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Memorandum

DATE: September 2, 2010
TO: Rob Olson, P.E.,
Project Manager
FROM: Todd Ullom, WDC
SUBJECT: Wetland Delineation Report
Four Seasons Mall Property
Plymouth, Minnesota

This wetland delineation report is prepared for the Four Seasons Mall Property located along the eastern municipal boundary of Plymouth, Minnesota. The parcel is located within the SE1/4 of the NE1/4 of Section 13, T118N, R22W, Hennepin County. Also included in this report is wetland permitting documentation to assist you in complying with the Minnesota Wetland Conservation Act (WCA) and Section 404 of the Federal Clean Water Act (U.S. Army Corps of Engineers).

The subject property is approximately 17.3 acres. The primary use of the property is a multi-tenant shopping center (Four Seasons Mall) and an associated parking lot. The western extension of the subject property (between County Road 9 and Lancaster Lane) is maintained as lawn. A structure, housing the City of Plymouth Well #14, is located within the westernmost end of the property, near the County Road 9 and Lancaster Lane intersection. County Road 9 borders the property to the north, Lancaster Lane is located along the west side of the property, and Highway 169 borders the property along the east side. Neighboring land uses include commercial and office to the north (beyond County Road 9), office to the west (beyond Lancaster Lane), the City of Plymouth "The Four Seasons" well located to the south-southwest, and multi-family residential to the southwest (beyond Lancaster Lane). A wetland complex occupies the neighboring property to the south. The subject property is located within the Mississippi River - Metro (#20) major watershed and the Bassett Creek minor watershed. The City of Plymouth is the Local Government Unit (LGU) and administers the WCA, which includes review and approvals of wetland boundary delineations and permit applications.

MFRA delineated two wetland basins during a July 28, 2010 site visit. This report describes the characteristics of the wetland basins and documents their status under the various wetland

regulations. If your project will not impact either wetland, or is below the threshold limits outlined below, this report can be submitted to the regulatory authorities to document compliance. If wetland impacts are proposed as part of your project, additional documentation, applications and plans may be necessary.

WETLAND DELINEATION METHODOLOGY

MFRA reviewed the available background wetland information of this site as a part of the wetland delineation activities, which included:

- USGS 7.5-Minute Topographic Map;
- NRCS Soil Survey;
- National Wetlands Inventory Map (NWI); and,
- DNR Public Waters Map.

USGS 7.5-Minute Topographic Map

According to USGS topographic maps, the subject property is located within a slight localized valley. Elevations across the subject property range from approximately 910 feet in the northwest corner to 885 feet at the depressional wetland in the southeast corner of the site. Elevations of the neighboring community to the west-southwest approach 965 feet and to the northeast elevations are approximately 915 feet. The USGS topographic map illustrates an intermittent stream entering the County Road 9 / Highway 169 right-of-way along the northeast corner property boundary. The intermittent stream has since been replaced with a pipe, but continues to enter the right-of-way at the same location. According to aerial photography, the pipe apparently provides drainage of a series of wetlands and stormwater ponds within the commercial and residential developments to the north and northwest of the subject property. The intermittent stream, which was delineated as Wetland 1 continues along the eastern property boundary and enters the depressional wetland along the south end of the subject property before continuing eastward into the Northwood Park area of the City of New Hope. The City of Plymouth Surface Water Management Plan only illustrates the depressional wetland at the south end of the property, which is classified as a medium quality wetland.

NRCS Soil Survey

MFRA utilized the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) (http://websoilsurvey.nrcs.usda.gov/app/) to identify areas of mapped hydric soils within the project boundaries. Hydric soil is an indicator of potential wetland conditions. Six soil types are identified within the project area, which include: **Lester loam (L22C2 and L22E), Hamel (L36A), Angus loam (L37B), Houghton and Muskego (L50A), urban land-udorthents (U1A),** and **udorthents (U2A and U3B)**. According to the WSS, the Lester, Hamel, Angus, Houghton and Muskego map units have components of hydric soil, which identifies them as a hydric soil. Two of the mapped hydric soil units (Lester and Angus) have a small hydric

component (5%) that results in them being classified as a hydric soil. Therefore, the likelihood for the mapped Lester and Angus soil units to exhibit hydric criteria is relatively low.

The NRCS drainage classification of the subject property soils range from very poorly drained (Houghton and Muskego) to well-drained (Lester and Angus).

National Wetland Inventory

NWI maps are utilized as an off-site tool in identifying areas of potential wetlands. These maps were generated in the early 1980's using high altitude color infra-red aerial photos viewed through stereoscopes. The NWI map for the project site identifies a Type 3 (PEMCd) wetland along the southernmost project boundary. The NWI indicated wetland was delineated as Wetland 1.

DNR Public Waters

DNR Public Waters are waterbodies which meet the definition of Minnesota Statue 103G.005, Subdivision 15 and are regulated by the DNR. The DNR Public Waters Map for Hennepin County does not identify any DNR Public Waters or Watercourses within the project boundaries.

Field Delineation

The subject property was field delineated using the principles of the 1987 Corps of Engineers *Wetland Delineation Manual* and the *Midwest Regional Supplement to the Corps of Engineers Wetland Delineation Manual.* The routine wetland delineation method was used and dominant vegetation was evaluated by estimating area cover and the 50/20 method. Wetlands were classified according to the methodologies in *Wetland and Deepwater Habitats of the United States* (FWS/OBS Publication 79/31; Cowardin et. al. 1979) and *Wetlands of the United States* (USFWS Circular 39; Shaw and Fredin 1971).

Wetland boundaries were staked with pink "Wetland Boundary" pinflags. MFRA utilized a Trimble GeoXH GPS unit to locate the wetland boundaries. The surveyed wetland boundaries are illustrated on the attached Delineated Wetland Boundary Map. Future site plans should include the surveyed wetland boundaries to ensure that the proper measures are taken to avoid, minimize, or mitigate potential wetland impacts.

BASIN CHARACTERISTICS

Two wetlands were identified and staked during the July 28, 2010 site visit. Table 1 and the following paragraphs provide a summary of the wetland basins identified and delineated by MFRA.

Table 1. Wetland Type and Size

Wetland	Classification	Type	Wetland Community	Area (sq. ft.)	Area (acres)
1	PEMCd	3	Shallow Marsh	NA*	NA*
2	PEMA	1	Seasonally Flooded Basin	457	0.01

* The area of Wetland 1 was not determined because the wetland extends onto the neighboring properties.

Wetland 1 is classified as a Palustrine (P-) type wetland exhibiting Emergent vegetation (-EM-) and a Seasonally Flooded (-C) moisture regime or a Type 3 (PEMCd), shallow marsh wetland. Wetland 1 includes a drainage ditch, which is located within County Road 9 and Highway 169 right-of-ways and parallels the northern and eastern property boundaries. The drainage ditch originates at the County Road 9 / Lancaster Lane intersection at the far western property boundary and flows toward the east. A drainage pipe, which provides surface water drainage for properties north and northwest of the subject property, enters the ditch near the northeast corner of the subject property. The drainage ditch continues to flow southward where it enters a depressional wetland along the southern property boundary. The depressional wetland located along the southern property boundary extends onto the neighboring property to the south of the subject property. According to aerial photography and the USGS topographic map, the depressional wetland discharges to the east and into the Northwood Park area located in the City of New Hope.

Due to the wetland's lengthy extent, the soils of Wetland 1 include, Hamel (L36A), Angus loam (L37B), Lester loam (L22C2 and L22E), udorthents (U2A), urban land (U1A), and Houghton and Muskego (L50A). The NWI map identifies a potential Type 3 (PEMCd) wetland at the location of Wetland 1. The DNR Public Waters Map for Hennepin County does not illustrate any DNR Public Waters within the vicinity of Wetland 1.

Although a majority of Wetland 1 is located within the County Road 9 and Highway 169 right-of-way, the City of Plymouth required that the wetland boundary nearest to the subject property be delineated to establish the city-required upland buffer. Future development plans will require the establishment of an upland buffer along Wetland 1, which will encroach onto the subject property. The City of Plymouth Surface Water Management Plan illustrates the depressional wetland portion of Wetland 1 as a medium quality wetland. The drainage ditch portion of Wetland 1 is not illustrated on the Surface Water Management Plan. Although Wetland 1 is classified as a medium quality wetland, the wetland characteristics do not meet the definition

provided in the City of Plymouth Zoning Ordinance. A low quality wetland, as defined in the City of Plymouth Zoning Ordinance, has the following characteristics: substantially altered by urban development that caused over nitrification, soil erosion, sedimentation, and water quality degradation, low levels of plant species and a related reduction in the quality of wildlife habitat, extreme water level fluctuations in response to storms, often exhibit evidence of significant human influences, and are deemed to be of little educational or scientific value to the community. Based on observations made during the wetland delineation site visit, Wetland 1 exhibits all of these characteristics. The wetland is dominated by hybrid cattail with very few other species that result in a poor wildlife habitat, the wetland receives a considerable amount of stormwater through the drainage ditch to the north and the Four Seasons Mall parking lot that results in significant fluctuations in water level, the addition of untreated stormwater is causing an over nitrification of the wetland, and flows within the drainage ditch along the north and east sides of the property are causing soil erosion that result in sedimentation within the depressional wetland at the southern property boundary. Because of these reasons, MFRA recommends that the wetland be reclassified from a medium quality wetland to a low quality wetland.

