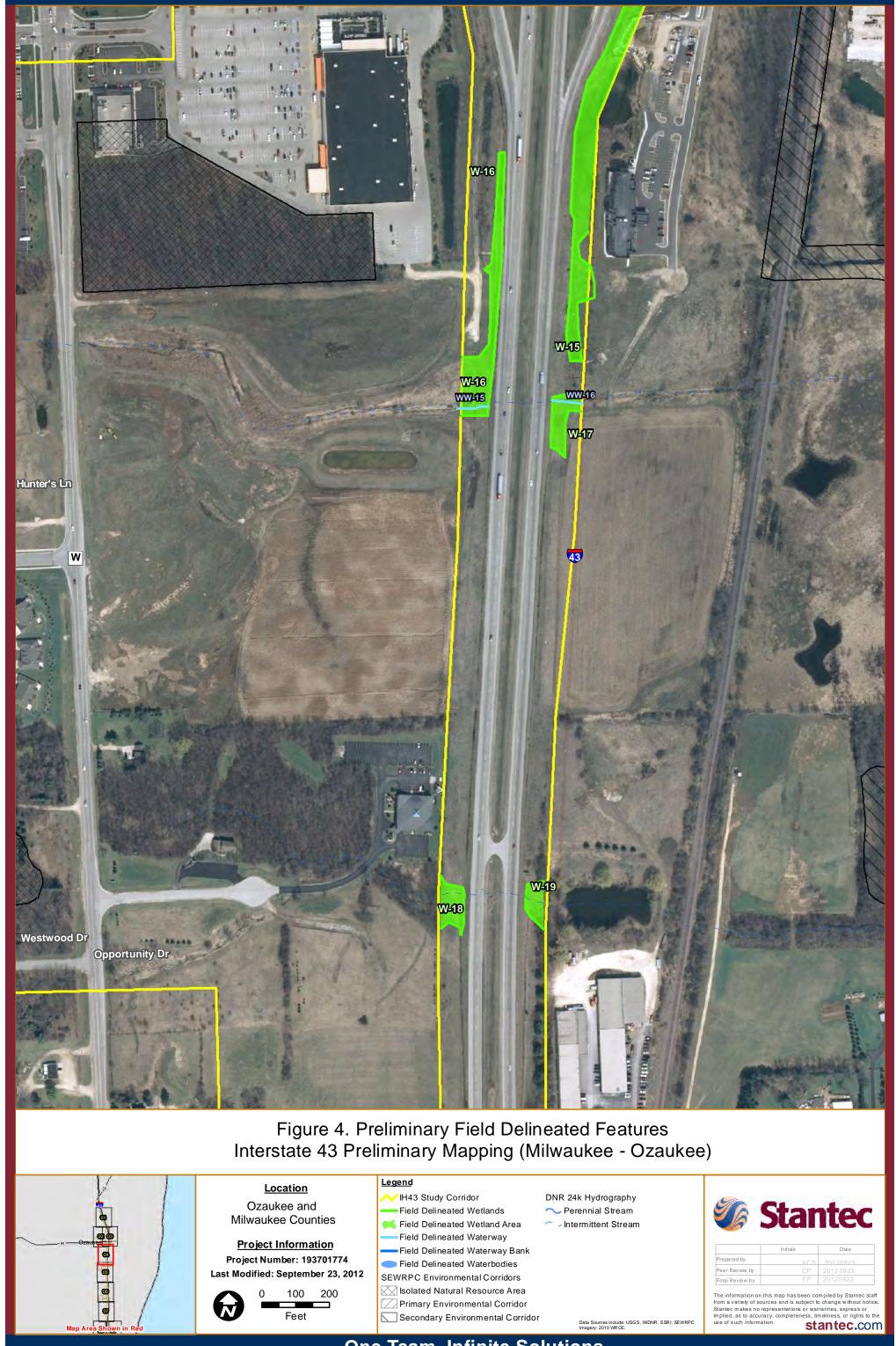
Intials Date
Prepared by ACS 20120923

Final Review by EP 20120923

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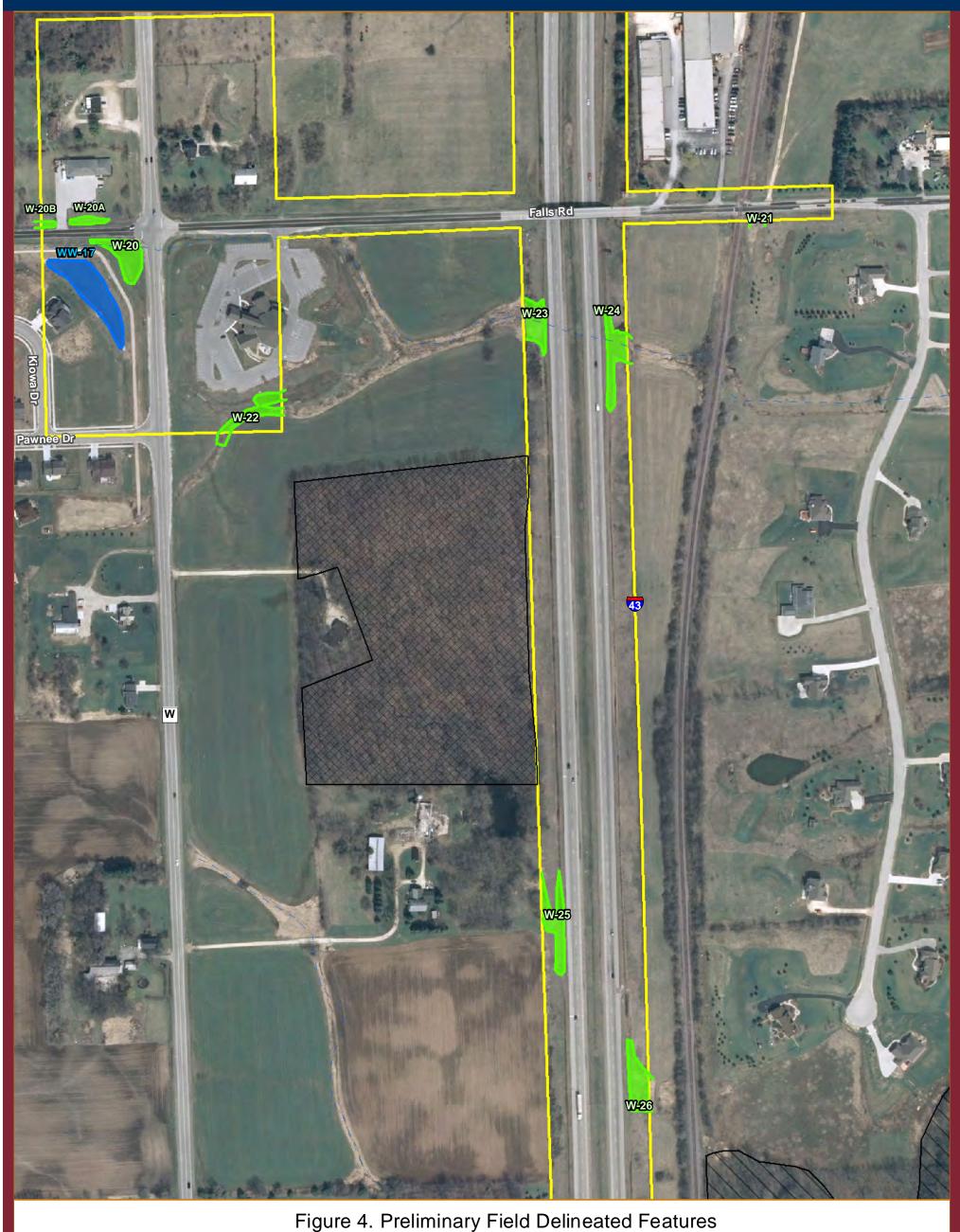
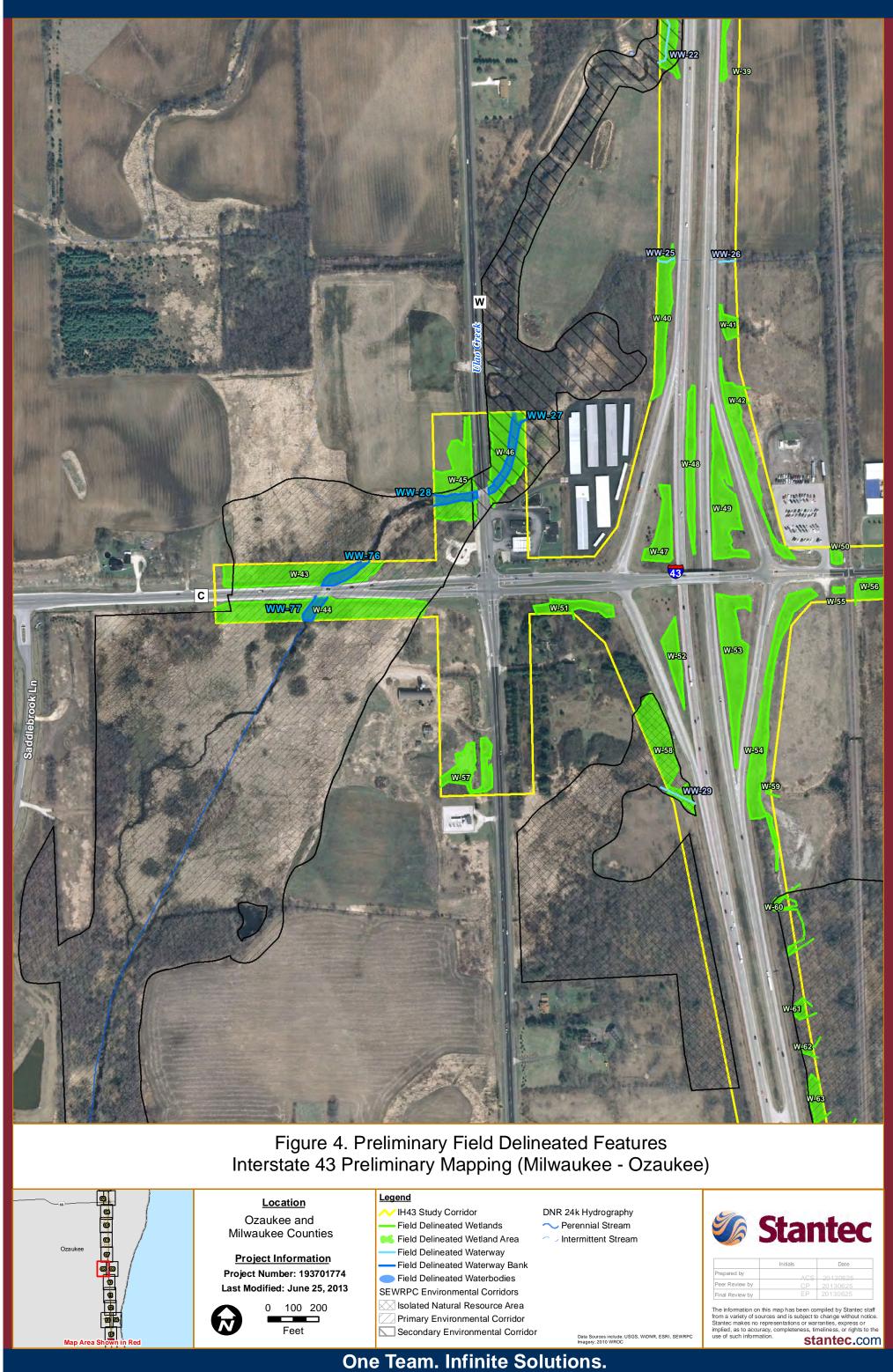


