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# Stormwater Master Plan for Hamilton Lakes Itasca, Illinois

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Hamilton Lakes is located at the northeast corner of I-290 and I-390 in Itasca, DuPage County, Illinois and includes approximately 186 acres of land. Hamilton Lakes (originally called Itasca Center and later referred to as the Chancellery at Hamilton Lakes) was designed in 1978 by Sheaffer and Roland and constructed in 1979 as a master planned business park with state-of-the-art stormwater management/detention and onsite wastewater treatment/land application systems. The infrastructure improvements included: significant mass grading of most of the overall property, 5 major stormwater detention lakes, an onsite wastewater treatment facility capable of processing 200,000 gpd, a grey water irrigation system to spray treated effluent from the sewage treatment plant on green areas of the development campus for absorption (discharge to the detention lakes prohibited), and sanitary sewer and potable water systems.

Stormwater management was provided in a series of 5 lakes through online detention storage due to the floodplain and floodway running through the site. Stormwater management and detention for the entire park buildout was designed, permitted, and constructed in 1979, and thus with the introduction of the DuPage County SMO in 1992 (and during the disclosure period for master planned developments) the Village of Itasca appropriately “grandfathered” the entire Hamilton Lakes campus with regard to the stormwater detention component of the ordinance. Future improvements are still subject to the ordinance’s VCBMP/PCBMP requirements, which were included in the 2013 revision to the ordinance.

Over the years, most of the parcels have been built out with the understanding that detention was provided for all of Hamilton Lakes in the 5 lakes. Any parcel developed after 2013 provided the required VCBMP storage on their parcel as required by the latest County Ordinance. As development took place, the original detention calculations were referenced and an accounting system was utilized. Based on the original methodology, a required detention volume for the new development was calculated and subsequently subtracted from the detention available. In 2019, the FEMA flood maps were revised based on a flood study done by DuPage County, which resulted in some slight changes to the flood elevations in the lakes at Hamilton Lakes. In 2024, a ComEd Substation plan was submitted to DuPage County Stormwater for review and the question was raised as to the validity of the original stormwater management calculations and design since the flood maps had been revised and this is all on-line detention. There were various meetings and discussions between DuPage County, Village of Itasca, Ownership, and RWG Engineering (Ownership’s engineer) to determine the right way to ensure no negative impact, as defined in the County Ordinance, as a result of the development at Hamilton Lakes. The recommendation by the County was to create a Master Plan that would be the regulating document for Hamilton Lakes regarding stormwater management going forward. Because the detention is within the floodway (online detention), it is not possible to meet the standard allowable release rate and storage criteria in the ordinance. All parties agreed that an analysis should be completed comparing a “modified effective” FEQ model to a “full buildout” FEQ model to show no negative impact. V3 was brought on the team to complete this analysis, in cooperation with the County, and the results are included as an attachment to this document. The results were found to have no negative impact as defined in the DuPage County Ordinance based on parameters agreed to between all parties. The “full buildout” condition assumed an 80% impervious coverage on the remaining land to be developed, which is slightly more than what is out there today. There are no anticipated impacts to wetlands or riparian buffers in conjunction with this plan. In the future, any impact to potential wetlands or riparian buffers would have to be dealt with at that time through DuPage County. Each development will remain responsible for providing on-site VCBMP/PCBMP as required by the current ordinance, but will be allowed to develop up to a net new impervious of 80% of the total site area.

**DEVON AVENUE  
TRIBUTARY – HAMILTON  
LAKES BUSINESS PARK  
UPDATED MASTER PLAN:  
STORMWATER INSERT**



**PROJECT SITE:**

**333 Pierce Rd,  
Itasca, DuPage County, Illinois 60143**

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
Chapter 1 - Document and Site Overview .....	ii
Document Review.....	ii
Site Description.....	ii
Site Characteristics.....	iii
Chapter 2 - Hydrology and Hydraulics.....	vii
Model Development – Modified Effective Condition .....	vii
Model Development – Future (Full Build-Out) Condition .....	viii
Chapter 3 - Results .....	10
Modeling Results – Comparing the Future condition to the Modified Effective condition .....	10
Chapter 4 - RECOMMENDATIONS .....	16
Recommendations – Approve Implementation of Stormwater Insert for Inclusion in the HLBP Updated Master Plan.....	16

## APPENDICES

APPENDIX 1 HAMILTON LAKES IMPERVIOUS CONDITION SUMMARY	
APPENDIX 2 ELGIN-OHARE I-290/I390 INTERCHANGE HYDRAULIC REPORT EXCERPT	
APPENDIX 3 FEQ MODEL REVISION INFORMATION	
APPENDIX 4 HAMILTON LAKES LAND USE CALCULATIONS FOR MODIFIED EFFECTIVE & FULL BUILD OUT CONDITION	
APPENDIX 5 MODIFIED EFFECTIVE VERSUS FUTURE PERCENTAGE CHANGE FIGURES	
APPENDIX 6 FEMA FIRM PANEL	
APPENDIX 7 FIS FLOOD PROFILE	



# EXECUTIVE SUMMARY

Hamilton Lakes Business Park is working with the DuPage County Stormwater Management Department (SMD) to evaluate land use changes within the business park in order to determine whether those changes would cause adverse impacts to the adjacent or downstream properties. The changes would be based on the Effective FEQ model updated to the Modified Effective land use and hydraulic condition. This Modified Effective condition would be compared to the full build-out (Updated Stormwater Master Plan) land use condition. This report concludes that the historic regional online stormwater management facilities can handle the full build-out development without adverse impacts to adjacent or downstream properties, which is demonstrated using the Effective FEQ model for the Devon Avenue Ditch tributary to Salt Creek.

The site of interest is Hamilton Lakes Business Park (HLBP) in the Village of Itasca, DuPage County, Illinois. The park is located in the northwest quadrant of Section 05, Town 40 North, Range 11 East of the 3<sup>rd</sup> Principal Meridian within the Public Land Survey System (PLSS). HLBP is just east and downstream of Interstate 290 (I-290). The stormwater management system of the HLBP contains five lakes connected by culverts and weirs before flowing into an outlet channel, RC box culvert, and finally drop box intake into a large box culvert under Devon Avenue that discharges into the Devon Avenue ditch, and which then drains into Salt Creek.

The Effective FEQ model has been obtained from DuPage County and has been used to create a Modified Effective FEQ model and a Full Build-Out Conditions FEQ Model. Results for this modeling effort can be found in the detailed narrative below. In summary these tables show small changes in elevation, discharge and velocity for the larger magnitude storm events that are within computational tolerances for an unsteady flow model like the Devon Avenue Ditch FEQ model.

The modeling and report narrative have been prepared to demonstrate the HLBP stormwater management system will not adversely impact adjacent or downstream systems, given the Full Build-Out (Updated Stormwater Master Plan) land use condition. No remapping of floodplain or changes to the mapped floodway are proposed. Further, the analysis indicates no additional revisions to the stormwater management system need occur to remain compliant with either the original stormwater master plan or SMD (no adverse impacts) in order to support the HLBP fully developed condition. It should be noted that the Future (full build-out) condition used eighty percent imperviousness land use coverage as a conservative upper-level expectation for final construction on each parcel remaining to be developed (the majority of dense sites built under the pre-existing stormwater plan had an impervious coverage of about 77 or 78 percent).



# CHAPTER 1 - DOCUMENT AND SITE OVERVIEW

## Document Review

Hamilton Lakes Business Park is working with the DuPage County Stormwater Management Department (SMD) to evaluate land use changes within the business park in order to determine whether those changes would cause adverse impacts to the adjacent or downstream properties. The changes would be based on the Effective FEQ model updated to the Modified Effective land use and hydraulic condition. This Modified Effective condition would be compared to the full build-out (Updated Stormwater Master Plan) land use condition. V3 was tasked with performing a watershed plan level modeling evaluation of the Hamilton Lakes Business Park (HLBP) to determine if the constructed stormwater system (executed under the original historic stormwater master plan) provides sufficient stormwater management volumes and hydraulic control to minimize potential impacts to adjacent or downstream properties.

The modeling effort began with a review of the previous Stormwater Management Reports involving establishment of the stormwater management system and ongoing revisions based on updated permitting regulations for water quality and quantity. The Hamilton Lakes Impervious Condition Summary data table (PDF page 8, provided as an exhibit under Appendix 1) was contained in the June 4, 2024 report prepared by RWG Engineering and was selected as an appropriate reference point for the impervious/pervious ratio present in the HLBP. The 1978 "Itasca Center" Drainage Management Report was checked to determine if there was any requirement for a limiting projected impervious/pervious ratio from the original design (none was found). Other stormwater management reports prepared for individual parcel development and prepared by Cowhey Gudmundson Leder, LTD and V3 Companies, LTD were examined for any relevant or useful stormwater management information.

## Site Description

The site of interest is Hamilton Lakes Business Park in the Village of Itasca, DuPage County, Illinois. The park is located in the northwest quadrant of Section 05, Town 40 North, Range 11 East of the 3<sup>rd</sup> Principal Meridian within the Public Land Survey System (PLSS). The land-use surrounding the site is predominantly residential and commercial. The Project Location Map, Figure 1.1 below, shows I-290 borders the HLBP to the west, Illinois Route 390 to the south, Arlington Heights Road approximately 700 feet to the east and Devon Avenue to the north. V3 reviewed the available documentation and performed a site walk of the HLBP to confirm the size and condition of critical hydraulic structures within the watershed.

The HLBP is just downstream of Interstate 290 (I-290), which is connected to the upstream drainage by a reinforced concrete box (RCB) culvert under I-290. The HLBP contains five lakes, which are identified on the FEQ model schematic (Figure 2.3 below) and connected by culverts and weirs before flowing into an outlet channel (Branch 18), RC box culvert (D16), and finally drop box intake (D13) into a large box culvert (Branch 10) that runs under Arlington Heights Road



parallel to the Devon Avenue alignment and discharges into the Devon Avenue ditch (Branches 2 thru 8), which ditch then drains into Salt Creek. The ultimate discharge point into Salt Creek occurs just south of where Devon Avenue crosses Salt Creek.

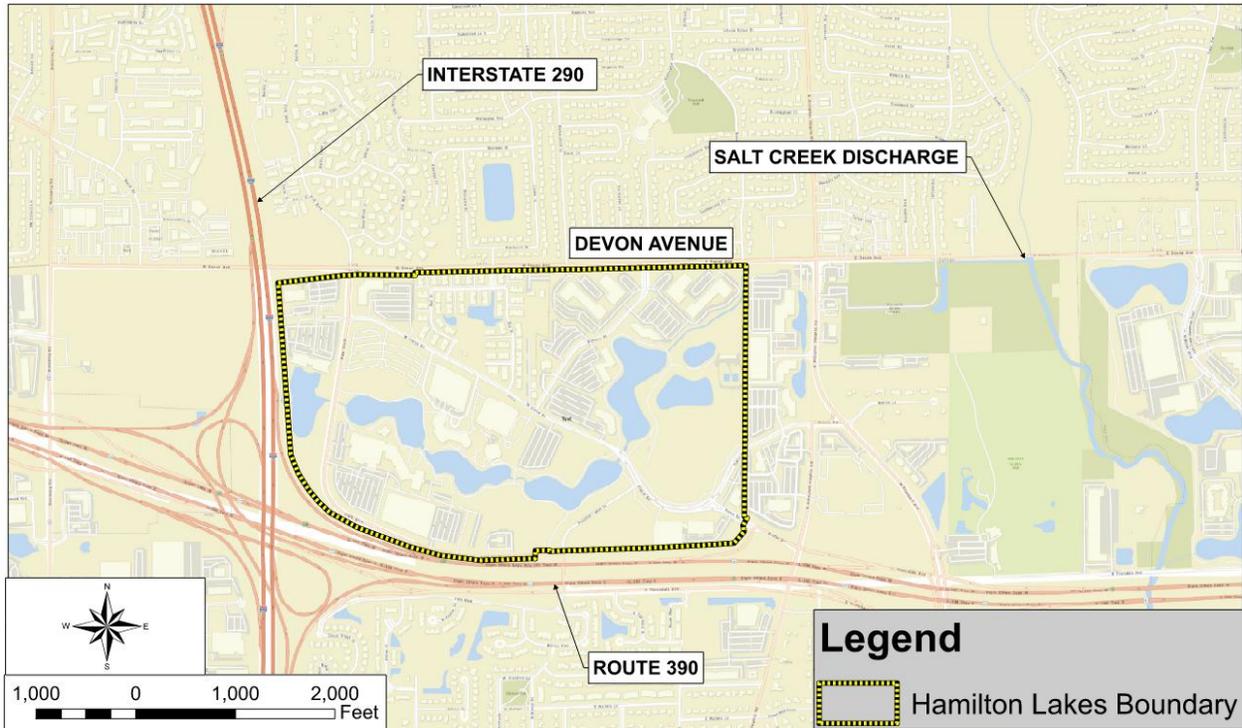


Figure 1.1: Project Location Map

### Site Characteristics

The site observations consisted of structure measurements and comparisons with the Effective FEQ model elements. The HLBP portion of the Devon Avenue Ditch watershed is captured by the dashed blue line on Figure 2.3 below. It should be noted that the smaller elements for very low flows are not accounted for in the FEQ Effective model and have not been included in either the Modified Effective model or Future (Full Build-Out) model. Two examples are the low flow outlet from Lake 1 and the low flow 20-inch diameter drain tile at the downstream control location.

The outlet from Lake 1 is consistent with the Effective model description and condition as shown in Figure 1.2 below.



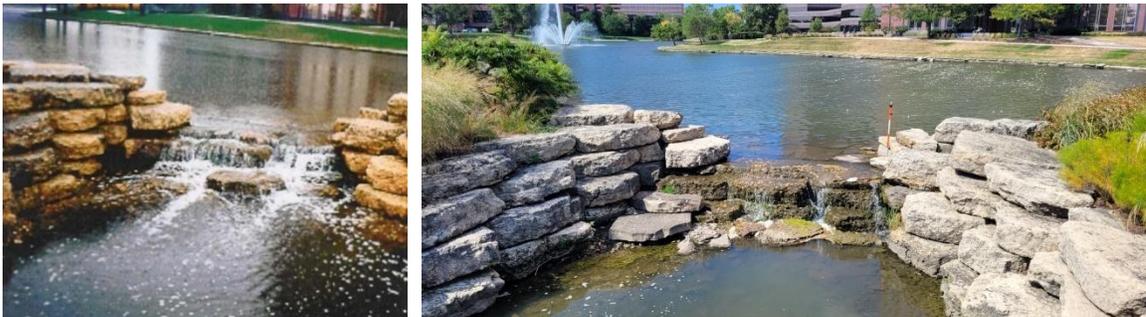
Figure 1.2: Effective (1995 photo) and Present (2024 photo) condition of the Lake 1 culvert outlet

The outlet from Lake 2 varies from the Effective model description and condition as shown in Figure 1.3 below. The variations in opening shape and elevation were included in the updated FEQ model. The variations in opening shape included a revision to the weir length from 32 feet to 26 feet with somewhat steeper side slopes and no change to the weir overflow invert elevation of 689.08.