MFRA completed a MNRAM assessment of Wetland 1, which resulted Low and Medium values for the assessed wetland characteristics. Attached to this report is the result of the MNRAM assessment.

One transect, consisting of two sample locations, was established along the north side of Wetland 1, near the southern property boundary. Dominant vegetation, the soil profile and wetland hydrologic indicators were observed and noted at each sample location. Data collected from the sample locations are presented in the Field Data Sheets (SP1-1 WET and SP1-1 UP), which are included with this report.

Dominant vegetation within the drainage ditch portion of Wetland 1 includes reed canary grass, cattail, giant goldenrod, and sandbar willow. Dominant vegetation within the depressional portion of Wetland 1 includes cattail, sandbar willow, black willow, and jewelweed. The boundary of Wetland 1 was based on the abrupt change in topography and the dominance of Canada goldenrod, Canada thistle, and common buckthorn along the upland side of the boundary.

Wetland 2 is classified as a Palustrine type wetland exhibiting Emergent vegetation and a Temporarily Flooded (-A) moisture regime or a Type 1 (PEMA), seasonally flooded wetland. According to the Rain Garden Agreement (Document Number 8629989), Wetland 2 was created as a rain garden as part of the Four Seasons Mall parking lot expansion project. A copy of the Rain Garden Agreement is attached to this report. Based on the created nature of Wetland 2, the wetland would not be regulated by the WCA and not subject to replacement. The rain garden,

which is located near the northwest corner of the Four Seasons Mall and between the parking lot and the northern property boundary, is designed to capture and infiltrate stormwater runoff from the parking lot. An overflow is located along the north side of Wetland 2, which allows excess stormwater to enter Wetland 1.

Wetland 2 is located in an area mapped as Lester loam (L22C2), which is classified as a hydric soil because it has a hydric component. The NWI map does not identify any potential wetlands in the vicinity of Wetland 2 and the DNR Public Waters Map for Hennepin County does not illustrate any DNR Public Waters within the vicinity of Wetland 2.

Wetland 2 is generally a depressional area that is hydrologically supported by stormwater runoff from the adjacent parking lot. The clay loam soils of the rain garden allow water to pond at the surface an infiltrate over time. Approximately 2 to 3 inches of surface water was observed within wheel ruts present in the wetland at the time of the wetland delineation site visit. The temporarily flooded conditions of the wetland has allowed hydrophytic vegetation to become established and the development of hydric soil indicators.

One transect, consisting of two sample locations, was established along the east side of Wetland 2. Dominant vegetation, the soil profile and wetland hydrologic indicators were observed and noted at each sample location. Data collected from the sample locations are presented in the Field Data Sheets (SP2-1 WET and SP2-1 UP), which are included with this report.

Dominant vegetation within Wetland 2 includes barnyard grass, sandbar willow, common plantain, yellow nut sedge, wild barley, and fowl bluegrass. The boundary of Wetland 2 was based on the dominance of birds-foot trefoil, dandelion, and annual ragweed along the upland side of the boundary.

WETLAND JURISDICTION

Clean Water Act, Section 404

The U.S. Army Corps of Engineers (COE) regulates dredge and fill activities in navigable waters, wetlands adjacent, tributary, or with significant nexus to Waters of the United States. Wetland 2 receives stormwater from the parking lot of the Four Seasons Mall. An overflow from Wetland 2 is located along the north side of the basin, which flows into Wetland 1. The southernmost portion of Wetland 1 appears to be a natural wetland, while the northern portions appear to be a man-made drainage ditch transporting water from points north and west of the subject property around the subject property and into the southern portion of Wetland 1. Based on aerial photography and USGS

topographic maps, it appears that Wetland 1 flows to the east underneath Highway 169 and eventually into a pond in the City of New Hope. The final destination of surface water discharged from Wetland 1 is unknown and was not determined for the purpose of this report. MFRA recommends that a copy of this report be submitted to the COE for an official COE jurisdiction determination.

In most cases, if the proposed impacts are less than 400 square feet, the COE does not require notification of the project. If the proposed impacts are between 400 square feet and 2.0 acres, the COE requires notification and approval (letter of permission) prior to beginning the project. If the wetland impacts occur in or adjacent to "special waters" and/or exceed 10,000 square feet, the COE review will include a 30-day public/interagency notice. If the proposed impacts exceed the WCA *de minimis* limits, the COE will require mitigation for the full amount of the impacts regardless of the WCA exemption. If more than 2 acres of wetland impacts are proposed, an individual permit will automatically be required which includes sequencing (proving there are no alternatives), review by other environmental agencies, a public comment period, and compensatory mitigation.

The COE contact for Hennepin County is Melissa Jenny (651) 290-5363.

Minnesota Protected Waters Act

The Minnesota Department of Natural Resources (DNR) has jurisdiction over waters of the state that are generally wetland Types 3, 4, and 5, and are larger than 2.5 acres in incorporated areas or 10 acres in unincorporated areas. The DNR also regulates activities in some rivers and streams and, as of December 1994, any tributaries to DNR designated trout streams. The DNR has jurisdiction over areas below the Ordinary High Water level (OHW). The OHW for a lake or wetland is determined by the DNR as the elevation at which the vegetation changes from aquatic to terrestrial. For a watercourse, the OHW is the average elevation of the top of the channel banks at any given location.

The DNR Public Waters map for Hennepin County does not identify any DNR Public Waters on the subject property.

The DNR contact for this project is Kate Drewry (651) 259-5753.

Minnesota Wetland Conservation Act (WCA)

A Local Government Unit (LGU) will have jurisdiction over the wetlands on the site, based on the WCA as amended through 2009. The LGU for this site is the City of Plymouth (Derek Asche, (763) 509-5526).

The WCA regulates impacts (filling or draining) to wetlands within the State of Minnesota. All land development projects are required to demonstrate avoidance and

minimization of wetland impacts. Replacement (mitigation) of unavoidable wetland impacts is required if they exceed the *de minimis* exemption. A *de minimis* exemption provides the applicant an opportunity to impact a wetland without replacement. The amount of the *de minimis* exemption depends on the type of wetland and the location of the wetland. The *de minimis* for the subject property is 400 square feet for Wetland 1 and 1,000 square feet for Wetland 2.

Per the Rain Garden Agreement (Document Number 8629989), Wetland 2 was constructed as a rain garden for the treatment and infiltration of stormwater discharged from the parking lot of the Four Seasons Mall. The WCA does not regulate impacts to incidental wetlands. Incidental wetlands are defined as wetland areas that were created in nonwetland areas for the purpose which was not to create a wetland. Because Wetland 2 was created for the purpose of retaining and improving surface water quality, the wetland should be classified as incidental and not subject to replacement under the WCA.

If proposed wetland impacts exceed the *de minimis* amounts and wetland mitigation is required, on-site wetland mitigation is the only option available to the applicant. Although the WCA allows off-site replacement by purchasing wetland credits from a wetland bank, the City of Plymouth has a policy that wetland bank credits can only be purchased from a wetland bank located within the City of Plymouth. Since there are no wetland banks located within the city, the only option for wetland replacement is by creating on-site wetland mitigation.

