

**PRELIMINARY  
STORMWATER  
MANAGEMENT  
REPORT**



**PROJECT SITE:**

**COSTCO WHOLESALE  
1255 E. OGDEN AVENUE  
NAPERVILLE, DUPAGE COUNTY, ILLINOIS**

**PREPARED FOR:**

Costco Wholesale Corporation  
999 Lake Drive  
Issaquah, WA 98027  
425.313.8100

**PREPARED BY:**

V3 COMPANIES, LTD.  
7325 JANES AVENUE  
WOODRIDGE, ILLINOIS 60517  
630.724.9200

MARCH 04, 2020

# **COSTCO – NE NAPERVILLE STORMWATER MANAGEMENT REPORT**

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## **NAPERVILLE, DUPAGE COUNTY, ILLINOIS**

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# **COSTCO – NE NAPERVILLE STORMWATER MANAGEMENT REPORT**

**NAPERVILLE, DUPAGE COUNTY, ILLINOIS**

## **OVERVIEW**

The proposed 18.71± acre Costco Wholesale project is located in Section 8, Township 38 North, Range 10 East in the City of Naperville, DuPage County, Illinois. The property is located at 1255 East Ogden Avenue (see enclosed project location map). The project includes the construction of the Costco Wholesale Warehouse with associated parking, underground utilities, truck docks, and fuel facility.

The proposed development area is currently a retail strip mall with an existing offsite stormwater management facility northwest of the site (see enclosed aerial map exhibit). The site is bounded by Iroquois Avenue with Citibank and Panera Bread to the south, DeVry University and Naperville Corporate Center to the north, H Mart and CVS to the east, and Katharine Manor and a stormwater detention facility to the west.

The existing site generally drains to the west, toward the existing stormwater management facility that was designed for the existing development and other adjacent developments (see enclosed USGS Topographic Map). The existing basin then is ultimately tributary to the West Branch DuPage River via a system of stormwater sewer pipes and detention basins.

According to the FEMA Flood Insurance Rate Maps (FIRM) (see enclosed FIRM exhibit), there is no 100-year mapped floodplain within the proposed Costco development. According to the USGS Hydrologic Atlas and the National Wetlands Inventory (NWI), there are no mapped wetlands present on the proposed development (see enclosed USGS Hydrologic Atlas and NWI Map). The soil survey of DuPage County shows that the site predominantly consists of two different soil types; Askhum silty clay loam and Orthents silty clay (see enclosed Soil Survey Map).

## **DETENTION NARRATIVE**

The site is to follow the DuPage County Countywide Stormwater and Flood Plain Ordinance. Since, under the proposed conditions, the impervious area does not increase by more than 25,000 SF, when compared to the site condition as of February 15, 1992, site runoff storage is not required for the proposed redevelopment. Additionally, since the proposed redevelopment will not result in 2,500 square feet or more of net new impervious area, when compared to the site condition as of April 23, 2013, no PCBMPs are required. Additionally, the impervious area decreases from 16.63 AC (724,532 SF) in the existing condition to 15.17 AC (660,631 SF) in the proposed condition. This is a reduction of 1.47 AC (63,901 SF).

# **COSTCO – NE NAPERVILLE STORMWATER MANAGEMENT REPORT**

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## **NAPERVILLE, DUPAGE COUNTY, ILLINOIS**

The existing detention basin located northwest of the site provides site runoff storage for the existing Ogden Mall development and will continue to provide site runoff storage for the proposed redevelopment. The impervious area decreases under the proposed conditions; the existing detention basin will not be modified. The proposed design will not impact the existing detention basin.

The existing development conveys the overland overflow to Iroquois Avenue. The proposed Costco grading plan will convey the overland overflow to the existing detention basin located northwest of the Costco site.

