

**HYDRAULIC REPORT**  
**ELGIN O'HARE – WEST BYPASS**  
**P-91-443-06**

**ELGIN O'HARE EXPRESSWAY**  
**CREST AVENUE**  
**MEDINAH ROAD**  
**OVER MEACHAM CREEK**

*Prepared for:*

Illinois Department of Transportation  
201 West Center Court  
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*Prepared By:*

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CBBEL Project No. 07-0404

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**MEACHAM CREEK**

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In order to facilitate a more efficient and timely approval of Hydraulic Reports, a "Hydraulic Report Outline" shall be prepared and submitted with each hydraulic project. This Outline shall be submitted to the District Hydraulic Engineer along with the Hydraulic Report to aid in review of the report.

If any deviations from the procedural steps below are necessary, they must be documented in the outline. Hydraulic Reports prepared by a Qualified District Hydraulic Engineer or under his supervision, are exempt from the HRO requirement. To facilitate Pump Station Hydraulic Report reviews, the Checklist and Data Sheets from the IDOT Drainage Manual, 13-303 and 13-304, will be used. The Data Sheets must be signed by the consultant's QA/QC person or the District Hydraulic Engineer.

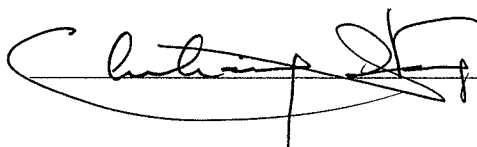
- BBS 2740 (02/27/08)

8. Modeling:
- a. ☐ HEC RAS    ☐ WSPRO    ☒ Other FEQ Model
  - b. N-values estimated according to Chapter 5 of Drainage Manual? ☐ Yes ☒ No
  - c. Source of starting WSE Salt Creek
  - d. Non-IDOT encroachments in survey? ☒ Yes ☐ No  
If yes, are they accounted for? ☒ Yes ☐ No
  - e. Tail water controls(s)? ☒ Yes ☐ No  
If yes, list: Salt Creek  
Properly addressed? ☒ Yes ☐ No
  - f. Expansion/Contraction cones addressed per Chapter 7 of Drainage Manual? ☒ Yes ☐ No  
If N/A, explain: \_\_\_\_\_
9. IDNR-OWR Permit: Drainage Area 0.73 sq. ☐ Rural; ☒ Urbanizing;  
Public Water or within Public Water boundaries ☐ Yes ☒ No  
Indicate Permit Type Required:  
  - a. Individual ☐
  - b. Statewide #2 ☐
  - c. Statewide #12 ☐
  - d. Floodway ☐
  - e. Other: \_\_\_\_\_
  - f. None: ☒
10. Sensitive flood receptors ☐ Yes ☒ No  
Give type, elevations and locations: \_\_\_\_\_  
\_\_\_\_\_  
History of flooding or overtopping problems: Yes ☐ No ☒  
Sources of observed highwater: \_\_\_\_\_
11. Scour/migration problems: ☒ None/minimal ☐ Significant ☐ Severe  
Comments: \_\_\_\_\_  
Ice/Debris concerns: None/minimal ☒ Significant ☐ Severe ☐  
Comments: \_\_\_\_\_  
Countermeasures proposed: NA
12. Deviations from the general procedures presented above and in Chapters 6 and 7 of the  
Drainage Manual: Application of the FEQ modeling from the DuPage County floodplain study.  
(Attach supporting documents if necessary)

Prepared by: Michael D. Cothard

Date: 11/11/2011

Signed:  
(QA/QC)



Date: 6/29/2012

## Hydraulic Report Checklist

The District or Consultant should complete the following checklist before submitting the Hydraulic Report for approval.

1. ☒ Title Page
2. ☒ Table of Contents
3. ☒ Narrative - (as outlined in Section 2-601.01 Item #3)
4. ☒ Waterway Information Table (WIT) - (as outlined in Section 2-601.01 Item #4)
5. ☒ Hydraulic Report Data Sheets
6. ☒ Location Map - should show the subject structure along with nearby location defining landmarks (cities, roads, highways, etc.)
7. ☒ USGS Hydraulic Investigation Map (District 1 only)
8. ☒ Photographs - (Minimum: U/S & D/S Structure Faces, Up & Down Channel, Up & Down Roadway Across Structure)
9. ☒ Hydrology (map and calculations)
10. ☒ Streambed Profile
11. ☒ Roadway Profile (existing and proposed)
12. ☒ Cross Section Plots - with plan layout preferably overlayed upon an aerial photo with the contours
13. ☐ Bridge Opening Plots
14. ☒ Natural Condition Analysis
15. ☒ Existing Condition Analysis
16. ☒ Proposed Condition Analysis
17. ☐ Scour Analysis – Existing and Proposed Conditions
18. ☒ Compensatory Storage Calculations (if required)
19. ☒ Survey Notes (if available, No Electronic Point Files)
20. ☒ Correspondence Notes
21. ☒ CD with Project Files (Include pdf copy of the Hydraulic Report)

When HEC-RAS modeling is being used, ALL Plans (Natural, Existing, & Proposed) shall be included in ONE Project File.

**Tab 1**

## **SECTION 1**

**NARRATIVE  
ELGIN O'HARE EXPRESSWAY  
CREST AVENUE  
MEDINAH ROAD  
OVER MEACHAM CREEK**

## **NARRATIVE**

### **Project Description**

The Elgin O'Hare-West Bypass (EOWB) study area encompasses nine (9) watersheds: West Branch DuPage River, Spring Brook, Meacham Creek, Salt Creek, Willow Creek, Higgins Creek, Bensenville Ditch, Silver Creek and Addison Creek. The length of the expressway and interchanges to be improved is approximately 50 miles, including Elgin O'Hare Expressway and Thorndale Avenue approximately from Gary Avenue to York Road, I-90 approximately from Arlington Heights Road to Wolf Road and I-294 approximately from North Avenue to Wolf Road. It is estimated that approximately 25 miles of arterials and frontage roads also will be included in the study. A general project location map is included in Section 3 of this report.

This hydraulic report is submitted for the impacted structure located within the Meacham Creek watershed. Separate hydraulic reports for impacted structures within each of the other watersheds are concurrently being prepared.

This hydraulic report documents the hydraulic conditions for the Meacham Creek waterway structures on the Elgin O'Hare Expressway, Crest Avenue and Medinah Road in the Village of Itasca, Village of Roselle and Village of Elk Grove Village, DuPage and Cook Counties, Illinois. The USGS Hydrologic Investigations Atlas and Flood Insurance Rate Map included in Section 3 show locations of these structures. No work is proposed at the Crest Avenue and Medinah Road crossings.

### **Site Description**

The existing Elgin O'Hare Expressway structure is 10 feet wide by 8 feet high reinforced concrete box culvert (RCBC) that carries two lanes of traffic in each direction, plus a westbound on ramp and an eastbound off ramp. The overall structure length is 265 feet face to face. The existing structure length perpendicular to the roadway is 265 feet, and has a skew angle of approximately 0 degree. The Elgin O'Hare Expressway RCBC crossing is located approximately 1,300 feet west of Medinah Road. The adjacent areas are wetlands, residential and commercial.

The existing Crest Avenue structure is a 6-foot diameter corrugated metal pipe (CMP) that a bike path crosses over. This structure is under the vacated portion of Medinah Road/Crest Avenue. The overall structure length is 86 feet face to face and has a skew angle of approximately 0 degree. The Crest Avenue CMP structure is located approximately 1,400 feet south of the Elgin O'Hare Expressway. The adjacent areas are wetlands, residential and commercial.

The existing Medinah Road structure is a twin 10 feet wide by 8.5 feet high RCBC that carries two lanes of traffic in each direction. The overall structure length is 160 feet face to face, and the perpendicular length to the roadway is 100 feet, with has a skew angle of approximately 45 degrees. The Medinah Road twin RCBC structure

is located approximately 1,700 feet south of the Elgin O'Hare Expressway. The adjacent areas are wetlands, residential and commercial.

## **Field Observations**

A field visit to the project site was made on November 2, 2010. The visit was completed to photograph and observe surrounding structures within the modeling limits of the study. Photographs of all modeled structures are provided in Section 4.

Meacham Creek is channelized in the vicinity of the Elgin O'Hare Expressway. The channel extends upstream due north from the Elgin O'Hare Expressway for approximately 280 feet, where it receives the outflow from the Jensen Park detention pond. The floodplain area upstream of Elgin O'Hare Expressway is excavated open water adjacent to residential structures. The channel flows through the 10 feet wide by 8 feet high RCBC structure under Elgin O'Hare Expressway. There is standing water upstream and downstream of the structure as well as through the structure opening. Under flood stages, the culvert is submerged. There is no evidence of scour at the structure.

Downstream of Elgin O'Hare Expressway is also channelized. The floodplain area downstream of Elgin O'Hare Expressway contains large wetlands adjacent to commercial and residential structures. Confluences with Meacham Creek tributaries from the west and east occur approximately 1,150 feet and 600 feet downstream of Elgin O'Hare Expressway, respectively. The channel extends downstream of Elgin O'Hare Expressway for approximately 1,400 feet prior to the structure under Crest Avenue.

Meacham Creek is also channelized in the vicinity of Crest Avenue. Confluences with the Meacham Creek tributaries from the west and east occur approximately 250 feet and 700 feet upstream of Crest Avenue, respectively. The channel flows through the CMP structure under Crest Avenue. There is some siltation immediately upstream and downstream of the structure as well as throughout the structure opening. This siltation causes flow in the channel to be constricted and directed toward the center of the CMP for baseflow conditions only. Under flood stages, the silted area is submerged. There is no evidence of scour at the structure.

Downstream of Crest Avenue, Meacham Creek is highly channelized for approximately 120 feet then crosses under Medinah Road. The channel flows through the twin RCBC structure under Medinah Road. There is some siltation immediately upstream and downstream of the structure as well as throughout the structure opening. This siltation causes flow in the creek to be constricted and directed toward the center of the RCBC for baseflow conditions only. Under flood stages, the silted area is submerged. There is no evidence of scour at the structure.

Downstream of Medinah Road, Meacham Creek is channelized for approximately 400 feet where the creek section becomes less channelized and more natural. The creek extends downstream of Medinah Road for approximately 2,100 feet prior to the structure under Thorndale Avenue. The entire floodplain area downstream of



Medinah Road is wetlands and an inundated commercial parking lot adjacent to commercial and residential structures.

### **Stream Survey**

A stream survey of Meacham Creek was prepared by D. B. Sterlin Consultants, Inc. in accordance with the stream survey requirements in Section 2-600 of the IDOT Drainage Manual. The stream survey was based on the IDOT datum for the Elgin O'Hare – West Bypass project, which is same as the NAVD 1988 datum.

### **Datum Correlation**

A datum correlation is required because the Flood Insurance Study (FIS) datum of NGVD 1929 was used in the FEQ regulatory model and the IDOT datum of NAVD 1988 was used for the survey. The DuPage County FIS and model results are each based on the NGVD 1929 datum. The IDOT datum, the stream survey, all roadway plans, and tables included in this report are based on the NAVD 1988 datum. Modeling input and output are in the NGVD 1929 datum. The Waterway Information Tables (WIT's) and Hydraulic Report Data Sheets, included in Section 2, are presented in the NAVD 1988 datum.

DuPage County calculated the countywide vertical datum conversion factors for each watershed as provided in Section 14 of this report. The Spring Brook watershed elevations at the NAVD 1988 datum can be determined by subtracting 0.28 feet from the NGVD 1929 datum elevations.

Input and output of hydraulic modeling are based on the NGVD 1929 datum. Report Tables, Waterway Information Tables and all exhibits are developed based on the NAVD 1988 datum.

### **Historical Flooding Observations**

According to DuPage County, the flood of record for Meacham Creek occurred in August 1987. The flood stage at Elgin O'Hare Expressway was approximately 715.9 feet (NAVD 1988), the flood stage at Crest Avenue was approximately 715.9 feet (NAVD 1988) and the flood stage at Medinah Road was approximately 715.0 feet (NAVD 1988).

### **Sensitive Flood Receptors**

There are no sensitive flood receptors within the Meacham Creek floodplain due to backwater created by the Elgin O'Hare Expressway crossing of Meacham Creek. Upstream of the Elgin O'Hare Expressway crossing between Elgin O'Hare Expressway and Jensen Park South, the floodplain consists of open water areas which do not cause any impacts.

## **Other Studies and Reports**

The regulatory 100-year flood profile ends upstream of Medinah Road with a 100-year storm event flood elevation of 715.9 feet according to Sheet 115P of the Flood Insurance Study for DuPage County, Illinois and Incorporated Areas, dated March 2007 which is included in Section 3 of this report. The flood profile elevations shown at Medinah Road for the 10-year, 50-year, and 500-year storm events are 714.1 feet, 715.2 feet and 716.3 feet respectively. These flood elevations are based on the NAVD 1988 datum. The Flood Insurance Rate Map (FIRM), Map Number 17043C0203H, dated December 16, 2004 is included in Section 3 of this report. The FIRM reports a floodplain flood Zone AE designation upstream and downstream of the crossing.

There is no regulatory flood profile associated with the Elgin O'Hare Expressway crossing and Crest Avenue crossing as illustrated on the included FIRM.

The baseline conditions hydraulic model of Meacham Creek used in this analysis was obtained from a floodplain mapping study prepared for DuPage County by Hey and Associates and AECOM, dated August 10, 2010.

## **Waterway Modeling**

A hydraulic analysis of Meacham Creek was performed to develop the proposed, existing and natural conditions flood elevations for determining the effects if any, of the structures on the water surface profiles. The basis for the hydraulic analysis was the current FEQ unsteady flow hydraulic model of Meacham Creek and its tributaries.

### Hydrologic Analysis

DuPage County employs a long-term continuous record of rainfall and potential evapotranspiration to simulate historical runoff to create a homogeneous record of flood flows. This simulation employs the HSPF software program which was released by the USEPA in 1980 and is currently in Version 12.2. The Salt Creek HSPF model calibration includes 31 flood events that occurred during the time period of 1995-2008. The results of this analysis are compared with USGS gages located throughout the Salt Creek watershed (Meacham Creek is tributary to Salt Creek). Peak elevations, flows and volumes are computed for each of the 31 simulated storm events and then are compared at each of the gages.

Once the model results are judged to accurately simulate the calibration period, a series of historical storms is extracted from the continuous HSPF record and used in the hydraulic model simulation. The historical period of record used in the DuPage County simulation is from 1949-2008. There are 157 discrete storm events contained in the simulations.

## Hydraulic Analysis

Hydraulic analysis in the DuPage County floodplain mapping procedure is performed using the FEQ modeling software developed by Dr. Delbert Franz and distributed by the USGS. It has been supported by USGS and is a FEMA approved model since 1997. The USGS approval process included an in depth validation and verification of the model's capabilities and accuracy. The FEQ model of the Salt Creek was prepared and calibrated according to FEMA standards for the development of hydraulic model input data. The FEQ model uses input from the HSPF hydrologic model and also from the FEQUTL program. FEQUTL is used to generate tabular files that are used by FEQ to compute the elevation and flow at each location contained in the model.

## Statistical Analysis

HSPF and FEQ are used to generate a series of simulated floods. Although the floods are based on historical rainfall input, the floods themselves are not historical. Instead, they are representative of the flood peaks that might have occurred if current watershed development had been in place during the past 60 years (1949-2008).

This simulated historical series consists of 157 floods that have been extracted from the long term continuous simulation. Multiple floods are extracted from many of the years because the largest flood in any given year might be produced by different rainfall events in different watersheds or different locations in the same watershed. The floods with the 60 largest peaks at each location are employed in the statistical analysis. The selected number of peaks is based on the 60 years of simulated data.