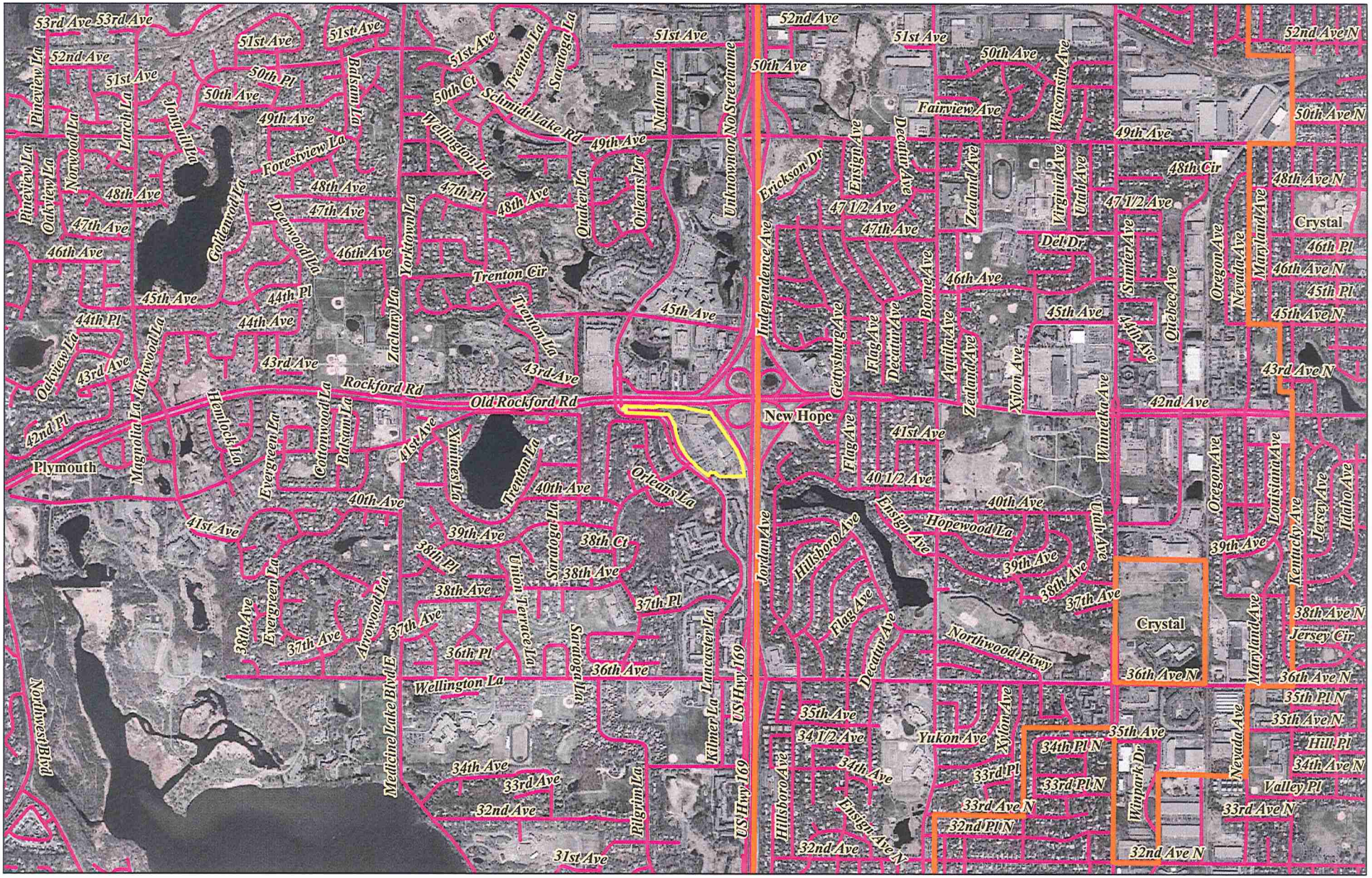
If wetland impacts are proposed as part of future site plans, only two viable options of providing on-site wetland mitigation are available, which include converting upland to wetland and establishing upland buffers. Converting upland areas into wetlands is the most common form of creating wetland mitigation, but only 75% of the total area created is eligible for wetland credit. In addition, the applicant must establish a 25-foot average buffer adjacent to the created wetland. The buffer must be established with native, non-invasive vegetation. Only 25% of the established buffer is eligible for wetland credit.

If the site plans include wetland impacts, which exceed the exemption limits, a WCA permit will be required from the LGU. Under the WCA rules, an applicant must demonstrate that wetland impacts have been avoided and unavoidable impacts minimized before the activity would be permitted. These rules also require a minimum of 2:1 mitigation ratio for filling or draining in any wetland, or excavation in semi permanently to permanently flooded wetlands. The mitigation ratio may increase to 2.5:1 if wetland replacement is not provided in-place or in-kind. Projects with proposed wetland mitigation must also develop a 5-year monitoring plan to verify the success of the mitigation plan. Vegetation management of both created wetland and buffer areas are necessary to meet the city vegetation standards and obtain final approval of the mitigation plan. Permanent deed restrictions will be required over the mitigation area(s).

List of Attachments

Location Map (2006 aerial photo)
USGS Topographic Map
NRCS Soil Survey (2006 aerial photo)
NWI Map (2006 aerial photo)
DNR Public Waters Map (2006 aerial photo)
Delineated Wetland Boundary (2006 aerial photo)
Field Data Sheets
MNRAM Assessment
Photo Log
Rain Garden Agreement

FIGURES



This map was created using MFRA's Geographic Information Systems (GIS), it is a compilation of information and data from various sources. This map is not a surveyed or legally recorded map and is intended to be used as a reference. MFRA is not responsible for any inaccuracies contained herein.

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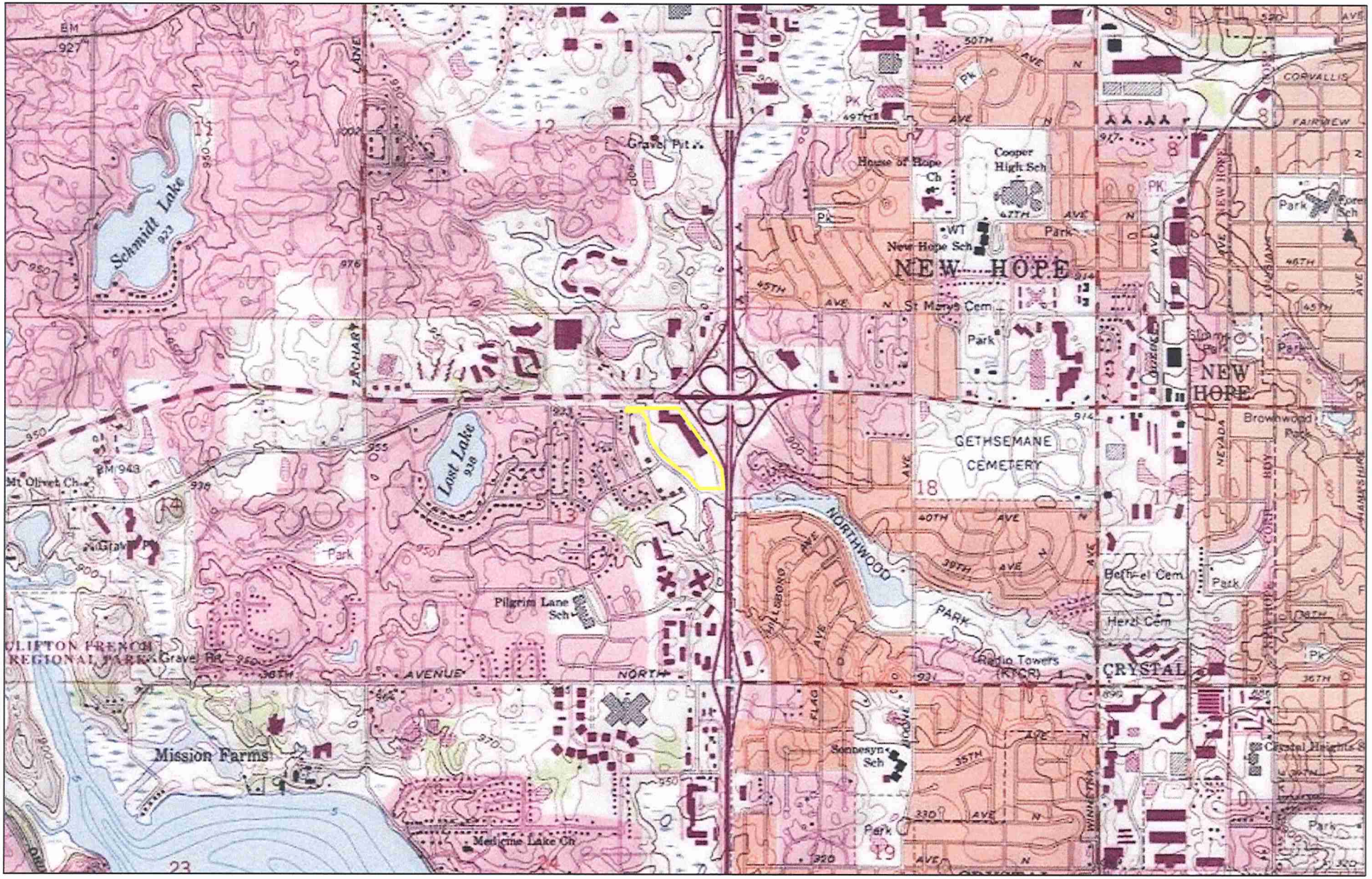
Scale In Feet

Location Map

Four Seasons Mall Property
Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC



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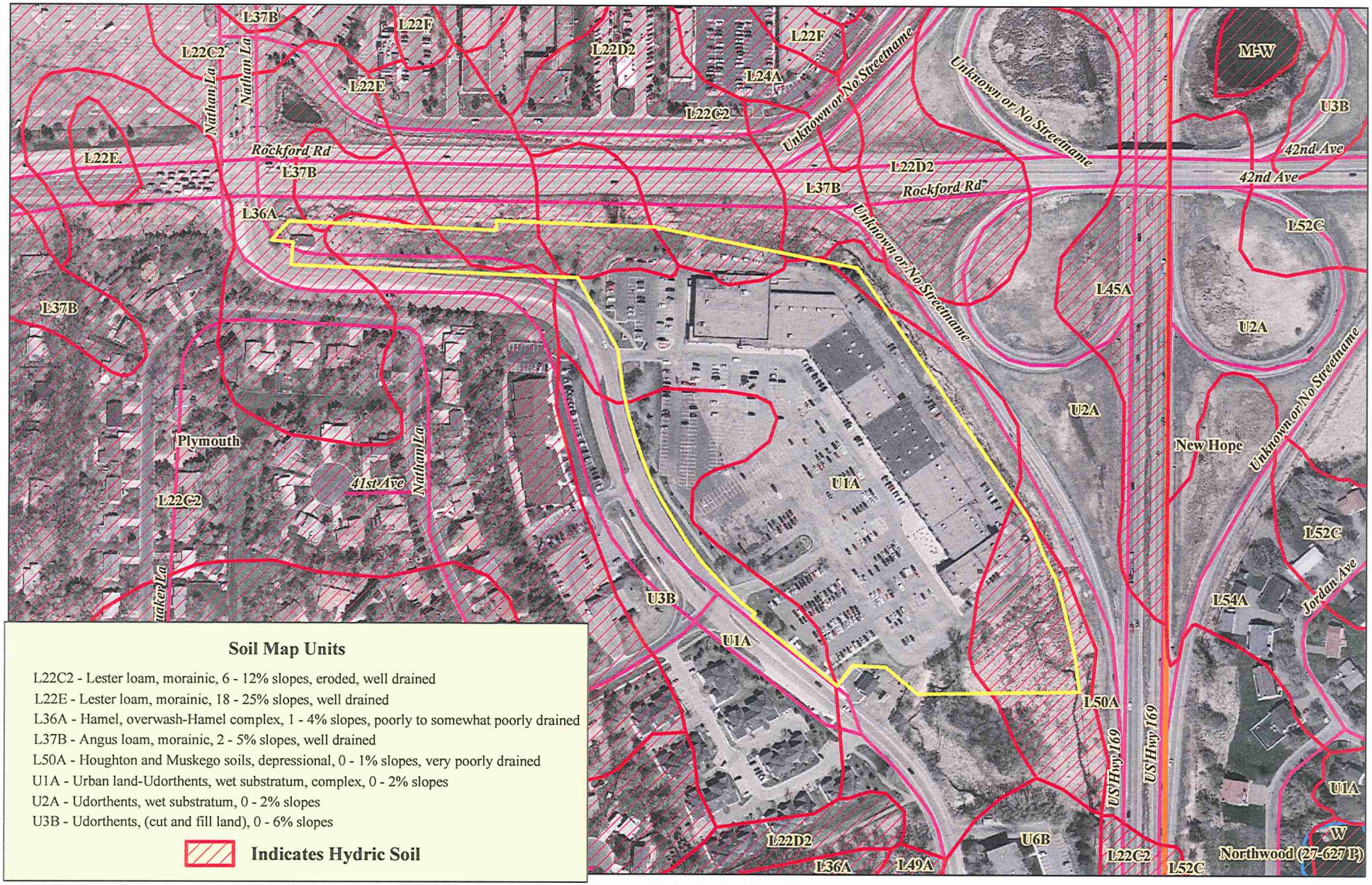
Scale In Feet

USGS Map

Four Seasons Mall Property
Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC



Soil Map Units

L22C2 - Lester loam, morainic, 6 - 12% slopes, eroded, well drained
L22E - Lester loam, morainic, 18 - 25% slopes, well drained
L36A - Hamel, overwash-Hamel complex, 1 - 4% slopes, poorly to somewhat poorly drained
L37B - Angus loam, morainic, 2 - 5% slopes, well drained
L50A - Houghton and Muskego soils, depressional, 0 - 1% slopes, very poorly drained
U1A - Urban land-Udorthents, wet substratum, complex, 0 - 2% slopes
U2A - Udorthents, wet substratum, 0 - 2% slopes
U3B - Udorthents, (cut and fill land), 0 - 6% slopes

Indicates Hydric Soil

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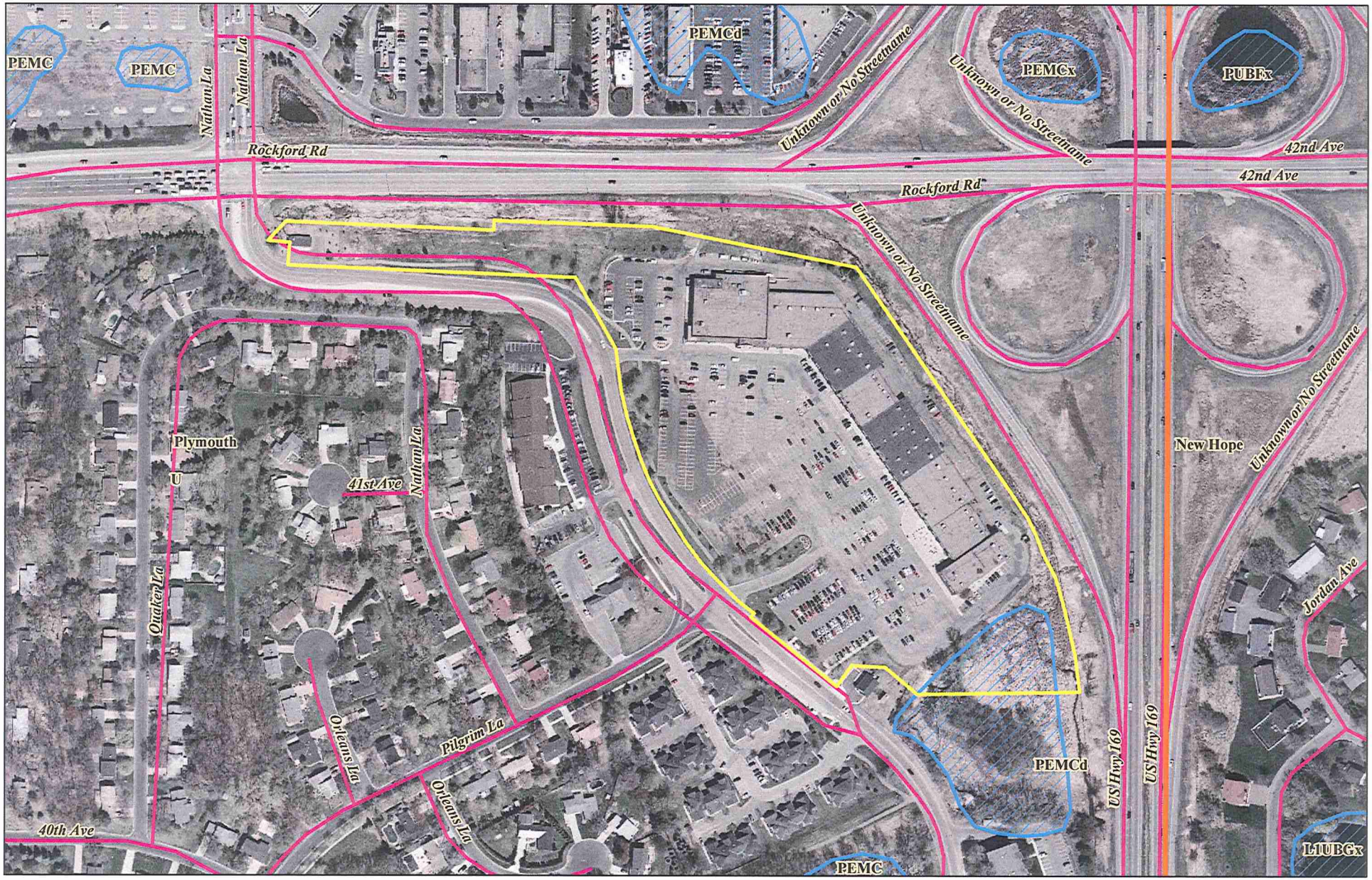
Scale In Feet

Hennepin County Soil Survey

Four Seasons Mall Property
Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC