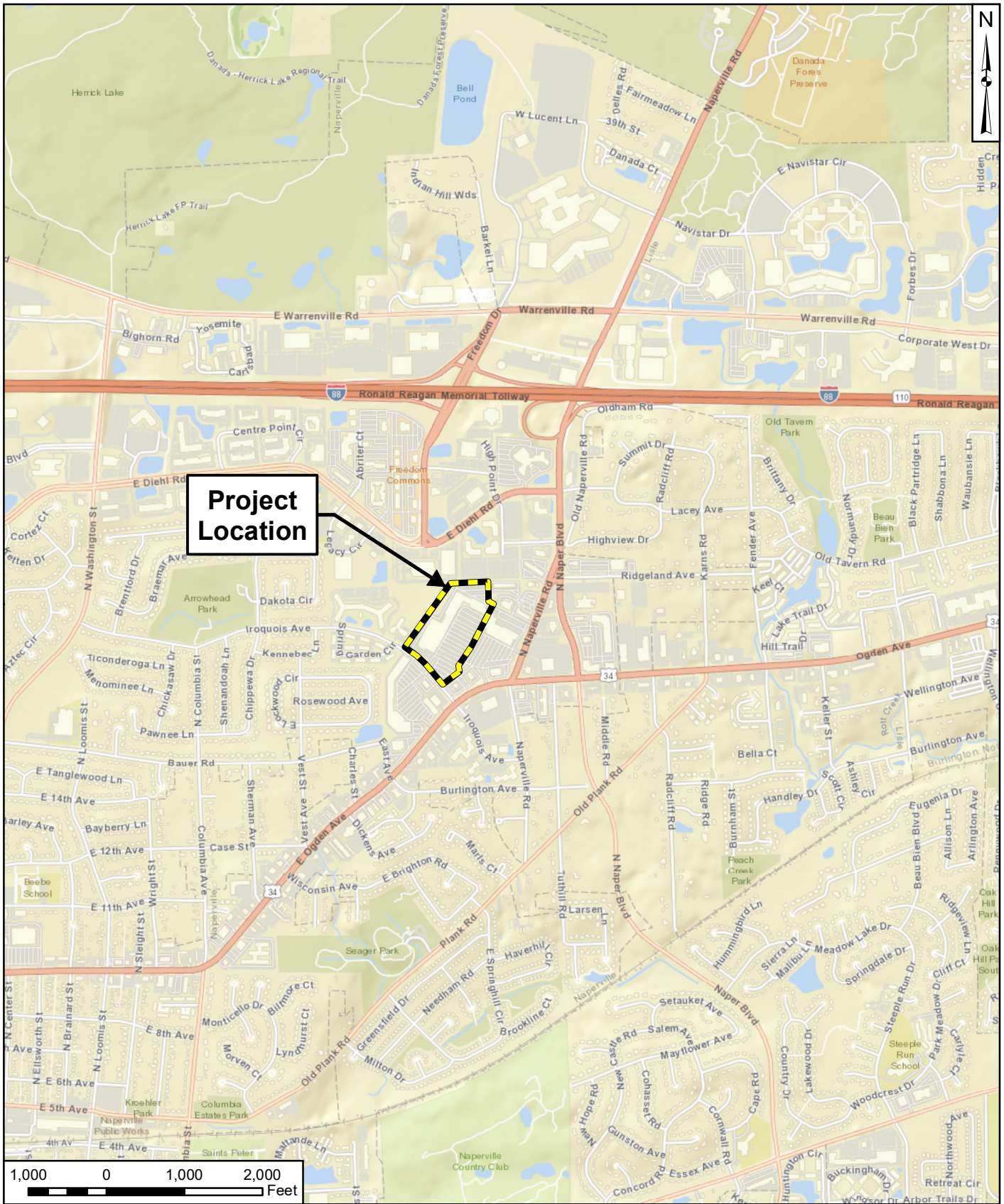
### **STORM SEWER**

The proposed storm sewer for the Costco site will be sized to convey runoff from the 10-year rainfall event using the latest Bulletin 70 rainfall data. Offsite storm sewer that conveys runoff from the remainder of the Ogden Mall property to the east will be connected to a combination of new and existing storm sewers that extend through the Costco site and into the existing northwest detention pond. Two new outfall connections to the pond are proposed to direct flow from new Costco storm sewers into the existing pond.

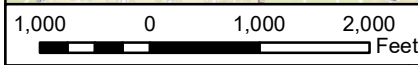
### **CONCLUSION**

It is our opinion that the proposed stormwater management design conforms to the requirements of DuPage County Stormwater Ordinance. An existing detention basin lies to the northwest of the site and will continue to provide storage for the subject property. Further calculations and details will be provided during final design.