*Figure 1.3: Effective (1995 photo) and Present (2024 photo) condition of the Lake 2 outlet weir*

While the apparent outlet from Lake 3 varies little from the Effective model description and condition as shown in Figure 1.4 below, the actual FEQ weir overflow section varies more substantially from the below Figure 1.4. The variations in opening shape and elevation were included in the updated FEQ model. The variations in opening shape included a revision to the weir length from 10.7 feet to 10.5 feet with more vertical side slopes and no change to the weir overflow invert elevation of 687.15.



*Figure 1.4: Effective (1995 photo) and Present (2024 photo) condition of the Lake 3 outlet weir*

While the apparent outlet from Lake 4 varies from the Effective model description and condition as shown in Figure 1.5 below, the actual FEQ weir overflow appeared to match the present condition elevation closely enough that the only revision excluded overbank areas not contributing flow into the culvert. The weir invert was not changed from the effective FEQ model. It should be noted that the Lake 4 and Lake 5 water surface levels are basically the same.



*Figure 1.5: Effective (1995 photo) and Present (2024 photo) condition of the Lake 4 outlet weir*

Downstream from the weir outlet from Lake 4, the Pierce Road RCB culvert, is consistent with the Effective model description and condition as shown in Figure 1.6 below. It should be noted that the overflow condition from the effective FEQ did not represent the re-aligned Pierce Road configuration. The road overflow condition was revised to reflect the re-aligned Pierce Road low elevation of 689.6, which is feet above the Base Flood Elevation (BFE) of about 687.4 for this location. The culvert length was revised from 120 feet to 74.2 feet and the culvert invert updated from 683.78 to 683.88 to reflect the road improvements.



*Figure 1.6: Effective (1995 photo) and Present (2024 photo) condition of the Pierce Road culvert*

The outlet from Lake 5 varies from the Effective model description and condition as shown in Figure 1.7 below. Revisions were not made to the Modified Effective FEQ model to account for the variation, since the variation in vegetative condition is a maintenance function and the maintained channel condition appeared to be described in the Effective FEQ model.



*Figure 1.7: Effective (1995 photo) and Present (2024 photo) condition of the Lake 5 outlet weir*

The downstream outlet from the HLBP consists of a low flow 20-inch clay tile and RCB overflow culvert outlet from the Lake 5 outlet channel termination just south of Devon Avenue at the approximate east property line. The outlet is basically consistent with the Effective model description and condition as shown in Figure 1.8 below (except for debris accumulation).



*Figure 1.8: Effective (1995 photo) and Present (2024 photo) condition of downstream outlet*

# CHAPTER 2 - HYDROLOGY AND HYDRAULICS

## Model Development – Modified Effective Condition

The Effective FEQ model was obtained from the DuPage County SMD and was used as a starting point for hydrologic and hydraulic revisions to arrive at the Modified Effective condition FEQ model. The hydrologic portion of the model effort was development of impervious/pervious ratios according to the HSPF land use classifications. The Hamilton Lakes Impervious Condition Summary table (RWG Report PDF page 8 – Appendix 1) contained in the June 4, 2024 report prepared by RWG Engineering was selected as an appropriate reference point for the impervious/pervious ratio present in the HLBP. This table was used to guide development of the HLBP land use data that was input into the FEQ model for HSPF calculation of flows into the Modified Effective FEQ model basin and branch elements (see Figure 2.3 below for blue annotated revision locations). The undeveloped parcels identified in the June 2024 RWG report at the time of floodplain mapping are shown in Figure 2.1 below.



Figure 2.1: Modified Effective (2016) Development Condition

The Modified Effective model was further modified using information gathered on V3's document review and site visit. The Site Characteristics section above highlights differences and similarities between the Effective model and Modified Effective model (Present day hydraulic structure conditions). Basic revisions to some of the hydraulic structures occurred in the Modified Effective model. The structures involved weir descriptions and geometries as well as roadway overflows due to changes in the watershed after the Effective model was created. These revisions included the stone weir outfall and overflow relationships from Lake 2, the stone weir outfall and overflow

relationships from Lake 3, and the roadway overflow relationships connecting Lakes 4 and Lake 5. These points of interest may be seen annotated in red on Figure 2.3 below.

### Model Development – Future (Full Build-Out) Condition

Once the Modified Effective model was completed, it was used as the model to be revised to create the Future (Full Build-Out) model. The Future land use condition involves full build-out of the HLBP and is shown on Figure 2.2 below. As described in the Modified Effective hydrology section above, the full build-out land uses were established using the GIS platform to evaluate land use changes from Modified Effective to Future using the watershed subbasin boundary overlay of the parcel data to determine the impervious, steep grass, medium grass, flat grass, and forested amounts. It should be noted that the Future (full build-out) condition used eighty percent imperviousness land use coverage as a conservative upper-level expectation for final construction on each parcel remaining to be developed (the majority of dense sites built under the pre-existing stormwater plan had an impervious coverage of about 77 or 78 percent).

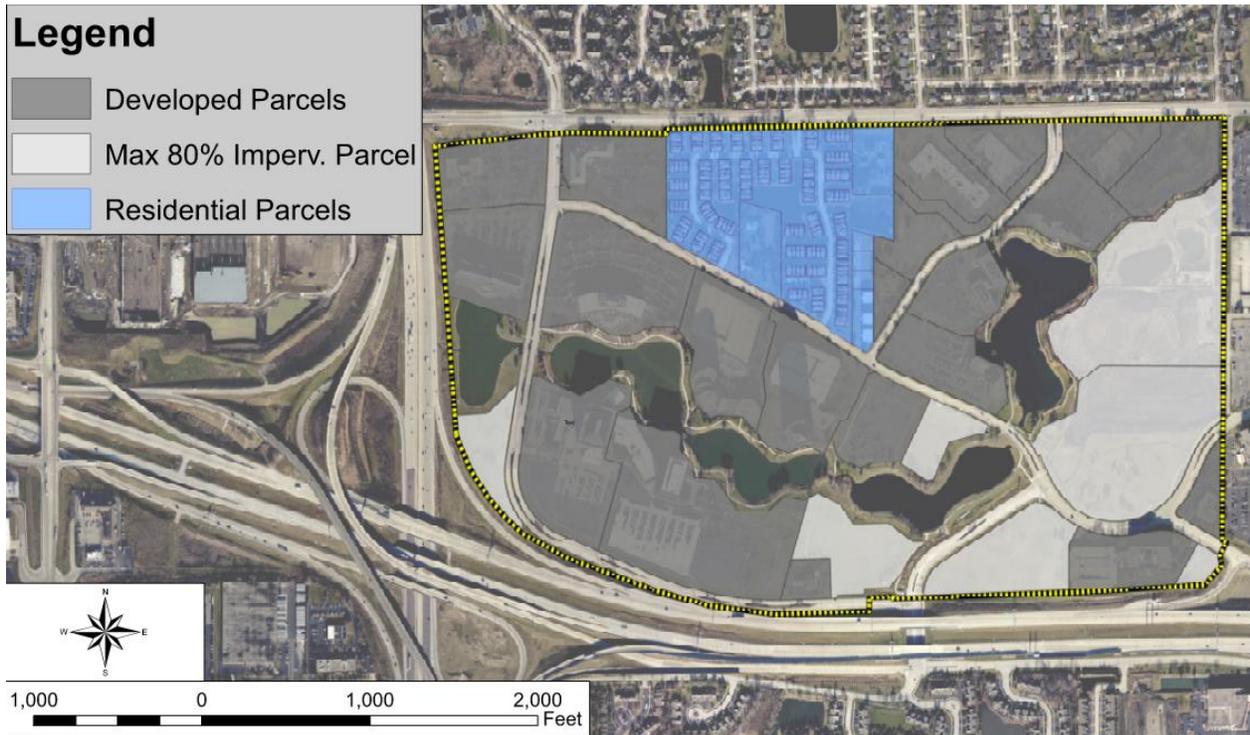


Figure 2.2: Future (Full Build-Out) Development

The hydraulic structures outside the HLBP in the Modified Effective and Future models were presumed not to need revision. This assumption may need to be re-visited if the DuPage County SMD finds that the variations of the Future model results, when compared to the Modified Effective model results, are outside the regulatory acceptance level envelope based on the DuPage County Countywide Stormwater & Floodplain Ordinance (the Ordinance).



# CHAPTER 3 - RESULTS

## Modeling Results – Comparing the Future condition to the Modified Effective condition

Results for this modeling effort can be found in the figures and tables below. These figures contain summary tables of changes in elevation, discharge, and velocity. The historic time series storms are used to establish a condition of ‘No Adverse Impact’ under the requirements of the Ordinance, which are understood to be modeling tolerances and generally are (1) no increases above 0.1 feet in elevation [Section 15-82.C.4.a.], (2) no increases in discharge above 10 percent [Section 15-82.C.4.b.], and (3) no increases in velocity above 10 percent [Section 15-82.C.4.c.].

The ‘No Adverse Impact’ analysis uses the HSPF historic time series storms routed through the FEQ hydraulic model to determine flood elevations, discharges, and velocities for the entire historic time series from 1949 through 2008 (a total of 157 storms). Because the time series storms vary significantly from low flow events to large magnitude events, the comparisons of maximum deviation may not necessarily be associated with the peak elevation, discharge, or velocity for any specific location within the FEQ model comparison data set. Figure 3.1 through Figure 3.4 below show the maximum deviations associated with the change in land use used in the Modified Effective and Future conditions models. These maximum deviations occur at the drop box outlet (D12) just south of Devon Avenue located approximately 400 feet west of the Arlington Heights Road intersection (centerline).

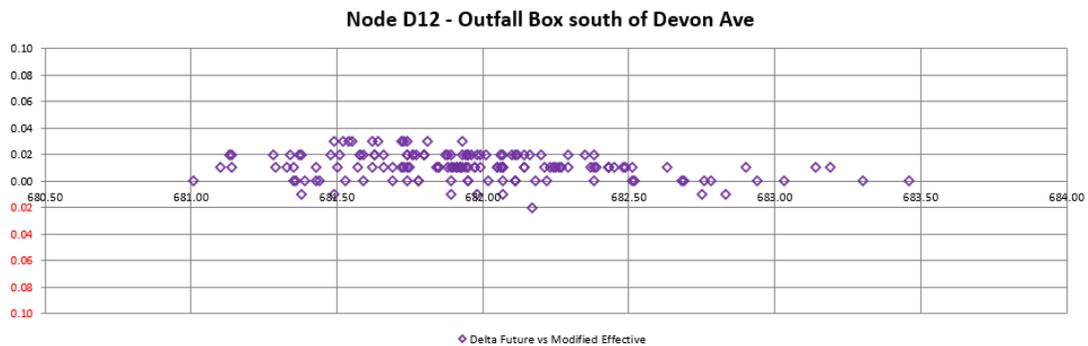


Figure 3.1: Future versus Modified Effective deviations in elevation (feet) at given elevations

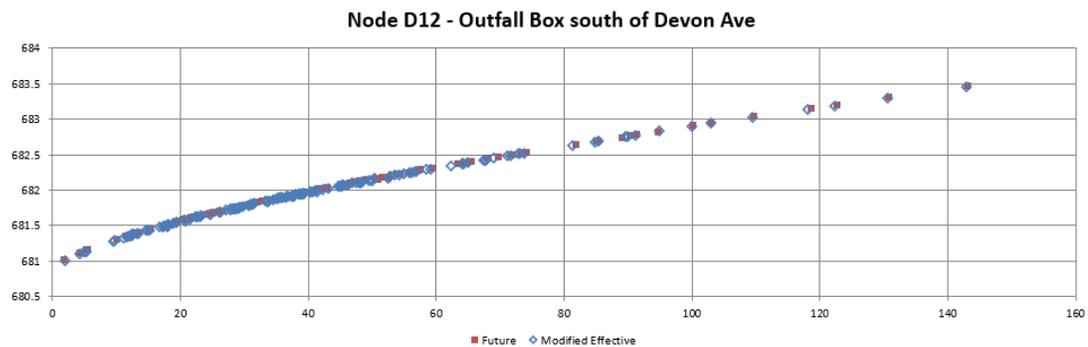


Figure 3.2: Future versus Modified Effective deviations in elevation (feet) at given discharges (cfs)



The above Figure 3.1 variations in elevation are well within the 0.1 foot tolerance listed (which satisfies Section 15-82.C.4.a.). Figure 3.3 below shows the variation from Modified Effective discharges (blue diamonds) based on computed differences, the maximum of which is about 1.4 cfs for lower magnitude storms and 0.6 cfs for larger magnitude storms (primary y-axis flow deviations versus Modified Effective x-axis discharges). The secondary y-axis uses percentages (red squares) for the purpose of comparing against the Ordinance requirement, the maximum of which is about 8.0 percent for lower magnitude storms and 0.7 percent for larger magnitude storms (primary y-axis percentage deviations versus Modified Effective x-axis discharges – satisfies Section 15-82.C.4.b.).

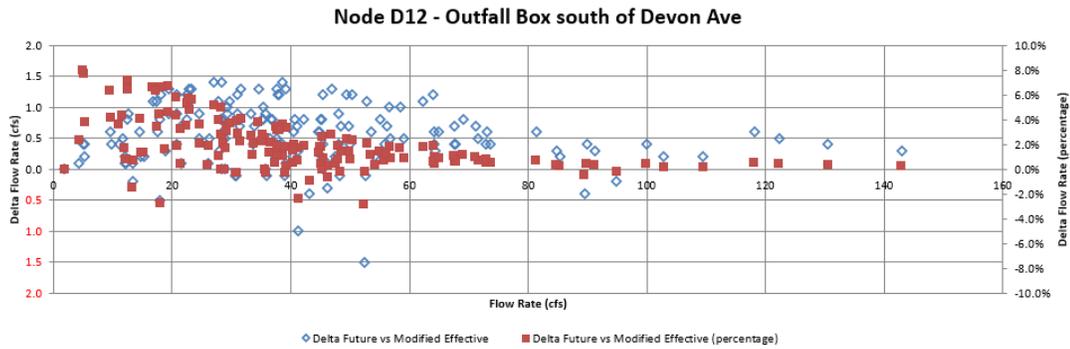


Figure 3.3: Future versus Modified Effective deviations in discharge (cfs) at given discharges

Figure 3.4 below shows the variation from Modified Effective velocities (blue diamonds) based on computed differences, the maximum of which is about 0.02 fps for lower magnitude storms and 0.01 fps for larger magnitude storms (primary y-axis flow deviations versus Modified Effective x-axis velocities). The secondary y-axis uses percentages (red squares) for the purpose of comparing against the Ordinance requirement, the maximum of which is about 0.4 percent for lower magnitude storms and 0.2 percent for larger magnitude storms (primary y-axis percentage deviations versus Modified Effective x-axis velocities – satisfies Section 15-82.C.4.c.).