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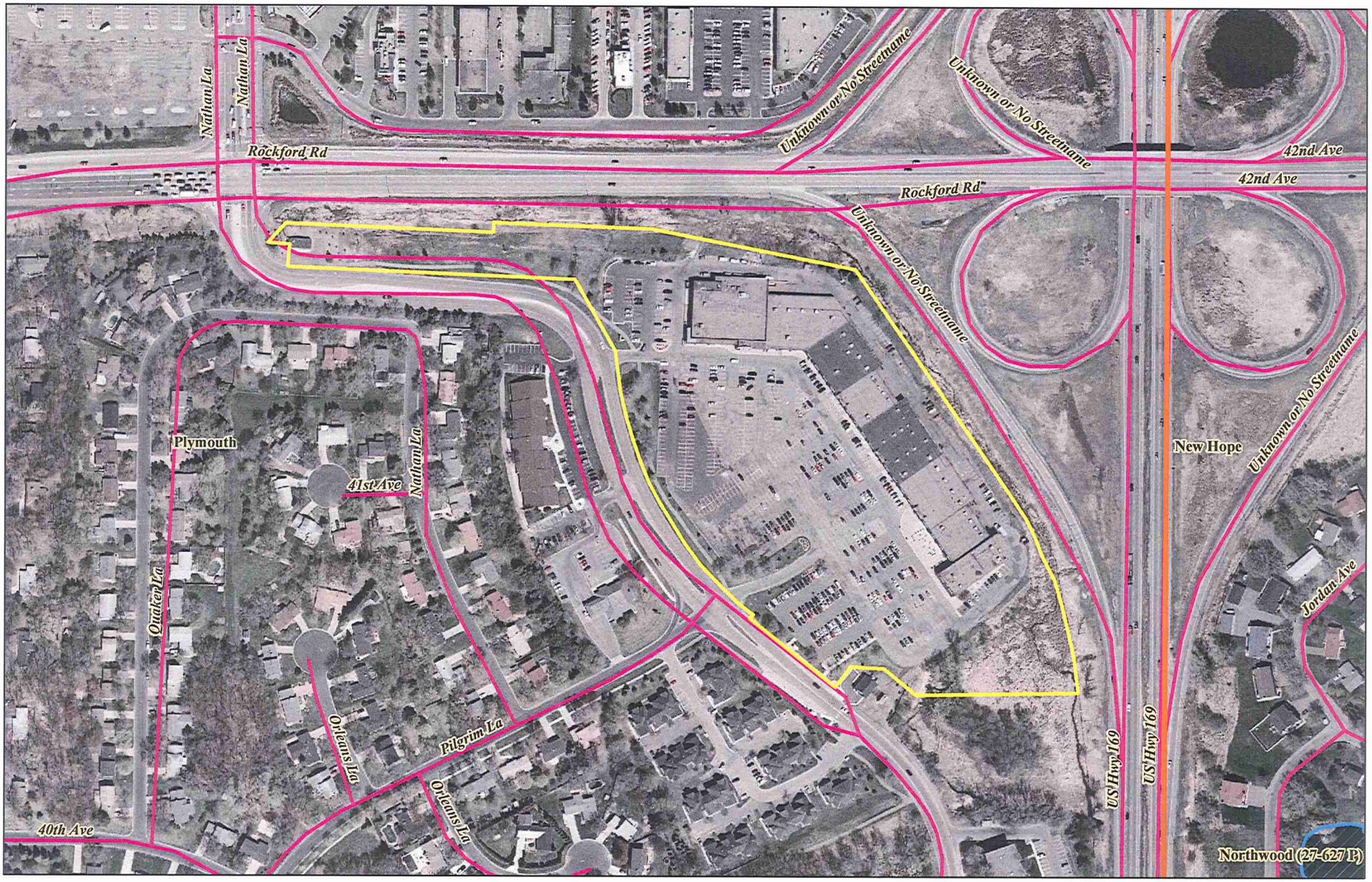
Scale In Feet

NWI Map

Four Seasons Mall Property
Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC



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Scale In Feet

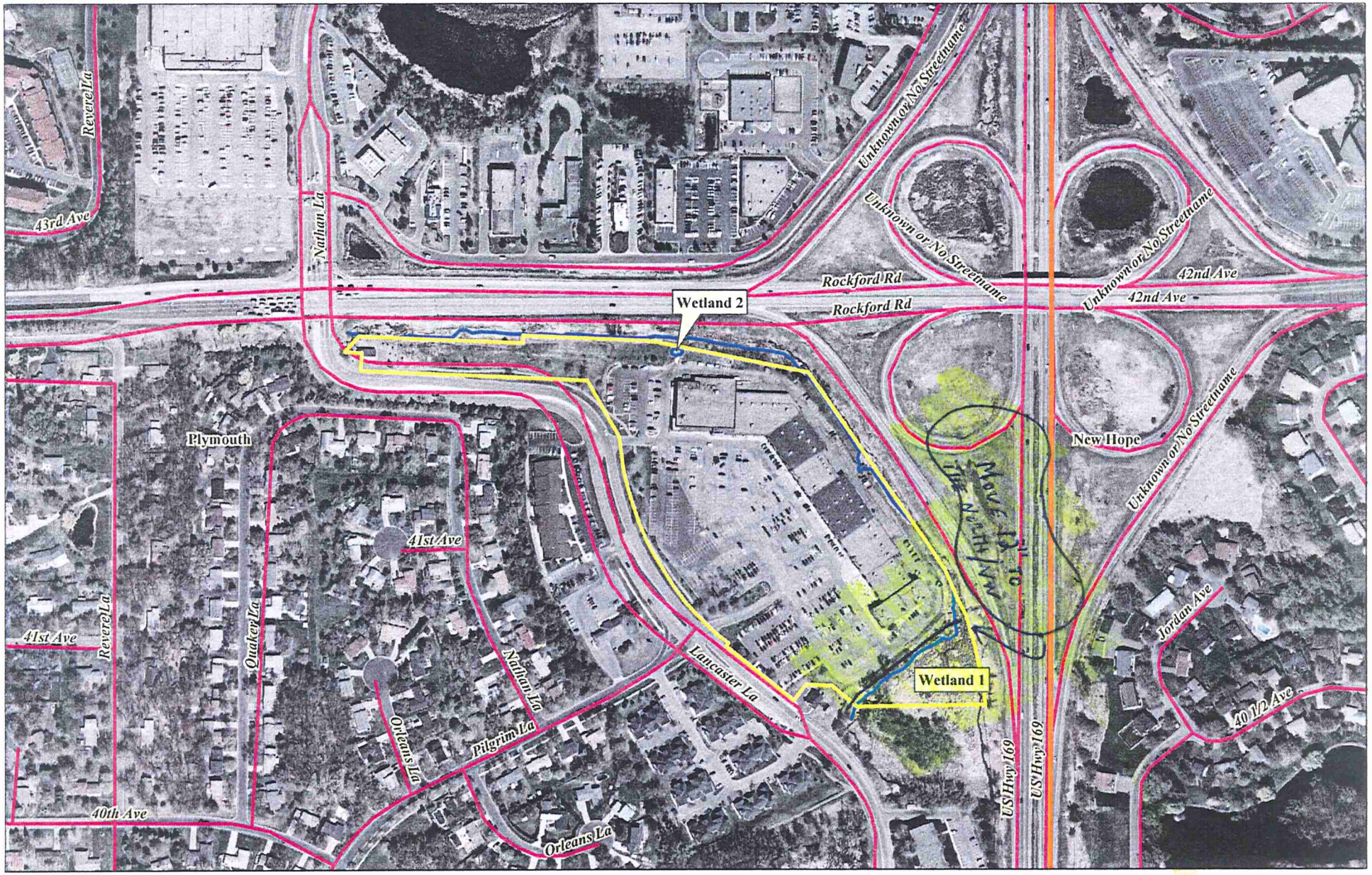
DNR Public Waters Map

Four Seasons Mall Property

Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC



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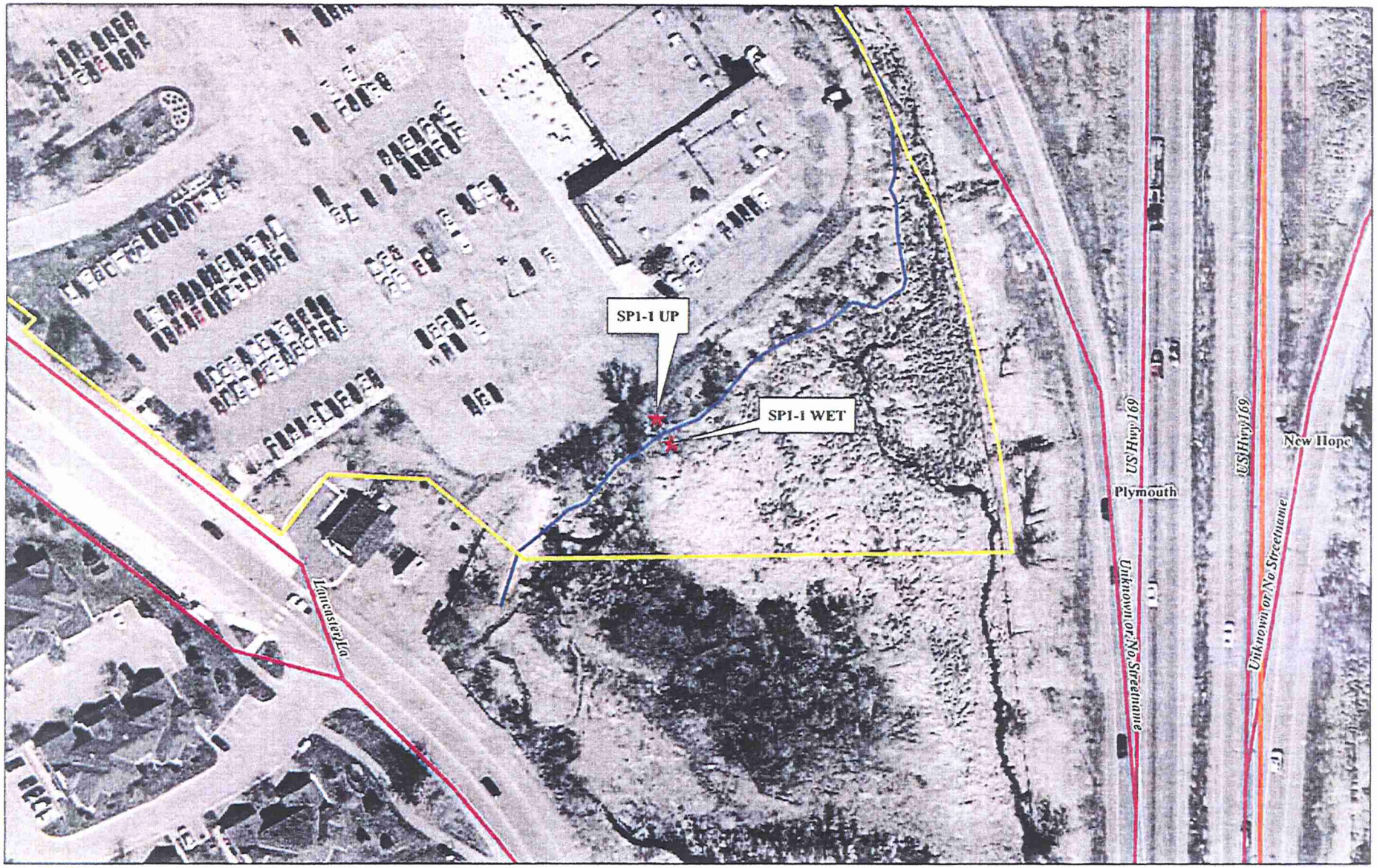
Scale In Feet