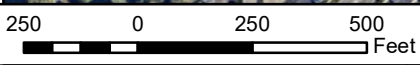


**Project Location**



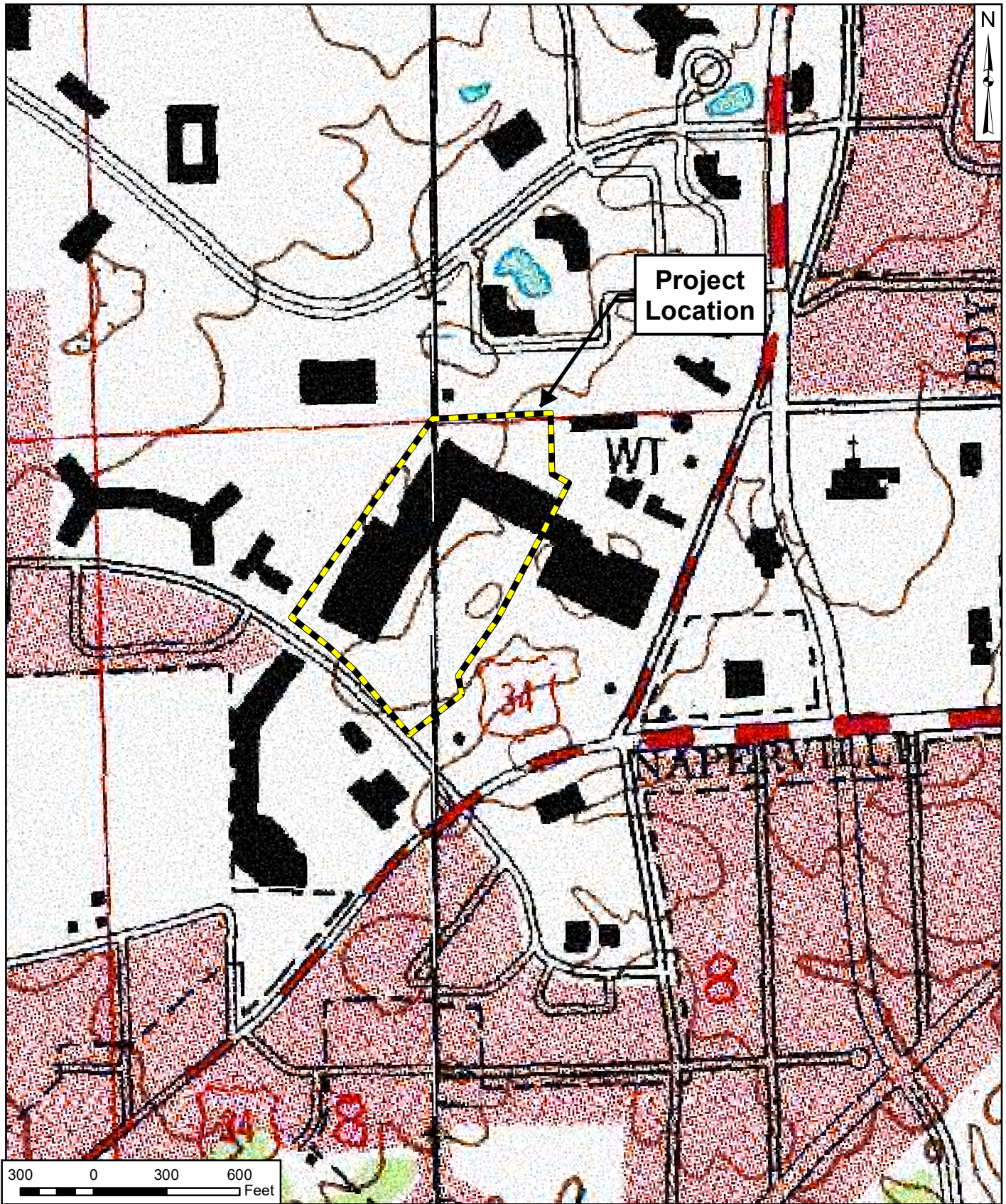
 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.: 19473	CLIENT: Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523	<b>PROJECT LOCATION MAP</b>	
	CREATED BY: PTW	DATE: 01/16/2020		
Visio, Vertere, Virtute... <i>"The Vision To Transform with Excellence"</i>	SCALE: See Scale Bar	BASE LAYER: ESRI World Street Map		