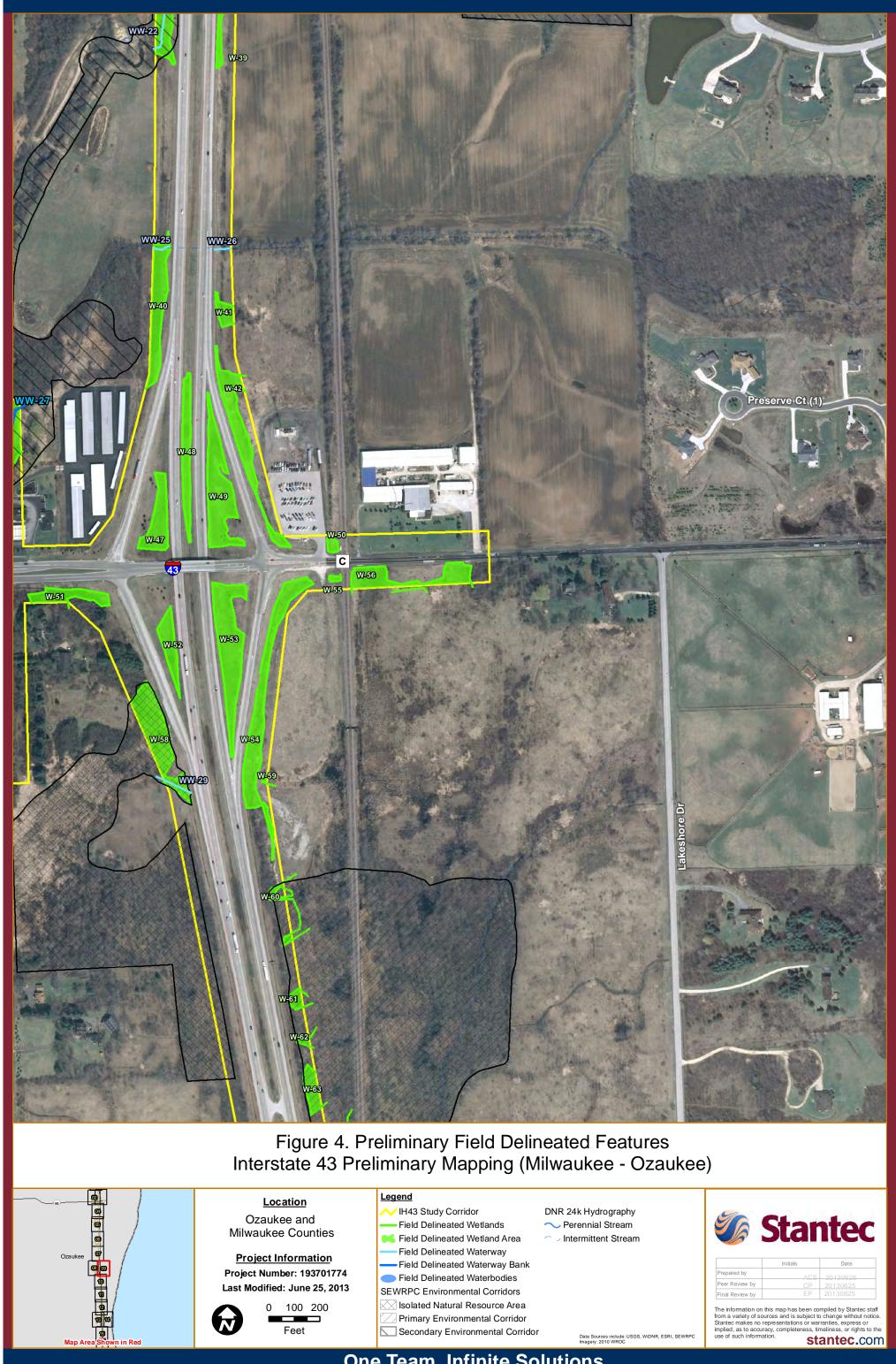
Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)