For each selected flood, the flood volume is determined using a baseflow separation program called BFILTER. The 60 flood volumes are then fitted to a statistical distribution which allows flood volume quantities to be determined, such as the 100-year volume. Next, a functional relationship between peak elevation and volume is developed. This relationship is derived from pairs of peak elevation and flood volumes obtained from the simulated data. Often the historical storm simulations do not contain data points at the high end of the peak elevation versus volume curve. Additional data is obtained to extend the curve by simulating a sequence of extreme Midwestern rain events. These extreme events are simply used to obtain stage and volume results beyond the envelope of locally recorded storms. The two steps involving the statistical fits and the derivation of the peak elevation versus volume curve are performed using the software known as PVSTATS.

## Baseline Conditions Model

The existing conditions model prepared for DuPage County, used as the baseline conditions model, was obtained from AECOM and is an updated version of the watershed plan model originally prepared in 2005. The model was updated in order to run a more current version of FEQ (version 10.61). This model of the Spring Brook (which includes the Meacham Creek) will be used as part of the overall floodplain mapping effort being completed by DuPage County.

The FEQ model for the Meacham Creek is part of a larger model of the lower Salt Creek watershed. The Meacham Creek portion of the Salt Creek model is linked to the Spring Brook portion of the model at the Lake Kadajah and uses Salt Creek to determine starting water conditions. The Spring Brook confluence with Salt Creek is located approximately 650 feet downstream of Prospect Avenue. The FEQ model functions such that for each flood profile analyzed along Meacham Creek, the starting water surface elevation is taken from the same flood profile at Spring Brook. Therefore, the 100-year Meacham Creek profile will start with the 100-year elevation of Spring Brook Creek. Using a constant storm event elevation such as the 10-year elevation of the Spring Brook as the starting elevation for analyzing all profiles was considered to be not applicable with application of the HSPF/FEQ/PVSTATS analysis. The summary of the baseline conditions elevations and flows at selected locations is included in Section 8.

#### Existing Conditions Model

The surveyed Cross Sections A1 through A8, and A10 were added to the existing conditions FEQ model. The cross section data was converted to the NGVD 1929 datum by adding 0.28 feet to the surveyed elevations. The surveyed cross sections were extended using the 2-foot topographic map included in Section 9. The surveyed Cross Section A9 was not used in the existing conditions FEQ model because it did not reflect the actual approach cross section for the Elgin-O'Hare Expressway culvert. Also, Cross Sections A11 and A12 were not used in existing FEQ model because these cross sections are located within the pond (FEQ Node F134). The associated FEQUTL file "mcxs\_exist3.ftl" is included in Section 9.

The tributary area upstream of the Elgin O'Hare culvert was increased from 0.73 sq. mi. to 1.06 sq. mi. as shown on Exhibit 9.2. This was done by adding approximately 0.33 sq.mi. to FEQ Branch B-132, and subtracting 0.33 sq. mi. from FEQ Branches/Nodes B-140, B-143, B-138, F130, and F132. The tributary area calculations are included in Section 9.

The culverts under Elgin-O'Hare Expressway, Crest Avenue, and Medinah Road were updated to match the survey data. The associated FEQUTL files "crestave\_culv.ftl" and MedinahRd\_culv.ftl" for the Crest Avenue, and Medinah Road culverts, respectively are included in Section 9. The summary of the existing conditions elevations and flows at selected locations is included in Section 9.

The Existing Conditions water surface elevation (WSEL) is compared with the Baseline Conditions WSEL in Table 1.

Table 1  
Comparison of Existing Conditions and Baseline Conditions WSEL  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	Baseline WSEL	Diff. (Ft.)	EX. WSEL	Baseline WSEL	Diff. (Ft.)	EX. WSEL	Baseline WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.7	-0.1	719.1	719.2	-0.1	717.5	717.6	-0.1
XS 9010c	716.6	716.8	-0.2	716.0	716.4	-0.3	714.4	714.9	-0.5
XS 9010 (A10)	716.4			715.9			714.4		
XS 9010c2 USF of Elgin-O'Hare	716.4	716.8	-0.5	715.9	716.4	-0.5	714.4	714.9	-0.5
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.8	-0.4	715.8	716.3	-0.5	714.3	714.7	-0.4
XS 9007 (A7)	716.4			715.7			714.3		
XS 9006 (A6)	716.4			715.7			714.1		
XS 510	716.4	716.6	-0.3	715.7	716.0	-0.3	714.1	714.3	-0.2
XS 9005 (A5)	716.4			715.7			714.1		
XS 501	716.4	716.6	-0.3	715.7	716.0	-0.3	714.1	714.3	-0.2
XS501c	716.4	716.6	-0.3	715.7	716.0	-0.3	714.1	714.3	-0.2
XS 500c	716.4	716.6	-0.3	715.7	716.0	-0.3	714.1	714.3	-0.2
XS 498 USF of Crest Ave.	716.4	716.6	-0.2	715.7	716.0	-0.3	714.1	714.3	-0.3
XS 9004c DSF of Crest Ave.	715.5	716.0	-0.4	714.9	715.3	-0.4	713.5	713.8	-0.3
XS 9004 (A4)	715.5			714.9			713.5		
XS 489 USF of Medinah Road	715.5	715.9	-0.4	714.9	715.3	-0.4	713.5	713.8	-0.3
XS 9003c DSF of Medinah Road	715.4	715.8	-0.5	714.8	715.2	-0.4	713.5	713.7	-0.2
XS 9003 (A3)	715.4	715.8	-0.5	714.8	715.2	-0.4	713.5	713.7	-0.2
XS 487	715.4	715.8	-0.4	714.8	715.2	-0.4	713.5	713.7	-0.2
XS 9002 (A2)	715.4			714.8			713.5		
XS 486	715.4	715.8	-0.4	714.8	715.1	-0.3	713.4	713.7	-0.3
XS 9001 (A1)	715.4	715.8	-0.4	714.8	715.1	-0.3	713.4	713.7	-0.2
XS 484	715.4	715.8	-0.4	714.8	715.1	-0.3	713.4	713.7	-0.3
XS 985 USF of Thorndale Road	715.4	715.8	-0.4	714.8	715.1	-0.3	713.4	713.6	-0.2

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	Baseline WSEL	Diff. (Ft.)	EX. WSEL	Baseline WSEL	Diff. (Ft.)	EX. WSEL	Baseline WSEL	Diff. (Ft.)
XS 470 DSF of Thorndale Road	714.9	715.4	-0.5	714.2	714.7	-0.5	713.0	713.2	-0.2
XS 994	714.8	715.3	-0.5	714.2	714.6	-0.5	712.9	713.0	-0.2
XS 460 USF of Maple Ave	714.7	715.2	-0.5	714.0	714.4	-0.4	712.6	712.7	-0.2

The results show that the revision of the Elgin-O'Hare Expressway, Crest Avenue, and Medinah Road culverts decreases the 10-, 50-, and 100-year profiles between 0.1 feet and 0.5 feet.

The FIS applied the SCS WSP-2 program in modeling Salt Creek. In the FIS modeling, discharges for the 10-year, 50-year, and 100-year floods for the Salt Creek were computed using the log-Pearson Type III method. These discharges have been largely unchanged since 1979 and do not reflect current watershed conditions.

Application of the FEQ unsteady flow hydraulic model included updating the watershed characteristics to current land usage and applying the statistical analysis of the 60 largest storm peaks created by the recreation of 157 historic storms which were recorded between 1949 and 2008.

The Existing Conditions WSEL is compared with the FIS Regulatory WSEL in Table 2.

Table 2  
Comparison of Existing Conditions and FIS Regulatory WSEL  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	FIS WSEL	Diff. (Ft.)	EX. WSEL	FIS WSEL	Diff. (Ft.)	EX. WSEL	FIS WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6			719.1			717.5		
XS 9010c	716.6			716.0			714.4		
XS 9010 (A10)	716.4			715.9			714.4		
XS 9010c2 USF of Elgin-O'Hare	716.4			715.9			714.4		
XS 9008 (A8) DSF Elgin-O'Hare	716.4			715.8			714.3		
XS 9007 (A7)	716.4			715.7			714.3		
XS 9006 (A6)	716.4			715.7			714.1		

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	FIS WSEL	Diff. (Ft.)	EX. WSEL	FIS WSEL	Diff. (Ft.)	EX. WSEL	FIS WSEL	Diff. (Ft.)
XS 510	716.4			715.7			714.1		
XS 9005 (A5)	716.4			715.7			714.1		
XS 501	716.4			715.7			714.1		
XS501c	716.4			715.7			714.1		
XS 500c	716.4			715.7			714.1		
XS 498 USF of Crest Ave.	716.4			715.7			714.1		
XS 9004c DSF of Crest Ave.	715.5			714.9			713.5		
XS 9004 (A4)	715.5			714.9			713.5		
XS 489 USF of Medinah Road	715.5			714.9			713.5		
XS 9003c DSF of Medinah Road	715.4	719.9	-4.5	714.8	715.2	-0.4	713.5	714.1	-0.6
XS 9003 (A3)	715.4			714.8			713.5		
XS 487	715.4			714.8			713.5		
XS 9002 (A2)	715.4			714.8			713.5		
XS 486	715.4			714.8			713.4		
XS 9001 (A1)	715.4			714.8			713.4		
XS 484 (FIS XS SCSB 0076)	715.4	715.6	-0.2	714.8	714.9	-0.1	713.4	713.3	0.1
XS 985 USF of Thorndale Road	715.4	715.5	-0.1	714.8	714.9	-0.1	713.4	713.2	0.2
XS 470 DSF of Thorndale Road	714.9			714.2			713.0		
XS 994	714.8			714.2			712.9		
XS 460 USF of Maple Ave	714.7	715.1	-0.4	714.0	714.4	-0.4	712.6	713.2	-0.6

### Natural Conditions Model

A natural conditions model was developed to determine the natural water surface elevations at the Elgin O'Hare Expressway structure. The natural conditions model was prepared by removal of the Elgin O'Hare Expressway structure from the existing conditions model. The natural conditions analysis FEQ model output summary is included in Section 10.

The Existing Conditions WSEL is compared with the Natural Conditions WSEL in Table 3.

Table 3  
Comparison of Existing Conditions and Natural Conditions WSEL at the Elgin O'Hare Expressway  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.6	-0.1	719.1	719.0	-0.1	717.5	717.5	0.0
XS 9010c	716.6	716.3	-0.3	716.0	715.8	-0.3	714.4	714.2	-0.2
XS 9010 (A10)	716.4	716.3	-0.1	715.9	715.6	-0.2	714.4	714.0	-0.4
XS 9010c2 USF of Elgin-O'Hare	716.4	716.3	-0.1	715.9	715.6	-0.2	714.4	714.0	-0.4
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.3	-0.1	715.8	715.6	-0.1	714.3	714.0	-0.3
XS 9007 (A7)	716.4	716.3	-0.1	715.7	715.6	-0.1	714.3	713.9	-0.4
XS 9006 (A6)	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS 510	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS 9005 (A5)	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS 501	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS501c	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS 500c	716.4	716.3	-0.1	715.7	715.6	-0.1	714.1	713.9	-0.2
XS 498 USF of Crest Ave.	716.4	716.2	-0.2	715.7	715.6	-0.2	714.1	713.9	-0.2
XS 9004c DSF of Crest Ave.	715.5	715.3	-0.2	714.9	714.7	-0.2	713.5	713.4	-0.1
XS 9004 (A4)	715.5	715.3	-0.2	714.9	714.7	-0.2	713.5	713.4	-0.1
XS 489 USF of Medinah Road	715.5	715.3	-0.2	714.9	714.7	-0.2	713.5	713.4	-0.1
XS 9003c DSF of Medinah	715.4	715.3	-0.1	714.8	714.7	-0.1	713.5	713.4	-0.1



Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
Road									
XS 9003 (A3)	715.4	715.3	-0.1	714.8	714.7	-0.1	713.5	713.4	-0.1
XS 487	715.4	715.3	-0.1	714.8	714.7	-0.1	713.5	713.4	-0.1
XS 9002 (A2)	715.4	715.1	-0.3	714.8	714.6	-0.2	713.5	713.4	-0.1
XS 486	715.4	715.1	-0.3	714.8	714.6	-0.2	713.4	713.3	-0.1
XS 9001 (A1)	715.4	715.1	-0.3	714.8	714.6	-0.2	713.4	713.3	-0.1
XS 484	715.4	715.1	-0.3	714.8	714.6	-0.2	713.4	713.3	-0.1
XS 985 USF of Thorndale Road	715.4	715.1	-0.3	714.8	714.6	-0.2	713.4	713.3	-0.1
XS 470 DSF of Thorndale Road	714.9	714.6	-0.3	714.2	714.0	-0.2	713.0	712.9	-0.1
XS 994	714.8	714.6	-0.2	714.2	713.9	-0.2	712.9	712.8	-0.1
XS 460 USF of Maple Ave	714.7	714.4	-0.3	714.0	713.8	-0.2	712.6	712.5	-0.1

Removal of the Elgin O'Hare Expressway crossing decreases the 50- and 100-year profiles between 0.1 feet and 0.3 feet, and decreases the 10-year profile between 0.0 feet and 0.4 feet.

A second natural conditions model was developed to determine the natural water surface elevations at the Crest Avenue structure. The natural conditions model was prepared by removal of the Crest Avenue structure from the existing conditions model. The natural conditions analysis FEQ model output summary is included in Section 10.

The Existing Conditions WSEL is compared with the Natural Conditions WSEL in Table 4.

Table 4  
Comparison of Existing Conditions and Natural Conditions WSEL at Crest Avenue  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.6	0.0	719.1	719.0	0.0	717.5	717.5	0.0
XS 9010c	716.6	716.2	-0.4	716.0	715.6	-0.5	714.4	714.1	-0.3
XS 9010 (A10)	716.4	716.1	-0.3	715.9	715.4	-0.5	714.4	713.9	-0.4

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
XS 9010c2 USF of Elgin-O'Hare	716.4	716.1	-0.3	715.9	715.4	-0.4	714.4	713.9	-0.4
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.1	-0.3	715.8	715.4	-0.3	714.3	713.9	-0.4
XS 9007 (A7)	716.4	716.1	-0.3	715.7	715.4	-0.3	714.3	713.9	-0.4
XS 9006 (A6)	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS 510	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS 9005 (A5)	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS 501	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS501c	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS 500c	716.4	716.1	-0.3	715.7	715.4	-0.3	714.1	713.9	-0.2
XS 498 USF of Crest Ave.	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.9	-0.2
XS 9004c DSF of Crest Ave.	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.9	0.4
XS 9004 (A4)	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.9	0.4
XS 489 USF of Medinah Road	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.9	0.4
XS 9003c DSF of Medinah Road	715.4	715.9	0.5	714.8	715.3	0.5	713.5	713.8	0.4
XS 9003 (A3)	715.4	715.9	0.5	714.8	715.3	0.5	713.5	713.8	0.4
XS 487	715.4	715.9	0.5	714.8	715.3	0.5	713.5	713.8	0.3
XS 9002 (A2)	715.4	715.9	0.5	714.8	715.3	0.5	713.5	713.8	0.3
XS 486	715.4	715.9	0.5	714.8	715.3	0.5	713.4	713.8	0.3
XS 9001 (A1)	715.4	715.9	0.5	714.8	715.3	0.5	713.4	713.8	0.3
XS 484	715.4	715.9	0.5	714.8	715.3	0.5	713.4	713.8	0.4
XS 985 USF of Thorndale Road	715.4	715.9	0.5	714.8	715.3	0.5	713.4	713.8	0.3
XS 470 DSF of Thorndale Road	714.9	715.5	0.6	714.2	714.8	0.6	713.0	713.3	0.3
XS 994	714.8	715.4	0.6	714.2	714.7	0.5	712.9	713.2	0.3
XS 460 USF of Maple Ave	714.7	715.3	0.6	714.0	714.5	0.6	712.6	712.9	0.3

Removal of the Crest Avenue crossing raised the 10-year downstream WSEL between 0.3 feet and 0.4 feet, and lowered the upstream profile between 0.0 feet and 0.4 feet.