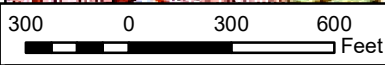



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19473</p>	<p>CLIENT: Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523</p>	<p>TITLE: <b>AERIAL MAP</b></p>	
	<p>CREATED BY: PTW</p>	<p>DATE: 01/16/2020</p>	<p>BASE LAYER: DigitalGlobe Aerial Imagery (2017)</p>	<p>SITE: Costco NE Naperville 1255 E. Ogden Ave Naperville, IL</p>
<p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p>SCALE: See Scale Bar</p>			

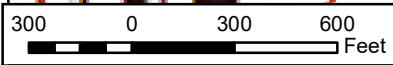
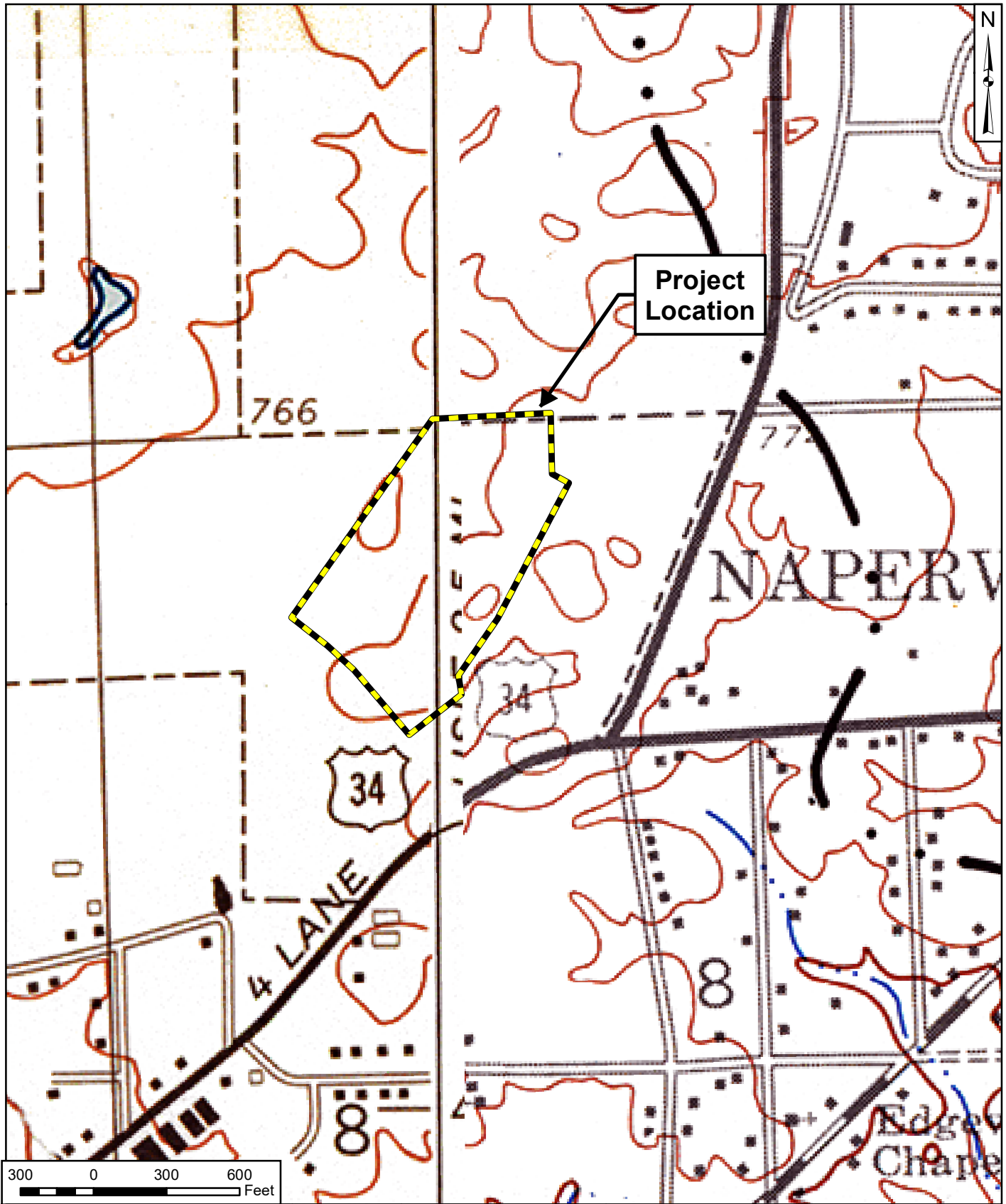