Delineated Wetland Boundaries Map

Four Seasons Mall Property
Plymouth, Minnesota

Sources: MetroGIS, NRCS, LMIC

mfra



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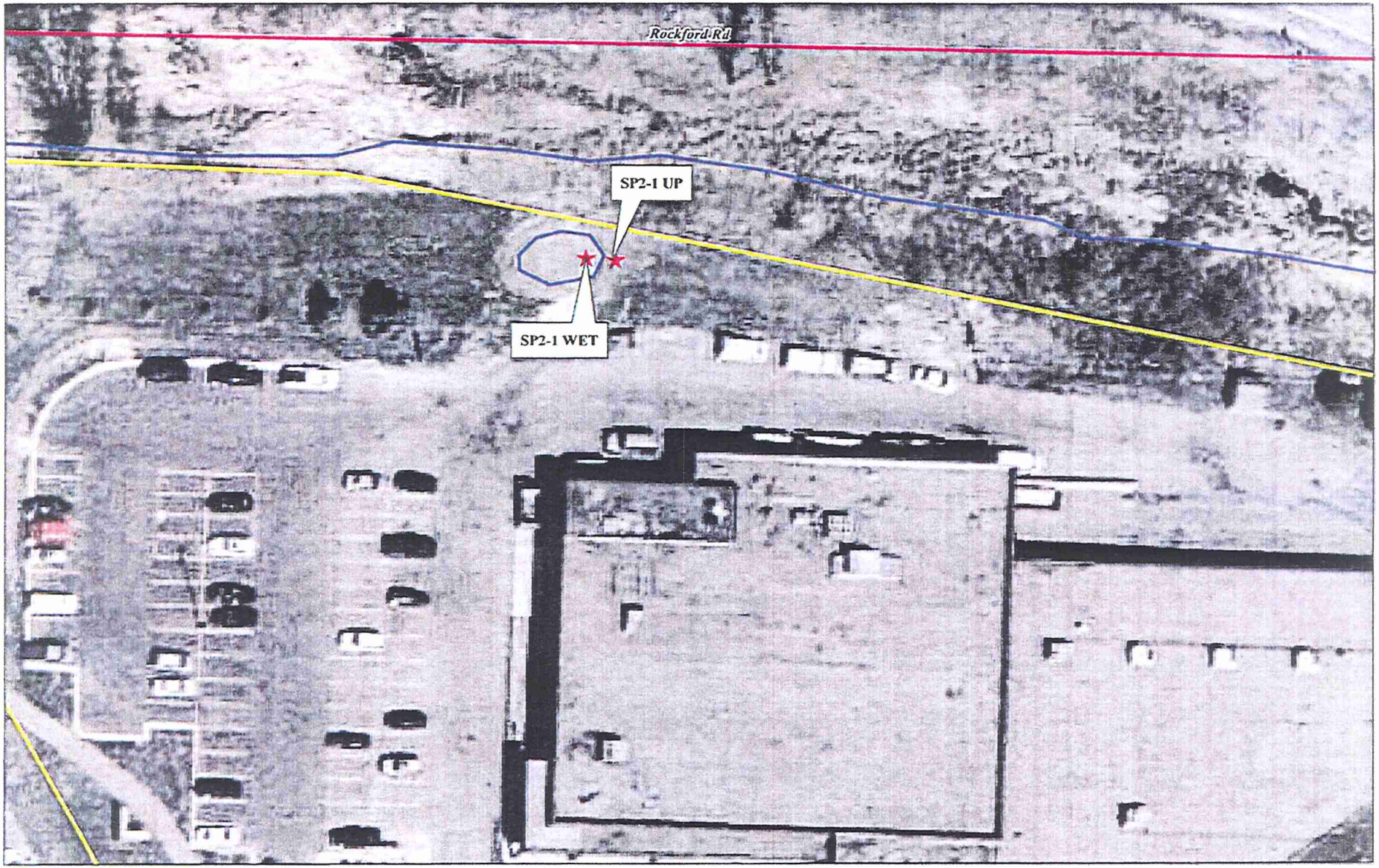
Scale In Feet

Wetland 1 Sample Locations

Four Seasons Mall Property
Plymouth, Minnesota

mnfra

Sources: MetroGIS, NRCS, LMIC



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Scale In Feet

Wetland 2 Sample Locations

Four Seasons Mall Property
Plymouth, Minnesota

mfra

Sources: MetroGIS, NRCS, LMIC

FIELD DATA SHEETS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project Site: Four Seasons Mall Property City/County: Plymouth / Hennepin Sampling Date: 7/28/10

Applicant/Owner: State: MN Sampling Point: SP1-1 WET

Investigator(s): MFRA – Todd Ullom Section, Township, Range: Section 13, T118N, R22W

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none):

Slope (%): Lat: Long: Datum:

Soil Map Unit Name: L50A – Houghton and Muskego soils, depressional, 0 – 1% slopes, very poorly drained NWI classification: PEMCd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes X No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	☐			
Hydric Soil Present?	Yes	X	No	☐	**Is the Sampling Area within a Wetland?**	Yes X	No ☐
Wetland Hydrology Present?	Yes	X	No	☐			

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
Salix nigra	30	Y	OBL
Fraxinus pennsylvanica	5	N	FACW
	35	= Total Cover	

Sapling/Shrub Stratum (plot size = 15')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (plot size = 5')	Absolute % Cover	Dominant Species?	Indicator Status
Carex lacustris	50	Y	OBL
Typha sp.	30	Y	OBL
Impatiens capensis	10	N	FACW
Sonchus arvensis	5	N	FAC
	95	= Total Cover	

Woody Vine Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
Vitis riparia	10	Y	FACW
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total %Cover of :	Multiply by:	
OBL species	110	x1 =	110
FACW species	25	x2 =	50
FAC species	5	x3 =	15
FACU species	0	x4 =	0
UPL species	0	x5 =	0
Column Totals:	140 (A)		175 (B)

Prevalence Index = B/A = 1.25

Hydrophytic Vegetation Indicators:

XX Dominance Test is >50%

XX Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present?	Yes	X	No	☐

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project Site:	Four Seasons Mall Property	City/County:	Plymouth / Hennepin	Sampling Date:	7/28/10
Applicant/Owner:		State:	MN	Sampling Point:	SP1-1 UP
Investigator(s):	MFRA – Todd Ullom	Section, Township, Range:	Section 13, T118N, R22W		
Landform (hillslope, terrace, etc.):		Local relief (concave, convex, none):			
Slope (%):	Lat:	Long:		Slope (%):	
Soil Map Unit Name:	L50A – Houghton and Muskego soils, depressional, 0 – 1% slopes, very poorly drained	NWI classification:	PEMCd		

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes X No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	☐	
Hydric Soil Present?	Yes	☐	No	X	**Is the Sampling Area within a Wetland?** Yes ☐ No X
Wetland Hydrology Present?	Yes	☐	No	X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
Fraxinus pennsylvanica	60	Y	FACW
	60	= Total Cover	

Sapling/Shrub Stratum (plot size = 15')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (plot size = 5')	Absolute % Cover	Dominant Species?	Indicator Status
Bromus inermis	50	Y	FACU
Sonchus arvensis	20	Y	FAC
Phalaris arundinacea	10	N	FACW
Solanum nigrum	3	N	FACU
	83	= Total Cover	