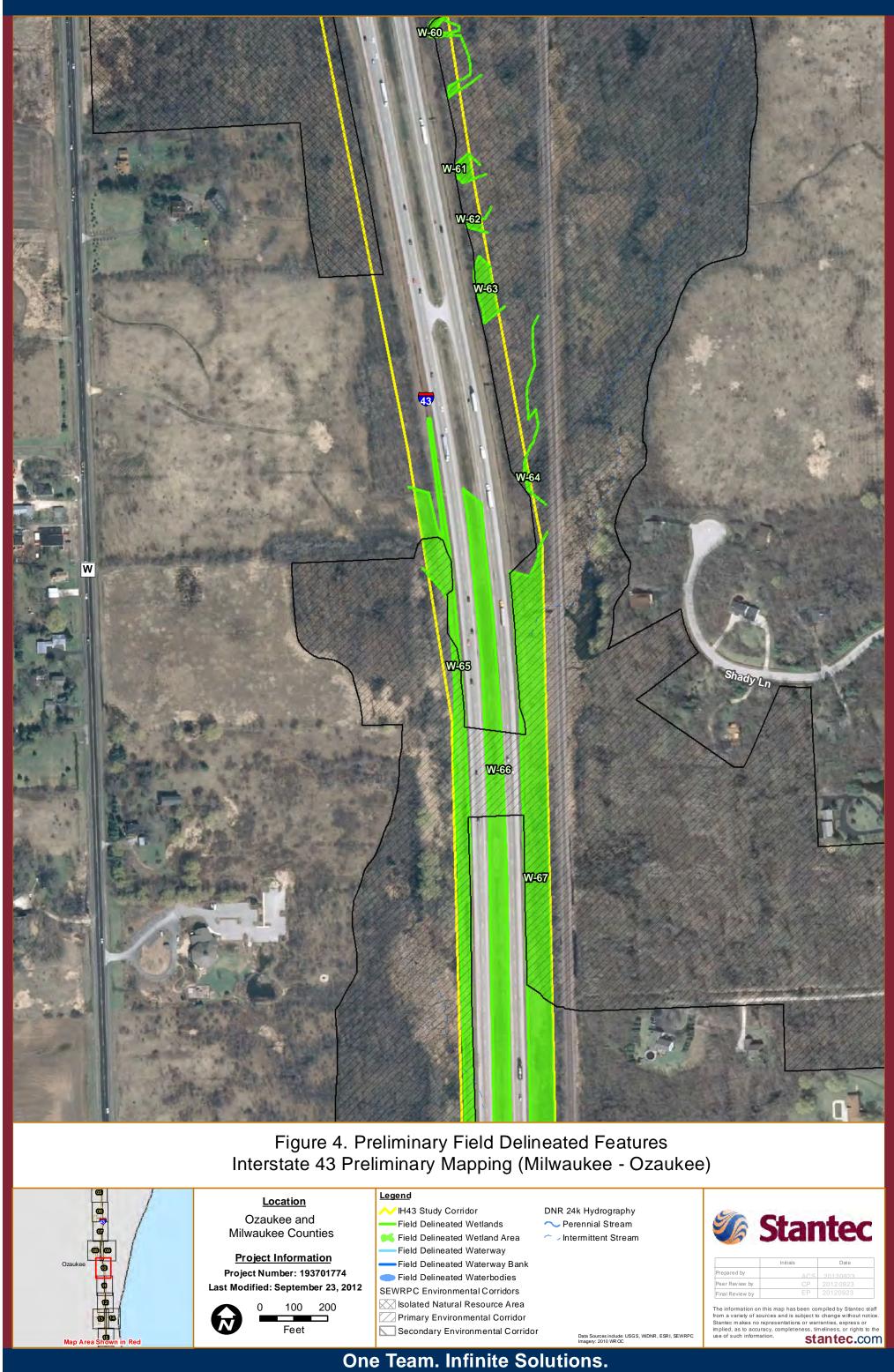












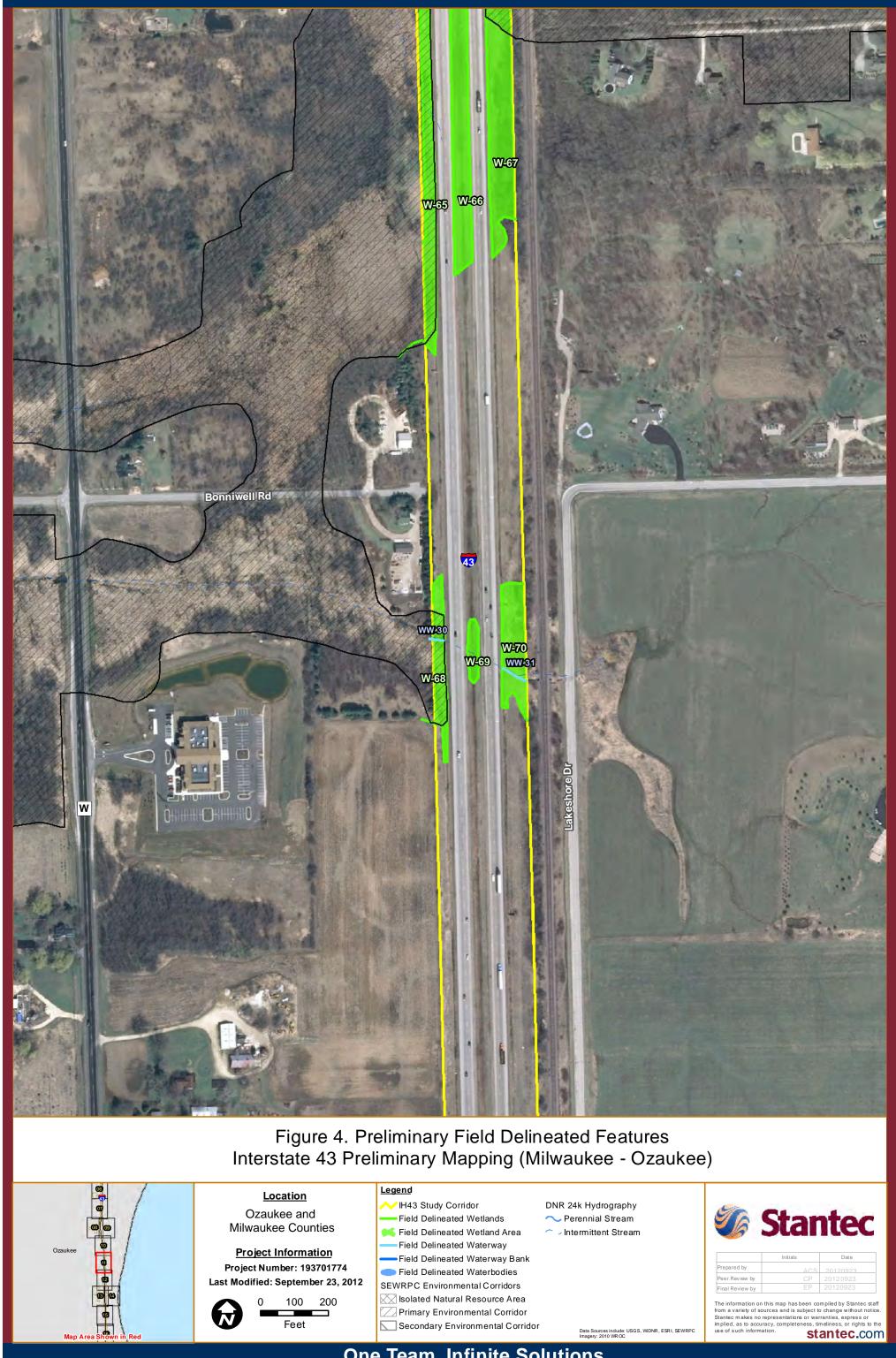




Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