Removal of the Crest Avenue crossing raised the 50-year downstream WSEL between 0.5 feet and 0.6 feet, and lowered the upstream profile between 0.0 feet and 0.5 feet.

Removal of the Crest Avenue crossing raised the 100-year downstream WSEL between 0.5 feet and 0.6 feet, and lowered the upstream profile between 0.0 feet and 0.4 feet.

A third natural conditions model was developed to determine the natural water surface elevations at the Medinah Road structure. The natural conditions model was prepared by removal of the Medinah Road structure from the existing conditions model. The natural conditions analysis FEQ model output summary is included in Section 10.

The Existing Conditions WSEL is compared with the Natural Conditions WSEL in Table 5.

Table 5  
Comparison of Existing Conditions and Natural Conditions WSEL at Medinah Road  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.6	0.0	719.1	719.0	0.0	717.5	717.5	0.0
XS 9010c	716.6	716.6	0.0	716.0	716.0	0.0	714.4	714.4	0.0
XS 9010 (A10)	716.4	716.5	0.1	715.9	715.9	0.0	714.4	714.4	0.0
XS 9010c2 USF of Elgin-O'Hare	716.4	716.5	0.1	715.9	715.9	0.0	714.4	714.4	0.0
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.5	0.1	715.8	715.8	0.1	714.3	714.4	0.0
XS 9007 (A7)	716.4	716.5	0.1	715.7	715.8	0.1	714.3	714.4	0.1
XS 9006 (A6)	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 510	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 9005 (A5)	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 501	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS501c	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 500c	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 498 USF of Crest Ave.	716.4	716.5	0.1	715.7	715.8	0.1	714.1	714.1	0.0
XS 9004c DSF of Crest Ave.	715.5	715.6	0.1	714.9	714.9	0.0	713.5	713.5	0.0
XS 9004 (A4)	715.5	715.6	0.0	714.9	714.9	0.0	713.5	713.5	0.0

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
XS 489 USF of Medinah Road	715.5	715.5	0.0	714.9	714.9	0.0	713.5	713.5	0.0
XS 9003c DSF of Medinah Road	715.4	715.5	0.2	714.8	714.9	0.1	713.5	713.5	0.0
XS 9003 (A3)	715.4	715.5	0.2	714.8	714.9	0.1	713.5	713.5	0.1
XS 487	715.4	715.5	0.1	714.8	714.9	0.1	713.5	713.5	0.1
XS 9002 (A2)	715.4	715.5	0.1	714.8	714.9	0.1	713.5	713.5	0.1
XS 486	715.4	715.5	0.1	714.8	714.9	0.1	713.4	713.5	0.0
XS 9001 (A1)	715.4	715.5	0.1	714.8	714.9	0.1	713.4	713.5	0.0
XS 484	715.4	715.5	0.1	714.8	714.9	0.1	713.4	713.5	0.1
XS 985 USF of Thorndale Road	715.4	715.5	0.1	714.8	714.9	0.1	713.4	713.5	0.0
XS 470 DSF of Thorndale Road	714.9	715.0	0.1	714.2	714.3	0.1	713.0	713.0	0.0
XS 994	714.8	715.0	0.1	714.2	714.3	0.1	712.9	712.9	0.0
XS 460 USF of Maple Ave	714.7	714.8	0.1	714.0	714.1	0.1	712.6	712.6	0.0

Removal of the Medinah Road crossing raised the 10-year flood profile downstream WSEL between 0.0 and 0.1 feet.

Removal of the Medinah Road crossing raised the 50-year upstream and downstream WSEL by 0.1 feet.

Removal of the Medinah Road crossing raised the 100-year downstream WSEL between 0.1 feet and 0.2 feet, and raised the upstream profile by 0.1 feet.

A fourth natural conditions model was developed to determine the natural water surface elevations at the Crest Avenue structure assuming the removal of both Crest Avenue and Medinah Road. The natural conditions analysis FEQ model output summary is included in Section 10.

The Existing Conditions WSEL is compared with the Natural Conditions WSEL in Table 6.

Table 6  
Comparison of Existing Conditions and Natural Conditions WSEL at Crest Avenue  
and Medinah Road  
Based on NAVD 1988 Datum

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.6	0.0	719.1	719.0	0.0	717.5	717.5	0.0
XS 9010c	716.6	716.1	-0.5	716.0	715.5	-0.5	714.4	714.1	-0.3
XS 9010 (A10)	716.4	716.0	-0.4	715.9	715.4	-0.5	714.4	713.9	-0.5
XS 9010c2 USF of Elgin-O'Hare	716.4	716.0	-0.4	715.9	715.4	-0.5	714.4	713.8	-0.5
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.0	-0.4	715.8	715.4	-0.4	714.3	713.8	-0.5
XS 9007 (A7)	716.4	716.0	-0.4	715.7	715.4	-0.4	714.3	713.8	-0.5
XS 9006 (A6)	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 510	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 9005 (A5)	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 501	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS501c	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 500c	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 498 USF of Crest Ave.	716.4	716.0	-0.4	715.7	715.4	-0.4	714.1	713.8	-0.3
XS 9004c DSF of Crest Ave.	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.8	0.3
XS 9004 (A4)	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.8	0.3
XS 489 USF of Medinah Road	715.5	716.0	0.5	714.9	715.4	0.5	713.5	713.8	0.3
XS 9003c DSF of Medinah Road	715.4	716.0	0.6	714.8	715.4	0.6	713.5	713.8	0.3
XS 9003 (A3)	715.4	716.0	0.6	714.8	715.4	0.6	713.5	713.8	0.4
XS 487	715.4	716.0	0.6	714.8	715.4	0.6	713.5	713.8	0.4
XS 9002 (A2)	715.4	716.0	0.6	714.8	715.4	0.6	713.5	713.8	0.4
XS 486	715.4	716.0	0.6	714.8	715.4	0.6	713.4	713.8	0.4
XS 9001 (A1)	715.4	716.0	0.6	714.8	715.4	0.6	713.4	713.8	0.4
XS 484	715.4	716.0	0.6	714.8	715.4	0.6	713.4	713.8	0.4
XS 985 USF of Thorndale	715.4	716.0	0.6	714.8	715.4	0.6	713.4	713.7	0.3

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)	EX. WSEL	NAT WSEL	Diff. (Ft.)
Road									
XS 470 DSF of Thorndale Road	714.9	715.5	0.6	714.2	714.8	0.6	713.0	713.3	0.3
XS 994	714.8	715.5	0.7	714.2	714.8	0.6	712.9	713.2	0.3
XS 460 USF of Maple Ave	714.7	715.4	0.7	714.0	714.6	0.6	712.6	712.9	0.3

Removal of both the Crest Avenue and Medinah Road crossings raised the 10-year downstream WSEL between 0.3 feet and 0.4 feet, and lowered the upstream profile between 0.0 feet and 0.5 feet.

Removal of both the Crest Avenue and Medinah Road crossings raised the 50-year downstream WSEL between 0.5 feet and 0.6 feet, and lowered the upstream profile between 0.0 feet and 0.5 feet.

Removal of both the Crest Avenue and Medinah Road crossings raised the 100-year downstream WSEL between 0.5 feet and 0.7 feet, and lowered the upstream profile between 0.0 feet and 0.5 feet.

Removal of both the Crest Avenue and Medinah Road crossings lowered the 100-year flood elevation at Poplar Avenue and Hawthorne Lane by 0.5 foot while raising the flood elevation downstream of Thorndale Avenue by 0.6 foot, lowered the 50-year flood elevation at Poplar Avenue and Hawthorne Lane by 0.5 foot while raising the flood elevation downstream of Thorndale Avenue by 0.6 foot, and lowered the 10-year flood elevation at Poplar Avenue and Hawthorne Lane by 0.3 foot while raising the flood elevation downstream of Thorndale Avenue by 0.3 foot. Since flooding is reported both at the intersection of Poplar and Hawthorn and downstream at Thorndale Avenue, a flood reduction at Poplar Avenue and Hawthorne Lane would occur at the expense of increased flooding at Thorndale Avenue. Flooding is more critical near Thorndale Avenue because while only street flooding is reported at Poplar and Hawthorn, homes are shown within the 100-year floodplain based on 2-foot topography near Thorndale Avenue (Exhibit 9.1).

The water surface elevations for the natural conditions reported in Tables 3-6 illustrate that it is possible to have WSEL increases associated with the removal of an existing structure. The FEQ model accounts for the velocity and volume of floodwater within a studied waterway. If an existing structure is restrictive and then removed, water which had been collected behind the structure will be released to continue downstream until it encounters the next restrictive location. The relocated waterway volume can increase the downstream floodplain elevation and decrease the channel velocity. The relocated waterway volume can also decrease the upstream floodplain elevation and increase the channel velocity.

### Proposed Conditions Model

The proposed conditions FEQ model was developed by modifying the existing conditions FEQ model. The proposed Elgin O'Hare Expressway culvert was modeled by extending Branch 133 to the south by 12 feet. The purpose of the proposed conditions FEQ model is to determine impacts to the water surface elevations at the proposed Elgin O'Hare Expressway crossings caused by the proposed Elgin O'Hare Expressway crossing widening. Cross Section A8 located at the downstream face of the proposed culvert was graded at 3:1 side slope with a bottom width of 10 feet. The associated cross section FEQUTL file "mcxs\_exist\_pr3.ftl" is included in Section 11.

The Elgin O'Hare Expressway crossing over Meacham Creek is sized to meet the following criteria:

1. Created head less than 0.1' above the existing conditions for all storm events up to and including the 100-year flood frequency
2. 500-year created head at or below the edge of pavement
3. 50-year created head no less than 3 feet below the edge of pavement (3 feet freeboard minimum)
4. 50-year headwater below the crown of culvert.

The proposed culvert consists of extending of the existing 10 feet (span) by 8 feet (rise) RCBC to the south 12 feet. The proposed culvert is perpendicular to the highway and is 277 feet long parallel to the channel. The proposed conditions analysis FEQ model output summary is included in Section 11.

The Proposed Conditions WSEL is compared with the Existing Conditions WSEL in Table 7.

Table 7  
Comparison of Existing and Proposed Conditions WSEL  
Based on NAVD 1988 Datum<sup>1</sup>

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	PROP. WSEL	Diff. (Ft.)	EX. WSEL	PROP. WSEL	Diff. (Ft.)	EX. WSEL	PROP. WSEL	Diff. (Ft.)
F134 (A12, A11)	719.6	719.6	0.0	719.1	719.0	0.0	717.5	717.6	0.0
XS 9010c	716.6	716.6	0.0	716.0	716.0	0.0	714.4	714.4	0.0
XS 9010 (A10)	716.4	716.4	0.0	715.9	715.9	0.0	714.4	714.4	0.0
XS 9010c2 USF of Elgin-O'Hare	716.4	716.4	0.0	715.9	715.9	0.0	714.4	714.4	0.0

<sup>1</sup> All Difference column values represent the actual change in elevation rather than the rounded WSEL values.

Cross Section ID	100-Year Recurrence Interval			50-Year Recurrence Interval			10-Year Recurrence Interval		
	EX. WSEL	PROP. WSEL	Diff. (Ft.)	EX. WSEL	PROP. WSEL	Diff. (Ft.)	EX. WSEL	PROP. WSEL	Diff. (Ft.)
XS 9008 (A8) DSF Elgin-O'Hare	716.4	716.3	0.0	715.8	715.8	0.1	714.3	714.4	0.0
XS 9007 (A7)	716.4	716.3	0.0	715.7	715.8	0.1	714.3	714.4	0.0
XS 9006 (A6)	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS 510	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS 9005 (A5)	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS 501	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS501c	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS 500c	716.4	716.3	0.0	715.7	715.7	0.0	714.1	714.1	0.0
XS 498 USF of Crest Ave.	716.4	716.3	-0.1	715.7	715.7	-0.1	714.1	714.1	0.0
XS 9004c DSF of Crest Ave.	715.5	715.5	0.0	714.9	714.9	0.0	713.5	713.5	0.0
XS 9004 (A4)	715.5	715.5	0.0	714.9	714.9	0.0	713.5	713.5	0.0
XS 489 USF of Medinah Road	715.5	715.5	0.0	714.9	714.9	0.0	713.5	713.5	0.0
XS 9003c DSF of Medinah Road	715.4	715.4	0.0	714.8	714.8	0.0	713.5	713.5	0.0
XS 9003 (A3)	715.4	715.4	0.0	714.8	714.8	0.0	713.5	713.5	0.0
XS 487	715.4	715.4	0.0	714.8	714.8	0.0	713.5	713.5	0.0
XS 9002 (A2)	715.4	715.4	0.0	714.8	714.8	0.0	713.5	713.5	0.0
XS 486	715.4	715.4	0.0	714.8	714.8	0.0	713.4	713.5	0.0
XS 9001 (A1)	715.4	715.4	0.0	714.8	714.8	0.0	713.4	713.5	0.0
XS 484	715.4	715.4	0.0	714.8	714.8	0.0	713.4	713.4	0.0
XS 985 USF of Thorndale Road	715.4	715.4	0.0	714.8	714.8	0.0	713.4	713.4	0.0
XS 470 DSF of Thorndale Road	714.9	714.9	0.0	714.2	714.2	0.0	713.0	713.0	0.0
XS 994	714.8	714.8	0.0	714.2	714.2	0.0	712.9	712.9	0.0
XS 460 USF of Maple Ave	714.7	714.7	0.0	714.0	714.0	0.0	712.6	712.6	0.0

<sup>1</sup> All Difference column values represent the actual change in elevation rather than the rounded WSEL values.

The water surface elevations for the existing conditions and proposed conditions reported in Table 7 illustrate that there are no elevation increases upstream or



downstream of the proposed structure. However, the results show there are minor elevation decreases upstream the proposed structure.

The proposed conditions model reflects the proposed Elgin O'Hare Expressway structure, roadway profile and roadway filling. This model demonstrates that the proposed culvert and compensatory storage area are sized properly and meet the WSEL and floodplain/floodway compensation volume requirements of ISTHA and DuPage County. The summary of proposed conditions elevations and flows is included in Section 11.

### **IDNR-OWR Floodway Permit and Compensatory Storage Summary**

The total area tributary to the Elgin O'Hare Expressway structure is 1.06 square miles, however a permit is not required from the Illinois Department of Natural Resources – Office of Water Resources for the work proposed at the Elgin O'Hare Expressway crossing of Meacham Creek. According to the Effective FEMA FIRM, there is no identified floodway at this location, therefore IDNR Part 3708 "Floodway Construction in Northeastern Illinois" rules do not apply. Under IDNR Part 3700 "Construction in Floodway of Rivers, Lakes, and Streams" rules, Item 9 in Section 3700.30 states that culvert extensions of up to 100% of the original length, but not exceeding 40 feet in length, provided the extension involves no change in alignment or reduction in size from the existing culvert are exempt from Part 3700 rules. The Elgin O'Hare Expressway over Meacham Creek culvert extension of 12 feet meets these criteria, and a IDNR-OWR construction permit is not required. However, fill within the floodplain will be mitigated in compliance with the DuPage County Stormwater Ordinance incrementally at a 1:1 ratio for roadway projects.

### **Drainage Investigation**

Flooding has been reported in the neighborhood to the southwest of the Elgin O'Hare Expressway crossing over Meacham Creek on Poplar Avenue and Hawthorne Lane. The street flooding is shown on the Exhibit 9.1. The Natural Conditions section describes how removing both the Crest Avenue and Medinah Road crossings located downstream of the neighborhood would lower 10-, 50- and 100-year flood elevations at Poplar Avenue and Hawthorne Lane, but would raise the flood elevations downstream of Thorndale Avenue. Since flooding is reported both at the intersection of Poplar and Hawthorn and downstream at Thorndale Avenue, a flood reduction at Poplar Avenue and Hawthorne Lane would occur at the expense of increased flooding at Thorndale Avenue. Flooding is more critical near Thorndale Avenue because while only street flooding is reported at Poplar and Hawthorn, homes are shown within the 100-year floodplain based on 2-foot topography near Thorndale Avenue (Exhibit 9.1). Downstream Crest Avenue and Medinah Road are not included in the roadway improvements, and it is not recommended to increase their culvert sizes and increase downstream flooding near Thorndale Avenue.