**Project Location**



 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	<p>PROJECT NO.: 19473</p>	<p>CLIENT: Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523</p>	<p>TITLE: <b>USGS TOPOGRAPHIC MAP</b></p>		
	<p>CREATED BY: PTW</p>	<p>DATE: 01/16/2020</p>	<p>BASE LAYER: USGS Topographic Map Naperville &amp; Wheaton Quadrangles (1993)</p>	<p>SITE: Costco NE Naperville 1255 E. Ogden Ave Naperville, IL</p>	<p>EXHIBIT: <b>3</b></p>
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 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.: 19473	CLIENT: Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523	TITLE: <b>USGS HYDROLOGIC ATLAS</b>	
	CREATED BY: PTW	DATE: 01/16/2020	BASE LAYER: USGS Hydrologic Atlas Naperville & Wheaton Quadrangles	SITE: Costco NE Naperville 1255 E. Ogden Ave Naperville, IL
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**Project Location**

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0142J**

**FIRM**  
FLOOD INSURANCE RATE MAP  
DU PAGE COUNTY,  
ILLINOIS  
AND INCORPORATED AREAS

**PANEL 142 OF 287**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	MAP#	PANEL	SUFFIX
DUPAGE COUNTY	170197	0142	J
NAPERVILLE, CITY OF	170213	0142	J
WARRENVILLE, CITY OF	170216	0142	J

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

**MAP NUMBER**  
17043C0142J

**MAP REVISED**  
AUGUST 1, 2019

Federal Emergency Management Agency

**NFIP**

**PANEL 0161J**

**FIRM**  
FLOOD INSURANCE RATE MAP  
DU PAGE COUNTY,  
ILLINOIS  
AND INCORPORATED AREAS

**PANEL 161 OF 287**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	MAP#	PANEL	SUFFIX
DUPAGE COUNTY	170197	0161	J
LISLE, VILLAGE OF	170211	0161	J
NAPERVILLE, CITY OF	170213	0161	J