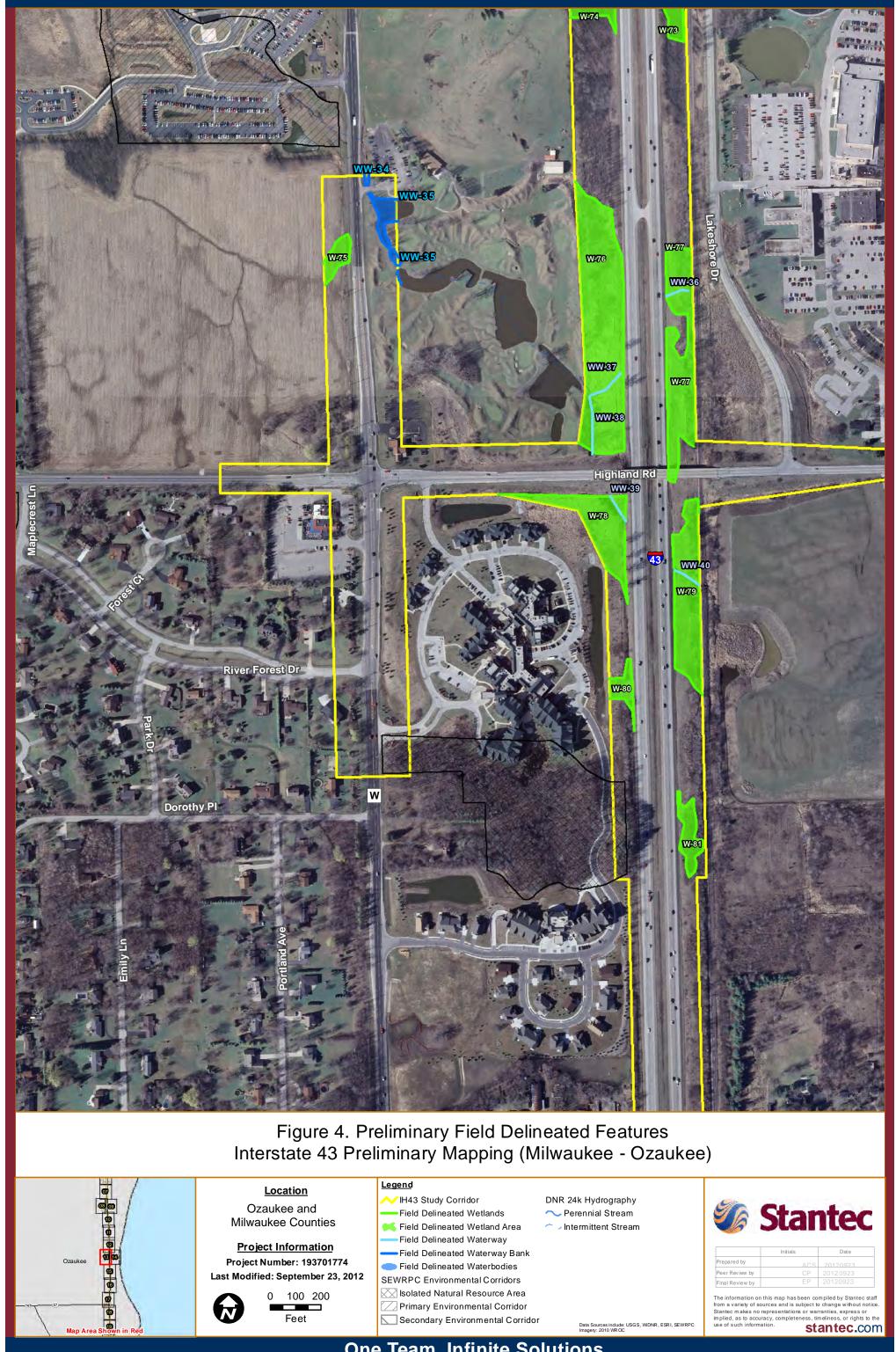
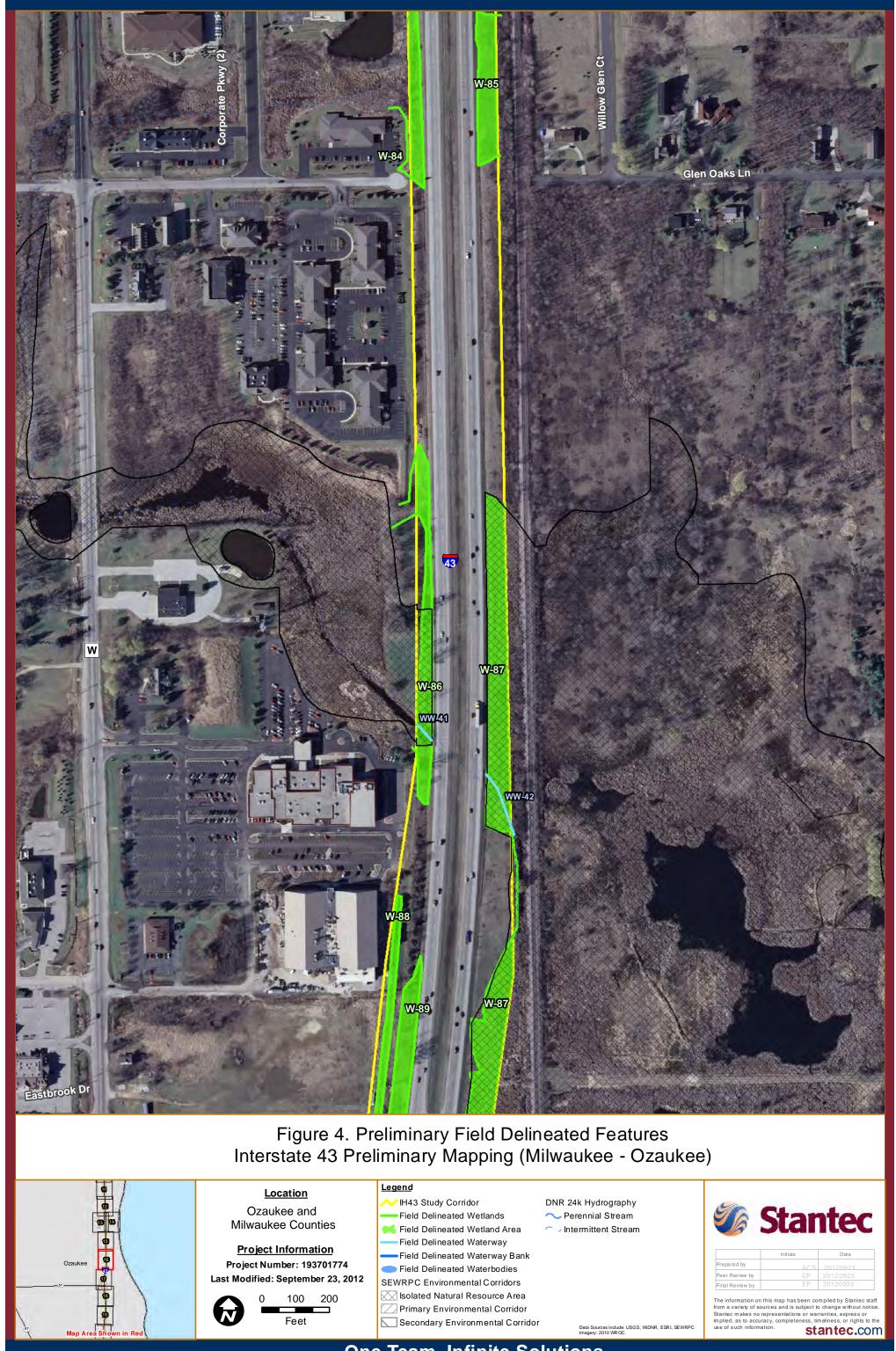


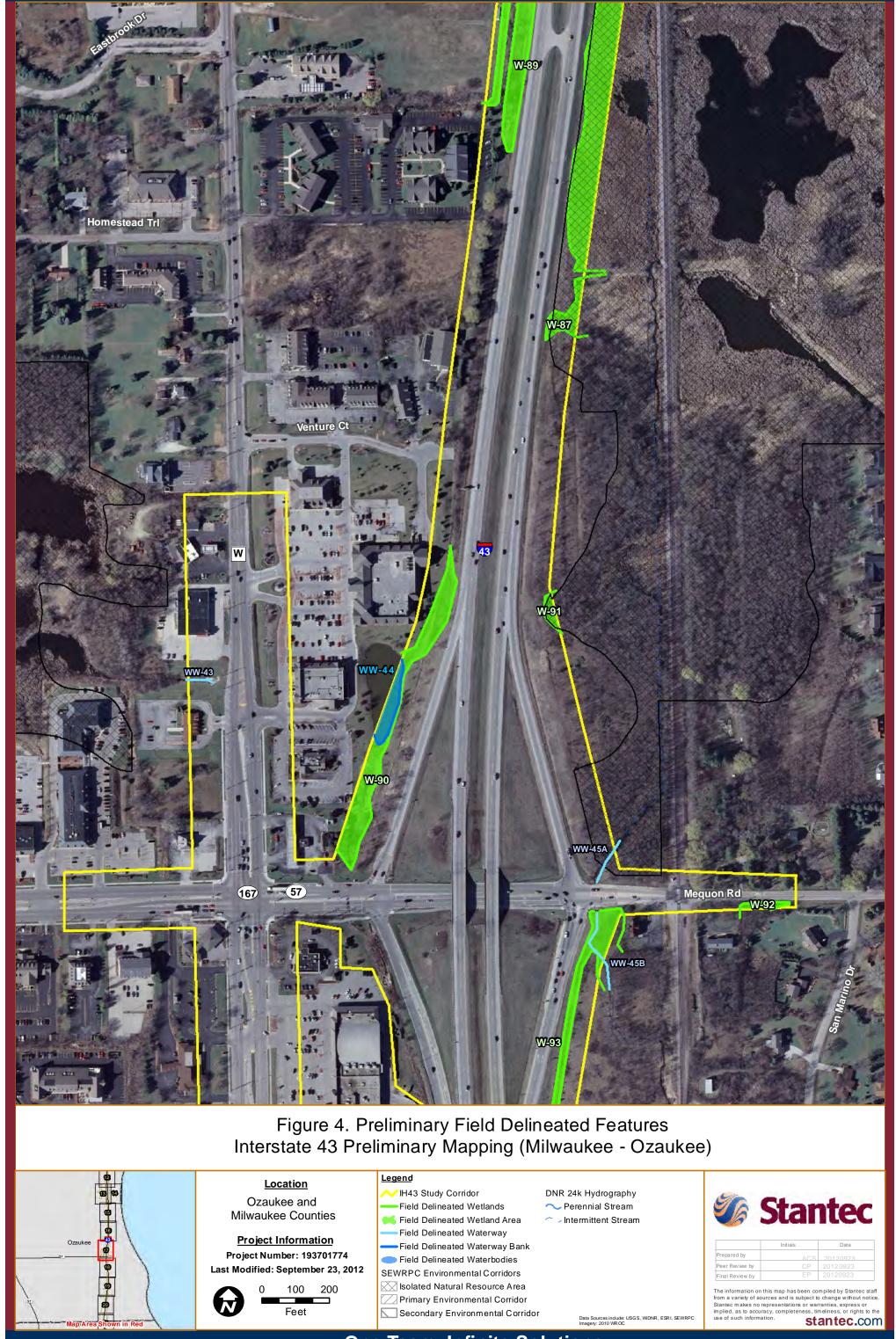




Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)