## Conclusion and Design Recommendations

The proposed Elgin O'Hare Expressway cross culvert has the following design parameters:

- The existing 265 feet long 10 feet (span) by 8 feet (height) RCBC structure will be extended 12 feet downstream (south) to accommodate the Elgin O'Hare Expressway road widening.
- The proposed structure is a 277 feet long 10 feet (span) by 8 feet (height) RCBC.
- To compensate for fill within the floodplain, compensatory storage volume is provided downstream of the crossing along the south side of the Elgin O'Hare corridor.

Based on the DuPage County Countywide Stormwater and Flood Plain Ordinance (Ordinance), the DuPage County Department of Economic Development and Planning (EDP) considers bridges and culverts an appropriate use of the floodplain but must meet the ordinance requirements associated with development in the regulatory floodplain. The Ordinance requires:

1. The development shall preserve effective conveyance such that there is no increases in flood elevations, flows, or floodway velocity, unless any such increases are contained in a public flood easement and a watershed benefit is provided. The comparison of elevations flows from the existing and proposed conditions FEQ models are included in Section 11.
2. Any fill proposed in the floodplain portion of Meacham Creek requires the excavation of compensatory storage equal to the volume of flood plain storage displaced and be provided at the same incremental flood frequency elevation as the flood storage displaced. The Fill and Compensatory Storage Summary Sheet and support calculations included in Section 11 demonstrate that the compensatory storage requirements are met.

N:\dot\070404\Drain\Docs\Hydraulic Reports\Meacham Creek\Proposed Conditions HR\  
Meacham HR\_6November2012.doc

**Tab 2**

## **SECTION 2**

### **WATERWAY INFORMATION TABLE HYDRAULIC REPORT DATA SHEETS**

ELGIN O'HARE EXPRESSWAY

CREST AVENUE

MEDINAH ROAD



# Illinois Department of Transportation

## Culvert Waterway Information Table

Route: EOWB  
Section: E-O Expwy  
County: DuPage  
Station: 920+00

S.N. Exist: NA  
S.N. Prop: NA  
Waterway: Meacham Creek

Computed by: M. Younus  
Checked by: M. Cothard

Date: 10-3-2012  
Date: 10-3-2012

Drainage Area = 1.06		Square Miles		Existing Overtopping Elevation: 720.97		Proposed Overtopping Elevation: 721.13		ft. @ Sta		914+00	
Flood	Frequency Year	Discharge cfs	Waterway Opening (sq. ft.)	Natural H.W.E.	Head Existing	Head Proposed	Headwater Elev. (ft.)	Existing	Proposed	Existing	Proposed
	10	309	50	714.0	0.4	0.4	714.4	714.4	714.4	714.4	714.4
Design	50	625	65	715.6	0.3	0.3	715.9	715.9	715.9	715.9	715.9
Base	100	780	70	716.3	0.1	0.1	716.4	716.4	716.4	716.4	716.4
OVT(E)	NA										
OVT(P)	NA										
Max Calc	500	1181	85	717.5	0.4	0.4	717.9	717.9	717.9	717.9	717.9

OVT = Overtopping Event  
(E) Existing (P) Proposed

DATUM: NAVD88  
ALL-TIME H.W.E. & DATE: 715.9 – August, 1987

### SCOPE OF WORK:

#### EXISTING STRUCTURE

Bridge or Culvert Type: RCBC  
Cell Dimensions (W x H): 10'X8'  
# of spans \ cells: 1  
Length: 265'  
U/S Flowline: 709.41  
D/S Flowline: 708.55  
Skew: 0  
Low EOP: 720.47

#### EXISTING DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

NOTE(S): NAVD88 = NGVD29 – 0.28

#### PROPOSED STRUCTURE

Culvert Type: RCBC  
Cell Dimensions (W x H): 10'X8'  
# of cells: 1  
Length: 277  
U/S Flowline: 709.41  
D/S Flowline: 708.55  
Skew: 0  
Low EOP: 720.63

#### PROPOSED DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

Flood Frequency Summary for Peak Discharge:

Flows

Sect	Return Period (years):			
	2.0	5.0	10.0	75.0
1	78.5	164.5	255.6	540.8
2	79.5	165.3	256.2	620.9
3	103.0	199.2	308.1	540.4
4	107.1	204.7	309.2	628.9
5	107.3	204.8	309.4	625.1
6	105.3	197.7	294.1	625.6
7	45.7	69.3	91.7	398.8
8	28.8	35.5	49.7	117.1
9	29.1	46.3	60.1	138.8
10	31.6	49.8	64.0	116.2
11	31.9	50.3	64.6	124.2
12	72.7	114.1	157.6	108.4
13	71.2	111.1	152.5	125.0
14	71.2	111.1	152.5	411.2
15	71.2	111.2	152.6	397.1
16	71.3	111.3	152.8	333.1
17	71.3	111.3	152.8	397.3
18	71.7	111.9	153.5	397.4
19	73.1	114.6	158.4	397.4
20	73.7	117.7	163.4	400.0
21	74.3	119.6	166.0	344.7
22	72.9	121.8	168.9	410.6
23	70.8	117.7	162.0	392.1
24	74.9	114.0	149.7	336.1
25	74.9	114.0	149.7	353.3
26	74.7	114.3	149.5	311.6
27	75.4	115.1	151.2	301.3
				286.7
				277.2
				280.2
				323.0
				326.4

Sect	Return Period (years):			
	100.0	200.0	300.0	500.0
1	679.3	825.6	915.0	1031.9
2	678.1	823.3	911.9	1027.8
3	783.2	946.7	1047.0	1178.4
4	780.4	945.7	1047.2	1180.5
5	781.2	946.9	1048.8	1182.5
6	751.3	914.7	1015.5	1148.4
7	193.7	232.5	256.9	289.7
8	155.5	201.0	231.7	275.1
9	128.6	164.7	190.1	210.3
10	136.8	173.3	199.3	227.3
11	137.1	170.7	193.7	237.5
12	463.5	609.4	710.0	855.6
13	447.4	587.2	683.4	822.4
14	447.4	587.2	683.4	822.4
15	447.6	587.5	683.7	822.7
16	447.6	587.2	683.2	822.0
17	447.6	587.2	683.2	822.0
18	450.7	591.8	688.8	829.0
19	462.5	607.6	708.0	854.2
20	435.8	553.8	632.0	741.8
21	434.5	549.6	625.9	732.9
22	383.9	461.6	509.5	544.8
23	374.6	455.1	505.7	543.4
24	376.8	486.5	562.3	622.2
25	376.8	486.5	562.3	672.5
26	358.9	458.8	527.7	582.1
27	362.6	463.6	533.4	634.9

PVSTATS Statistical Analysis Results  
Meacham Creek - Natural 1 Conditions Elevations (Keep Medinah and Crest Avenue, Remove Elgin O'Hare)  
FEQ Model Used: sbLNG1n1e.feq and sbB15n1e.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0:F134)	99999	710.72	717.53	719.00	719.55	720.68
XS9010c	385 feet us Elgin-O'Hare Culvert (132:1321)	13550	709.40	714.15	715.75	716.31	717.54
XS9010	40 feet us Elgin-O'Hare Culvert (132:1325)	13205	709.40	713.98	715.64	716.30	717.54
<b>XS9010c2</b>	<b>USF Elgin-O'Hare Culvert (132:1328)</b>	<b>13165</b>	<b>709.40</b>	<b>713.98</b>	<b>715.64</b>	<b>716.30</b>	<b>717.54</b>
XS9008	DSF Elgin-O'Hare Culvert (140:1401)	12900	708.55	713.98	715.64	716.30	717.54
XS9007	100 DS of Elgin-O'Hare Culvert (140:1405)	12800	707.91	713.87	715.64	716.30	717.54
XS9006	534 DS of Elgin-O'Hare Culvert (140:1409)	12366	709.44	713.87	715.64	716.30	717.54
XS 510	644 feet DS of Elgin-O'Hare Culvert (140:1413)	12256	708.16	713.87	715.64	716.30	717.54
XS9005	969 DS of Elgin-O'Hare Culvert (140:1417)	11931	709.09	713.87	715.64	716.30	717.54
XS 501	1167 feet DS of Elgin-O'Hare Culvert (140:1421)	11733	708.55	713.87	715.64	716.30	717.54
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	713.87	715.64	716.30	717.54
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	713.87	715.64	716.30	717.54
XS 498	USF of Crest Ave (141:1423)	11470	708.36	713.87	715.58	716.21	717.54
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.38	714.70	715.31	716.82
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.37	714.69	715.29	716.80
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.36	714.88	715.28	716.76
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.35	714.66	715.26	716.75
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.35	714.66	715.26	716.75
XS 487	315 feet DS of Medinah Road (143:1436)	10768	708.78	713.35	714.66	715.26	716.75
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.35	714.56	715.13	716.51
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.33	714.56	715.13	716.51
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.33	714.56	715.13	716.51
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.32	714.56	715.13	716.51
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.28	714.56	715.13	716.51
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.85	713.96	714.59	716.19
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.75	713.92	714.58	716.19
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.46	713.77	714.42	716.13

Natural Conditions Elevations



PVSTATS Statistical Analysis Results  
Meacham Creek - Existing Conditions Elevations  
FEQ Model Used: sbLNGe6.feq and sbB15e6.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0:134)	99999	710.72	717.54	719.05	719.61	720.78
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.39	716.04	716.62	717.86
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.38	715.87	716.39	717.86
<b>XS9010c2</b>	<b>USF Elgin-OHare Culvert (132:1328)</b>	<b>13165</b>	<b>709.40</b>	<b>714.38</b>	<b>715.86</b>	<b>716.39</b>	<b>717.86</b>
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.31	715.76	716.39	717.86
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.30	715.74	716.39	717.86
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.74	716.39	717.86
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.74	716.39	717.86
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.74	716.39	717.86
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.74	716.39	717.86
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.74	716.39	717.86
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.74	716.39	717.86
XS 498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.74	716.39	717.67
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.89	715.52	717.09
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.87	715.51	717.09
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.49	714.87	715.50	717.03
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.78	715.38	716.85
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.45	714.78	715.38	716.85
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.45	714.78	715.38	716.85
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.45	714.78	715.38	716.85
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.44	714.78	715.38	716.85
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.44	714.78	715.38	716.85
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.41	714.78	715.38	716.85
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.38	716.85
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.20	714.86	716.54
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.85	714.15	714.81	716.54
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.97	714.68	716.54

Existing Conditions Elevations



PVSTATS Statistical Analysis Results  
Meacham Creek - Proposed Conditions Elevations  
FEQ Model Used: sbLNGp4.feq and sbB15p4.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0:F134)	99999	710.72	717.55	719.04	719.59	720.74
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.38	716.04	716.62	717.91
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.35	715.86	716.42	717.91
<b>XS9010c2</b>	<b>USF Elgin-OHare Culvert (132:1328)</b>	<b>13165</b>	<b>709.40</b>	<b>714.35</b>	<b>715.86</b>	<b>716.42</b>	<b>717.91</b>
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.35	715.82	716.34	717.91
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.35	715.82	716.34	717.91
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.69	716.34	717.91
XS_510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.69	716.34	717.91
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.69	716.34	717.91
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.69	716.34	717.91
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.69	716.34	717.91
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.69	716.34	717.91
XS_498	USF of Crest Ave (141:1423)	11470	708.36	714.11	715.66	716.32	717.91
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.90	715.54	717.15
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.89	715.54	717.15
XS_489	USF of Medinah Road (142:1427)	11323	708.01	713.48	714.89	715.54	717.14
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.80	715.40	716.91
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.46	714.79	715.40	716.89
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.46	714.78	715.40	716.89
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.46	714.78	715.40	716.89
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.45	714.78	715.40	716.89
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.45	714.78	715.40	716.89
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.43	714.78	715.40	716.89
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.40	716.89
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.21	714.87	716.58
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.85	714.16	714.83	716.58
XS_460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.98	714.69	716.58

Proposed Conditions Elevations

MULCON  
; OPENING FOR ELGIN OHARE ON MEACHAM CREEK  
TABLE#=CCI33  
WSLOT= 0.01  
HSLLOT= 100.  
NPIPES= 1  
TYPE= BOX  
SPAN= 10.0  
RISE= 8.0  
BOTT= 0.0  
ROUG= 0.016

Elgin O'Hare Expy Culvert Data  
(Based on NAGV29 Datum)





# Illinois Department of Transportation

## Culvert Waterway Information Table

Route: EOWB  
Section: Crest Avenue  
County: DuPage  
Station:  
S.N. Exist: NA  
S.N. Prop: NA  
Waterway: Meacham Creek

Computed by: M. Younus  
Checked by: M. Cothard  
Date: 10-3-2012  
Date: 10-3-2012

Drainage Area = 3.01		Square Miles		Existing Overtopping Elevation: 715.64 Proposed Overtopping Elevation: N/A		ft. @ Sta ft. @ Sta		201.35* N/A	
Flood	Frequency Year	Discharge cfs	Waterway Opening (sq. ft.) Existing	Proposed	Natural H.W.E.	Head Existing	Proposed	Existing	Proposed
Design	10	153	27.9	N/A	713.8	0.3	N/A	714.1	N/A
Base	50	333	28.3	N/A	715.4	0.3	N/A	715.7	N/A
OVT(E)	100	447	28.3	N/A	716.0	0.4	N/A	716.4	N/A
OVT(P)	NA								
Max Calc	NA								
	500	822	28.3	N/A	717.5	0.2	N/A	717.7	N/A

10-Year Outlet Velocity from Existing Structure = 5.5 fps  
10-Year Outlet Velocity from Proposed Structure = 5.5 fps

OVT = Overtopping Event  
(E) Existing (P) Proposed

DATUM: NAVD88  
ALL-TIME H.W.E. & DATE: 715.9 – August 1987

### SCOPE OF WORK:

#### EXISTING STRUCTURE

Bridge or Culvert Type: 6' CMP  
Cell Dimensions (W x H):  
# of spans \ cells:  
Length: 86'  
U/S Flowline: 708.33  
D/S Flowline: 707.36  
Skew: 0  
Low EOP:

#### EXISTING DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

#### PROPOSED STRUCTURE

Culvert Type: N/A  
Cell Dimensions (W x H): N/A  
# of cells: N/A  
Length: N/A  
U/S Flowline: N/A  
D/S Flowline: N/A  
Skew: N/A  
Low EOP: N/A

#### PROPOSED DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

NOTE(S): NAVD88 = NGVD29 – 0.28

These natural conditions produced by removing the Crest Avenue and Medinah culverts, \* Please see the attached FEQUITL file for the Crest Avenue culvert

Flows

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (Years):			
	2.0	5.0	10.0	25.0
1	78.5	164.5	255.6	410.2
2	79.5	165.3	256.2	410.5
3	103.0	199.2	308.1	483.4
4	107.1	204.7	309.2	480.1
5	107.3	204.8	309.4	480.4
6	105.5	197.7	294.1	457.6
7	45.7	69.3	91.7	127.3
8	28.8	35.5	49.7	84.3
9	29.1	46.3	60.1	80.1
10	31.6	49.8	64.0	86.0
11	31.9	50.3	64.6	87.6
12	72.7	114.1	157.6	248.9
13	71.2	111.1	152.5	240.7
14	71.2	111.1	152.5	240.7
15	71.2	111.2	152.6	240.9
16	71.3	111.3	152.8	241.0
17	71.3	111.3	152.8	241.0
18	71.7	111.9	153.5	242.2
19	73.1	114.6	158.4	249.6
20	73.7	117.7	163.4	250.0
21	74.3	119.6	166.0	252.5
22	72.9	121.8	168.9	245.2
23	117.7	162.0	235.4	301.3
24	74.9	114.0	149.7	215.2
25	74.9	114.0	149.7	215.2
26	74.7	114.3	149.5	211.9
27	75.4	115.1	151.2	214.4