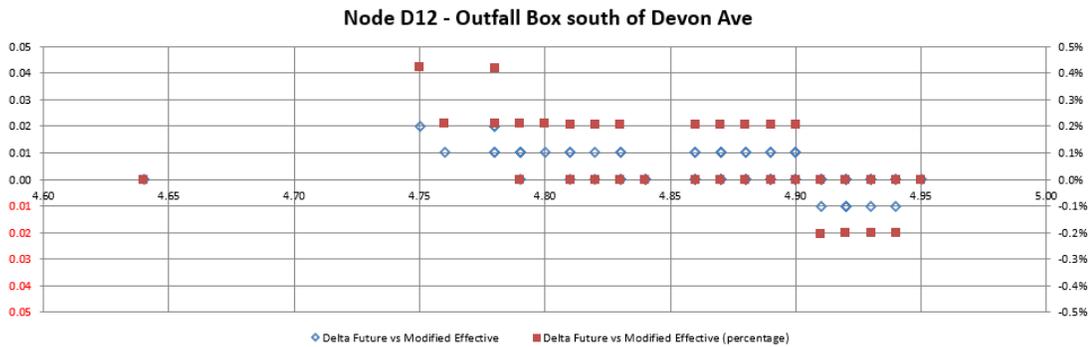


Figure 3.4: Future versus Modified Effective deviations in velocity (fps) at given velocities

The following tables provide results for comparison at key locations within the HLBP and downstream connection to the large RCB storm sewer running under Devon Avenue (400 feet west of Arlington Heights Road intersection). The key locations are: (1) incoming free node (F19)



for Lake 1, (2) branch node (D42) just upstream of Lake 2 weir outfall, (3) branch node (D36) just upstream of Lake 3 weir outfall, (4) branch node (D28) just upstream of Lake 4 weir overflow, (5) branch node (D20) just upstream of Lake 5 weir outfall, and (6) branch node just upstream of drop box intake grate (D12).

The tables provide a comparison of the Future and Modified Effective conditions for maximum, average, and minimum values of elevation, discharge, and velocity. The difference column shows the maximum, average, and minimum deviations based on comparison of each particular storm of the 157 total storms. This means the maximum deviation need not be associated with the peak storm occurrence from the entire data set. The larger and intermediate storms have little to no increase in elevation. Most of the increase happens for the smaller storms but in absolute terms these changes are very small and indicate little change from Modified Effective to Future conditions.

<i>Table 3.1a: Lake 1 (F19) Elevation Results</i>				
(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	692.83	692.84	0.01	0.01
Average	692.26	692.26		0.00
Minimum	691.79	691.79	0.00	0.00

<i>Table 3.1b: Lake 1 (F19) Discharge Results</i>				
(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	62.80	62.80	0.00	0.10
Average	20.82	20.82		0.00
Minimum	0.80	0.80	0.00	-0.10



Table 3.2a: Lake 2 (D42) Elevation Results

(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	690.12	690.13	0.01	0.01
Average	689.63	689.63		0.00
Minimum	689.17	689.17	0.00	-0.01

Table 3.2b: Lake 2 (D42) Discharge Results

(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	72.20	72.90	0.00	0.70
Average	23.88	23.91		0.04
Minimum	0.90	0.90	0.00	-0.10

Table 3.2c: Lake 2 (D42) Velocity Results

(Ft/S)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	0.31	0.31	0.00	0.01
Average	0.13	0.13		0.00
Minimum	0.01	0.01	0.00	0.00

Table 3.3a: Lake 3 (D36) Elevation Results

(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	688.78	688.79	0.01	0.01
Average	687.95	687.95		0.00
Minimum	687.24	687.24	0.00	0.00

Table 3.3b: Lake 3 (D36) Discharge Results

(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	76.10	77.00	0.90	0.90
Average	25.14	25.18		0.05
Minimum	0.90	0.90	0.00	-0.10

Table 3.3c: Lake 3 (D36) Velocity Results

(Ft/s)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	0.16	0.16	0.00	0.00
Average	0.06	0.06		0.00
Minimum	0.00	0.00	0.00	0.00



Table 3.4a: Lake 4 (D28) Elevation Results

(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	686.89	686.89	0.00	0.02
Average	685.78	685.78		0.01
Minimum	684.96	684.95	-0.01	-0.01

Table 3.4b: Lake 4 (D28) Discharge Results

(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	99.00	101.50	2.50	2.50
Average	33.18	33.47		0.29
Minimum	1.80	1.80	0.00	-0.50

Table 3.4c: Lake 4 (D28) Velocity Results

(Ft/s)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	0.31	0.32	0.01	0.01
Average	0.15	0.15		0.00
Minimum	0.02	0.02	0.00	-0.01

Table 3.5a: Lake 5 (D20) Elevation Results

(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	686.83	686.83	0.00	0.02
Average	685.75	685.76		0.01
Minimum	684.95	684.95	0.00	-0.02

Table 3.5b: Lake 5 (D20) Discharge Results

(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	138.20	138.50	0.30	1.00
Average	40.63	41.01		0.38
Minimum	1.90	1.80	-0.10	-0.90

Table 3.5c: Lake 5 (D20) Velocity Results

(Ft/s)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	0.62	0.62	0.00	0.01
Average	0.31	0.31		0.00
Minimum	0.03	0.03	0.00	-0.01



Table 3.6a: Outfall (D12) Elevation Results

(NGVD29)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	683.46	683.46	0.00	0.03
Average	681.96	681.97		-0.02
Minimum	681.01	681.01	0.00	0.01

Table 3.6b: Outfall (D12) Discharge Results

(CFS)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	142.90	143.20	0.30	1.40
Average	42.21	42.77		0.56
Minimum	1.90	1.90	0.00	-1.50

Table 3.6c: Outfall (D12) Velocity Results

(Ft/s)	Modified Effective	Full Build Out	Max / Min Deviation	Difference (157 storms)
Maximum	4.95	4.95	0.00	0.02
Average	4.88	4.89		0.00
Minimum	4.64	4.64	0.00	-0.01

Table 3.7: Devon Avenue Tributary Peak Flows and Elevations (compared to Effective Results)

GIS ID (Effective)	FEQ Model ID	Station (feet)	Invert (feet)	Peak Elevations (feet)		
				NGVD29 August 1987	NGVD29 Modified Effective	NGVD29 Future (Full Build-Out)
F19	F19	9,321	685.00	692.83	692.83	692.84
001SCDA0245	D42	7,713	687.90	690.12	690.12	690.13
001SCDA0239	D36	6,708	682.00	688.78	688.78	688.79
001SCDA0233	D28	5,448	683.30	686.90	686.90	686.90
001SCDA0226	D20	4,118	683.20	686.83	686.83	686.83
001SCDA0112	D12	2,572	680.80	683.46	683.46	683.46

Table 3.8: Devon Avenue Tributary Peak Flows and Elevations (compared to Effective Results)

GIS ID (Effective)	FEQ Model ID	Station (feet)	Invert (feet)	Peak Flows (CFS)		
				August 1987	Modified Effective	Future (Full Build-Out)
F19	F19	9,321	685.00	62.8	62.8	62.8
001SCDA0245	D42	7,713	687.90	72.2	72.2	72.9
001SCDA0239	D36	6,708	682.00	76.1	76.1	77.0
001SCDA0233	D28	5,448	683.30	99.0	99.0	101.5
001SCDA0226	D20	4,118	683.20	138.2	138.2	138.5
001SCDA0112	D12	2,572	680.80	142.9	142.9	143.2



# CHAPTER 4 - RECOMMENDATIONS

## Recommendations – Approve Implementation of Stormwater Insert for Inclusion in the HLBP Updated Master Plan

Results for this modeling effort indicate very little change from the Modified Effective to the Future (Full Build-Out) condition. It is V3's opinion that these small changes are within the acceptable tolerances and represent a 'No Adverse Impact' finding under the Ordinance. In other words, adequate stormwater volume has been provided within the HLBP stormwater management system such that no Future impacts to adjacent or downstream parcels are anticipated under the 'No Adverse Impact' finding. V3 recommends this report be used as the basis for the HLBP Updated Stormwater Master Plan, which identifies 80-percent imperviousness as the upper-level acceptable ratio of imperviousness for construction on any of the remaining undeveloped parcels to be developed within the HLBP until the fully developed condition is reached.



# APPENDIX 1

## HAMILTON LAKES IMPERVIOUS CONDITION SUMMARY



File No. 295-128-17

**HAMILTON LAKES IMPERVIOUS CONDITION SUMMARY  
(EXISTING CONDITIONS PRIOR TO RAGINGWIRE DEVELOPMENT)  
03/06/17**

Parcel/Address	Total Area (Ac)	Impervious (Ac)	% Impervious
Parcel A (Hotel)	11.05	7.94	71.86
Parcel B (450 + 500 Park)	17.97	11.75	65.39
Parcel C-8 (600 Park)	1.47	1.14	77.55
Parcel C-10 (Golf Range)	5.94	0.00	0.00
Parcel C-11	7.62	0.00	0.00
Parcel C-12 (150 Pierce)	5.47	3.59	65.63
Parcel C-13	0.96	0.00	0.00
Parcel C-14	0.07	0.00	0.00
Parcel D-2	2.05	1.38	67.32
Parcel D-3	17.03	0.00	0.00
Parcel E-2 (225 Windsor)	4.87	3.56	73.10
Parcel E-3 (333 Pierce)	5.63	4.14	73.53
Parcel F-1A (550 Devon)	3.80	2.22	58.42
Parcel F-1B (650 Devon)	5.46	3.18	58.24
Parcel F-2A (250 Devon)	6.54	3.87	59.17
Parcel F-2B (350 Devon)	4.28	2.67	62.38
Parcel F-3 (450 Devon)	4.89	4.33	88.55
Parcel F-4 (270 Devon)	4.28	2.94	68.69
Parcel G-1 (AAP)	11.15	7.80	69.96
Parcel G-2 (1 Pierce)	8.45	6.63	78.46
Parcel G-3 (2 Pierce)	8.35	4.94	59.16
Parcel G-4A (2 Pierce Parking)	4.73	3.13	66.17
Parcel G-4B	2.48	0.00	0.00
Parcel H (555 Pierce)	6.86	4.30	62.68
Parcel I-1 (300 Park)	7.77	5.84	75.16
Parcel I-2 (100 Park - Cannon)	5.96	3.22	54.03
Parcel J	3.47	0.00	0.00
Parcel L (WWTP)	18.03	0.43	2.38
Parcel M (Lake #1)	5.61	3.40	60.61
Parcel N (Lakes #2,3, and 4)	26.57	14.63	55.06
Parcel O (Lake #5)	13.19	7.28	55.19
Roads/ROW	17.10	11.11	64.97
<b>TOTALS</b>	<b>249.10</b>	<b>125.42</b>	<b>50.35</b>

EXISTING CONDITIONS IMPERVIOUS AREA= 50.35%

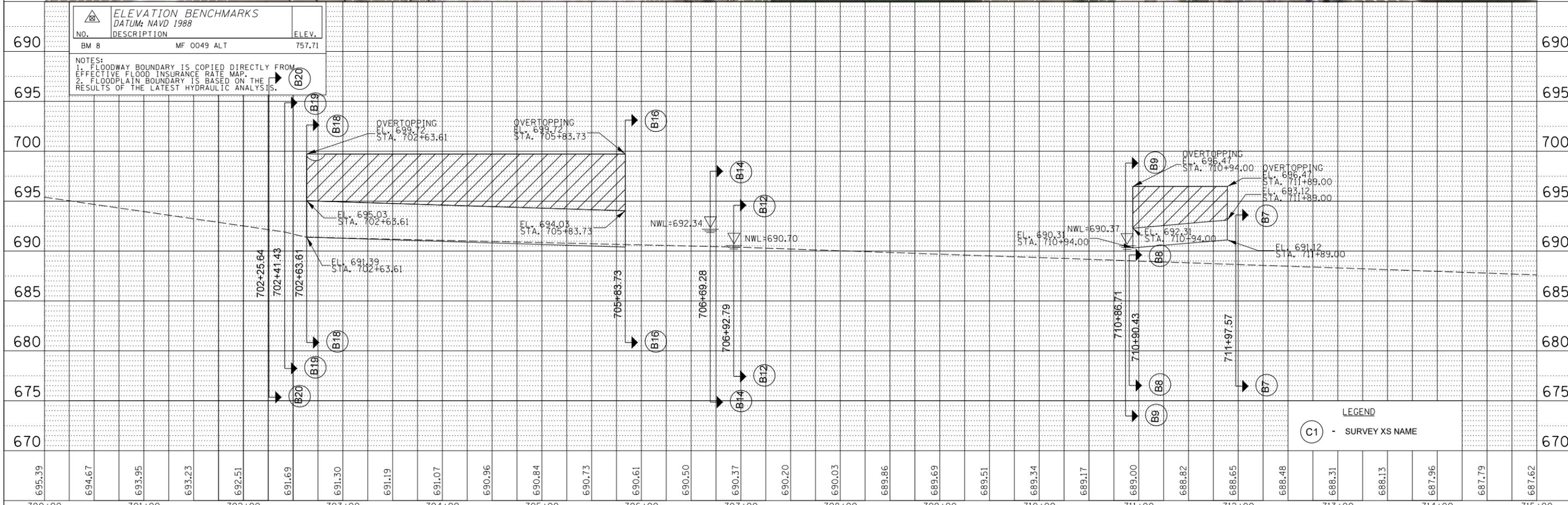
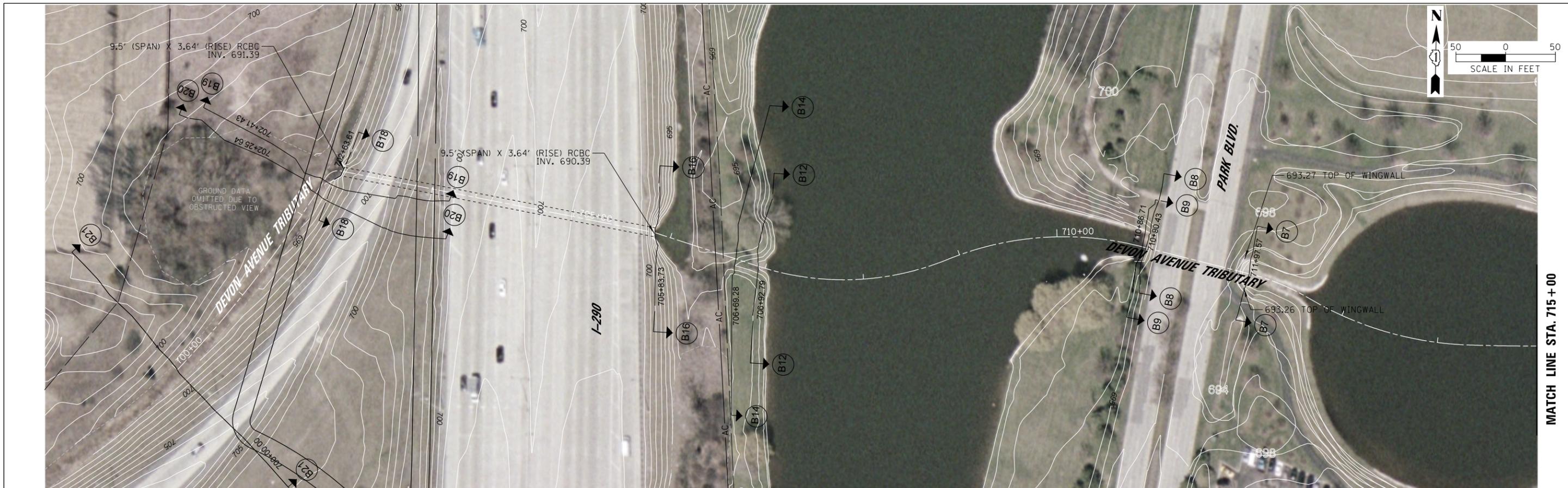
REMAINING DEVELOPMENT PARCEL AREAS= 55.53 Ac  
(PARCELS C-10, C-11, C-13, D-3, G-4B, J, AND L)

## APPENDIX 2

ELGIN-OHARE I-290/I390  
INTERCHANGE HYDRAULIC  
REPORT EXCERPT

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	FILED	
	CAD FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHKD	
	NO.	