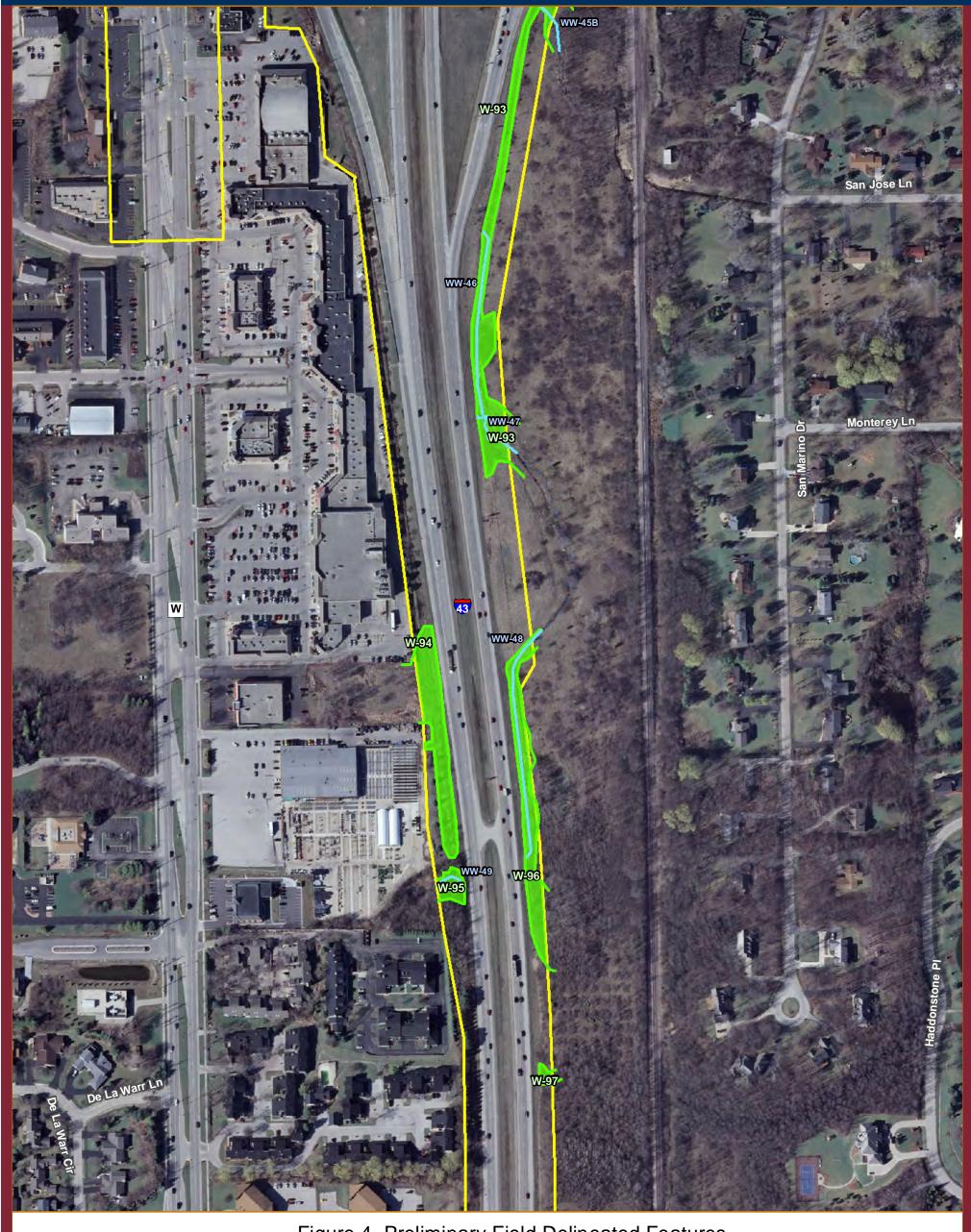
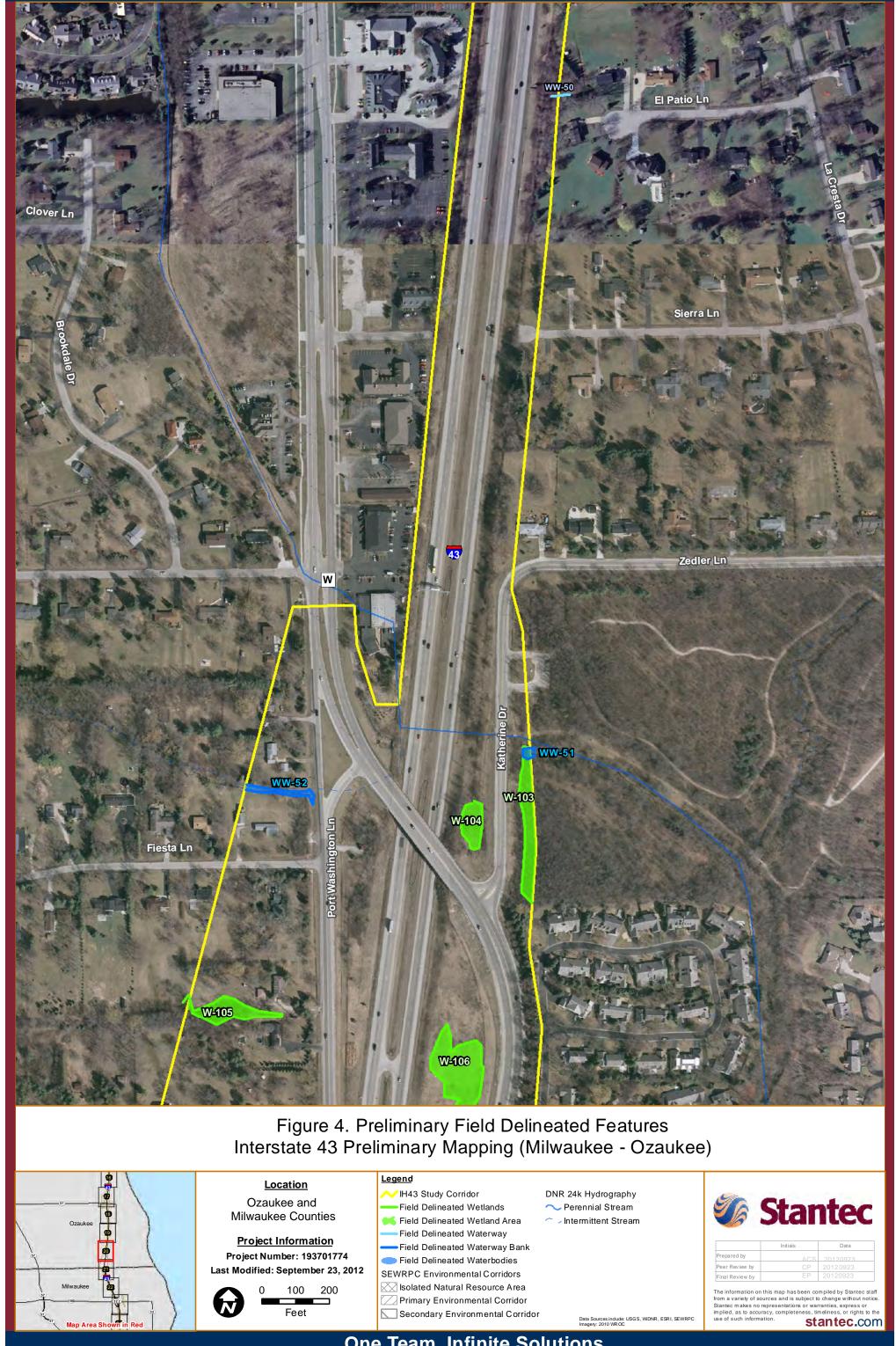