Sect	Return Period (Years):			
	100.0	200.0	300.0	500.0
1	679.3	825.6	915.0	1031.9
2	678.1	823.3	911.9	1027.8
3	783.2	946.7	1047.0	1178.4
4	780.4	945.7	1047.2	1180.5
5	781.2	946.9	1048.8	1182.5
6	751.3	914.7	1015.5	1148.4
7	193.7	232.5	256.9	289.7
8	155.5	201.0	231.7	275.1
9	128.6	164.7	190.1	227.3
10	136.8	173.3	199.3	237.5
11	137.1	170.7	193.7	226.6
12	463.5	609.4	710.0	855.6
13	447.4	587.2	683.4	822.4
14	447.4	587.2	683.4	822.4
15	447.6	587.5	683.7	822.7
16	447.6	587.2	683.2	822.0
17	447.6	587.2	683.2	822.0
18	450.7	591.8	688.8	829.0
19	462.5	607.6	708.0	854.2
20	435.8	553.8	632.0	741.8
21	434.5	549.6	625.9	732.9
22	383.9	461.6	509.5	572.8
23	374.6	455.1	505.7	573.8
24	376.8	486.5	562.3	672.5
25	358.9	458.8	527.7	627.8
26	362.6	463.6	533.4	634.9
27				



Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Delention ( OF134)	98999	710.72	717.53	719.04	719.60	720.78
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.07	715.53	716.08	717.50
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	713.90	715.36	716.00	717.50
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	713.83	715.36	716.00	717.50
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	713.83	715.36	716.00	717.50
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	713.83	715.36	716.00	717.50
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	713.83	715.36	716.00	717.50
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	713.83	715.36	716.00	717.50
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	713.83	715.36	716.00	717.50
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	713.83	715.36	716.00	717.50
XS501c	Confluence of Trib 1 (140:1423)	11694	708.55	713.83	715.36	716.00	717.50
XS 500c	Confluence of Trib 1 (141:1411)	11694	708.59	713.82	715.36	716.00	717.50
XS 488	USF of Crest Ave (141:1423)	11470	708.36	713.81	715.36	716.00	717.50
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.81	715.36	716.00	717.50
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.80	715.36	716.00	717.50
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.80	715.36	716.00	717.50
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.80	715.36	716.00	717.50
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.80	715.36	716.00	717.50
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.80	715.36	716.00	717.50
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.80	715.36	716.00	717.50
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.80	715.36	716.00	717.50
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.80	715.36	716.00	717.50
XS 484	1085 feet DS of Medinah Road (143:1450)	10008	708.73	713.79	715.36	716.00	717.50
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.74	715.36	716.00	717.50
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	713.29	714.81	715.51	717.46
XS 994	459 feet DS of Thorndale Road (144:1445)	8363	708.38	713.19	714.76	715.48	717.46
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.89	714.58	715.37	717.46

Natural Conditions Elevations

PVSTATS Statistical Analysis Results  
Mecham Creek - Existing Conditions Elevations  
FEQ Model Used: sblNGe6.feq and sbB15e6.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0°F134)	99999	710.72	717.54	719.05	719.61	720.78
XS90010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.39	716.04	716.62	717.86
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.38	715.87	716.39	717.86
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	714.38	715.86	716.39	717.86
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.31	715.76	716.39	717.86
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.30	715.74	716.39	717.86
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.74	716.39	717.86
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.74	716.39	717.86
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.74	716.39	717.86
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.74	716.39	717.86
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.74	716.39	717.86
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.74	716.39	717.86
XS 498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.74	716.39	717.87
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.89	715.52	717.09
XS9004	85 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.87	715.51	717.09
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.49	714.87	715.50	717.03
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.78	715.38	716.85
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.45	714.78	715.38	716.85
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.45	714.78	715.38	716.85
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.45	714.78	715.38	716.85
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.44	714.78	715.38	716.85
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.44	714.78	715.38	716.85
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.41	714.78	715.38	716.85
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.38	716.85
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.20	714.86	716.54
XS 984	459 feet DS of Thorndale Road (144:1445)	8383	708.36	712.85	714.15	714.81	716.54
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.97	714.68	716.54

Existing Conditions Elevations

Crest Avenue Culvert Data  
(Based on NAGV29 Datum)

FTABIN \ut\header\embweir.mtb  
FILE= \ut\header\type5.mtb  
TABID= -1

FEQX  
GISID= 005SCSB0498  
TABLE# 498 SAVE22 NEWBETAM NOOUT EXTEND  
STATION= 11469.64 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 4  
XSEC copied from x-sec SC580500 to 25 feet upstream of Crest Avenue APPROACH  
-366.52 720.32 1 1938469.75 577121.06 0001 XDI Ext. Sta.  
-322.77 720.10 1 1938467.38 577077.38 0002 XDI Ext. Sta.  
-279.02 718.70 1 1938464.88 577033.69 0003 XDI Ext. Sta.  
-235.27 717.00 1 1938462.50 576990.06 0004 XDI Ext. Sta.  
-191.52 715.61 1 1938460.13 576946.38 0005 XDI  
-103.49 715.19 1 1938442.00 576860.19 0006 xdi  
-87.00 714.42 1 INTERPOLATED  
-16.26 711.09 2 1938418.75 576776.13 0007 XDI  
-3.71 709.40 2 1938413.25 576764.88 0008 XDI  
3.65 708.64 2 1938412.75 576757.50 0009 Adjusted to match culvert  
11.59 710.34 2 1938412.13 576749.63 0010 XDI  
27.73 712.93 3 1938409.88 576733.63 0011 XDI  
27.73 709.99 -1 fabricated vertical frictionless wall  
77.73 709.65 3 1938408.50 576683.63 0012 XDI Ext. Sta.  
127.73 708.78 3 1938407.13 576633.69 0013 XDI Ext. Sta.  
177.73 709.19 3 1938405.75 576583.69 0014 XDI Ext. Sta.  
227.73 709.45 3 1938404.38 576533.69 0015 XDI Ext. Sta.  
277.73 711.24 4 1938403.00 576483.75 0016 XDI Ext. Sta.  
327.73 716.27 -1 1938401.63 576433.75 0017 XDI Ext. Sta.

FEQX  
GISID= 005SCSB9004  
TABLE# 9004 SAVE22 NEWBETAM NOOUT EXTEND  
STATION= 11383.00 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 4  
XSEC A4  
-42.6 800.00 1  
-42.5 721.98 1  
-31.1 720.53 1  
-16.9 716.58 2  
-8.8 711.01 2  
-5.0 709.33 2  
0.0 708.98 2  
11.9 709.37 2  
21.7 710.16 2  
28.5 710.93 2  
46.7 715.56 3  
75.5 716.65 3  
80.6 716.75 3  
98.3 716.86 3  
198.0 717.28 4  
238.0 718.28 4  
288.0 719.28 -1

MULCON  
TABID= 540 SAVE22 OLDBETA NOOUT  
WSLOT= 0.01  
HSLOT= 100  
NPIPES= 1



TYPE= CIRC  
SPAN= 6.00  
RISE= 6.00  
BOTT= .00  
ROUG= 0.024

CULVERT  
TABID= C9540  
TYPE= 13  
LABEL= 72in CMP UNDER CREST AVENUE  
APPROACH SECTION DATA  
APPTAB= 498  
APPELV= 708.64  
APPLEN= 25.0  
APPLOS= 0.2  
APPEXP= 0.5  
CULVERT DESCRIPTION  
NODEID=YES  
SFAC= 1.0  
NODE NODENAME XTAB STATION ELEVATION  
1 UPSTREAM 540 86.00 708.61

-1 DNSTREAM 540 0.00 707.64

CULCLS=PIPE  
DEPARTURE SECTION DESCRIPTION  
DEPTAB= 9004  
DEPELV= 708.98  
LOSOPT=MOMENTUM  
DISCHARGE COEFFICIENT DATA  
KRB=0

KWING=0  
KPROJ=0  
C46=0

TYPE 5 flow parameters

RBVALUE= 0.03  
BVANGLE= 0.00  
WVANGLE= 0.0  
LPOVERD= 0.0  
TYPE5SBF= 0.75

ROADWAY DESCRIPTION

PLCWTB=9994  
GLCWTB=9995  
PHCWTB=9996  
GHCWTB=9997  
PSUBTB=9998  
GSUBTB=9999

OFFSET	CREST	WIDTH	APPROACH SURFACE
-87.000	716.060	85.00	714.420 PAVED
-16.260	716.418		711.090
-3.710	716.481		709.400
0.000	716.500		709.017
3.650	716.561		708.640
11.590	716.692		710.340
27.730	716.960		712.930 END
-24.000	716.379	85.00	712.000 PAVED
-10.000	716.449		710.000
-7.000	716.465		709.910
.000	716.500		708.640
10.000	716.664		710.000
20.000	716.828		712.000
24.500	716.900		714.260 END
39.000	717.140		712.032
50.000	716.203		712.050
66.000	714.840		712.051
133.500	715.610		712.053

; 233.000 716.000 712.057  
; 300.000 718.000 712.060 END  
UPSTREAM HEADS TO USE IN COMPUTING THE TABLE  
NFRAC=40  
POWER=2.0

.500  
.750  
1.000  
1.500  
2.000  
2.500  
3.000  
3.500  
4.000  
4.500  
5.000  
5.500  
6.000  
6.500  
7.000  
8.000  
9.000  
10.000  
11.000  
12.000  
13.000  
-1.000

; EMBANKQ FOR THE RIGHT OVERBANK AT CREST AVENUE

EMBANKQ  
TABID= E9540 CSHIFT= 0.00  
PLCWTB=9994  
GLCWTB=9995  
PHCWTB=9996  
GHCWTB=9997  
PSUBTB=9998  
GSUBTB=9999  
LABEL=EMBANK

OFFSET	CREST	WIDTH	FLOW FOR THE RIGHT OVERBANK OF CREST AVENUE
27.730	716.960	85.00	APPROACH SURFACE
39.000	717.140		712.930 PAVED
77.730	716.849		712.191
127.730	716.473		709.650
177.730	716.097		708.780
201.350	715.920		709.190
227.730	715.061		709.313
277.730	716.328		709.450
327.730	716.595		711.240
		85.00	716.270 END
24.500	716.900		714.260 PAVED
39.000	717.140		712.032
50.000	716.203		712.050
66.000	714.840		712.051
133.500	715.610		712.053
233.000	716.000		712.057
300.000	718.000		712.060 END

UPSTREAM HEADS TO USE IN COMPUTING THE TABLE  
NFRAC= 40  
POWER= 2.0  
LIPREC= 0.02  
MINPFD= 0.01  
.100  
8.000  
-1.000

FEQX  
TABID= 52 SAVE22 NEWBETAM NOOUT EXTEND

STATION= 0.0  
NAYM=00000  
NSUB 2 0.055 0.250  
CHAN SECTION FOR FLOW OVER RIGHT OVERBANK CREST AVE  
27.73 716.96 1 INTERPOLATED FOR CHANRAT  
34.68 716.26 1 1938270.63 576728.88 0009 TOB 2203  
201.35 715.92 2 1938273.25 576562.25 0010 XDI Ext. Sta.  
368.01 716.81 2 1938275.75 576395.63 0011 XDI Ext. Sta.  
369.00 750.00 -1 Fabricated extension

CHANRAT  
TABID= R9540  
TYPE= 13  
LABEL= RIGHT OVERBANK FLOW - Meacham Creek at Crest Avenue  
XSTAB= 52  
BOTSLP= .000  
LENGTH= 75.0 MIDELEV= 715.92  
UPSTREAM HEADS USED IN COMPUTING THE TABLE  
NFRAC= 40  
POWER= 2.0  
LIPREC= 0.02  
MINPFD= 0.01  
0.01  
4.00  
-1

← Overtopping Elevation

;FEQX  
;TABID= 67 SAVE22 NEWBETAM NOOUT EXTEND  
;STATION= 0.0  
;NAYM= 0  
;NSUB 2 0.005 0.060  
;CHANRAT SECTION FOR FLOW OVER LEFT OVERBANK CREST AVENUE  
-580.1 740.00 1 FRICTIONLESS WALL  
-580.0 720.00 2 EXTENDED FROM TOPO  
-280.0 718.00 2 EXTENDED FROM TOPO  
-196.0 716.95 2 1938378.67 576951.00 EOP 1214  
-193.0 716.950 2  
-87.0 716.060 2  
-48.0 716.257 2  
-24.0 716.379 -1

CHANRAT  
TABID= L540  
TYPE= 13  
LABEL= OVERBANK FLOW - MEACHAM CREEK AT CREST AVENUE  
XSTAB= 67  
BOTSLP= .000  
LENGTH= 145.0 MIDELEV=716.06  
UPSTREAM HEADS USED IN COMPUTING THE TABLE  
NFRAC= 40  
POWER= 2.0  
LIPREC= 0.02  
MINPFD= 0.01  
0.25  
3.00  
-1.00

FINISH





# Illinois Department of Transportation

## Culvert Waterway Information Table

Route: EOWB  
Section: Medinah Road  
County: DuPage  
Station:

S.N. Exist: NA  
S.N. Prop: NA  
Waterway: Meacham Creek

Computed by: M. Younus  
Checked by: M. Cothard

Date: 6-8-2012  
Date: 6-8-2012

Drainage Area = 3.02		Square Miles		Existing Overtopping Elevation: 719.0 Proposed Overtopping Elevation: N/A		ft. @ Sta ft. @ Sta		475.0* N/A	
Flood	Frequency Year	Discharge cfs	Waterway Opening (sq. ft.)		Natural H.W.E.	Head		Headwater Elev. (ft.)	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Design	10	153	49.9	N/A	713.5	0.0	N/A	713.5	N/A
Base	50	333	63.9	N/A	714.9	0.0	N/A	714.9	N/A
OVT(E)	100	448	69.9	N/A	715.5	0.0	N/A	715.5	N/A
OVT(P)	NA								
OVT(P)	NA								
Max Calc	500	822	84.9	N/A	717.0	0.0	N/A	717.0	N/A

10-Year Outlet Velocity from Existing Structure = 3.1 fps  
10-Year Outlet Velocity from Proposed Structure = fps

OVT = Overtopping Event  
(E) Existing (P) Proposed

DATUM: NAVD88  
ALL-TIME H.W.E. & DATE: 715.0 – August 1987

### SCOPE OF WORK:

#### EXISTING STRUCTURE

Bridge or Culvert Type: RCBC  
Cell Dimensions (W x H): 10'X8.5  
# of spans \ cells: 2  
Length: 163'  
U/S Flowline: 708.51  
D/S Flowline: 708.31  
Skew: 45  
Low EOP:

#### EXISTING DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

#### PROPOSED STRUCTURE

Culvert Type: N/A  
Cell Dimensions (W x H): N/A  
# of cells: N/A  
Length: N/A  
U/S Flowline: N/A  
D/S Flowline: N/A  
Skew: N/A  
Low EOP: N/A

#### PROPOSED DROPBOX

Dimensions:  
Drop:  
Weir Elevation:

NOTE(S): NAVD88 = NGVD29 – 0.28

\* Please see the attached FEQUTL file for the Medinah Road culvert





PVSTATS Statistical Analysis Results  
Meacham Creek - Natural 2 Conditions Elevations (Keep Elgin-O'Hare and Crest Avenue, Remove Medinah  
FEQ Model Used: sbLNGn2e.feq and sbB15n2e.feq  
October 4, 2012