ELEVATION BENCHMARKS		
DATUM: NAVD 1988		
NO.	DESCRIPTION	ELEV.
BM 8	MF 0049 ALT	757.71

NOTES:  
 1. FLOODWAY BOUNDARY IS COPIED DIRECTLY FROM EFFECTIVE FLOOD INSURANCE RATE MAP.  
 2. FLOODPLAIN BOUNDARY IS BASED ON THE RESULTS OF THE LATEST HYDRAULIC ANALYSIS.

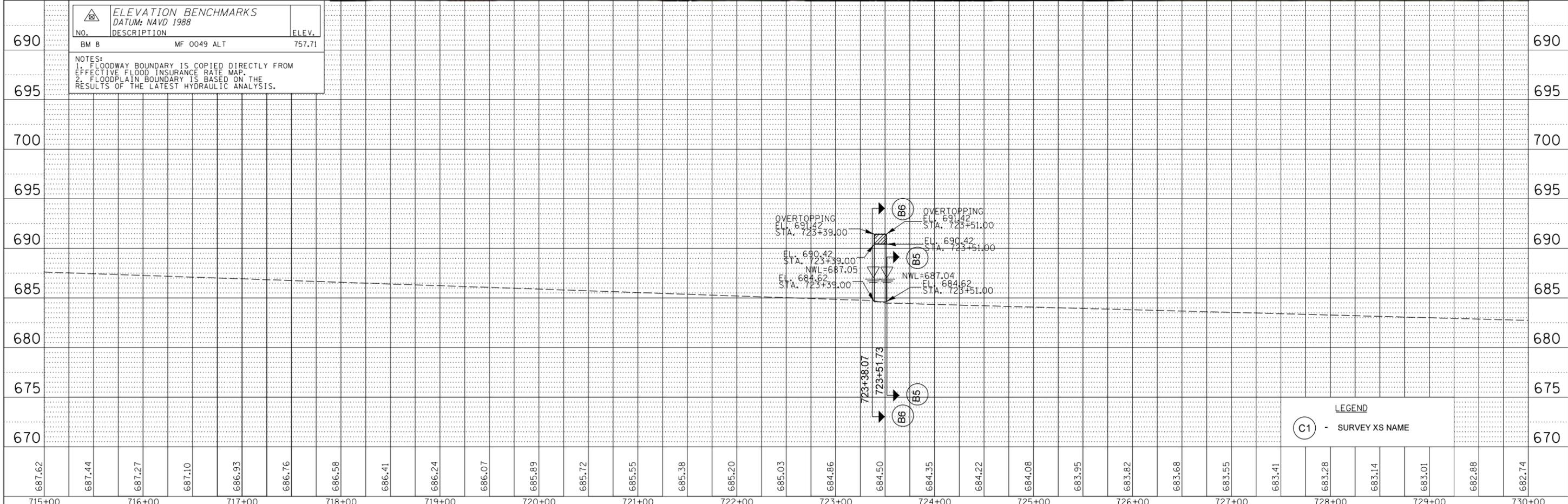
LEGEND  
 (C1) - SURVEY XS NAME

FILE NAME =	USER NAME = eanderson	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELGIN O'HARE WEST BYPASS</b> <b>DEVON AVENUE TRIBUTARY</b> <b>EXISTING CHANNEL PLAN AND PROFILE</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Y:\361180 - Elgin O'Hare - West Bypass\TIER_2\DWG\CAD\Sheets\DIE0WB-02-sht-plnprf-001.dwg	DRAWN	REVISED -	REVISED -			CONTRACT NO.					
PLOT SCALE = 100'	CHECKED -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					
PLOT DATE = 10/5/2012	DATE -	REVISED -	REVISED -								

MATCH LINE STA. 715+00

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	CAD FILE NAME		
	NO.		

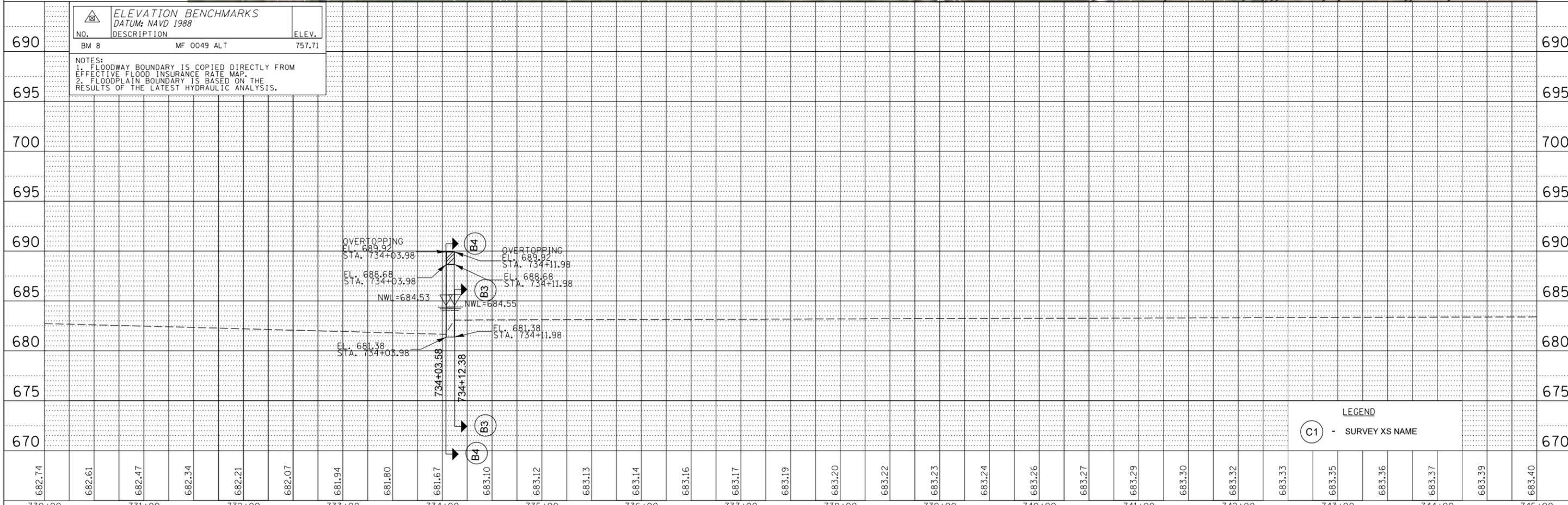
PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		
	NO.		



687.62	687.44	687.27	687.10	686.93	686.76	686.58	686.41	686.24	686.07	685.89	685.72	685.55	685.38	685.20	685.03	684.86	684.50	684.35	684.22	684.08	683.95	683.82	683.68	683.55	683.41	683.28	683.14	683.01	682.88	682.74
715+00	716+00	717+00	718+00	719+00	720+00	721+00	722+00	723+00	724+00	725+00	726+00	727+00	728+00	729+00	730+00															
FILE NAME =		USER NAME = eanderson		DESIGNED -		REVISED -																								
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		PLOT SCALE = 100'		CHECKED -		REVISED -																								
		PLOT DATE = 10/5/2012		DATE -		REVISED -																								
<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>										<b>ELGIN O'HARE WEST BYPASS DEVON AVENUE TRIBUTARY EXISTING CHANNEL PLAN AND PROFILE</b>																				
SCALE:										SHEET NO. OF SHEETS STA. TO STA.																				
F.A. RTE.										SECTION COUNTY TOTAL SHEETS SHEET NO.																				
										CONTRACT NO.																				
										ILLINOIS FED. AID PROJECT																				

PLAN	SURVEYED	BY	DATE
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	ALIGNED		
	CHECKED		
	FILED		
	CADD FILE NAME		
	NO.		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		
	NO.		



	<b>ELEVATION BENCHMARKS</b>	
	DATUM: NAVD 1988	
NO.	DESCRIPTION	ELEV.
BM 8	MF 0049 ALT	757.71
NOTES:		
1. FLOODWAY BOUNDARY IS COPIED DIRECTLY FROM EFFECTIVE FLOOD INSURANCE RATE MAP.		
2. FLOODPLAIN BOUNDARY IS BASED ON THE RESULTS OF THE LATEST HYDRAULIC ANALYSIS.		

LEGEND	
	- SURVEY XS NAME

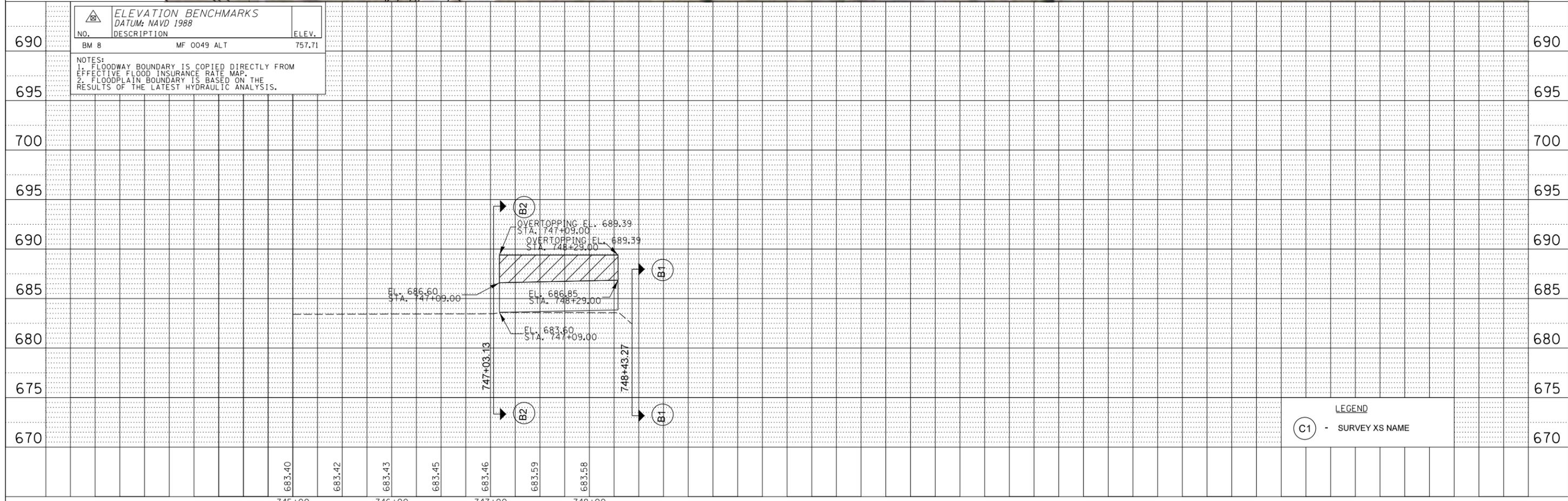
682.74	682.61	682.47	682.34	682.21	682.07	681.94	681.80	681.67	683.10	683.12	683.13	683.14	683.16	683.17	683.19	683.20	683.22	683.23	683.24	683.26	683.27	683.29	683.30	683.32	683.33	683.35	683.36	683.37	683.39	683.40
730+00	731+00	732+00	733+00	734+00	735+00	736+00	737+00	738+00	739+00	740+00	741+00	742+00	743+00	744+00	745+00															
FILE NAME =		USER NAME = eanderson		DESIGNED -		REVISED -																								
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		PLOT SCALE = 100'		CHECKED -		REVISED -																								
		PLOT DATE = 10/5/2012		DATE -		REVISED -																								

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ELGIN O'HARE WEST BYPASS DEVON AVENUE TRIBUTARY EXISTING CHANNEL PLAN AND PROFILE				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO.				
				ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	ALIGNED	
	CAD FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	GRADES	
	STRUCTURE	
	NOTATIONS	
	CHFD	
	NO.	