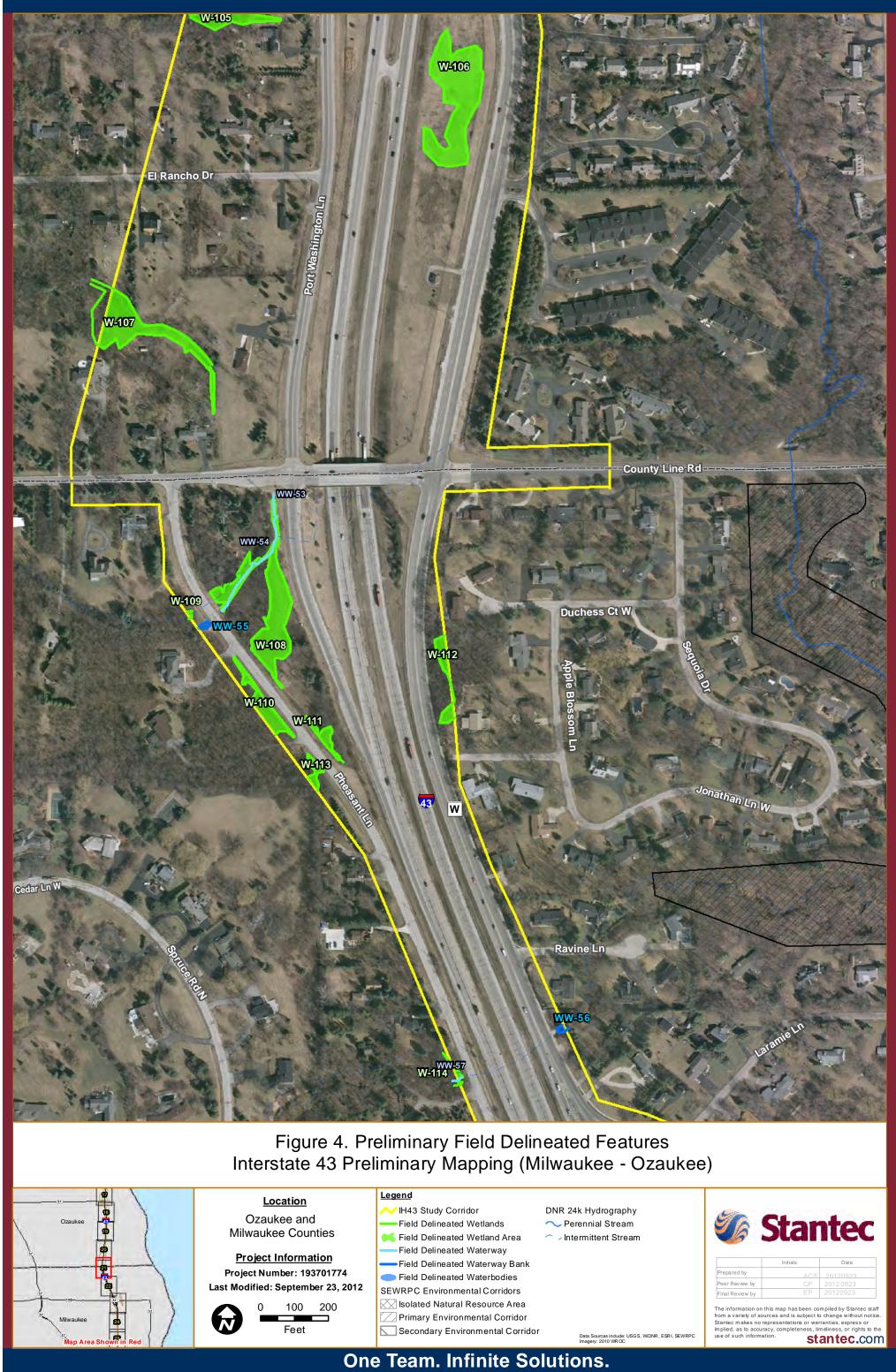
Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)