Gross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0.F134)	99999	710.72	717.54	719.04	719.60	720.76
XS9010c	395 feet us Elgin-O'Hare Culvert (132:1321)	13550	709.40	714.39	716.01	716.58	717.77
XS9010	40 feet us Elgin-O'Hare Culvert (132:1325)	13205	709.40	714.39	715.86	716.45	717.64
XS9010c2	USF Elgin-O'Hare Culvert (132:1328)	13165	709.40	714.37	715.86	716.45	717.64
XS9008	DSF Elgin-O'Hare Culvert (140:1401)	12900	708.55	714.36	715.82	716.45	717.64
XS9007	100 DS of Elgin-O'Hare Culvert (140:1405)	12800	707.91	714.36	715.82	716.45	717.64
XS9006	534 DS of Elgin-O'Hare Culvert (140:1409)	12366	709.44	714.07	715.82	716.45	717.64
XS_510	644 feet DS of Elgin-O'Hare Culvert (140:1413)	12256	708.16	714.07	715.82	716.45	717.64
XS9005	969 DS of Elgin-O'Hare Culvert (140:1417)	11931	709.09	714.07	715.82	716.45	717.64
XS_501	1167 feet DS of Elgin-O'Hare Culvert (140:1421)	11733	708.55	714.07	715.82	716.45	717.64
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.07	715.82	716.45	717.64
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.07	715.82	716.45	717.64
XS_498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.82	716.45	717.59
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.51	714.93	715.57	717.17
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.51	714.91	715.55	717.14
<b>XS_489</b>	<b>USF of Medinah Road (142:1427)</b>	<b>11323</b>	<b>708.01</b>	<b>713.51</b>	<b>714.91</b>	<b>715.54</b>	<b>717.13</b>
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.51	714.91	715.54	717.13
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.51	714.90	715.54	717.13
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.51	714.89	715.52	717.07
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.51	714.89	715.52	717.05
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.49	714.89	715.52	717.05
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.49	714.89	715.52	717.05
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.47	714.89	715.52	717.05
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	713.45	714.89	715.52	717.05
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	712.99	714.31	714.97	716.74
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.89	714.27	714.95	716.74
XS_460	USF of Maple Ave (144:1451)	7781	708.47	712.60	714.10	714.83	716.74

Natural Conditions Elevations

PVSTATS Statistical Analysis Results  
Meacham Creek - Existing Conditions Elevations  
FEQ Model Used: sblNGe6.feq and sbB15e6.feq  
October 3, 2012

Gross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0: F134)	99999	710.72	717.54	719.05	719.61	720.78
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.39	716.04	716.62	717.86
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.38	715.87	716.39	717.86
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	714.38	715.86	716.39	717.86
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.31	715.76	716.39	717.86
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.30	715.74	716.39	717.86
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.74	716.39	717.86
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.74	716.39	717.86
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.74	716.39	717.86
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.74	716.39	717.86
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.74	716.39	717.86
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.74	716.39	717.86
XS 498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.74	716.39	717.67
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.89	715.52	717.09
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.87	715.51	717.09
<b>XS 489</b>	<b>USF of Medinah Road (142:1427)</b>	<b>11323</b>	<b>708.01</b>	<b>713.49</b>	<b>714.87</b>	<b>715.50</b>	<b>717.03</b>
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.78	715.38	716.85
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.45	714.78	715.38	716.85
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.45	714.78	715.38	716.85
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.45	714.78	715.38	716.85
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.44	714.78	715.38	716.85
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.44	714.78	715.38	716.85
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.41	714.78	715.38	716.85
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.38	716.85
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.20	714.86	716.54
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.85	714.15	714.81	716.54
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.97	714.68	716.54

Existing Conditions Elevations



Medinah Road Culvert Data Datum: NGVD 1929
---

MULCON  
TABID= 608 NOOUT SAVE22 OLDBETA  
WSLOT=0.01  
HSLLOT=100  
NPIPES= 2  
TYPE= BOX BOX  
SPAN= 10.0 10.0  
RISE= 8.50 8.50  
BOTT= 0.00 0.00  
ROUG= 0.013 0.013

MULCON  
TABID= 609 NOOUT SAVE22 OLDBETA  
WSLOT=0.01  
HSLLOT=100  
NPIPES= 2  
TYPE= BOX BOX  
SPAN= 10.0 10.0  
RISE= 8.50 8.50  
BOTT= 0.00 0.00  
ROUG= 0.013 0.013

CULVERT  
TABID= C9537  
TYPE= 13  
LABEL=2-10X8.5 BOX CULVERT  
APPROACH SECTION DATA  
APPTAB= 489  
APPELV=708.29  
APPLEN=20.0  
APPLOS=0.2  
APPEXP=0.0  
CULVERT DESCRIPTION  
NODEID=YES  
SFAC=1.0  

NODE	NODEID	XNUM	STATION	ELEVATION	KA	KD	HTAB
100	UPSTRM	608	163.0	708.79			

	DNSTRM	608	0.0	708.59			
--	--------	-----	-----	--------	--	--	--

-1  
CULCLS= BOX  
DEPARTURE SECTION DATA  
DEPTAB= 9003  
DEPELV= 708.69 708.50 0.0 1.0  
LOSOPT=MOMENTUM  
DISCHARGE COEFFICIENT DATA  
KRB=0.0  
KWIN=0.00  
KPROJ=0.00  
C46=0.00  
TYPE 5 PARAMETERS  
RBVALUE= 0.00  
BVANGLE= 0.00  
WWANGLE= 45.0  
LPOVERD= 0.00  
TYPESSBF= 0.75  
ROADWAY DESCRIPTION  
PLCWTB=9994  
GLCWTB=9995  
PHCWTB=9996  
GHCWTB=9997  
PSUBTB=9998  
GSUBTB=9999

OFFSET	CREST	WIDTH	APPROACH	SURFACE
-49.75	920.32	50.0	719.00	PAVED
-41.00	920.29		716.69	
-15.26	920.21		709.91	
-3.20	920.18		708.29	
0.00	920.17		708.72	
8.83	920.14		709.91	
34.68	920.06		716.26	END

HEAD SEQUENCE DEFINITION

NFRAC=11  
POWER=2.0  
0.5  
1.0  
2.0  
2.5  
3.0  
3.5  
4.0  
4.5  
5.0  
5.5  
6.0  
6.5  
7.0  
7.5  
8.0  
9.0  
10.0  
11.0

12.0  
 13.0  
 14.0  
 -1

FEQX  
 TABID= 59 SAVE22 NEWBETAM NOOUT EXTEND  
 STATION= 0.0  
 NAVM=00000  
 NSUB 1 0.040  
 CHAN SECTION FOR FLOW OVER RIGHT OVERBANK MEDINAH ROAD (PER 1-FOOT TOPO)  
 -831.10 800.00 1  
 -831.00 723.28 1  
 -591.00 722.28 1  
 -381.00 722.28 1  
 0.00 722.28 1  
 201.00 721.28 1  
 415.00 720.28 1  
 475.00 719.28 -1 ← Overtopping Elevation

CHANRAT  
 TABID= R9537  
 TYPE= 13  
 LABEL= ROADWAY OVERFLOW - MEACHAM CREEK AT MEDINAH ROAD  
 XSTAB= 59  
 BOTSLP= .000  
 LENGTH= 50.0 MIDELEV= 719.28  
 UPSTREAM HEADS USED IN COMPUTING THE TABLE  
 NFRAC= 40  
 POWER= 2.0  
 LIPREC= 0.02  
 MINPFD= 0.01  
 0.01  
 0.50  
 10.00  
 10.50  
 -1





Route Elgin O'Hare Expressway P or D # P-91-443-06  
Section \_\_\_\_\_ PTB # 141 Item 2  
County DuPage County  
Exist SN \_\_\_\_\_  
Prop SN \_\_\_\_\_

General Information

1. Name of the Stream: Meacham Creek
2. Location of the Structure: NW 1/4 of the \_\_\_\_\_ 1/4 of Section 1  
Township \_\_\_\_\_ Range \_\_\_\_\_ of the \_\_\_\_\_ P.M.
3. Hydraulic Report Prepared By: ☒ Consultant Christopher B. Burke Engineering, Ltd.  
☐ District
4. Hydraulic Report Approval Authority: ☐ District – Post PDF of HR to BBS Hydraulics SharePoint Server  
☐ BBS Hydraulics - Submit 2 hard copies of HR to BBS Hydraulics

Site Design Data

5. Drainage Area (sq. mi.): 1.06
6. Highway Classification: ☐ Rural ☐ Principal Arterial  
☒ Urban ☐ Minor Arterial  
☐ Other ☐ Collector  
☒ Local
7. Design Frequency: ☐ 30 yr ☒ 50 Yr ☐ Other \_\_\_\_\_
8. Number of Waterway Information Tables (WIT): 1  
If more than one, explain: \_\_\_\_\_

Hydrologic & Hydraulic Analysis

9. Hydrology Modeling (check all that apply): ☐ USGS/Stream Stats ☐ FIS ☐ Gage Data  
☒ Other FEQ Model
10. Hydraulic Modeling (check all that apply):  
a. Method: ☐ HEC-RAS ☐ WSPRO ☒ Other FEQ Model  
b. Manning's "n" values determined as per IDOT DM CH.5? ☒ Yes ☐ No  
If no, explain: \_\_\_\_\_  
c. Source of Starting WSE: \_\_\_\_\_  
d. Non- IDOT encroachments in Survey? ☐ Yes ☒ No  
If yes, are they accounted for? ☐ Yes ☐ No  
e. Does the Tailwater Control? ☐ Yes ☒ No  
If yes, list: \_\_\_\_\_  
f. Were the Expansion/Contraction cones properly addressed? ☒ Yes ☐ No ☐ N/A  
If No or N/A, explain: \_\_\_\_\_

g. What Expansion and Contraction Rates were used?

Expansion:

(X:1)

Contraction

(X:1)

### IDNR – OWR Floodway Permit

11. Is area experiencing urbanization or expected to urbanize within 10 years? ☐ Yes ☒ No
12. Are there any sensitive flood receptors located upstream within possible backwater influence? ☐ Yes ☒ No  
If yes, list and describe critical upstream flood damageable properties and their elevations.
13. Is there any History of Flooding or Overtopping problems? ☐ Yes ☒ No  
Sources of Observed Highwater:
14. Is the structure hydraulically connected to or within the floodway of an IDNR-OWR designated Public Body of Water? ☐ Yes ☒ No
15. Required IDNR - OWR Permit type:  
☐ Individual ☐ SWP #2 ☐ SWP #12 ☐ Floodway  
☒ None ☐ Other

### Proposed Structure Data

16. Project Scope (check all that apply):  
a. ☐ Complete Replacement  
b. ☐ Superstructure Replacement  
c. ☐ Superstructure Widening; Length of Pier Extension in the water:  
U/S \_\_\_\_\_ D/S \_\_\_\_\_  
d. ☐ Bridge ☒ Culvert  
e. ☐ New Alignment  
f. Work Planned Below  $Q_{100}$  HWE? ☒ Yes ☐ No  
g. ☒ Profile Raise
17. If a bridge is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_  
Preliminary low beam elevation (ft): \_\_\_\_\_  
Width of deck (ft): \_\_\_\_\_  
Total length from face to face of abutment (ft) \_\_\_\_\_  
Abutment type: \_\_\_\_\_  
Skew (degrees): \_\_\_\_\_  
Number of spans: \_\_\_\_\_
18. If a culvert is proposed, supply:  
Type and size: 10'X8' RCBC  
Upstream invert elevation (ft): 709.41  
Downstream invert elevation (ft): 708.55  
Length (ft): 277  
Entrance type: \_\_\_\_\_  
Skew (degrees): 0  
Note: Upstream and downstream elevations should reflect the elevations before the 3" drop is applied
19. If a three-sided structure is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_  
Span (ft): \_\_\_\_\_  
Height (ft): \_\_\_\_\_  
Skew (degrees): \_\_\_\_\_  
Length (ft): \_\_\_\_\_  
Number of spans: \_\_\_\_\_
20. a. Is the IDOT Clearance Policy Met? ☐ Yes ☐ No ☒ NA Value (ft): \_\_\_\_\_  
b. Is the IDOT Freeboard Policy Met? ☒ Yes ☐ No ☐ NA Value (ft): 4.73
21. Type of streambed soil : ☐ Clay ☐ Silt ☐ Sand ☒ Loam ☐ \_\_\_\_\_

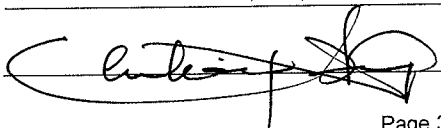
22. Scour/ Migration Problems: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Ice Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Debris Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:

Countermeasures Proposed:

#### Existing Structure Data

	Structure U/S	Subject Structure	Structure D/S
23. Distance from proposed structure: (ft.)	Victoria Detention + 300 ft	E-O Expy	Crest Avenue 1,400 ft
24. Type of structure:	3-3' Dia. RCP	8' x 10' RCBC	6' Dia. CMP
25. Low beam elevation:	712.2 ft	717.4 ft	714.3 ft
26. Flow line elevation:	± 709.2 ft	± 709.4 ft	± 708.3 ft
27. Maximum known high water elevation:	715.9 ft	715.9 ft	715.9 ft
28. Date of maximum high water:	August, 1987	August, 1987	August, 1987
29. Cause (backwater, headwater, etc.):			
30. Does structure carry entire design flood flow?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If not, state area of additional waterway opening: (ft <sup>2</sup> )			
31. Type and size of existing overflow structures:			
32. Has adverse scour occurred under or adjacent to the structure?	No	No	No
33. Classify type of scour and/or aggradation / degradation:			

#### Required Additional Data

34. Deviations from the General Procedures presented in IDOT DM CH. 2, CH.6, and CH.7:
35. Information regarding high water from other streams, reservoirs, flood control projects, proposed channel changes, or other controls affecting proposed waterway area:
36. Site Inspection made by: Gerald L. Robinson, P.E., CFM Date: 11/2/2010  
Remarks:
37. Prepared by: Michael D. Cothard, PE, CFM Date: 6/26/12  
Signed (QA/QC):  Date: 6/29/2012



Route Medinah Road P or D # P-91-443-06  
Section \_\_\_\_\_ PTB # 141 Item 2  
County DuPage County  
Exist SN \_\_\_\_\_  
Prop SN \_\_\_\_\_

General Information

1. Name of the Stream: Meacham Creek
2. Location of the Structure: SE 1/4 of the NW 1/4 of Section 2  
Township 40N, Range 10E of the 3rd P.M.
3. Hydraulic Report Prepared By: ☒ Consultant Christopher B. Burke Engineering, Ltd.  
☐ District
4. Hydraulic Report Approval Authority: ☐ District – Post PDF of HR to BBS Hydraulics SharePoint Server  
☐ BBS Hydraulics - Submit 2 hard copies of HR to BBS Hydraulics

Site Design Data

5. Drainage Area (sq. mi.): ± 2.9
6. Highway Classification: ☐ Rural ☐ Principal Arterial  
☒ Urban ☐ Minor Arterial  
☐ Other ☐ Collector  
☒ Local
7. Design Frequency: ☐ 30 yr ☒ 50 Yr. ☐ Other \_\_\_\_\_
8. Number of Waterway Information Tables (WIT): \_\_\_\_\_  
If more than one, explain: \_\_\_\_\_  
\_\_\_\_\_

Hydrologic & Hydraulic Analysis

9. Hydrology Modeling (check all that apply): ☐ USGS/Stream Stats ☐ FIS ☐ Gage Data  
☒ Other FEQ Model
10. Hydraulic Modeling (check all that apply):  
a. Method: ☐ HEC-RAS ☐ WSPRO ☒ Other FEQ Model  
b. Manning's "n" values determined as per IDOT DM CH.5? ☒ Yes ☐ No  
If no, explain: \_\_\_\_\_  
c. Source of Starting WSE: Salt Creek  
d. Non- IDOT encroachments in Survey? ☐ Yes ☒ No  
If yes, are they accounted for? ☐ Yes ☐ No  
e. Does the Tailwater Control? ☐ Yes ☒ No  
If yes, list: \_\_\_\_\_  
f. Were the Expansion/Contraction cones properly addressed? ☒ Yes ☐ No ☐ N/A  
If No or N/A, explain: \_\_\_\_\_

g. What Expansion and Contraction Rates were used?