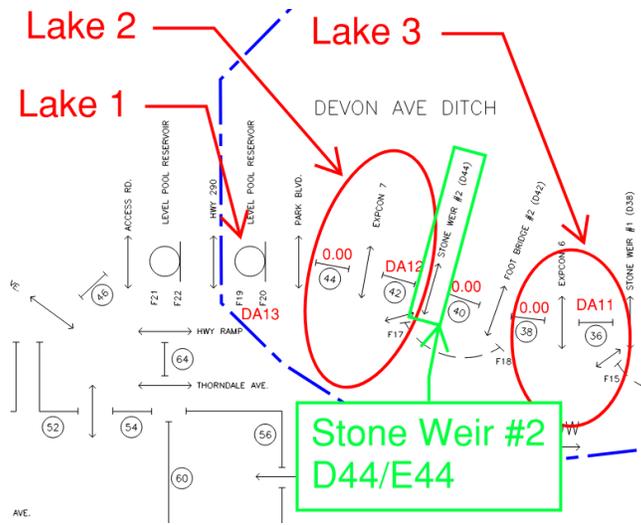


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PLOT SCALE = 100'	CHECKED -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					
PLOT DATE = 10/5/2012	DATE -	REVISED -	REVISED -			SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	

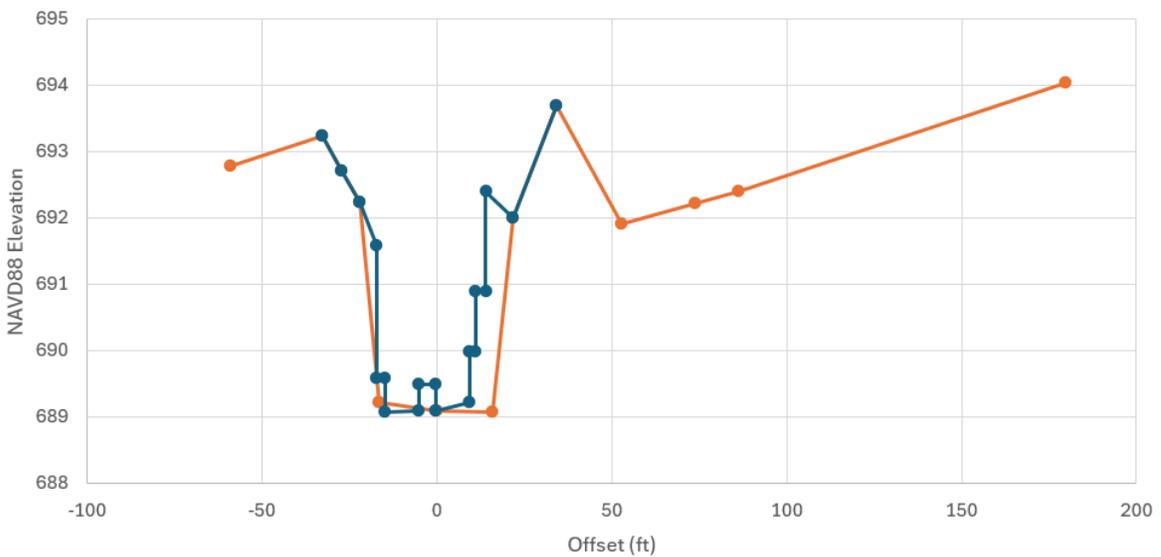
# APPENDIX 3

## FEQ MODEL REVISION INFORMATION

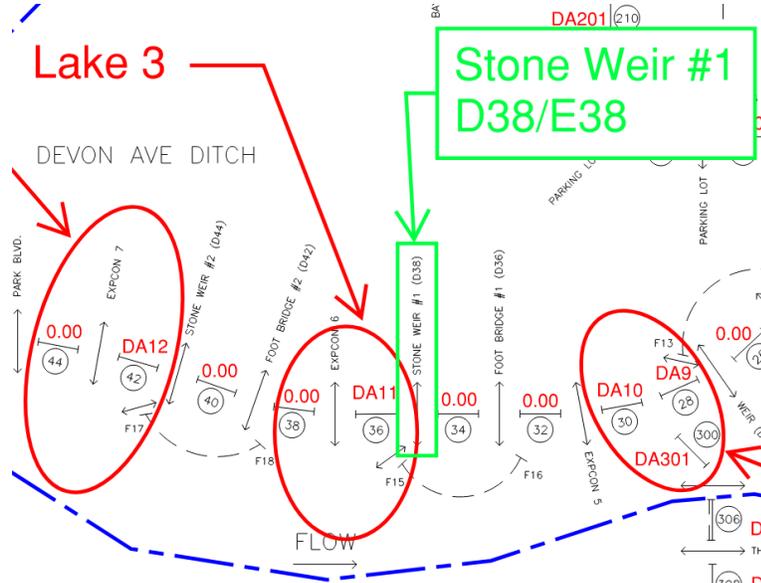
**Stone Weir #2  
Location in FEQ  
Flow Schematic**



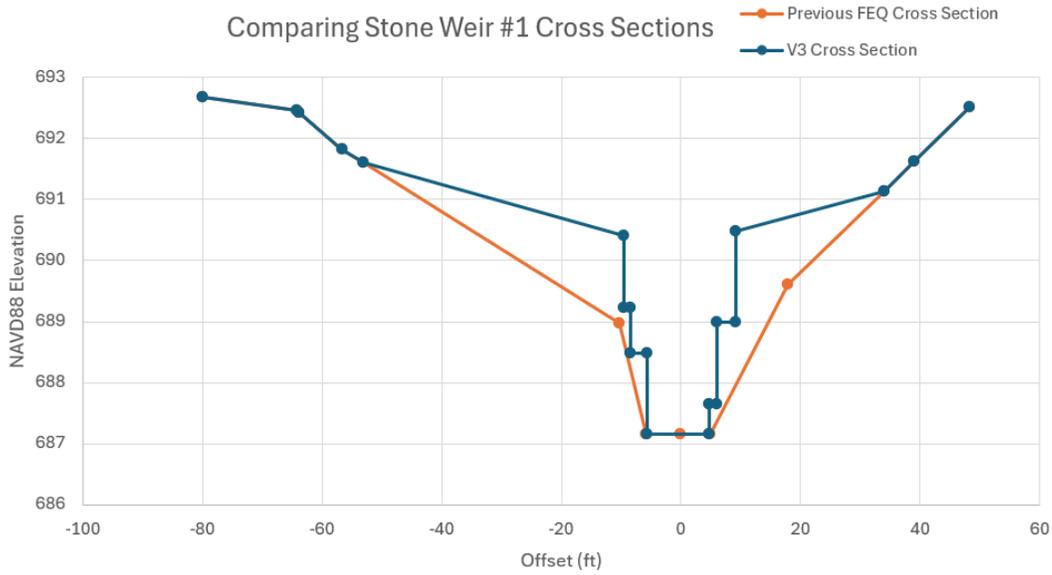
**Comparing Stone Weir #2 Cross Sections**

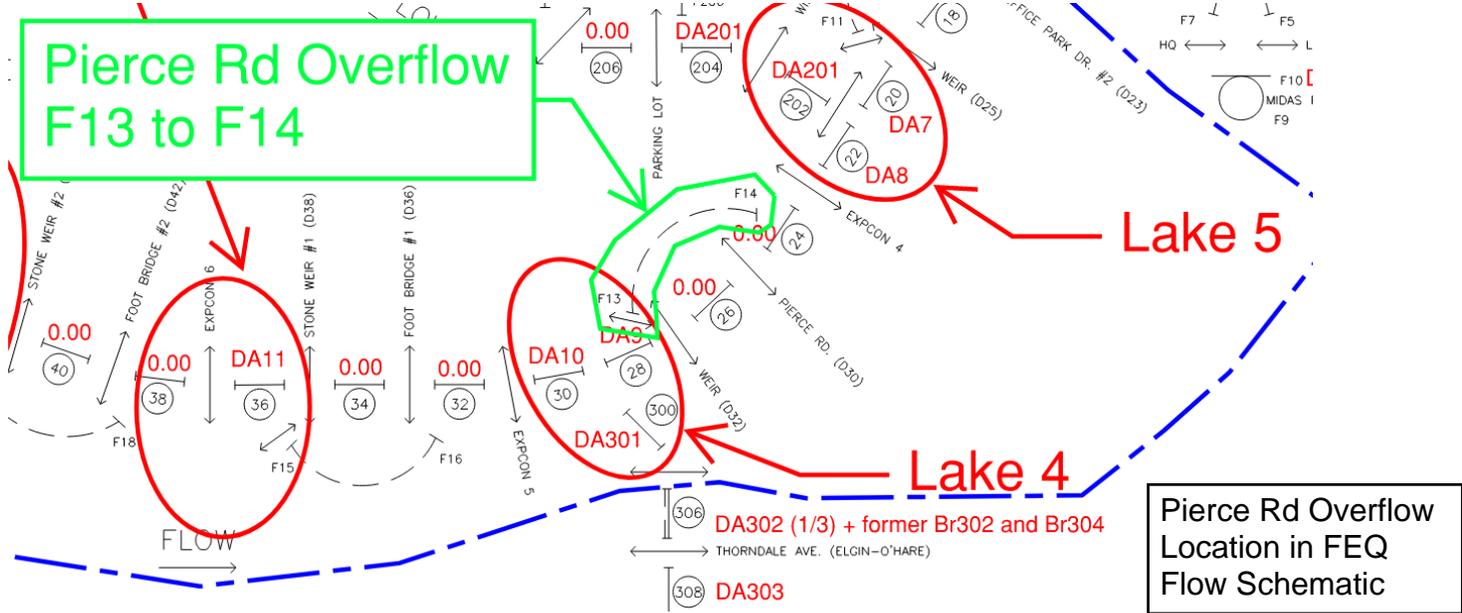


Stone Weir #1  
Location in FEQ  
Flow Schematic

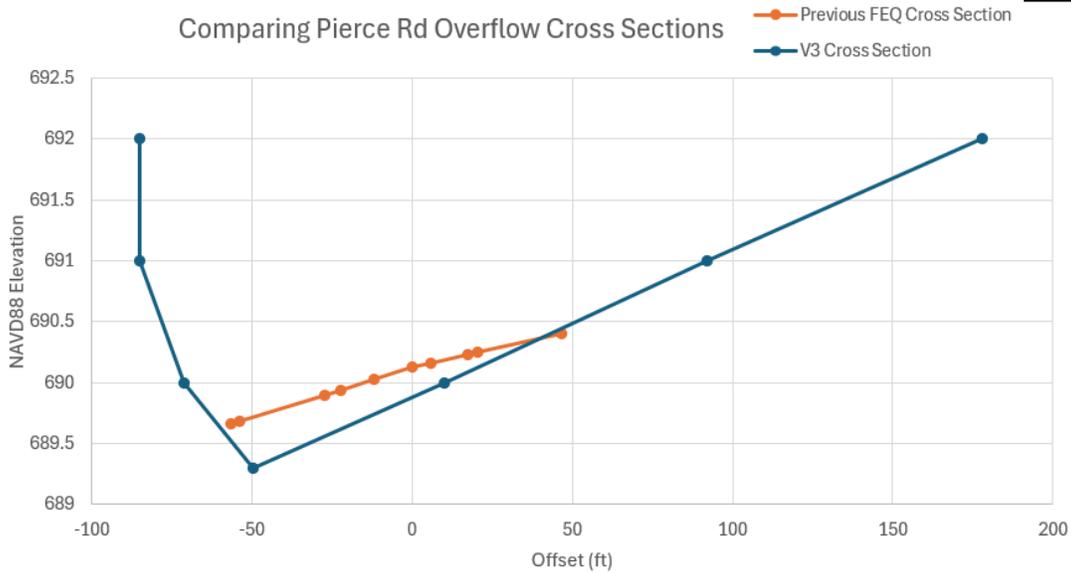


Comparing Stone Weir #1 Cross Sections





Comparing Pierce Rd Overflow Cross Sections



## APPENDIX 4

HAMILTON LAKES LAND USE  
CALCULATIONS FOR  
MODIFIED EFFECTIVE and  
FULL BUILD OUT CONDITION

# MEMORANDUM



**DATE:** 2/11/2025  
**TO:** Clayton Heffter, Stormwater Permitting Manager  
**FROM:** Derrick Martin  
**CC:** Christian Smith, Christine Klepp  
**RE:** Hamilton Lakes Land Use Calculations for Modified Effective & Full Build Out Condition

**Figure 1** below is an excerpt of the Land Use codes and character used in FEQ models and provided by DuPage County. V3 amended some of the land use characteristics to reflect the probable land condition present within the Hamilton Lakes Business Park (see **Table 1** below). The grassed condition was expanded, by review of the topographic characteristics of the parcels, so as to break down the grass category further into steep, medium and flat grass. The breakdown of grass was done by analyzing DuPage County topography and observing the grass classifications within the parcels. New class categories were created for the Lakes (which were categorized based on HLBP parcel boundaries, including the associated grassed areas) and NTT (ComED Substation) since there didn't seem to be a code that exactly fitted the County's data so as to match the Modified Effective condition well. These classes were broken down by the same method above, which included analyzing aerial imagery of the site.

Land Use - Land Cover Percentage Breakdown

File: C:\JDM\GIS\_DATA\FEQUSE.XLS, on JDM's computer

Rev: 25Sep96, JDM

DEC's

FEQUSE or PLFEQUSE(2)						Planning Dept's equivalent USE90A or LUP92 Code
CODE	IMPRV	GRASS	FOREST	AG.	LAND USE DESCRIPTION	LAND USE GROUP
130	0.5000	0.4000	0.1000	0.0000	Multi-Family Residential High	Multi-Family (13)
200	0.8500	0.1500	0.0000	0.0000	Commercial	Commercial (21 - 24)
500	0.8000	0.1500	0.0500	0.0000	Business Park	Business Park (51, 52)
700	0.0200	0.9300	0.0500	0.0000	Open Space, General	Open Space (71, 72)
810	0.6500	0.3500	0.0000	0.0000	Transp/Utility/Infrastructure, Sewered Roadway	Transp/Utility/Infrastructure (81)

**Figure 1:** Excerpt of Land Use Classification Table provided by DuPage County

**Table 1:** V3 Land Use Classification

Class		Impervious (%)	Steep Grass (%)	Medium Grass (%)	Flat Grass (%)	Forest (%)
130	Residential	50	0	30	10	10
200	Commercial	85	15			
500	Business Park	80		12	3	5
700	Field	2	0	38	55	5
810	Road	65	0	35	0	0
999	Lake	65	18	12	0	5
	NTT (ComED Substation)	50	0	20	30	0

Figure 2 below shows the parcels that were undeveloped for the Modified Effective condition in relation to the FEQ drainage basins within the Hamilton Lakes Business Park. The Future or Full Build Out condition considers these parcels will all be fully developed and that the development will result in land use impervious level changes to a greater or lesser degree for FEQ Drainage Areas 006, 007, 008, 009, 010, 011, 013, 301 and 302.

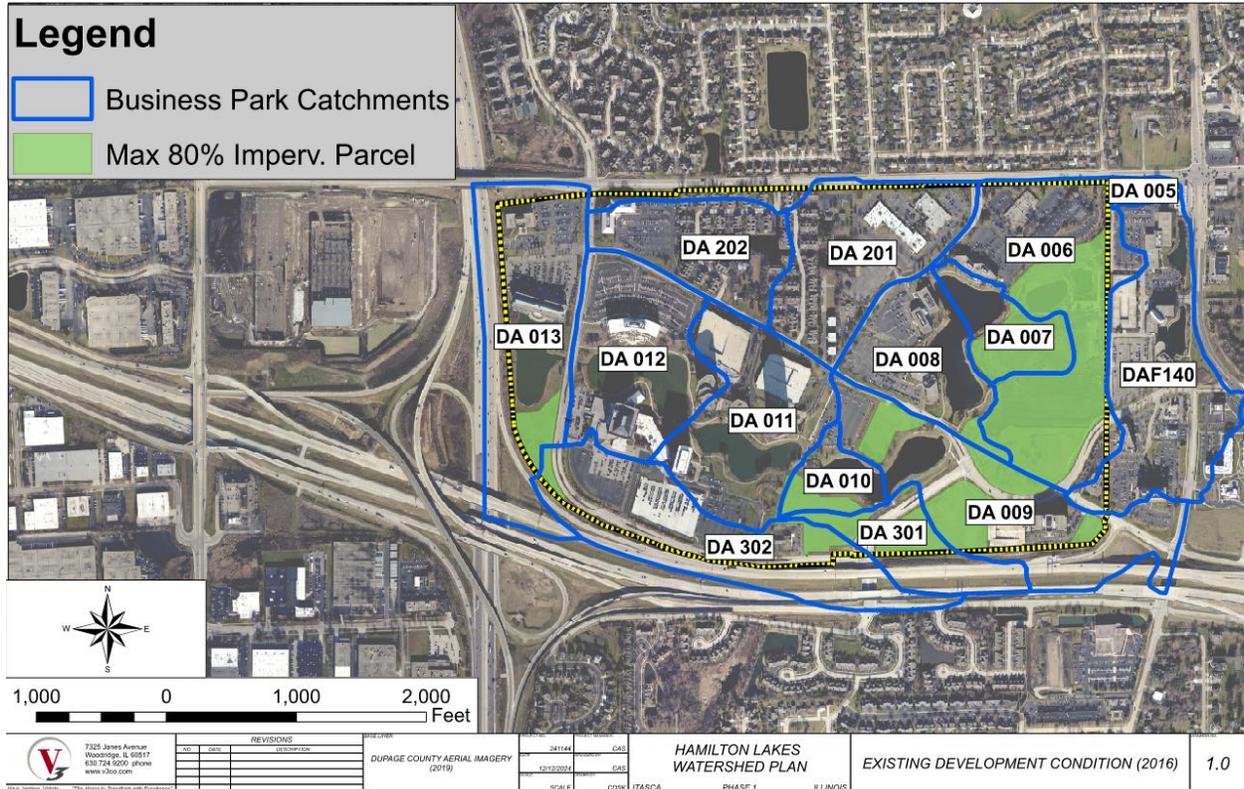


Figure 2: Hamilton Lakes Change in Drainage Basins

Table 2 below shows the drainage basin areas in the FEQ model received from the County compared to V3's GIS calculation of the basin areas from the received shape file. Although the variation is small, V3 revised the drainage areas to correspond to the GIS calculation. The drainage area for DA202 is given below but was not given as a separate drainage area in the FEQ model. V3 didn't change the drainage area for the DA202 + DA203 FEQ model basin since there was no anticipated future change in land use under the stormwater plan.