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

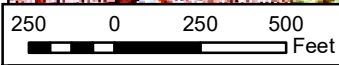
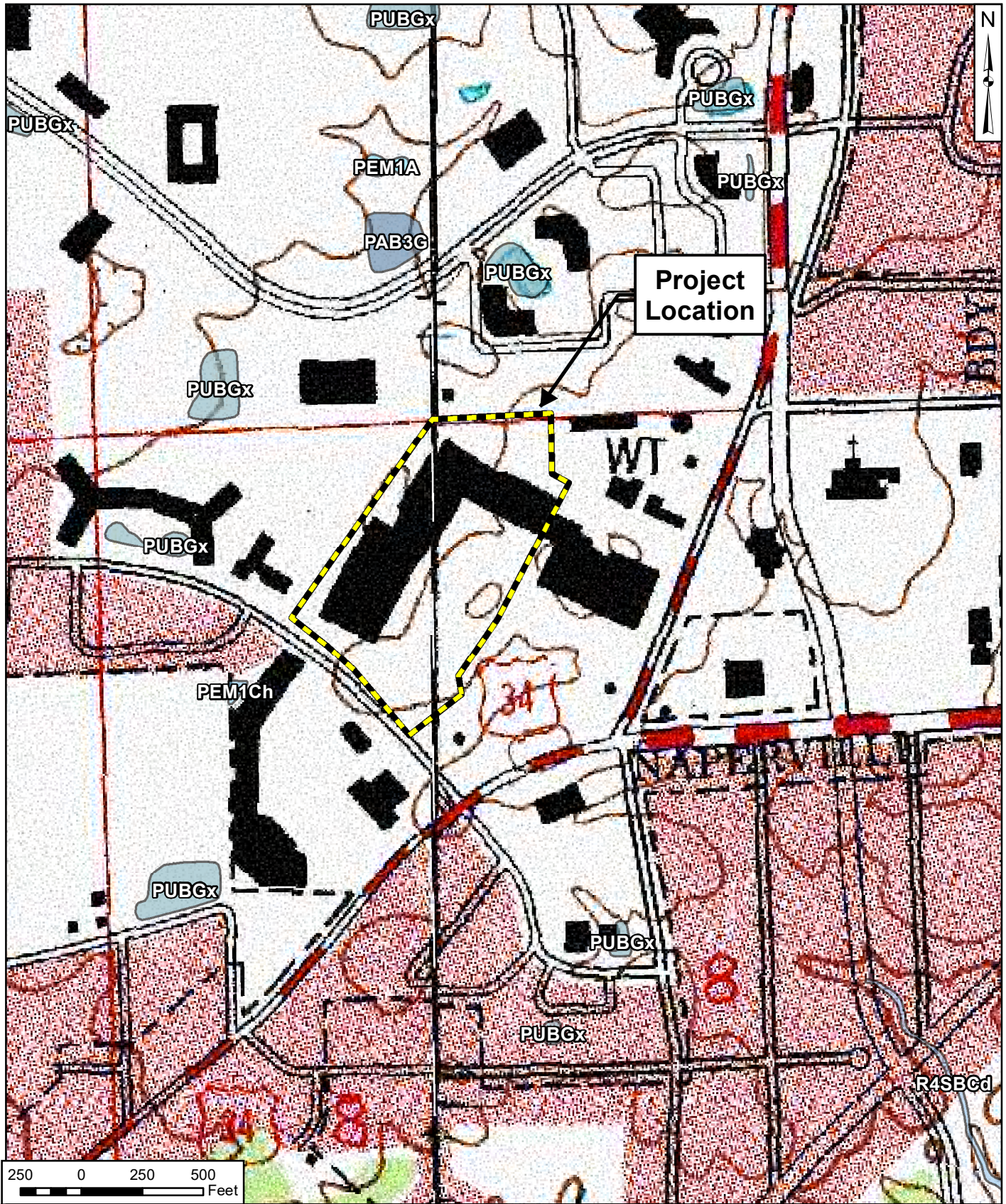
**MAP NUMBER**  
17043C0161J