Expansion: 4 (X:1)

Contraction: 2 (X:1)

### IDNR – OWR Floodway Permit

11. Is area experiencing urbanization or expected to urbanize within 10 years? ☒ Yes ☐ No
12. Are there any sensitive flood receptors located upstream within possible backwater influence? ☒ Yes ☐ No  
If yes, list and describe critical upstream flood damageable properties and their elevations.  
Commercial property, residential property and roadways. Since no improvements are proposed to this crossing  
A survey was not conducted.
13. Is there any History of Flooding or Overtopping problems? ☐ Yes ☒ No  
Sources of Observed Highwater:
14. Is the structure hydraulically connected to or within the floodway of an IDNR-OWR designated Public Body of Water? ☐ Yes ☒ No
15. Required IDNR - OWR Permit type:  
☐ Individual ☐ SWP #2 ☐ SWP #12 ☐ Floodway  
☐ None ☐ Other

### Proposed Structure Data

16. Project Scope (check all that apply):  
a. ☐ Complete Replacement  
b. ☐ Superstructure Replacement  
c. ☐ Superstructure Widening; Length of Pier Extension in the water:  
U/S \_\_\_\_\_ D/S \_\_\_\_\_  
d. ☐ Bridge ☐ Culvert  
e. ☐ New Alignment  
f. Work Planned Below  $Q_{100}$  HWE? ☐ Yes ☐ No  
g. ☐ Profile Raise
17. If a bridge is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_  
Preliminary low beam elevation (ft): \_\_\_\_\_  
Width of deck (ft): \_\_\_\_\_  
Total length from face to face of abutment (ft) \_\_\_\_\_  
Abutment type: \_\_\_\_\_  
Skew (degrees): \_\_\_\_\_  
Number of spans: \_\_\_\_\_
18. If a culvert is proposed, supply:  
Type and size: \_\_\_\_\_  
Upstream invert elevation (ft): \_\_\_\_\_  
Downstream invert elevation (ft): \_\_\_\_\_  
Length (ft): \_\_\_\_\_  
Entrance type: \_\_\_\_\_  
Skew (degrees): \_\_\_\_\_  
Note: Upstream and downstream elevations should reflect the elevations before the 3" drop is applied
19. If a three-sided structure is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_  
Span (ft): \_\_\_\_\_  
Height (ft): \_\_\_\_\_  
Skew (degrees): \_\_\_\_\_  
Length (ft): \_\_\_\_\_  
Number of spans: \_\_\_\_\_
20. a. Is the IDOT Clearance Policy Met? ☐ Yes ☐ No ☐ NA Value (ft): \_\_\_\_\_  
b. Is the IDOT Freeboard Policy Met? ☐ Yes ☐ No ☐ NA Value (ft): \_\_\_\_\_
21. Type of streambed soil: ☐ Clay ☐ Silt ☐ Sand ☒ Loam ☐ \_\_\_\_\_



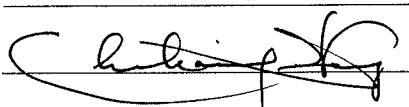
22. Scour/ Migration Problems: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Ice Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Debris Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:

Countermeasures Proposed:

### Existing Structure Data

	Structure U/S	Subject Structure	Structure D/S
23. Distance from proposed structure: (ft.)	Crest Avenue + 120 ft	Medinah Road	Thorndale Ave 2100 ft
24. Type of structure:	6' Dia. CMP	2-8.5' x 10' Box	6' Dia. CMP and 4.5' Dia. CMP
25. Low beam elevation:	714.3 ft	717.0 ft	713.1 ft
26. Flow line elevation:	± 708.3 ft	± 708.5 ft	± 708.6 ft
27. Maximum known high water elevation:	715.9 ft	715.0 ft	714.9 ft
28. Date of maximum high water:	August, 1987	August, 1987	August, 1987
29. Cause (backwater, headwater, etc.):			
30. Does structure carry entire design flood flow?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, state area of additional waterway opening: (ft <sup>2</sup> )			
31. Type and size of existing overflow structures:			
32. Has adverse scour occurred under or adjacent to the structure?	No	No	No
33. Classify type of scour and/or aggradation / degradation:			

### Required Additional Data

34. Deviations from the General Procedures presented in IDOT DM CH. 2, CH.6, and CH.7:
35. Information regarding high water from other streams, reservoirs, flood control projects, proposed channel changes, or other controls affecting proposed waterway area:
36. Site Inspection made by: Gerald L. Robinson, P.E., CFM Date: 11/2/2010  
Remarks:
37. Prepared by: Michael D. Cothard, P.E., CFM Date: 6/26/12  
Signed (QA/QC):  Date: 6/29/2012



Route Crest Avenue P or D # P-91-443-06  
Section \_\_\_\_\_ PTB # 141 Item 2  
County DuPage County  
Exist SN \_\_\_\_\_  
Prop SN \_\_\_\_\_

General Information

1. Name of the Stream: Meacham Creek
2. Location of the Structure: SE 1/4 of the NW 1/4 of Section 2  
Township 40N, Range 10E of the 3<sup>rd</sup> P.M.
3. Hydraulic Report Prepared By: ☒ Consultant Christopher B. Burke Engineering, Ltd.  
☐ District
4. Hydraulic Report Approval Authority: ☐ District – Post PDF of HR to BBS Hydraulics SharePoint Server  
☐ BBS Hydraulics - Submit 2 hard copies of HR to BBS Hydraulics

Site Design Data

5. Drainage Area (sq. mi.): ± 2.9
6. Highway Classification: ☐ Rural ☐ Principal Arterial  
☒ Urban ☐ Minor Arterial  
☐ Other ☐ Collector  
☒ Local
7. Design Frequency: ☐ 30 yr ☒ 50 Yr. ☐ Other \_\_\_\_\_
8. Number of Waterway Information Tables (WIT): 1  
If more than one, explain:  
\_\_\_\_\_  
\_\_\_\_\_

Hydrologic & Hydraulic Analysis

9. Hydrology Modeling (check all that apply): ☐ USGS/Stream Stats ☐ FIS ☐ Gage Data  
☒ Other FEQ Model
10. Hydraulic Modeling (check all that apply):  
a. Method: ☐ HEC-RAS ☐ WSPRO ☒ Other FEQ Model  
b. Manning's "n" values determined as per IDOT DM CH.5? ☒ Yes ☐ No  
If no, explain: \_\_\_\_\_  
c. Source of Starting WSE: Salt Creek  
d. Non- IDOT encroachments in Survey? ☐ Yes ☒ No  
If yes, are they accounted for? ☐ Yes ☐ No  
e. Does the Tailwater Control? ☐ Yes ☒ No  
If yes, list: \_\_\_\_\_  
f. Were the Expansion/Contraction cones properly addressed? ☒ Yes ☐ No ☐ N/A  
If No or N/A, explain: \_\_\_\_\_

g. What Expansion and Contraction Rates were used?

Expansion: 4 (X:1)

Contraction 2 (X:1)

### IDNR – OWR Floodway Permit

11. Is area experiencing urbanization or expected to urbanize within 10 years? ☒ Yes ☐ No
12. Are there any sensitive flood receptors located upstream within possible backwater influence? ☒ Yes ☐ No  
If yes, list and describe critical upstream flood damageable properties and their elevations.  
Commercial property, residential property and roadways. Since there are no proposed improvements survey was not collected.
13. Is there any History of Flooding or Overtopping problems? ☐ Yes ☐ No  
Sources of Observed Highwater:
14. Is the structure hydraulically connected to or within the floodway of an IDNR-OWR designated Public Body of Water? ☐ Yes ☒ No
15. Required IDNR - OWR Permit type:  
☐ Individual ☐ SWP #2 ☐ SWP #12 ☐ Floodway  
☐ None ☐ Other

### Proposed Structure Data

16. Project Scope (check all that apply):  
a. ☐ Complete Replacement  
b. ☐ Superstructure Replacement  
c. ☐ Superstructure Widening; Length of Pier Extension in the water:  
U/S \_\_\_\_\_ D/S \_\_\_\_\_  
d. ☐ Bridge ☐ Culvert  
e. ☐ New Alignment  
f. Work Planned Below  $Q_{100}$  HWE? ☐ Yes ☐ No  
g. ☐ Profile Raise
17. If a bridge is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_ Abutment type: \_\_\_\_\_  
Preliminary low beam elevation (ft): \_\_\_\_\_ Skew (degrees): \_\_\_\_\_  
Width of deck (ft): \_\_\_\_\_ Number of spans: \_\_\_\_\_  
Total length from face to face of abutment (ft) \_\_\_\_\_
18. If a culvert is proposed, supply:  
Type and size: \_\_\_\_\_ Length (ft): \_\_\_\_\_  
Upstream invert elevation (ft): \_\_\_\_\_ Entrance type: \_\_\_\_\_  
Downstream invert elevation (ft): \_\_\_\_\_ Skew (degrees): \_\_\_\_\_  
Note: Upstream and downstream elevations should reflect the elevations before the 3" drop is applied
19. If a three-sided structure is proposed, supply:  
Flow line elevation (ft): \_\_\_\_\_ Skew (degrees): \_\_\_\_\_  
Span (ft): \_\_\_\_\_ Length (ft): \_\_\_\_\_  
Height (ft): \_\_\_\_\_ Number of spans: \_\_\_\_\_
20. a. Is the IDOT Clearance Policy Met? ☐ Yes ☐ No ☐ NA Value (ft): \_\_\_\_\_  
b. Is the IDOT Freeboard Policy Met? ☐ Yes ☐ No ☐ NA Value (ft): \_\_\_\_\_
21. Type of streambed soil : ☐ Clay ☐ Silt ☐ Sand ☒ Loam ☐ \_\_\_\_\_

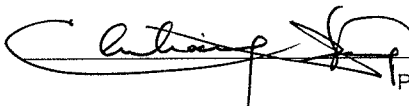
22. Scour/ Migration Problems: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Ice Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:
- Debris Concerns: ☒ None/Minimal ☐ Significant ☐ Severe  
Comments:

Countermeasures Proposed:

#### Existing Structure Data

	Structure U/S	Subject Structure	Structure D/S
23. Distance from proposed structure: (ft.)	E-O Expwy 1400 ft	Crest Avenue	Medinah Road ± 120 ft
24. Type of structure:	10' H x 8'W RCBC	6' Dia. CMP	2- 8.5' x 10' RCBC
25. Low beam elevation:	717.4 ft	714.3 ft	717.0 ft
26. Flow line elevation:	± 709.4 ft	± 708.3 ft	± 708.5 ft
27. Maximum known high water elevation:	715.9	715.9	715.0
28. Date of maximum high water:	August, 1987	August, 1987	August, 1987
29. Cause (backwater, headwater, etc.):			
30. Does structure carry entire design flood flow?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, state area of additional waterway opening: (ft <sup>2</sup> )			
31. Type and size of existing overflow structures:			
32. Has adverse scour occurred under or adjacent to the structure?	No	No	No
33. Classify type of scour and/or aggradation / degradation:			

#### Required Additional Data

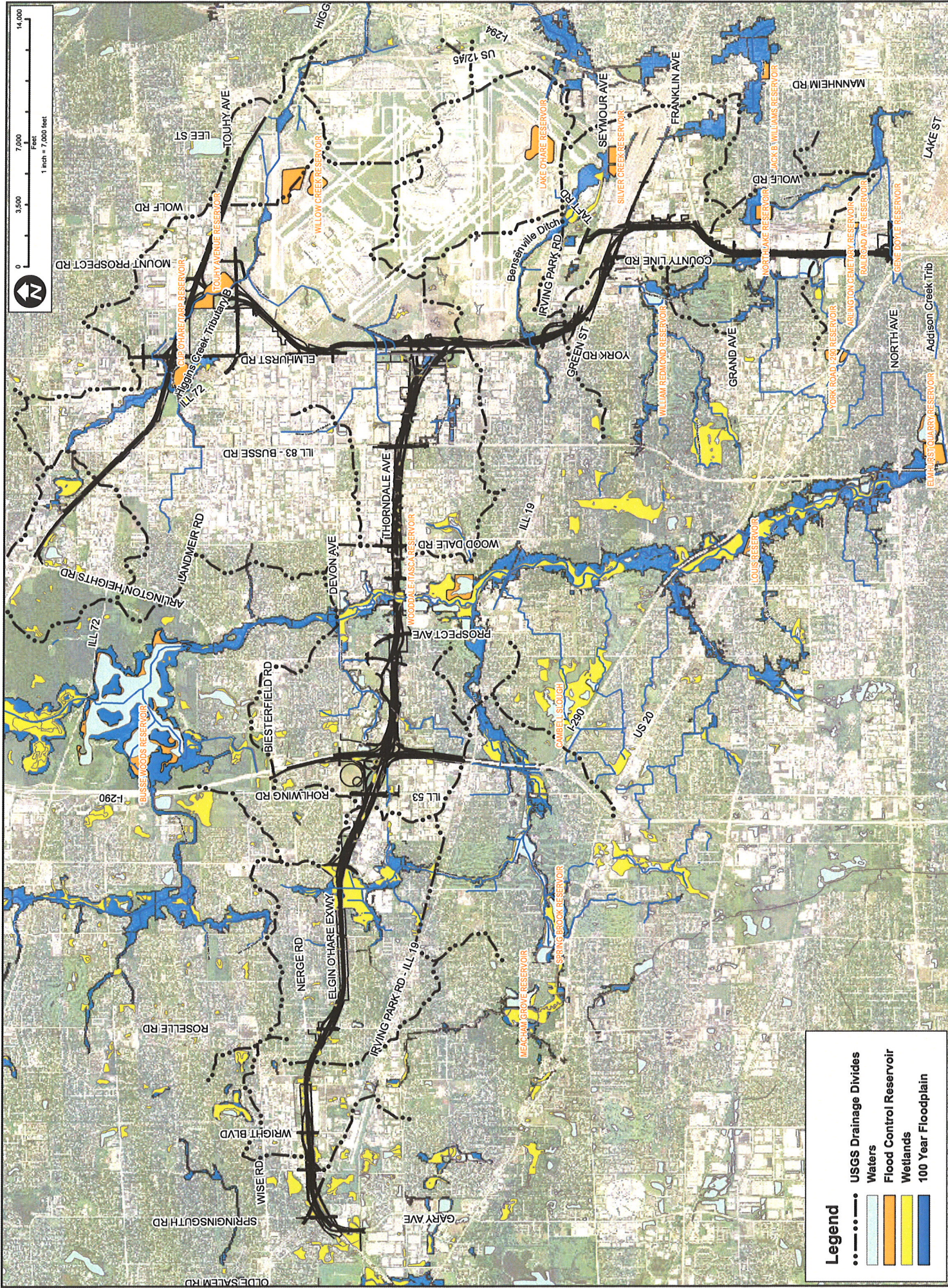
34. Deviations from the General Procedures presented in IDOT DM CH. 2, CH.6, and CH.7:
35. Information regarding high water from other streams, reservoirs, flood control projects, proposed channel changes, or other controls affecting proposed waterway area:
36. Site Inspection made by: Gerald L. Robinson, P.E., CFM Date: 11/2/2010  
Remarks:
37. Prepared by: Michael D. Cothard, PE, CFM Date: 6/26/12  
Signed (QA/QC):  Date: 6/29/2012

# Tab 3

## **SECTION 3**

**GENERAL PROJECT LOCATION MAP  
USGS HYDROLOGIC INVESTIGATIONS ATLAS (HA-67, 68, 87 and 143)  
FLOOD INSURANCE RATE MAP  
PROFILES OF FLOODS ON SPRING BROOK AND MEACHAM CREEK  
FLOOD INSURANCE STUDY INFORMATION**