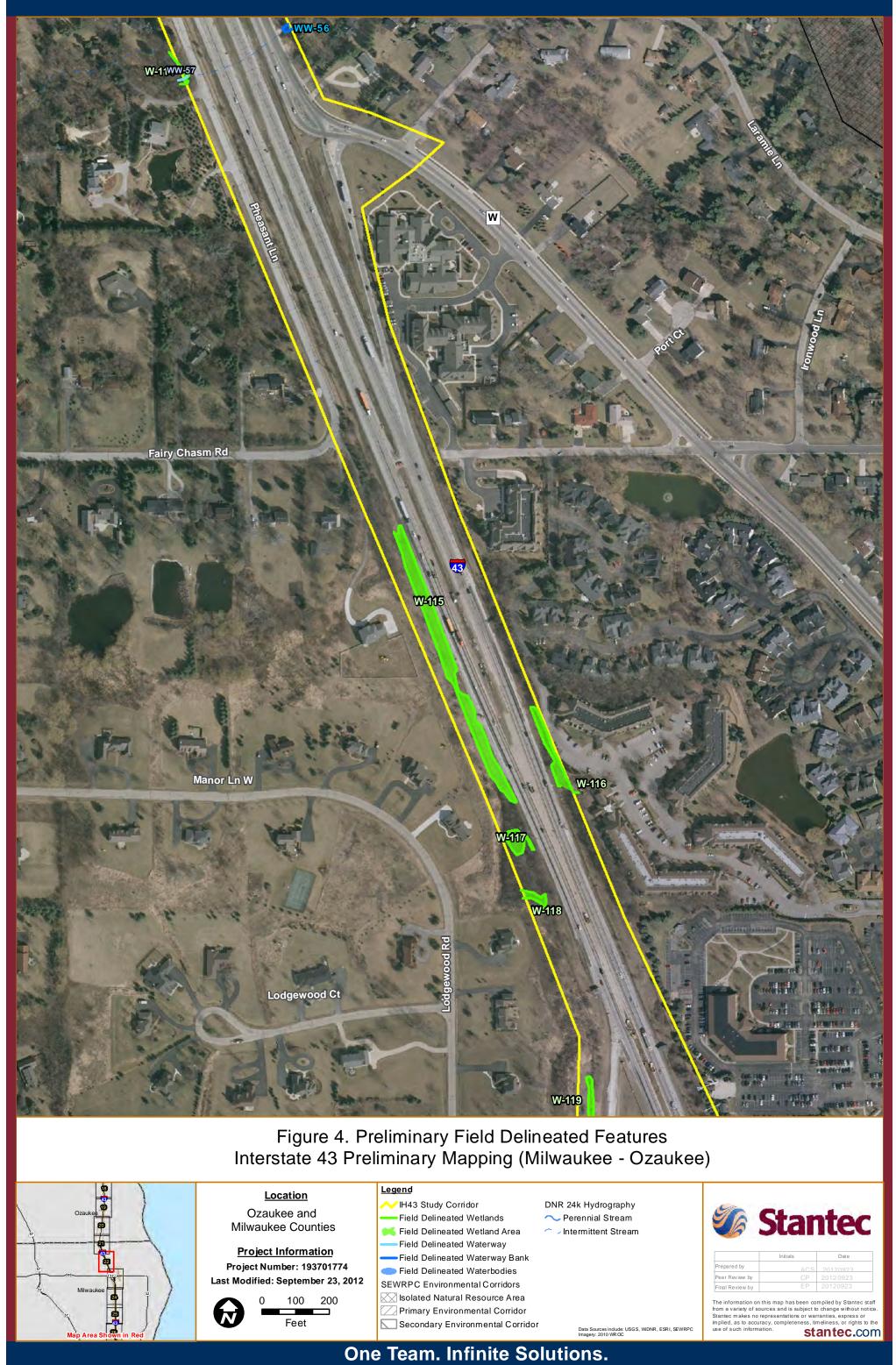


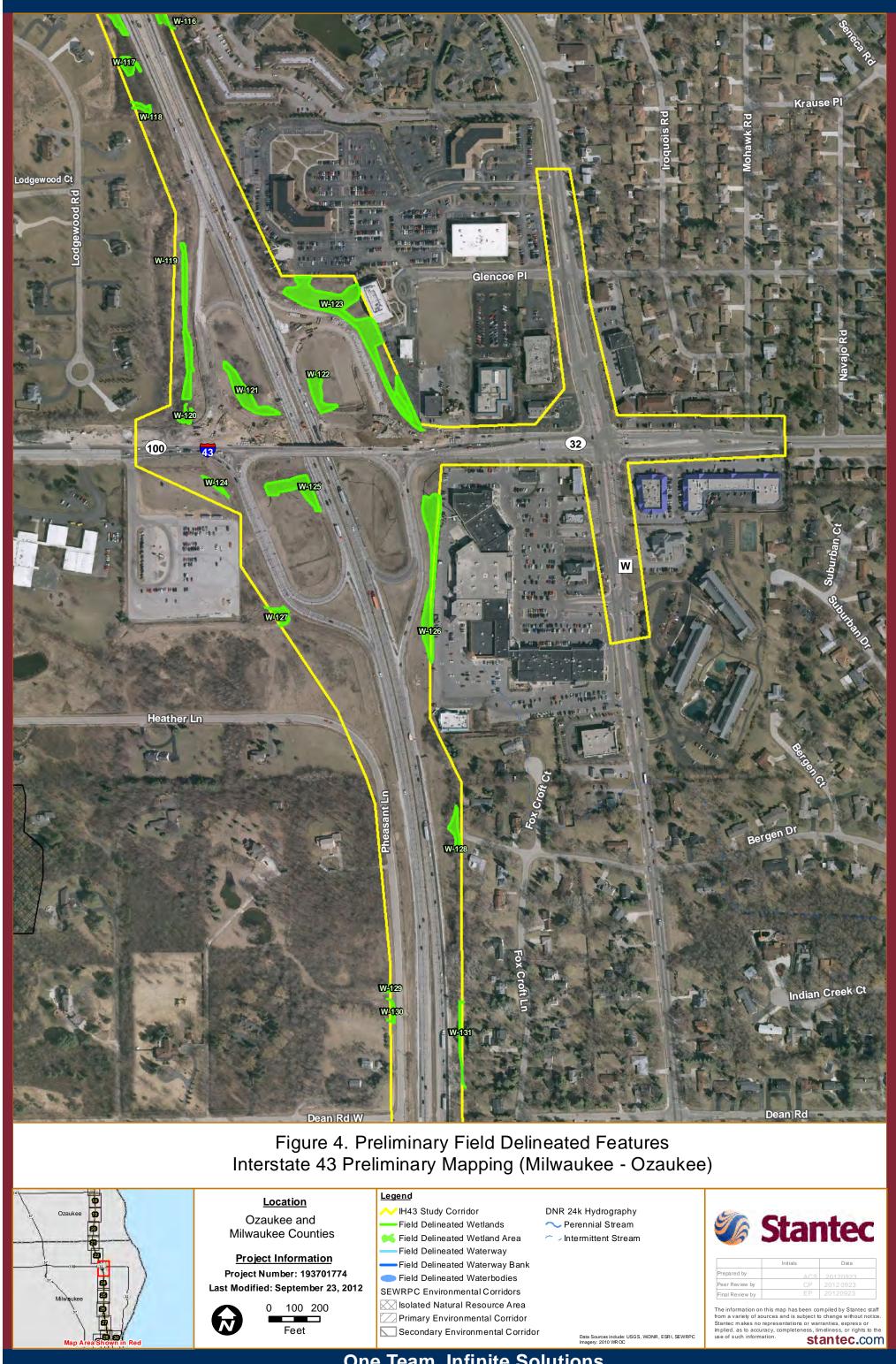


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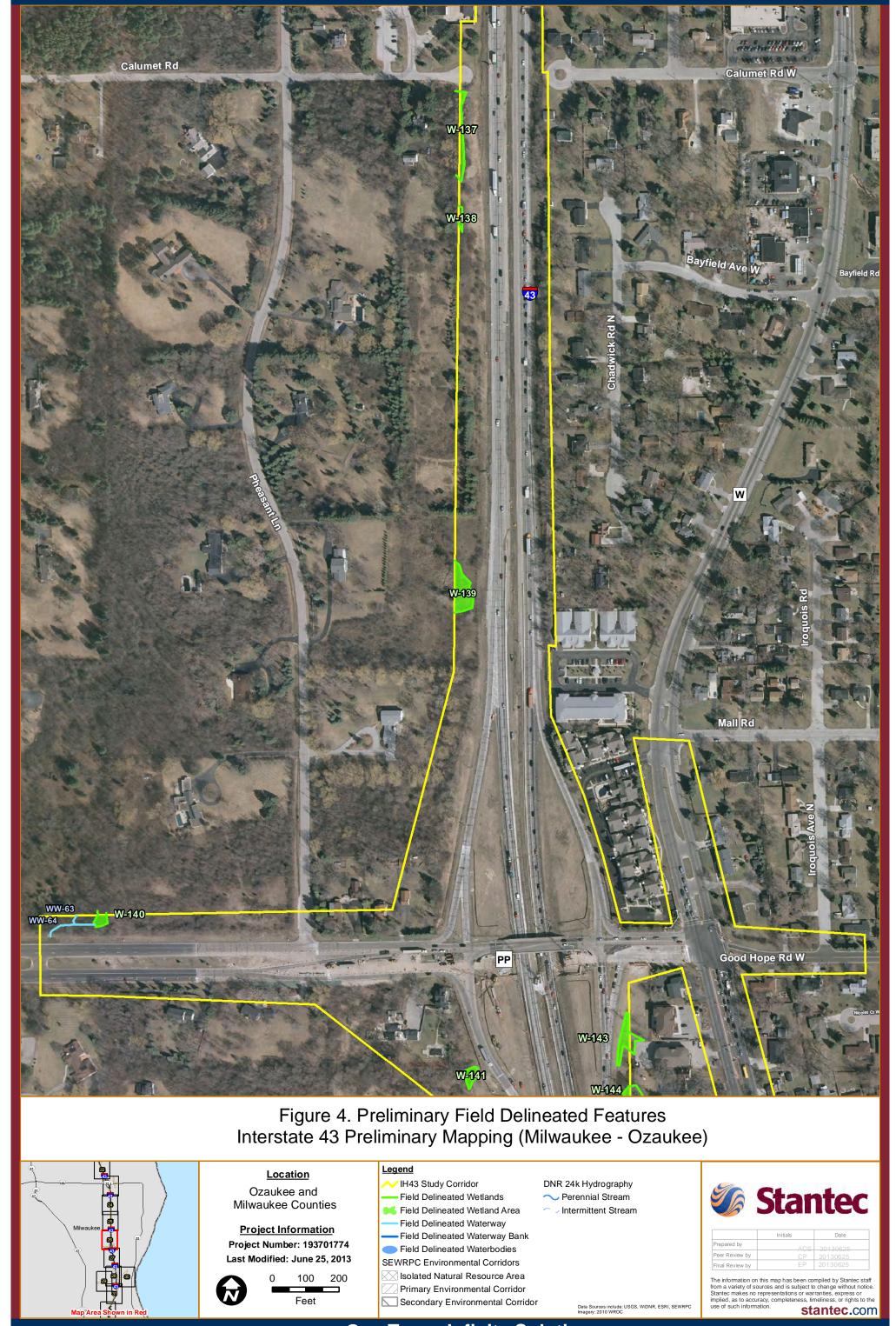