**MAP REVISED**  
AUGUST 1, 2019

Federal Emergency Management Agency

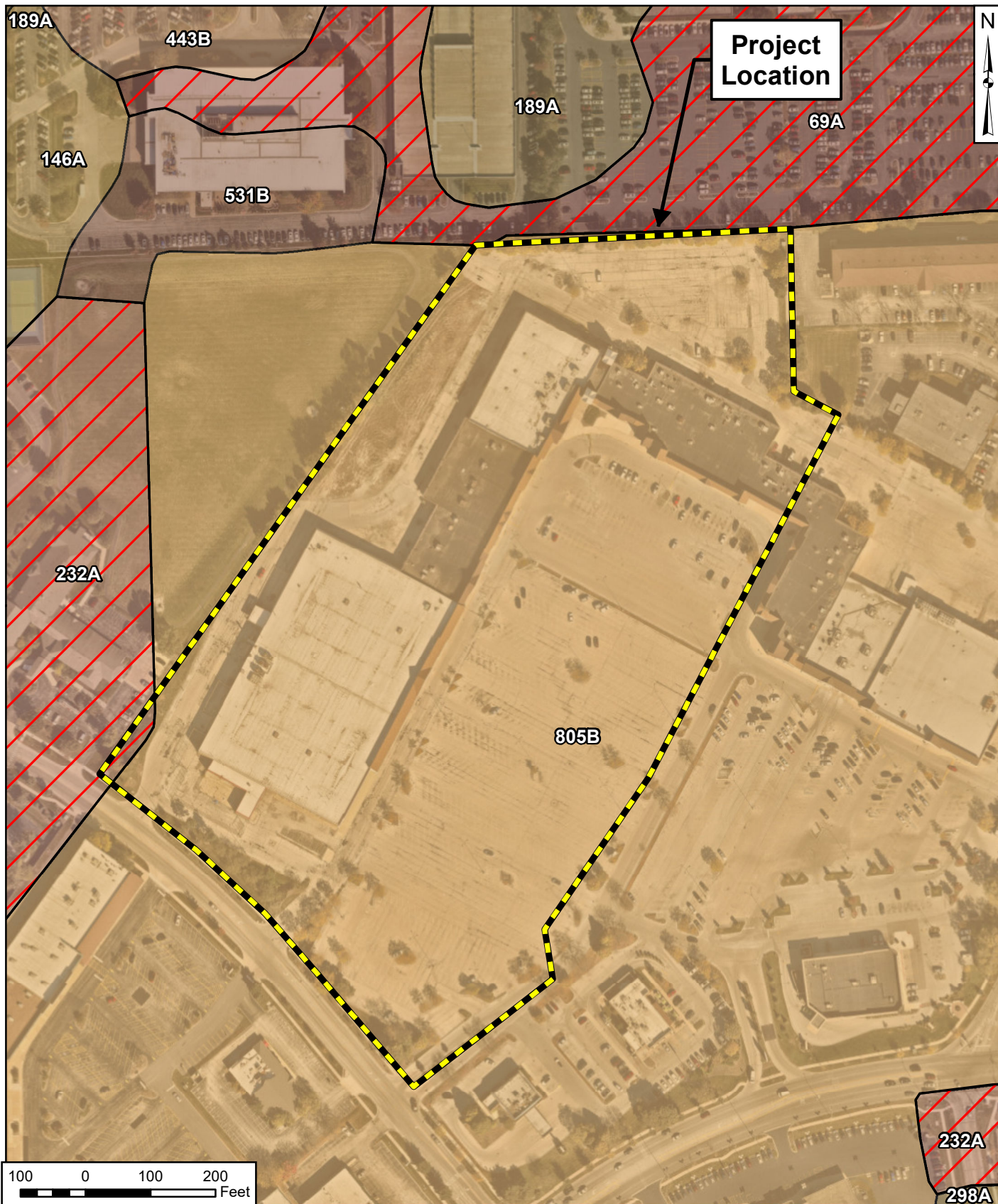
<p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p> <p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p>	<p><b>PROJECT NO.:</b> 19473</p> <p><b>CREATED BY:</b> PTW</p> <p><b>DATE:</b> 01/16/2020</p> <p><b>SCALE:</b> Not To Scale</p>	<p><b>CLIENT:</b> Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523</p> <p><b>BASE LAYER:</b> FEMA FIRM Panels 17043C0142J &amp; 17043C0161J (2019)</p>	<p><b>TITLE:</b> <b>FEMA FLOOD INSURANCE RATE MAP (FIRM)</b></p> <p><b>SITE:</b> Costco NE Naperville 1255 E. Ogden Ave Naperville, IL</p>	<p><b>EXHIBIT:</b> <b>5</b></p>
	<p>N:\2019\19473\Drawings\ArcGIS\LD\EXH5_firm_19473.mxd</p>			





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	CREATED BY: PTW	DATE: 01/16/2020	BASE LAYER: USGS Topographic Map Naperville & Wheaton Quadrangles (1993)	SITE: Costco NE Naperville 1255 E. Ogden Ave Naperville, IL





 <p>7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com</p>	PROJECT NO.: 19473	CLIENT: Costco Wholesale Corporation c/o TJ Design Strategies, Ltd. 2311 W 22nd Street, Suite 208 Oak Brook, IL 60523	TITLE: <b>SOIL SURVEY OF DUPAGE COUNTY, ILLINOIS (2003) MAP</b>	
	CREATED BY: PTW	DATE: 01/16/2020	BASE LAYER: DigitalGlobe Aerial Imagery (2017)	SITE: Costco NE Naperville 1255 E. Ogden Ave Naperville, IL
Visio, Vertere, Virtute... "The Vision To Transform with Excellence"	SCALE: See Scale Bar			