Table 2: Drainage Basin Area Comparison

Basin ID	Received	V3 Calculation
DAF140	0.0607	0.0608
DA9	0.0639	0.0639
DA8	0.0336	0.0336
DA7	0.0184	0.0184
DA6	0.0728	0.0727
DA5	0.0035	0.0036
DA302	0.0594	0.0596
DA301	0.0223	0.0223
DA202		0.0342
DA201	0.0492	0.0491
DA13	0.0649	0.0648
DA12	0.0491	0.0491
DA11	0.0510	0.0510
DA10	0.0123	0.0124
<b>TOTALS</b>	<b>0.5611</b>	<b>0.5610</b>

**Table 3** and **Table 4** below show the Modified Effective condition and Full Build Out (Future) condition respectively containing the Land Use breakdown for each of the drainage basins within the Hamilton Lakes Business Park. For those drainage basins where changes occurred either in the Modified Effective or Full Build Out condition, the land use character of the drainage area is highlighted in green. These tables were developed in part through intersecting shapefiles in GIS ArcMap. The intersect command was used to find discreet areas classified within one drainage basin and one land use. For every drainage basin there were multiple shapes based on the land use shape within it. The land use classification was used to generate impervious, flat grass, medium slope grass, steep grass, forest and agriculture percentages for each discreet shape. These classification breakdowns were taken from **Table 1** above. Pulling each discreet area classification together into the whole subbasin created the land character areas provided in the two tables below.

**Table 3: Modified Effective Condition: Drainage Basin Land Use Break Down**

Modified Effective Condition ID	IMPRV	FGRSS	MGRSS	SGRSS	FORST	AGRIC	TOTAL
DAF140	0.0473	0.0016	0.0093	0.0000	0.0026	0.0000	0.0608
DA9	0.0352	0.0088	0.0167	0.0013	0.0018	0.0000	0.0639
DA8	0.0240	0.0011	0.0049	0.0022	0.0014	0.0000	0.0336
DA7	0.0048	0.0062	0.0052	0.0012	0.0009	0.0000	0.0184
DA6	0.0379	0.0164	0.0158	0.0003	0.0024	0.0000	0.0727
DA5	0.0028	0.0001	0.0005	0.0000	0.0002	0.0000	0.0036
DA302	0.0400	0.0027	0.0155	0.0000	0.0014	0.0000	0.0596
DA301	0.0098	0.0041	0.0080	0.0001	0.0004	0.0000	0.0223
DA202	0.0181	0.0045	0.0091	0.0000	0.0025	0.0000	0.0342
DA201	0.0346	0.0022	0.0086	0.0010	0.0027	0.0000	0.0491
DA13	0.0427	0.0029	0.0158	0.0016	0.0017	0.0000	0.0648
DA12	0.0367	0.0010	0.0065	0.0026	0.0023	0.0000	0.0491
DA11	0.0385	0.0013	0.0065	0.0021	0.0025	0.0000	0.0510
DA10	0.0058	0.0021	0.0025	0.0013	0.0006	0.0000	0.0124

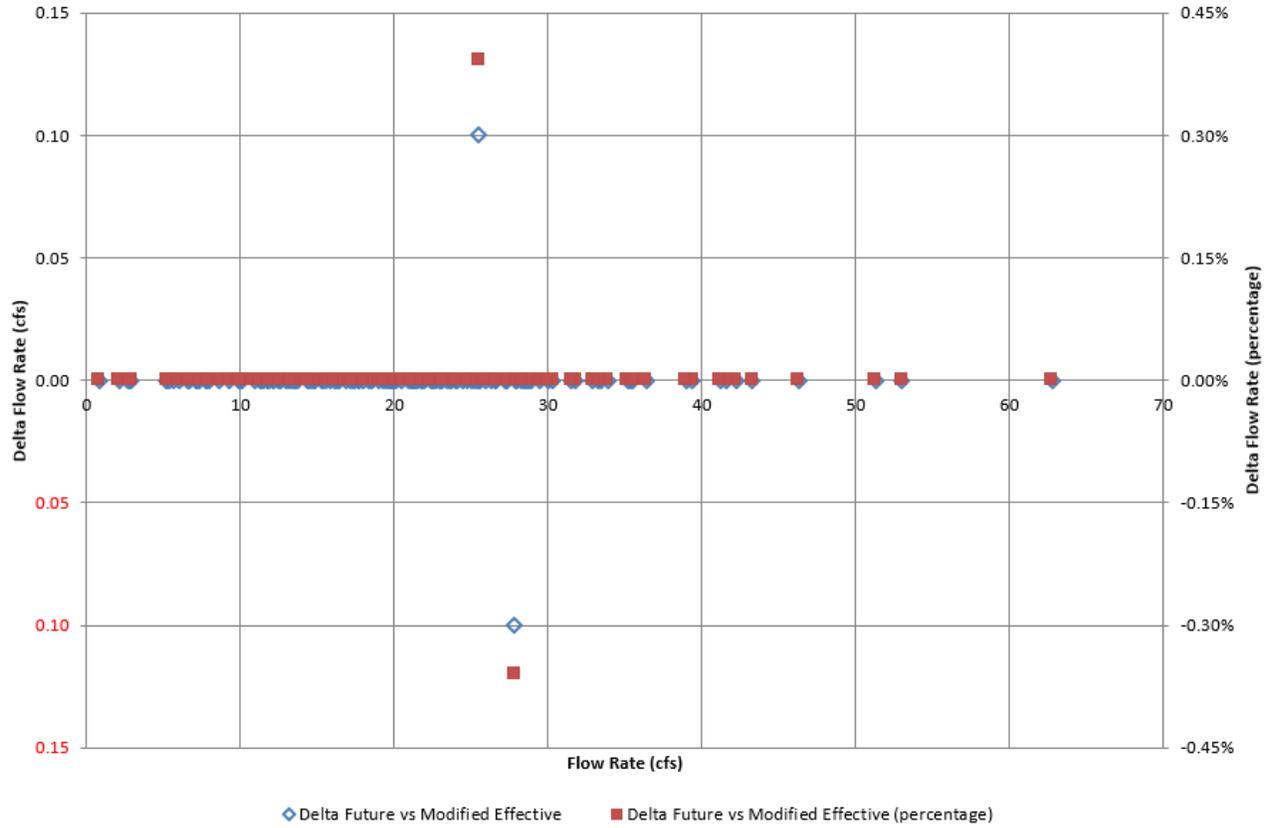
**Table 4: Full Build Out (Future Condition): Drainage Basin Land Use Break Down**

Full Build Out Condition ID	IMPRV	FGRSS	MGRSS	SGRSS	FORST	AGRIC	TOTAL
DAF140	0.0473	0.0016	0.0093	0.0000	0.0026	0.0000	0.0608
DA9	0.0465	0.0010	0.0131	0.0013	0.0020	0.0000	0.0639
DA8	0.0246	0.0006	0.0047	0.0022	0.0015	0.0000	0.0336
DA7	0.0137	0.0003	0.0022	0.0012	0.0009	0.0000	0.0184
DA6	0.0573	0.0020	0.0097	0.0003	0.0034	0.0000	0.0727
DA5	0.0028	0.0001	0.0005	0.0000	0.0002	0.0000	0.0036
DA302	0.0428	0.0008	0.0145	0.0000	0.0014	0.0000	0.0596
DA301	0.0156	0.0002	0.0060	0.0001	0.0004	0.0000	0.0223
DA202	0.0181	0.0045	0.0091	0.0000	0.0025	0.0000	0.0342
DA201	0.0346	0.0022	0.0086	0.0010	0.0027	0.0000	0.0491
DA13	0.0460	0.0008	0.0147	0.0016	0.0017	0.0000	0.0648
DA12	0.0367	0.0010	0.0065	0.0026	0.0023	0.0000	0.0491
DA11	0.0388	0.0011	0.0064	0.0021	0.0025	0.0000	0.0510
DA10	0.0088	0.0001	0.0015	0.0013	0.0006	0.0000	0.0124

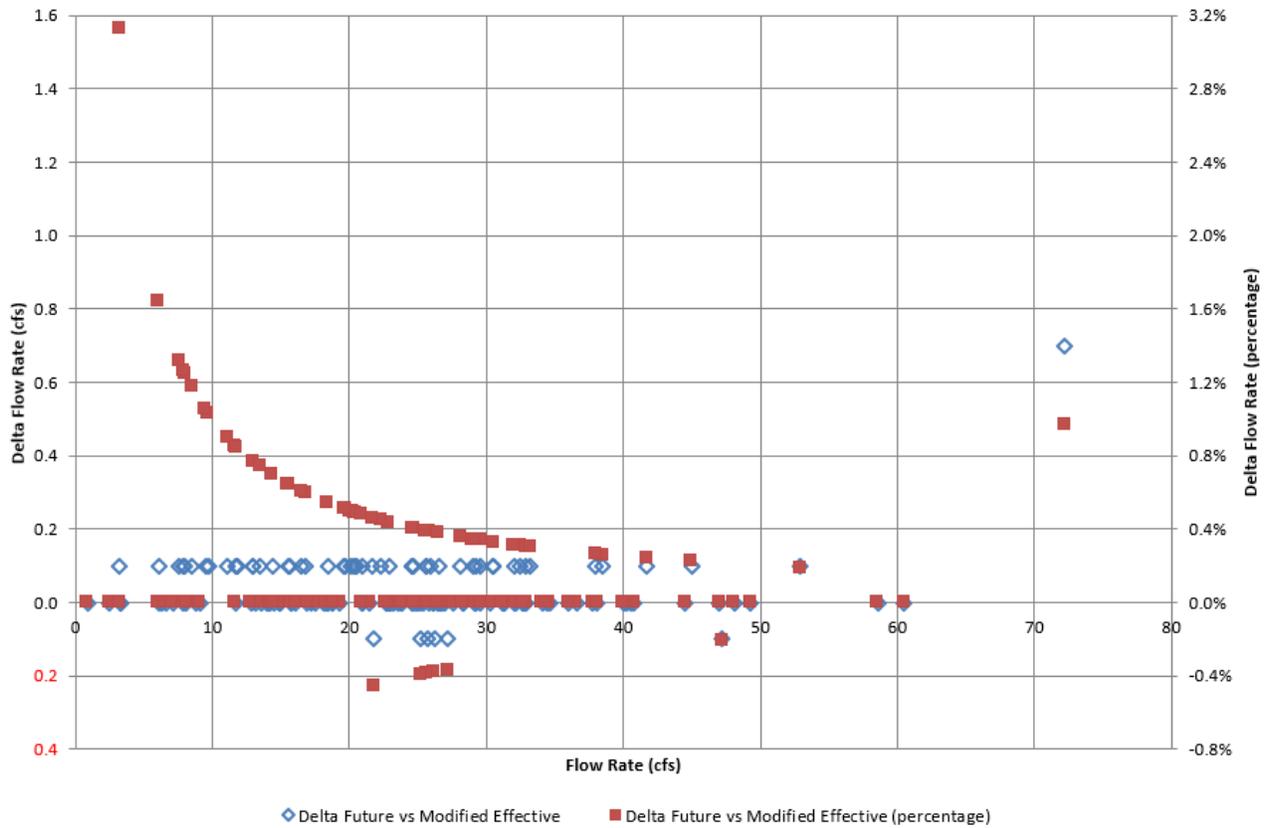
# APPENDIX 5

MODIFIED EFFECTIVE VERSUS  
FUTURE PERCENTAGE  
CHANGE FIGURES

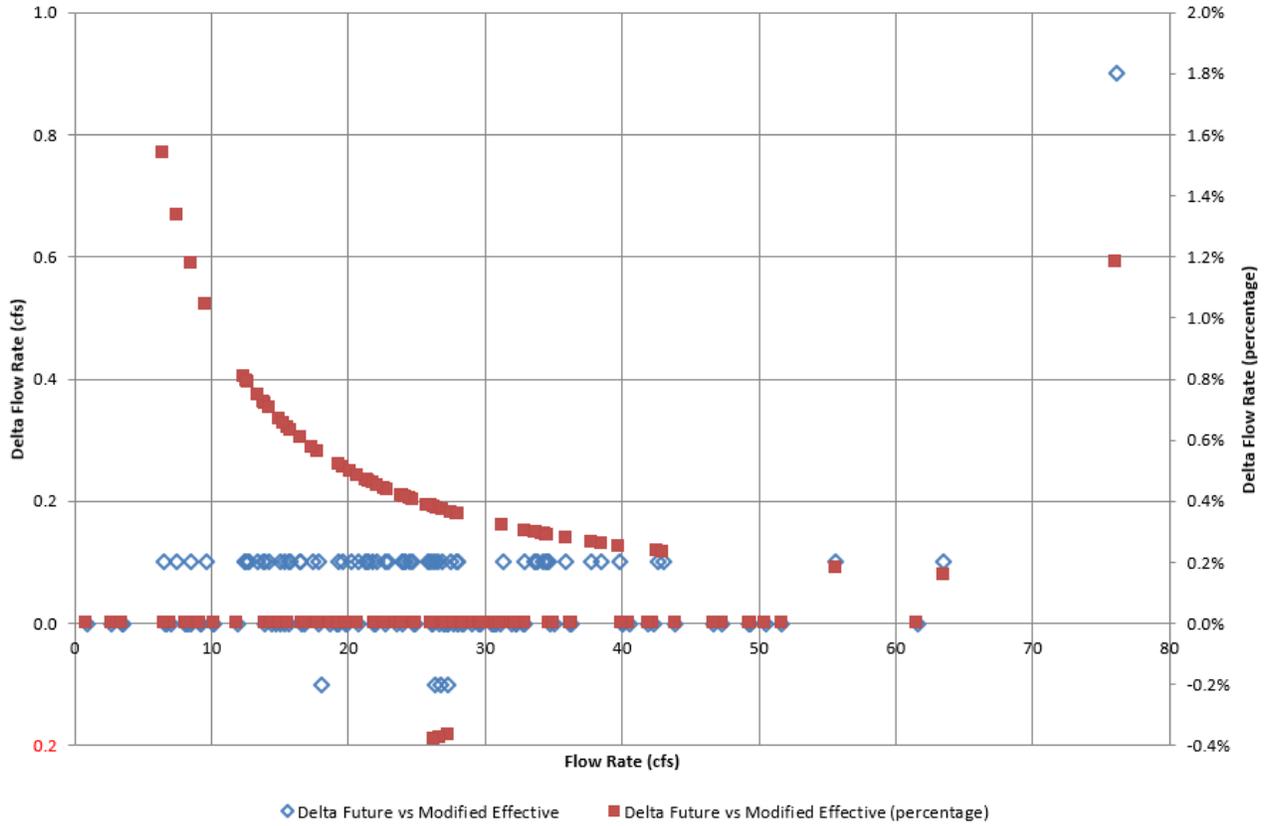
### Node F19 - D/S HWY 290 - Lake 1 (Devon Ave Ditch)