Woody Vine Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
Parthenocissus quinquefolia	10	Y	FAC
Vitis riparia	5	Y	FACW
	15	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	80%	(A/B)

Prevalence Index worksheet:

Total %Cover of :		Multiply by:	
OBL species	0	x1 =	0
FACW species	75	x2 =	150
FAC species	30	x3 =	90
FACU species	53	x4 =	212
UPL species	0	x5 =	0
Column Totals:	158 (A)		452 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

XX Dominance Test is >50%

XX Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present?	Yes	☐	No	X

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project Site: Four Seasons Mall Property | City/County: Plymouth / Hennepin | Sampling Date: 7/28/10

Applicant/Owner: | State: MN | Sampling Point: SP2-1 WET

Investigator(s): MFRA – Todd Ullom | Section, Township, Range: Section 13, T118N, R22W

Landform (hillslope, terrace, etc.): | Local relief (concave, convex, none):

Slope (%): | Lat: | Long: | Slope (%):

Soil Map Unit Name: L22C2 – Lester loam, morainic, 6 – 12% slopes, eroded, well drained | NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes X No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	☐				
Hydric Soil Present?	Yes	X	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	X	**No** ☐
Wetland Hydrology Present?	Yes	X	No	☐				

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Sapling/Shrub Stratum (plot size = 15')	Absolute % Cover	Dominant Species?	Indicator Status
Salix exigua	10	Y	OBL
	10	= Total Cover	

Herb Stratum (plot size = 5')	Absolute % Cover	Dominant Species?	Indicator Status
Poa palustris	40	Y	FACW
Cyperus esculentus	25	Y	FACW
Plantago major	20	Y	FAC
Echinochloa crusgalli	15	N	FACW
	100	= Total Cover	

Woody Vine Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

	Total %Cover of :	Multiply by:	
OBL species	10	x1 =	10
FACW species	80	x2 =	160
FAC species	20	x3 =	60
FACU species	0	x4 =	0
UPL species	0	x5 =	0
Column Totals:	110 (A)		230 (B)

Prevalence Index = B/A = **2.09**

Hydrophytic Vegetation Indicators:

XX Dominance Test is >50%

XX Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present?	**Yes**	X	**No**	☐

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project Site:	Four Seasons Mall Property	City/County:	Plymouth / Hennepin	Sampling Date:	7/28/10
Applicant/Owner:		State:	MN	Sampling Point:	SP2-1 UP
Investigator(s):	MFRA – Todd Ullom	Section, Township, Range:	Section 13, T118N, R22W		
Landform (hillslope, terrace, etc.):		Local relief (concave, convex, none):			
Slope (%):	Lat:	Long:		Slope (%):	
Soil Map Unit Name:	L22C2 – Lester loam, morainic, 6 – 12% slopes, eroded, well drained		NWI classification:	NA	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes X No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	☐	
Hydric Soil Present?	Yes	☐	No	X	**Is the Sampling Area within a Wetland?** Yes ☐ No X
Wetland Hydrology Present?	Yes	☐	No	X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Sapling/Shrub Stratum (plot size = 15')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Herb Stratum (plot size = 5')	Absolute % Cover	Dominant Species?	Indicator Status
Lotus corniculatus	45	Y	FAC
Poa pratensis	40	Y	FAC
Taraxacum officinale	10	N	FACU
Plantago major	1	N	FAC
Glecoma hederacea	1	N	FACU
	97	= Total Cover	

Woody Vine Stratum (plot size = 30')	Absolute % Cover	Dominant Species?	Indicator Status
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total %Cover of :		Multiply by:	
OBL species	0	x1 =	0
FACW species	0	x2 =	0
FAC species	86	x3 =	258
FACU species	11	x4 =	44
UPL species	0	x5 =	0
Column Totals:	97 (A)		302 (B)

Prevalence Index = B/A = **3.11**

Hydrophytic Vegetation Indicators:

XX Dominance Test is >50%

Prevalence Index is ≤3.0[1]

Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present?	Yes	X	No	☐

Remarks:

MNRAM ASSESSMENT

Wetland Community Summary
Four Seasons Mall Property - Wetland 1

		Vegetative Diversity/Integrity								
		Community								
Wetland Name	*Location*	*Cowardin Classification*	*Circular 39*	*Plant Community*	*Wetland Proportion*	*Individual Community Rating*	*Highest Wetland Rating*	*Average Wetland Rating*	*Weighted Average Wetland Rating*	*
1 Wet	27-118-22-13-001	PEMCd	Type 3	Shallow Marsh	50	0.1				
		PEMBd	Type 2	Fresh (Wet) Meadow	30	0.1				
		PSS1Ad	Type 6	Shrub Carr	20	0.1				
					100		Low	Low	Low	☐

** Denotes incomplete calculation data.*

Wetland Functional Assessment Summary
Four Seasons Mall Property - Wetland 1

Wetland Name	*WS*	*SA*	*Location*	*Hydrogeomorphology*	*Maint. of Hydrologic Regime*	*Flood/ Stormwater/ Attenuation*	*Downstream Water Quality*	*Maint. of Wetland Water Quality*	*Shoreline Protection*
	20	7	27-118-22-13-001	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet), Slope	Low	Moderate	Moderate	Low	Not Applicable

Wetland Functional Assessment Summary
Four Seasons Mall Property - Wetland 1

									Additional Information	
Wetland Name	*Location*	*Maint. of Char. of Wildlife Habitat*	*Maint.of Char. Fish Habitat*	*Maint. of Char. Amphibian Habitat*	*Aesthetics/ Recreation/ Education/ Cultural*	*Commercial Uses*	*Ground-Water Interaction*	*Wetland Restoration Potential*	*Additional Stormwater Treatment Needs*	*Wetland Sensitivity to Stormwater and Urban Develop.*
	27-118-22-13-001	Low	Not Applicable	Not Applicab	Moderate	Not Applicable	Combination Discharge, Recharge	Not Applicable	Low	Moderate

Wetland Community Summary
Four Seasons Mall Property - Wetland 1

Wetland Name	*Location*	*Vegetative Diversity/Integrity*								
		Community			*Wetland Proportion*	*Individual Community Rating*	*Highest Wetland Rating*	*Average Wetland Rating*	*Weighted Average Wetland Rating*	*
		Cowardin Classification	*Circular 39*	*Plant Community*						
Wet	27-118-22-13-001	PEMCd	Type 3	Shallow Marsh	50	0.1				
		PEMBd	Type 2	Fresh (Wet) Meadow	30	0.1				
		PSS1Ad	Type 6	Shrub Carr	20	0.1				
					100		0.10	0.10	0.10	☐

** Denotes incomplete calculation data.*

Wetland Functional Assessment Summary
Four Seasons Mall Property - Wetland 1

Wetland Name	*WS*	*SA*	*Location*	*Hydrogeomorphology*	*Maint. of Hydrologic Regime*	*Flood/ Stormwater/ Attenuation*	*Downstream Water Quality*	*Maint. of Wetland Water Quality*	*Shoreline Protection*
	20	7	27-118-22-13-001	Depressional/Flow-through (apparent inlet and outlet), Depressional/Flow-through (apparent inlet and outlet), Slope	0.30	0.44	0.33	0.24	0.00

Wetland Functional Assessment Summary
Four Seasons Mall Property - Wetland 1

								Additional Information	
Wetland Name	*Location*	*Maint. of Char. of Wildlife Habitat*	*Maint.of Char. Fish Habitat*	*Maint. of Char. Amphibian Habitat*	*Aesthetics/ Recreation/ Education/ Cultural*	*Commercial Uses*	*Ground-Water Interaction*	*Wetland Restoration Potential*	*Additional Stormwater Treatment Needs*
	27-118-22-13-001	0.30	0.00	0.00	0.36	0.00	Combination Discharge, Recharge	0.00	0.24

PHOTO LOG

Wetland Delineation Photo Log

Four Seasons Mall Property
Plymouth, Minnesota
July 28, 2010

Photo 1. Photo of Wetland 1 taken near the southern property boundary, facing southeast.

Photo 2. Photo of Wetland 2, facing northwest.

RAIN GARDEN AGREEMENT

TRANSFER ENTERED
HENNEPIN COUNTY TAXPAYER SERVICES

AUG 01 2005

HENNEPIN COUNTY MINN.
BY _____ DEPUTY

Doc No 8629989 08/09/2005 08:04 AM
Certified filed and or recorded on above date:
Office of the County Recorder
Hennepin County, Minnesota
Michael H. Cunniff, County Recorder
Deputy 5 TransID 130353
Fees
$35.50 DOC
$10.50 SUR
$46.00 Total

RAIN GARDEN AGREEMENT

THIS AGREEMENT made this 19th day of July, 2005, by and among the City of Plymouth, a Minnesota municipal corporation (hereinafter referred to as the "City") and Four Seasons II, LLC, a Minnesota limited liability company with reference to the following facts and circumstances:

A. Four Seasons II, LLC is the fee owner of certain real property situated in the City of Plymouth, Hennepin County, Minnesota, legally described as follows:

FOUR SEASONS II, LLC
(hereinafter referred to as the "Subject Property")

Described on attached Exhibit A

B. As a condition of its approval of the parking lot expansion for the Subject Property, as described on Exhibit A, the City of Plymouth has required that the parties hereto enter into an agreement, which makes provision for the maintenance of one structural BMPs, also known as a "rain garden". The rain garden shall be constructed by Four Seasons II, LLC within the boundaries of the property outlined in attached Exhibit A of this Agreement as the same are described and depicted in those certain construction plans drawn by Bolton & Menk, Inc. and approved by the City.