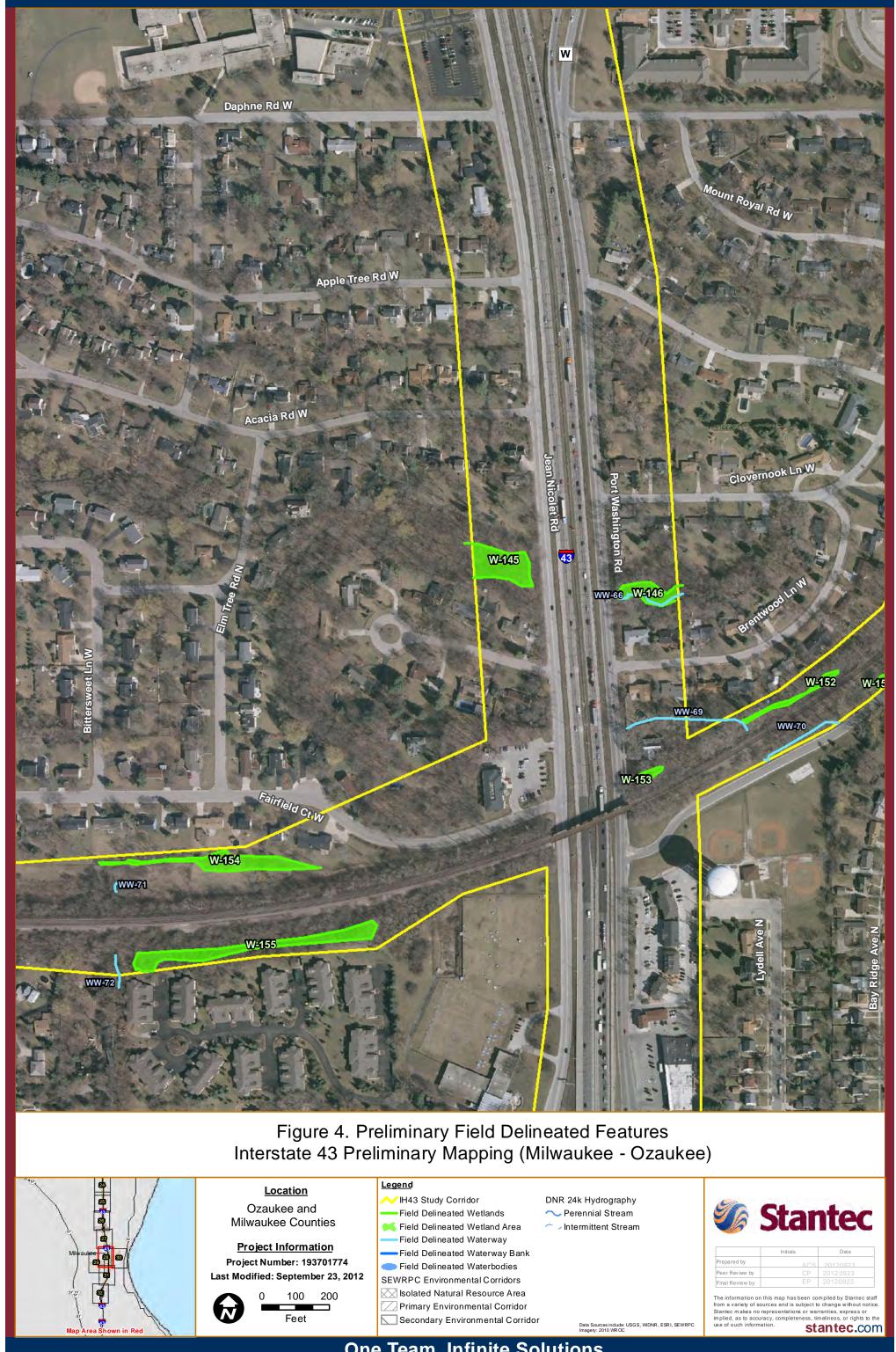


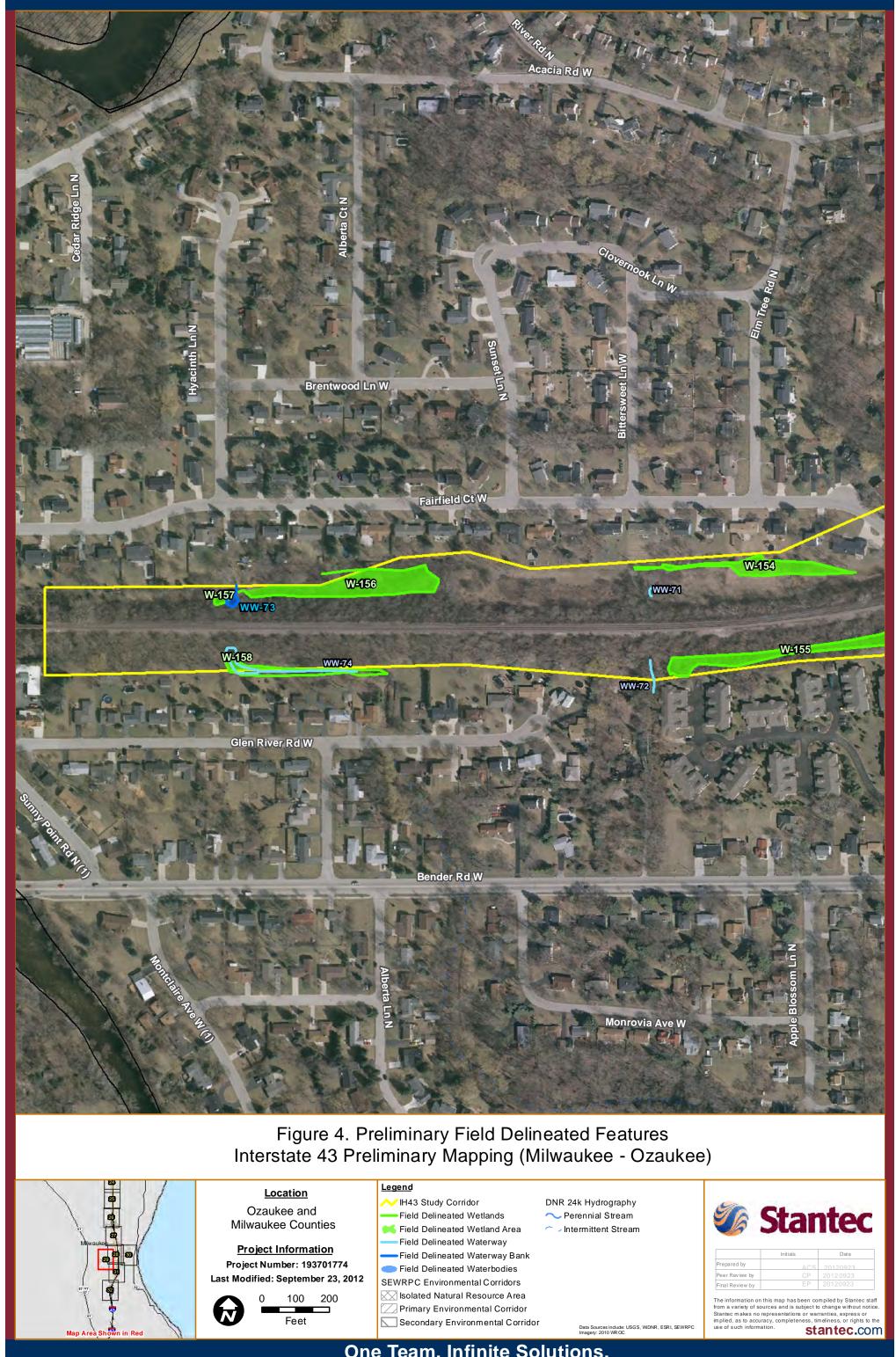
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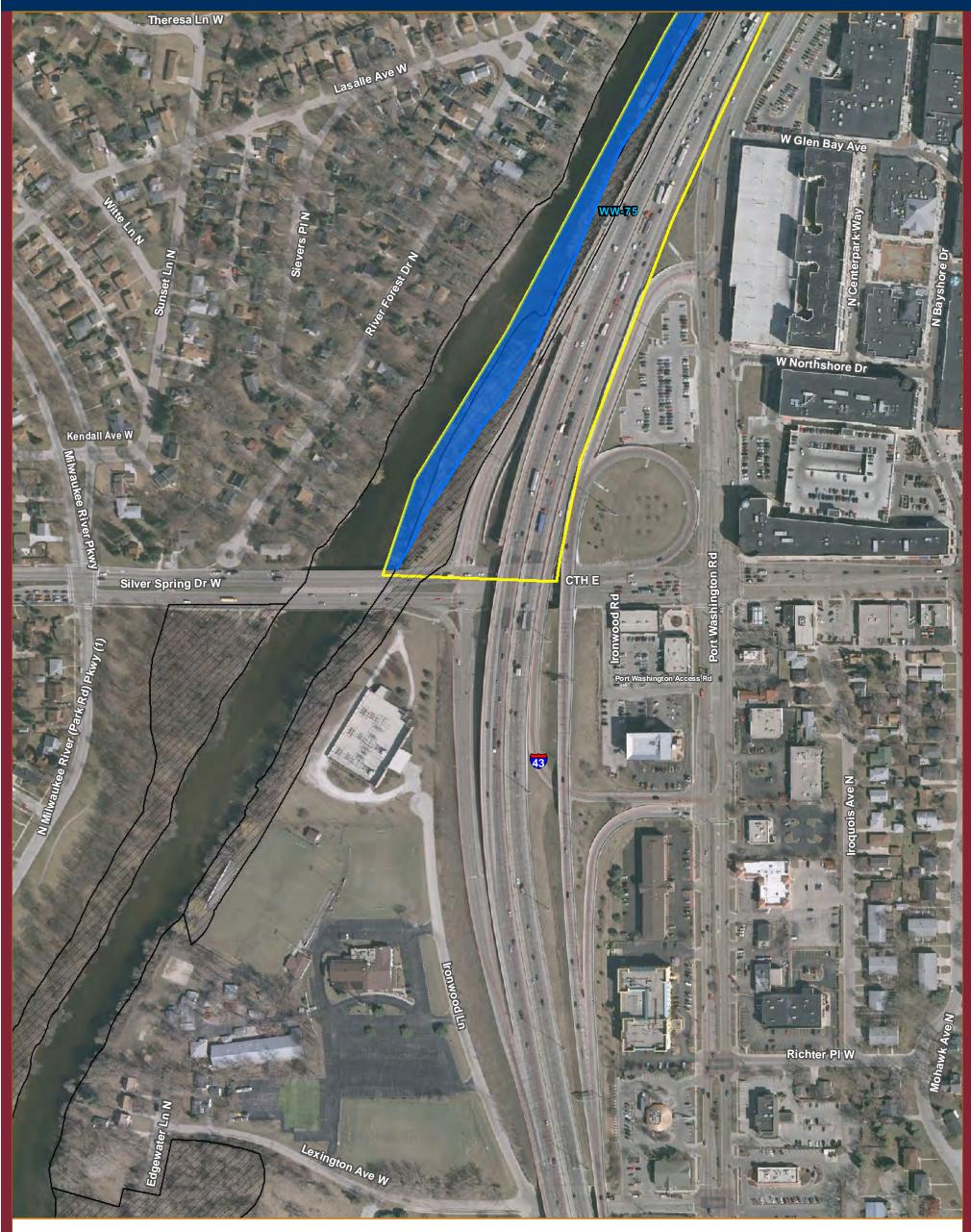


Figure 4. Preliminary Field Delineated Features Interstate 43 Preliminary Mapping (Milwaukee - Ozaukee)



Preliminary Wetland & Waterway Report

Milwaukee and Ozaukee Counties, WI

SITE PHOTOS