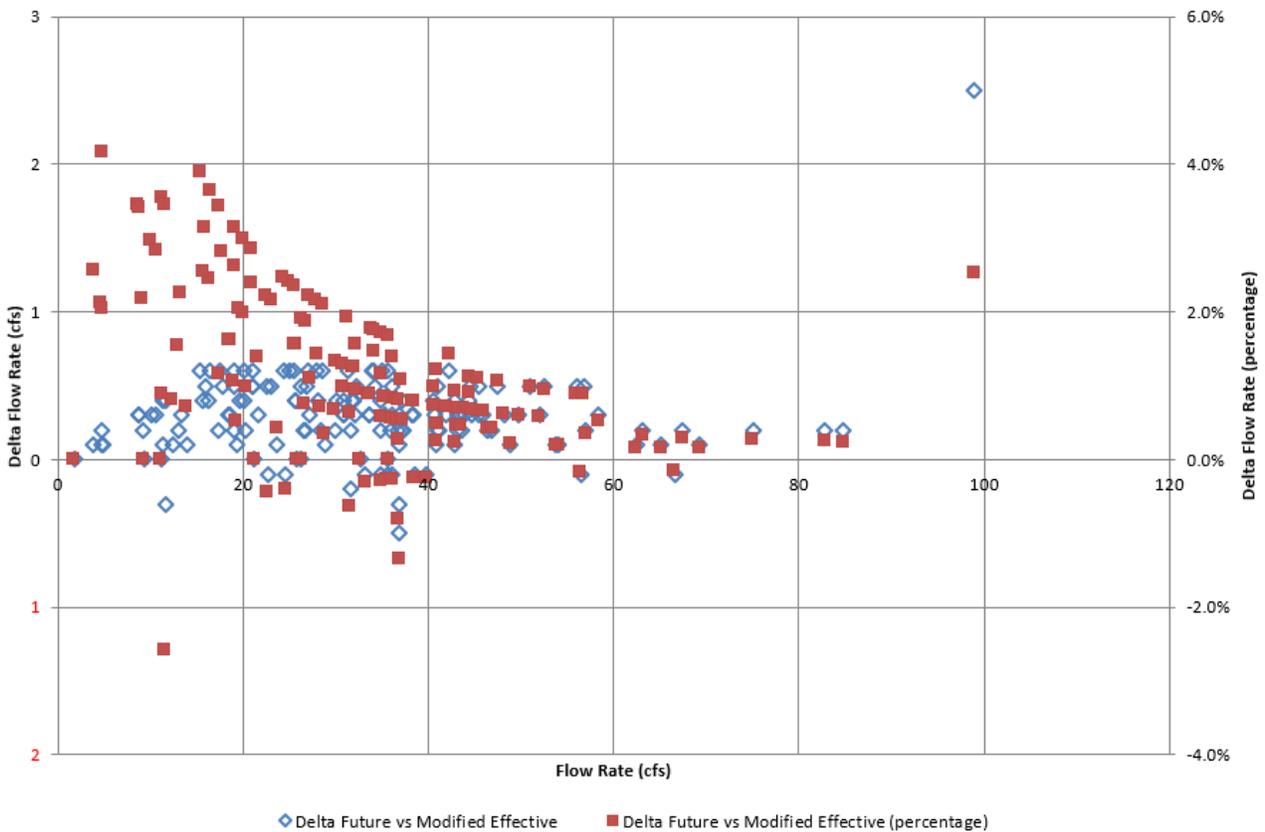
### Node D42 - U/S Stone Weir #2 - Lake 2 (Devon Ave Ditch)



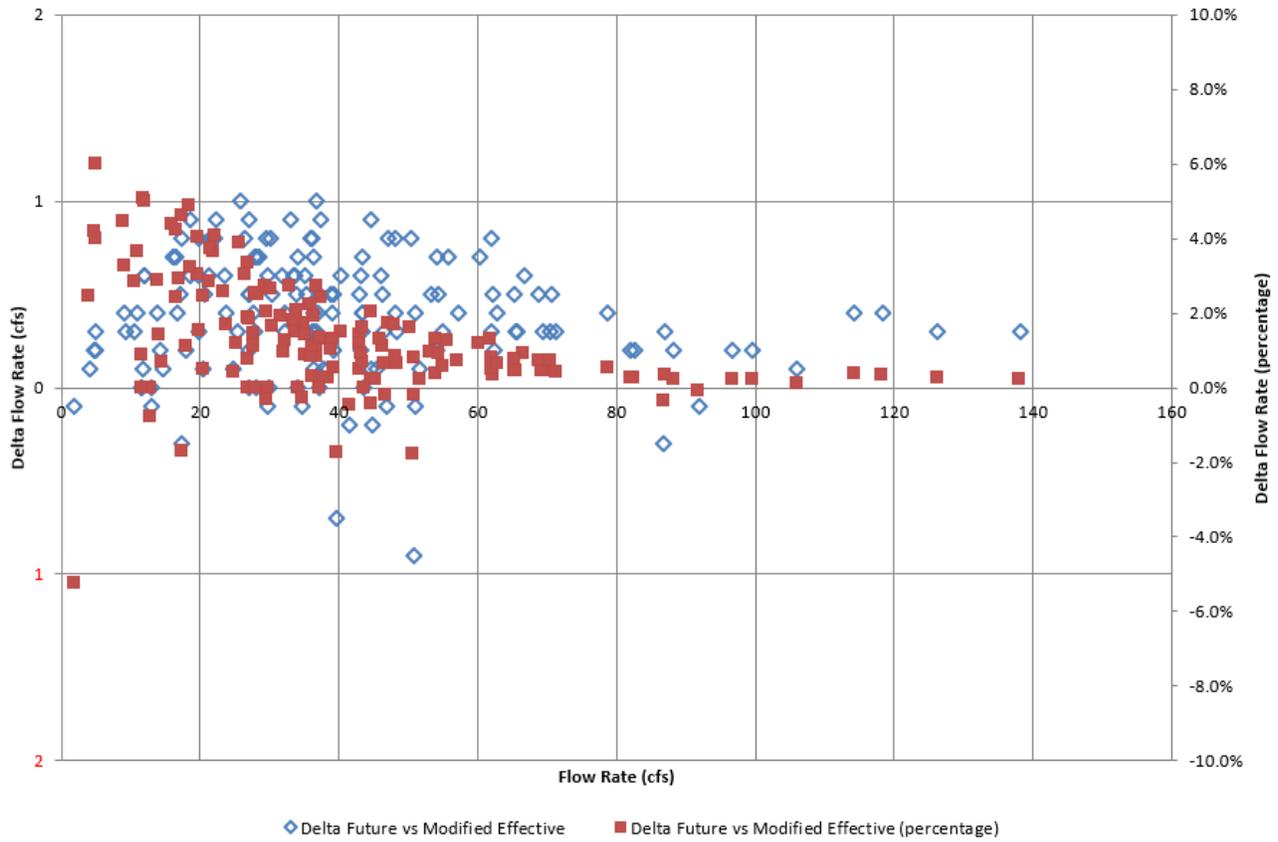
### Node D36 - U/S Stone Weir #1 - Lake 3 (Devon Ave Ditch)



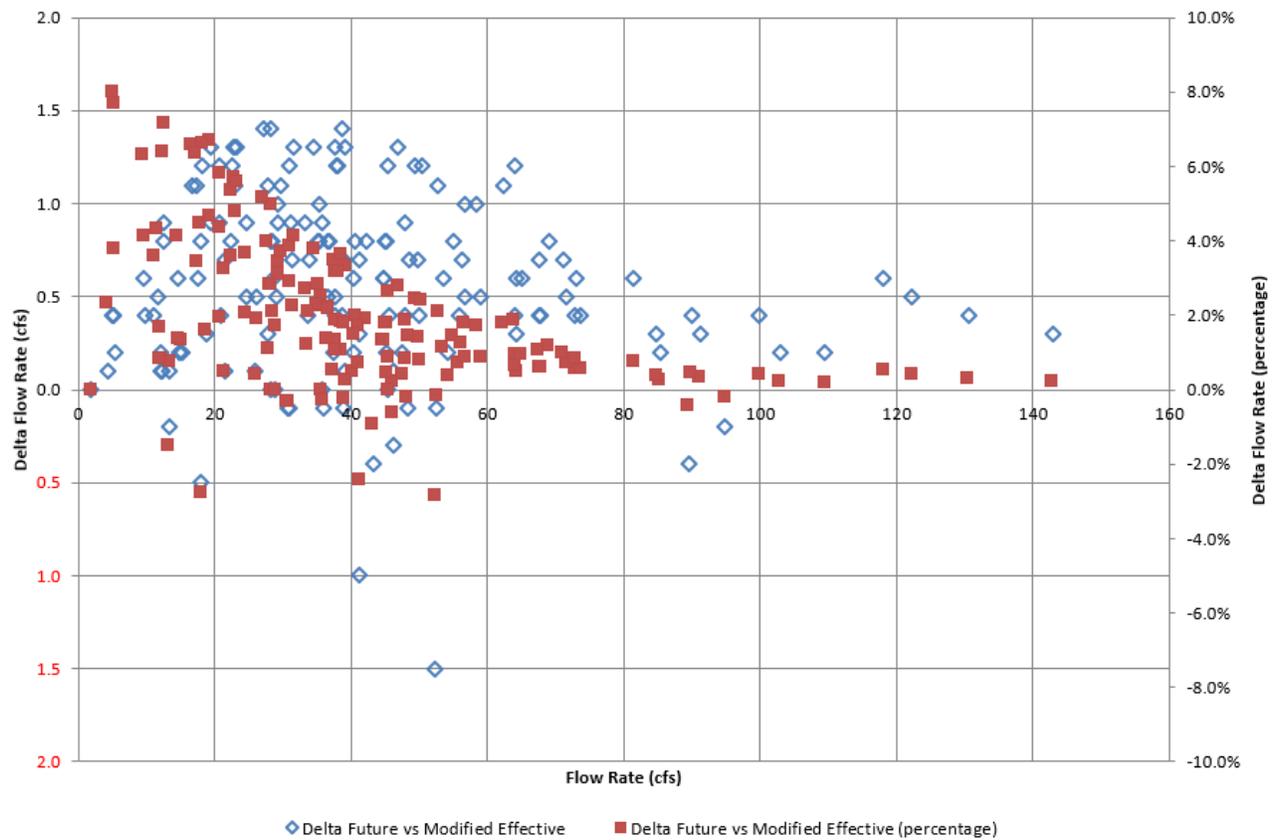
### Node D28 - U/S Pierce Road - Lake 4 (Devon Ave Ditch)