C. The parties hereto desire to set forth their agreements with respect to the maintenance of the structural BMP's (rain garden) and the costs of such maintenance.

NOW THEREFORE, in consideration of the foregoing facts and circumstances, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. For the purposes of this Agreement, maintenance of the rain garden shall mean the annual inspection and certification by a professional engineer that the structural BMP is functioning in accordance with the approved plans and, if necessary, the following actions will be taken to maintain the proper operation and function of the structural BMP.

Maintenance Item	Frequency
A. Debris Cleanout	Monthly
B. Vegetation - Maintain at least 80% surface area coverage of plants approved per plan. - Removal of undesirable woody plants. - Removal of invasive plants. - Removal of dried, dead, diseased vegetation. - Re-mulch void areas.	Annual
C. Hydrocarbon Build-up - Eliminate hydrocarbon oil and grease build-up.	Monthly
D. Outlet and Overflow Spillway - Correct any erosion. - Remove any sediment build-up or blockage.	Annual

2. The owners of the subject property or its current owner shall be solely responsible for the maintenance of the rain garden and shall bear all costs of such maintenance, If the current owner does not undertake the necessary maintenance within 30 days of notification by the City, the City may undertake such maintenance, but the costs reasonably incurred by the City for performing such maintenance shall be reimbursed to the City by the owner(s) of the Subject Property.

3. All reasonable costs which the City may incur in performing its maintenance responsibility under this Agreement shall be reimbursed to the City by the owners of the various lots contained within the Subject Property with such costs to be allocated among those lots on equal basis per lot.

4. If the City is not reimbursed within thirty (30) days, the City may levy a special assessment equal to the amount of the reasonable City costs incurred against the Subject Property on each occasion that the City is required to perform the maintenance. The special assessment shall be apportioned to each of the lots constituting the Subject Property. If a lot is subsequently subdivided, the special assessments for the subdivided lot shall be reapportioned on a square footage basis over the new lots created from the subdivided lot. The assessment shall be spread over (five) 5 years together with annual interest equal to the prime interest rate on the unpaid balance. The estimated amount of each assessment is $1,500 based upon the estimated cost of performing such maintenance and construction price index in 2005. The estimate shall be adjusted to reflect changes in the construction price index. The current owner of the Subject Property, waives all procedural and substantive objections to the public improvements and special assessments including but not limited to hearing and notice requirements, and claims that the amount of the assessment exceeds the benefit to the property. The right to appeal the assessments pursuant to Minn. Stat. § 429.081 is also waived.

5. The terms and conditions of this Agreement shall be binding upon, and shall inure to the benefit of, the parties hereto and their respective successors and assigns and shall be recorded against the title to the Subject Property.

IN WITNESS WHEREOF, the parties hereto have caused this document to be executed as of the day and year first above written.

CITY OF PLYMOUTH

By: _____
~~Judy A. Johnson, Mayor~~ TIM BILDSOE DEPUTY MAYOR

By: _____
Laurie Ahrens, City Manager

FOUR SEASONS II, LLC

By: _____
Robert L. Rappaport, Its: President

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me on this 19th day of July, 2005, by ~~Judy A. Johnson~~ Tim B. Ildsoe and Laurie Ahrens, the ~~Mayor~~ Deputy and City Manager, respectively, of the City of Plymouth, a Minnesota municipal corporation.

_____
Notary Public

KURT HOFFMAN III
NOTARY PUBLIC - MINNESOTA
My Commission Expires Jan 31, 2010

STATE OF MINNESOTA)
) SS.
COUNTY OF ~~HENNEPIN~~ Carver)

The foregoing was acknowledged before me this 14th day of July, 2005, by Robert L. Rappaport, the President of Four Seasons II, LLC, a Minnesota limited liability company, on behalf of the company.

_____
Notary Public

LAN W. SARKIS
NOTARY PUBLIC-MINNESOTA
My Commission Expires Jan. 31, 2010

THIS INSTRUMENT DRAFTED BY
Ronald S. Quanbeck, P.E.
City Engineer
City of Plymouth
3400 Plymouth Blvd.
Plymouth, MN 55447

EXHIBIT A

That part of Lot 3, Block 1, Plymouth Plaza 4th Addition, according to the recorded plat thereof, Hennepin County, Minnesota, lying Westerly of Hennepin County State Aid Highway No. 18, Plat 32 according to the recorded plat thereof and Northerly of the following described line: Commencing at the most Southwesterly corner of said Lot 3, Block 1, Plymouth Plaza 4th Addition; thence Northwesterly along the right-of-way line of Lancaster Lane, according to the recorded plat thereof, to the most Westerly corner of said Lot 3, Block 1; thence Northeasterly along a Northwesterly line of said Lot 3, Block 1, for a distance of 100.00 feet to the actual point of beginning of the line to be described; thence Easterly parallel with the South line of said Lot 3, Block 1, to the Westerly line of said Hennepin County State Aid Highway No. 18, Plat 32 and there terminating.

Also: All that part of Lot 1, Block 1, Plymouth Plaza 4th Addition lying Westerly of Hennepin County State Aid Highway No. 18, Plat 32.

Also: A 200 foot by 200 foot tract adjacent to the Northwesterly corner of Lot 1, Block 1, and labeled "EXCEPTION" on the plat of record of Plymouth Plaza 4th Addition, being described as follows:

> Commencing at the Northeast corner of Lot 1, Block 1, Plymouth Plaza Addition; thence Easterly along the Southerly line of County Road No. 9, a distance of 269.01 feet; thence at a right angle South a distance of 7 feet to the actual point of beginning of the tract of land to be described; thence continuing South along last described course a distance of 103 feet; thence Southerly along a tangential curve to the left, with a radius of 834.3 feet, a distance of 97.23 feet; thence Easterly parallel with the Southerly line of County Road No. 9, a distance of 194.34 feet; thence at a right angle North a distance of 200 feet to a point 7 feet South of the Southerly line of County Road No. 9; thence Westerly parallel with the Southerly line of County Road No. 9, a distance of 200 feet to the actual point of beginning.

Also: The North 48 feet of Lot 1, Block 5, Plymouth Plaza 4th Addition.

Also: The North 55 feet of Lot 1, Block 1, Plymouth Plaza Addition.

Also: The North 55 feet of Lots 1, 2 and 3, Block 5, Plymouth Plaza 2nd Addition.

Together with that part of old Hennepin County Road No. 9 in part of Section 13, Township 118, Range 22, Hennepin County, Minnesota, lying Westerly of the Northerly extension of the Westerly right-of-way of Lancaster Lane, as platted Plymouth Plaza 4th Addition, and lying Easterly and Southerly of the following described line:

> Beginning at a point on the Northerly lot line of Lot 4, Block 5, Plymouth Plaza 2nd Addition, distant 46.35 feet Westerly of the Northeast corner of said Lot 4 (said Northerly line has assumed bearing of North 88 degrees 26 minutes 06 seconds East); thence North 41 degrees 33 minutes 47 seconds East, a distance of 58.50 feet, more or less, to the South line of Hennepin County State Aid Highway No. 18, Plat 32; thence Easterly along said Southerly line of C.S.A.H. No. 18 to its intersection with the Northerly extension of the Westerly right-of-way of said Lancaster Lane and there terminating.

Together with that part of County Road No. 9 (Rockford Road) lying Easterly of the Northerly extension of the Westerly right-of-way of Lancaster Lane and the Westerly of the Westerly right-of-way of County State Aid Highway No. 18, all lying in Section 13, Township 118, Range 22, Hennepin County, Minnesota as vacated as public roadway.

Together with that part of the North 55 feet of Nathan Lane lying South of the South right-of-way line of County Road No. 9 in Section 13, Township 118, Range 22.

Together with that part of Lancaster Lane described as: Beginning at the intersection of the Easterly right-of-way of Lancaster Lane and the Southerly right-of-way of County Road No. 9; thence Southerly along the Easterly right-of-way of Lancaster Lane a distance of 200.23 feet; thence Northwesterly to a point on the Westerly right-of-way of Lancaster Lane distant 48.00 feet Southerly of Southerly right-of-way of County Road No. 9; thence Northerly along Westerly right-of-way of Lancaster Lane to Southerly right-of-way of County Road No. 9; thence Easterly to point of beginning and there terminating

All lying in Section 13, Township 118, Range 22, Hennepin County, Minnesota.