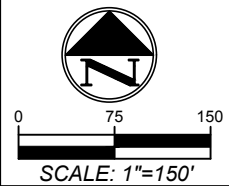


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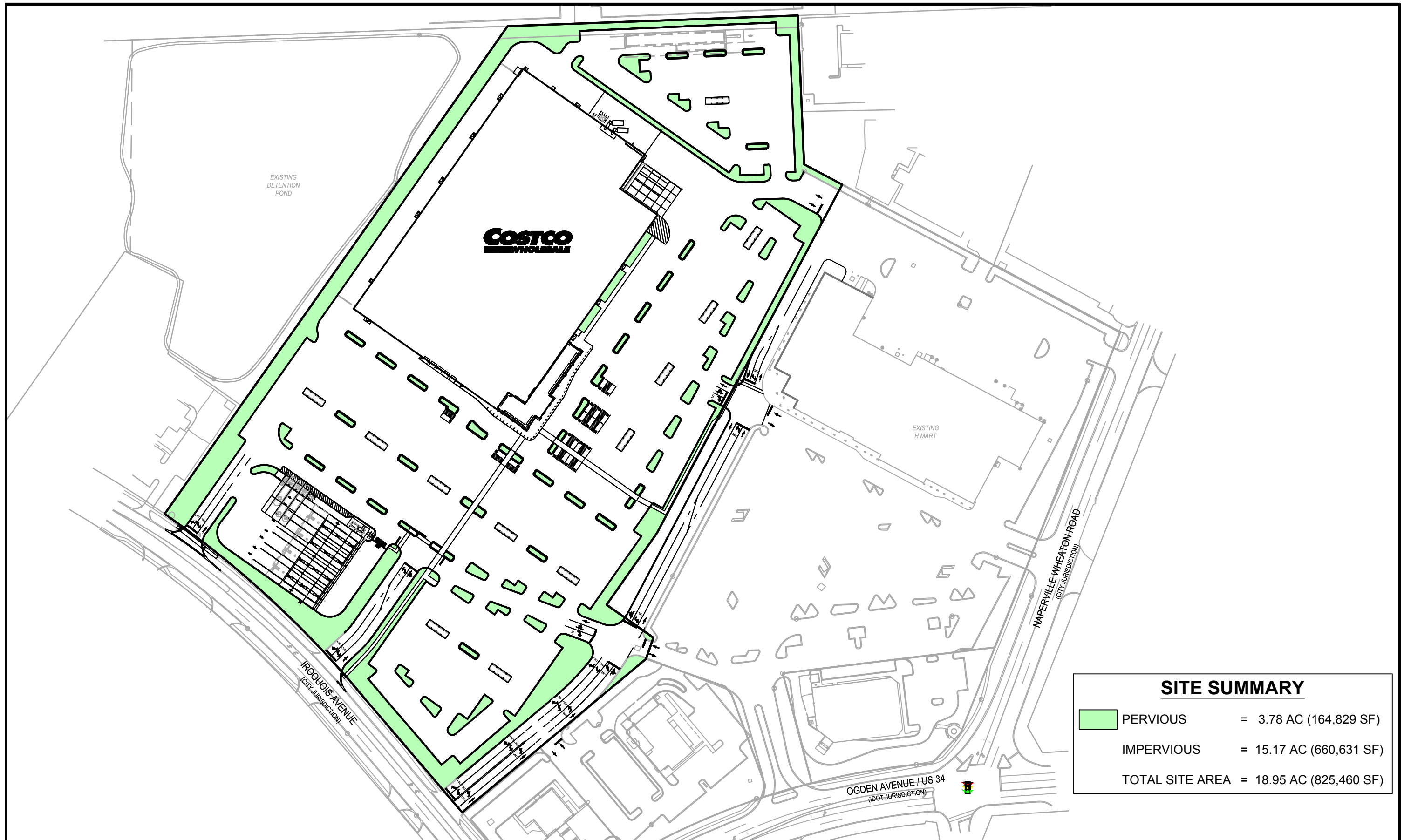
**COSTCO**  
NAPERVILLE OGDEN MALL ILLINOIS


**EXISTING PERVIOUS /  
IMPERVIOUS EXHIBIT**

DATE: 03-03-20







SITE SUMMARY		
	PERVIOUS	= 3.78 AC (164,829 SF)
	IMPERVIOUS	= 15.17 AC (660,631 SF)
	TOTAL SITE AREA	= 18.95 AC (825,460 SF)



7325 Janes Avenue  
Woodridge, IL 60517  
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NAPERVILLE

COSTCO

OGDEN MALL

ILLINOIS

PROPOSED PERVIOUS /  
IMPERVIOUS EXHIBIT

DATE: 03-03-20