### Node D20 - U/S Office Park- Lake 5, D/S Bridge (Devon Ave Ditch)



### Node D12 - Outfall Box south of Devon Ave



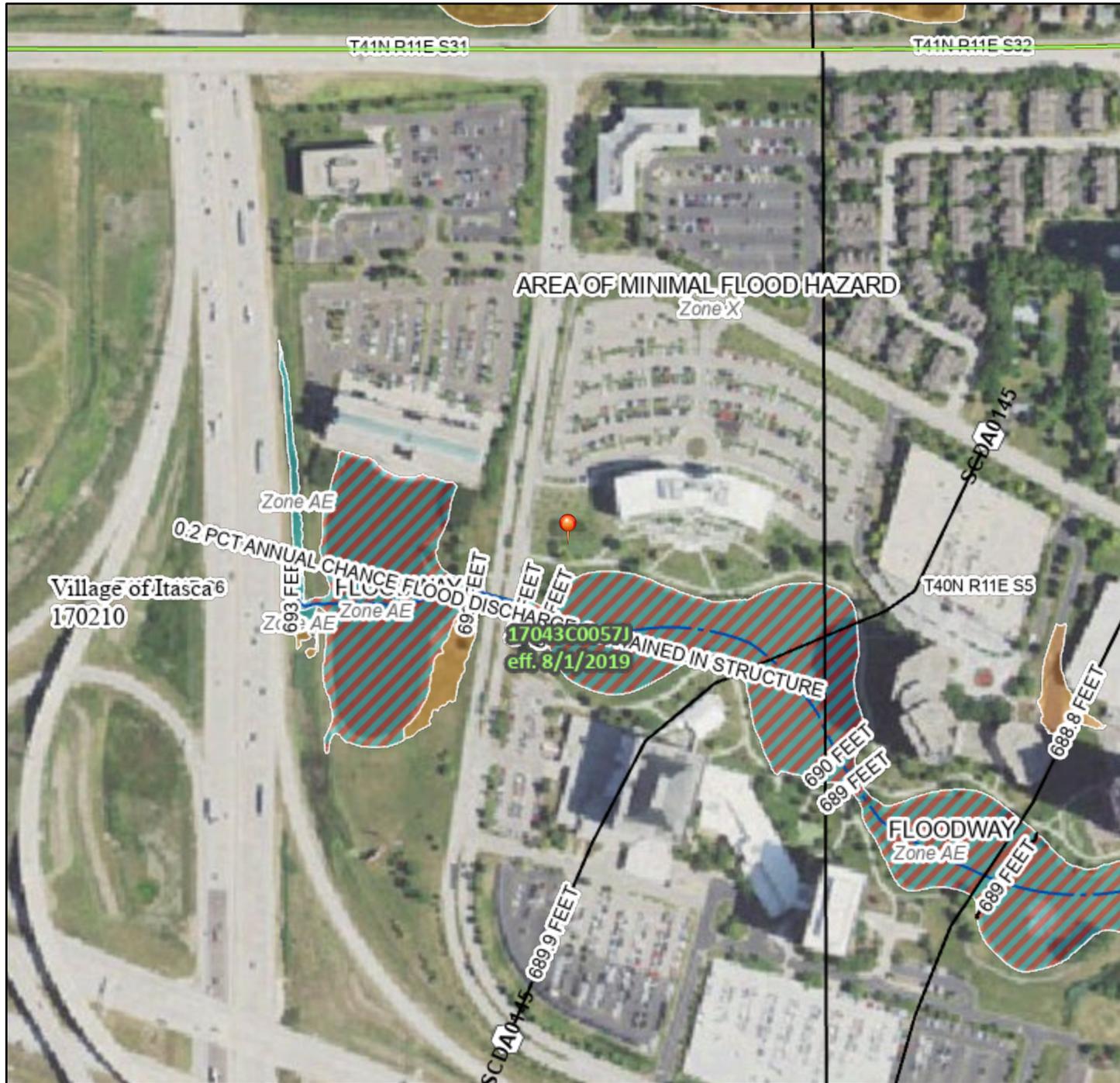
# APPENDIX 6

FEMA FIRM PANEL

# National Flood Hazard Layer FIRMMette



88°1'32"W 41°59'34"N



1:6,000

88°0'54"W 41°59'7"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

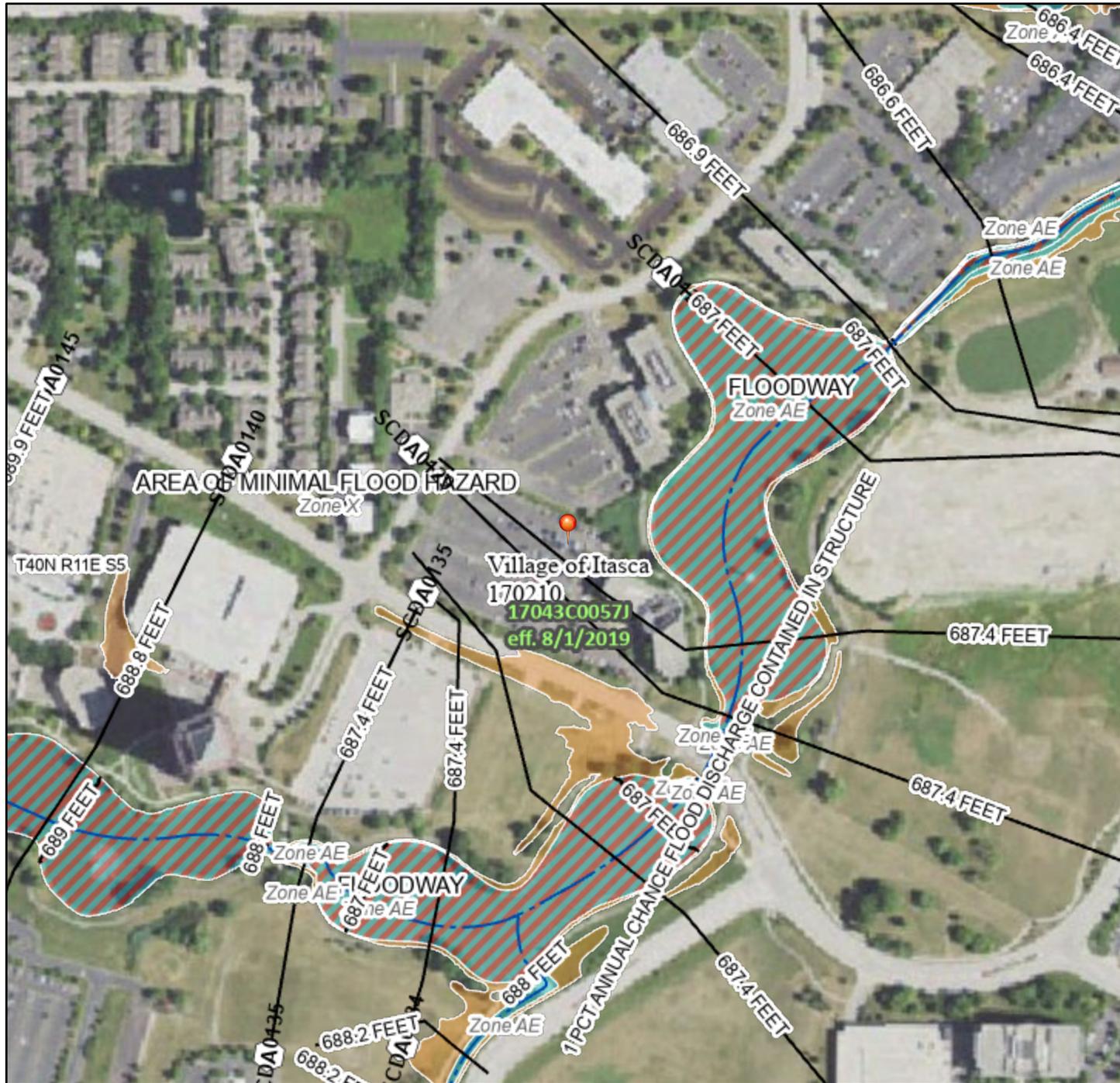
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/17/2025 at 9:15 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# National Flood Hazard Layer FIRMMette



88°1'1"W 41°59'33"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR	Regulatory Floodway

	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D

### OTHER AREAS OF FLOOD HAZARD

	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D

### OTHER AREAS

	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall

### GENERAL STRUCTURES

	20.2 Cross Sections with 1% Annual Chance
	17.5 Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature

### OTHER FEATURES

	Digital Data Available
	No Digital Data Available
	Unmapped

### MAP PANELS

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/17/2025 at 9:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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1:6,000

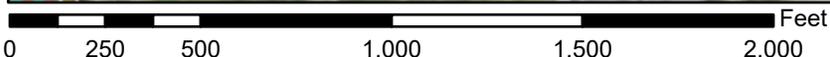
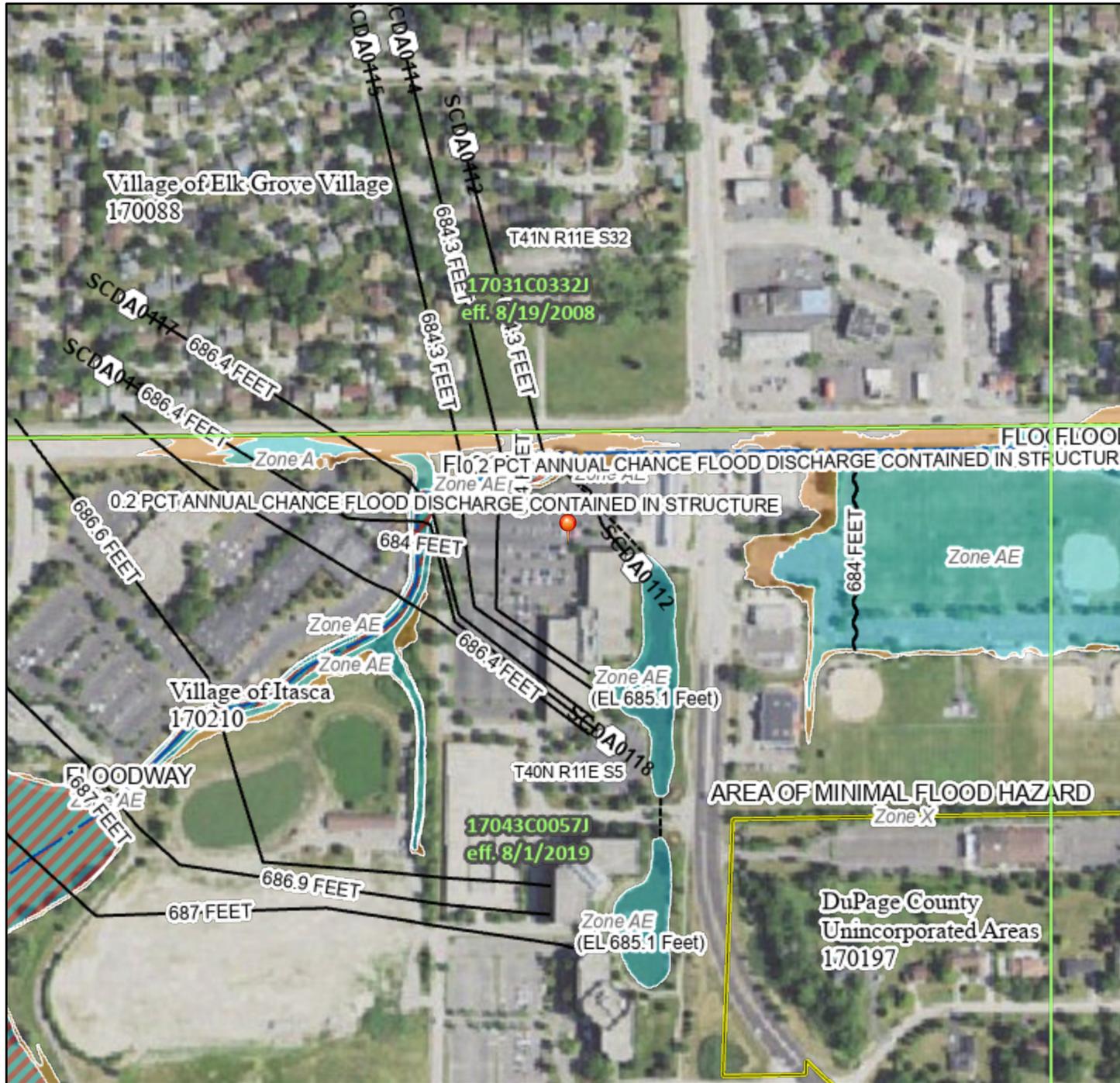
88°0'23"W 41°59'6"N

Basemap Imagery Source: USGS National Map 2023

# National Flood Hazard Layer FIRMMette



88°0'35"W 41°59'44"N



1:6,000 87°59'57"W 41°59'17"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X	Future Conditions 1% Annual Chance Flood Hazard Zone X	Area with Reduced Flood Risk due to Levee. See Notes. Zone X	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X	Effective LOMRs	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer	Levee, Dike, or Floodwall

OTHER FEATURES	20.2 Cross Sections with 1% Annual Chance Water Surface Elevation	17.5 Coastal Transect	Base Flood Elevation Line (BFE)	Limit of Study	Jurisdiction Boundary	Coastal Transect Baseline	Profile Baseline	Hydrographic Feature

MAP PANELS	Digital Data Available	No Digital Data Available	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

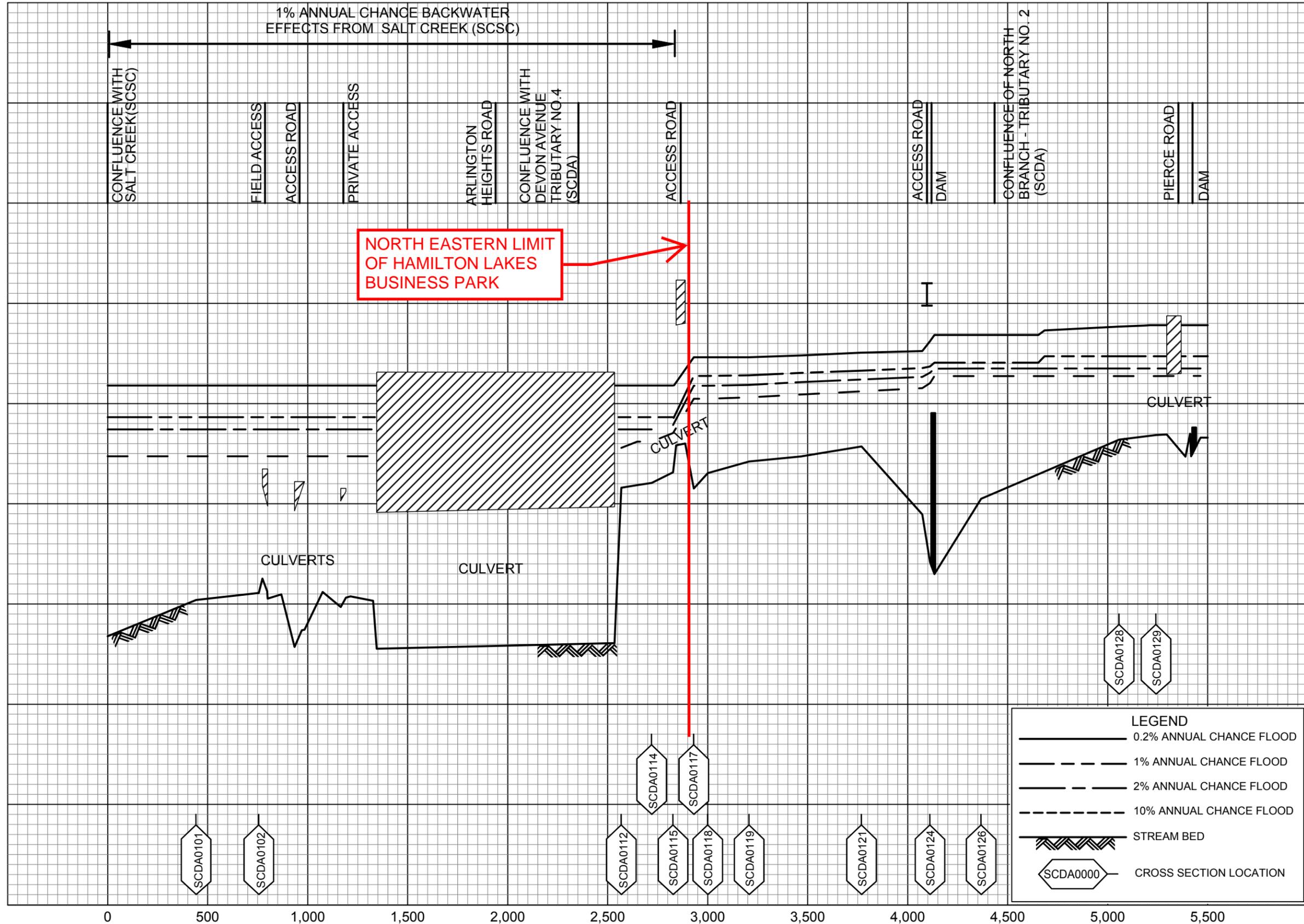
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/17/2025 at 9:17 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# APPENDIX 7

## FIS FLOOD PROFILE

ELEVATION IN FEET (NAVD 88)



FLOOD PROFILES

DEVON AVENUE TRIBUTARY (SCDA)

FEDERAL EMERGENCY MANAGEMENT AGENCY  
DU PAGE COUNTY, IL  
AND INCORPORATED AREAS