**Legend**

- USGS Drainage Divides
- Waters
- Flood Control Reservoir
- Wetlands
- 100 Year Floodplain

**CHRISTOPHER B. BURKE ENGINEERING LTD.**  
9575 West Higgins Road, Suite 600  
Rosemont, Illinois 60018  
(847) 923-0500

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

CLIENT

NO.	DATE	NATURE OF REVISION

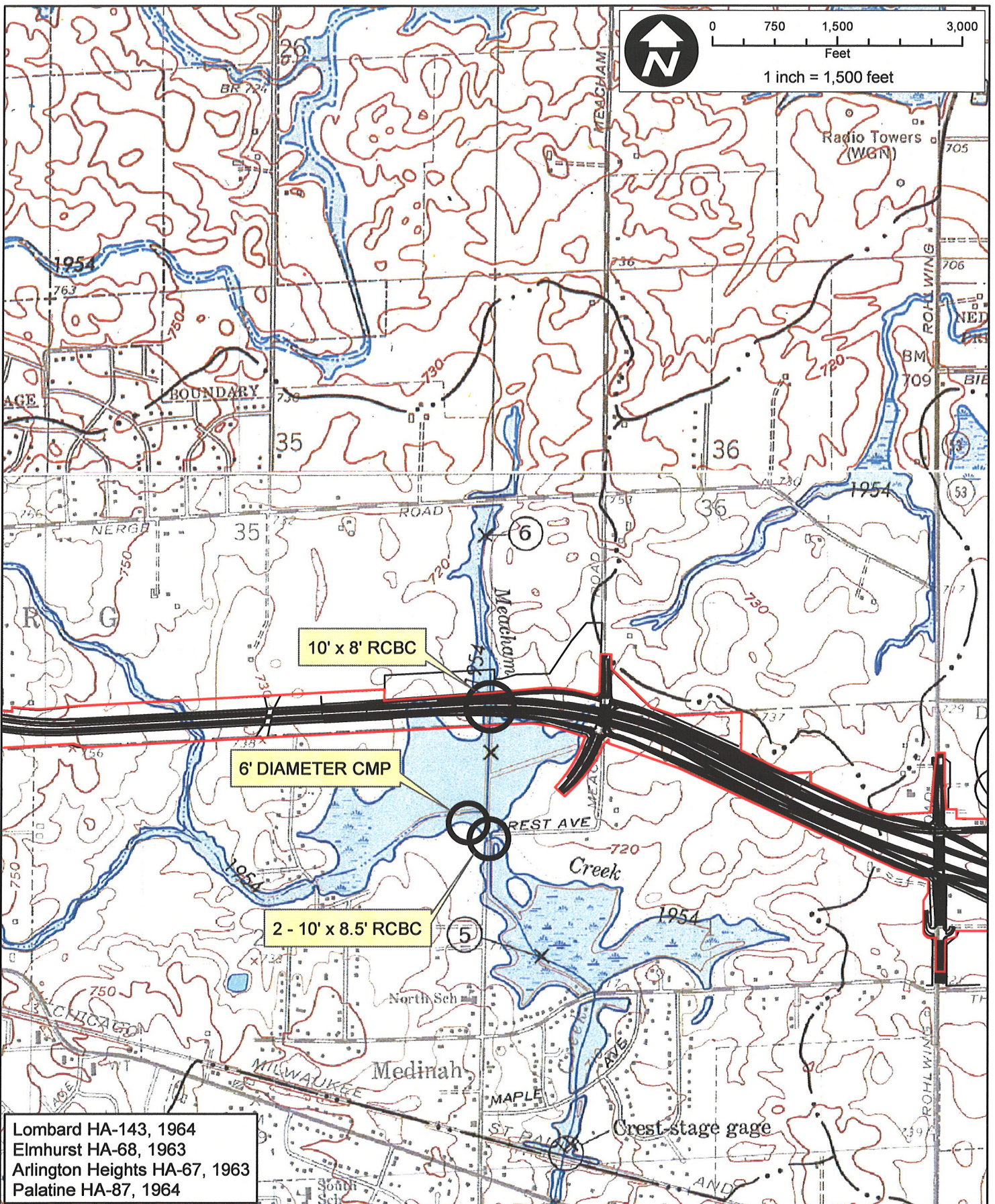
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CHECKED: [ ]  
DATE: [ ]

PROJECT NO. 0704044  
SHEET 0 OF 0  
DRAWING NO. EXH 1



Map Document: N:\dot070404\GIS\Exhibits\HA and FIRM Exhibits\MEECHAM CREEK\HA Meecham Creek.mxd  
12/9/2010 - 14:33:33



Lombard HA-143, 1964  
Elmhurst HA-68, 1963  
Arlington Heights HA-67, 1963  
Palatine HA-87, 1964

CLIENT:



**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

TITLE:

**ELGIN O'HARE - WEST BYPASS  
MEACHAM CREEK  
USGS HYDRAULIC INVESTIGATIONS ATLAS**

PROJ. NO. 070404

DATE: 11-01-2010

SHEET 0 OF 0

DRAWING NO.

**EXH 2A**



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
9575 W. Higgins Road, Suite 600 • Rosemont, Illinois 60018 • (847) 823-0500

DSGN.  
DWN.  
CHKD.  
FILE:

SCALE: 1"=1,500'  
GIS USER: MHAYES  
PLOT DATE:



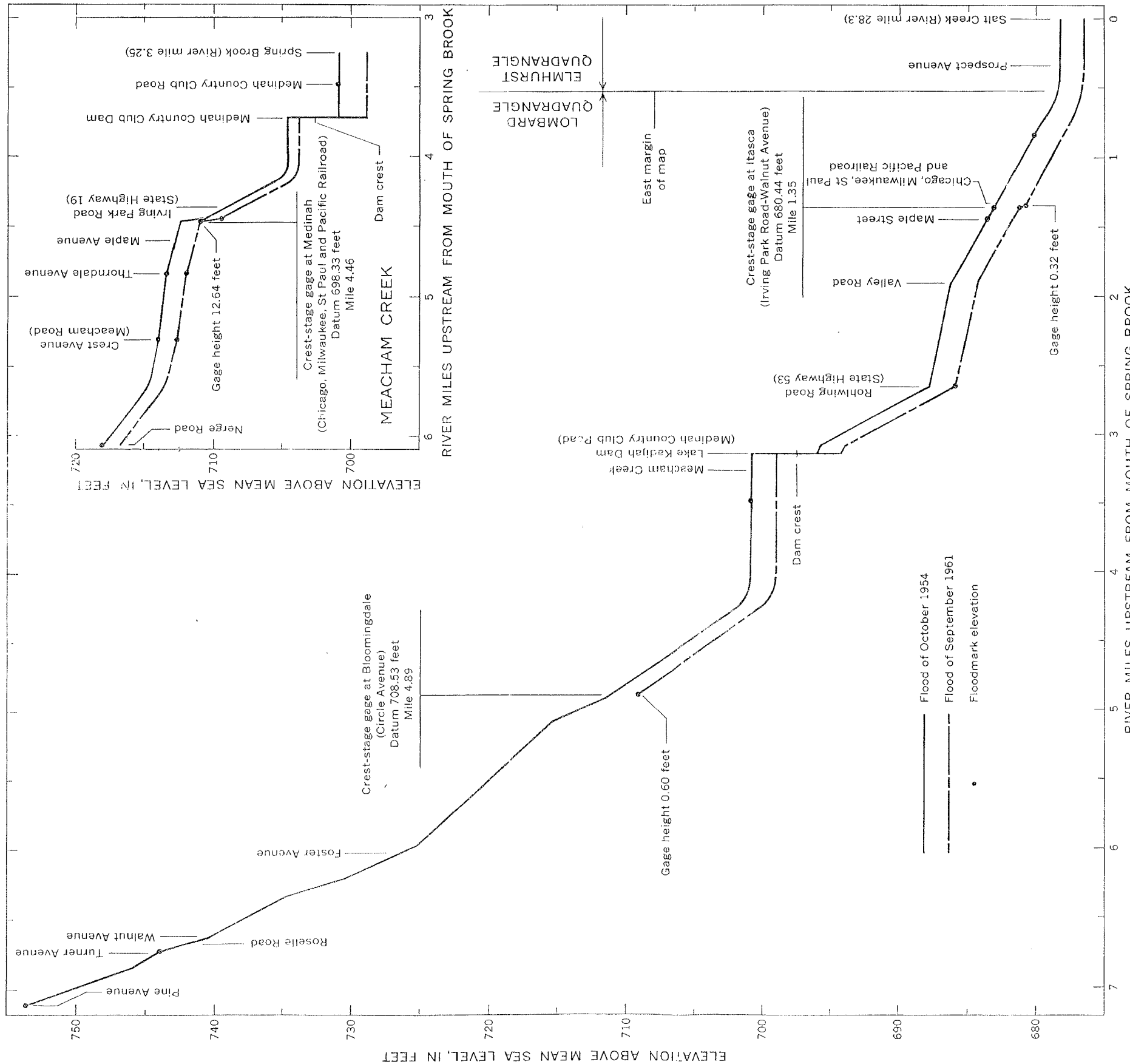


FIGURE 5.—Profiles of floods on Spring Brook and Meacham Creek.

PANEL 0203H

FIRM

FLOOD INSURANCE RATE MAP

DuPAGE COUNTY,

ILLINOIS

AND INCORPORATED AREAS

PANEL 0203 OF 1006

IS/FI MAP INDEX FOR FIRM PANEL LAYOUT:

COMMUNITY	NUMBER	PANEL	SUFFIX
GLITCHESVILLE VILLAGE OF	17006	0203	H
DUPAGE COUNTY	17009	0203	H
ITASCA VILLAGE OF	17010	0203	H

MAP NUMBER

17043C0203H

EFFECTIVE DATE

DECEMBER 16, 2004

Federal Emergency Management Agency

The map displays flood insurance rate zones for the West Bypass area of Meacham Creek. Key features include:

- Communities:** Village of Roselle (170216), Village of Elk Grove (170088), Village of Itasca (170210), and DuPage County Unincorporated Areas (170197).
- Flood Zones:** Zone A, Zone X, and Zone AE are clearly delineated across the map.
- Geography:** The map shows the Meacham Creek and its surrounding areas, including the Elgin-O'Hare Expressway and various residential streets.
- Boundaries:** Cook County and DuPage County boundaries are indicated.

FILE NAME = N:\dot\070404\Water\Exhibit MDC\07040404	USER NAME = eanderson	DESIGNED -	REVISED -		FIRM MAP MEACHAM CREEK		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLT SCALE = 700.000000' / in.	PLT DATE = 6/27/2012	DRAWN -	REVISED -		SCALE:	SHEET NO. #NUM OF #TOTALSHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			
CHECKED -	DATE -	REVISED -	REVISED -		EXHIBIT 3							
DATE -	DATE -	REVISED -	REVISED -									

The Federal Emergency Management Agency  
in Cooperation with  
DuPage County, Illinois Presents:



# **FLOOD INSURANCE STUDY**

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A Report of Flood Hazards in:

**DUPAGE COUNTY, ILLINOIS  
AND INCORPORATED AREAS**

---

Prepared, in parts, by:

**FEMA**  
Region V  
536 South Clark Street  
Chicago, Illinois 60605

and

Nika Engineering  
421 Mill Street  
Batavia, Illinois 60510

March 2007  
1 7043CV000A

for City of Wood Dale	54.4	1,650	2,310	2,590	3,260
- at Plum Grove Road	10.18	522	792	913	1,225

### 3.5.1.3 Hydraulic Analysis

Analysis of the hydraulic characteristics of flooding from the sources studied was carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Locations of selected cross-sections used in the hydraulic analysis are shown on the Flood Profiles and on the Flood Insurance Rate Map.

The water-surface elevations for the streams studied in detail and limited detail were computed using either the SCS WSP-2 backwater computer program or the USACE HEC-2 step-backwater computer program (U.S. Department of Agriculture, 1974; USACE, HEC-2 Water-Surface Profiles, Computer Program 723-X6-L202A, 1973). The USACE HEC-2 model was used for all streams studied in detail and limited detail except for Meacham Creek, Sawmill Creek, Salt Creek, Spring Brook, and Westwood Creek, which were modeled utilizing the SCS WSP-2 program (U.S. Department of Agriculture, 1974).

Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals. Streams studied in detail have flood profiles drawn for the 500-year, 100-year, 50-year, and 10-year storm events, with the exception of Upper Salt Creek, Klein Creek Tributary No. 1, Klein Creek Tributary No. 2, Sawmill Creek, Sawmill Creek Tributary No. 1, Wards Creek, West Branch Tributary No. 5, West Branch Tributary No. 7, East Branch Tributary No. 1, and East Branch Tributary No. 2, which have only the 10-year and 100-year profiles.

Cross sections for the backwater analyses on Salt Creek were field surveyed by the SCS. Cross-section data for Salt Creek were obtained from Regulation of Construction Within the Floodplain of Lower Salt Creek and Tributaries (Illinois Department of Transportation, 1980). Sections were located at close intervals above and below bridges and culverts in order to compute the significant backwater effects of these structures.

Starting water-surface elevations for Salt Creek were developed by the slope/area method.

Channel roughness factors for Salt Creek were assigned on the basis of field inspection of floodplain areas and from previous studies by the SCS. Refer to Table SCSC.3 for further details.

used to determine the 10-, 50-, and 100-year peak discharges as a function of the drainage area at any given cross section. The 500-year peak discharge was determined by a log-log extrapolation of peak discharges computed for frequencies up to 100 years. The peak discharges obtained were substantiated by regional flood flow equations for northeastern Illinois.

A summary of the drainage area-peak discharge relationships for the portions of the streams studied by detailed methods is shown in Table SCDA.1.

**Table SCDA.1: Devon Avenue Tributary Summary of Discharges**  
Summary of Discharges

Flooding Source And Location	Drainage Area (mi <sup>2</sup> )	Peak Discharges (cfs)			
		10-yr	50-yr	100-yr	500-yr
<u>Devon Avenue Tributary</u>					
- at lower corporate limit for the Village of Itasca	1.20	130	200	240	320
- approximately 100 feet u/s of Pierce Road	0.80	105	165	200	270

#### 3.5.3.3 Hydraulic Analysis

Analysis of the hydraulic characteristics of flooding from the sources studied was carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Locations of selected cross-sections used in the hydraulic analysis are shown on the Flood Profiles and on the Flood Insurance Rate Map.

Cross-section data for Devon Avenue Tributary were obtained from field surveys by the Illinois Division of Water Resources supplemented with field surveys by a contractor for the SCS. In some cases, these cross sections were extended using topographic maps with a 2-foot contour interval (Floodplain Topographic Maps, 1973).

Water-surface profiles for Devon Avenue Tributary, and Meacham Creek were developed using the SCS "WSP-2 Water-Surface Profile Computer Program" (U.S. Department of Agriculture, 1974). Profiles were determined for the 10-, 50-, 100-, and 500-year floods for all flooding sources.

Starting elevations for Devon Avenue Tributary, and Meacham Creek were taken from previously published data (Des Plaines River Steering Committee, 1975).

Valley and channel roughness coefficients for Devon Avenue Tributary were determined from field observations, USGS' "Water Supply Paper 1849" (U.S. Department of the Interior, 1967), and the SCS' "Guide for Selecting Roughness Coefficients" (U.S. Department of Agriculture, 1963). Please refer to Table SCDA.2 for further information.

**Table SCDA.2: Devon Avenue Tributary Manning's "n" Values**  
Manning's "n" Values

<u>Stream</u>	<u>Channel "n"</u>	<u>Overbank "n"</u>
- Devon Ave Tributary	0.045 - 0.065	0.065 - 0.085

#### 3.5.3.4 Flood Boundaries

To reference the flood boundaries for Devon Avenue Tributary, see Map Panels: 0203, 0301 and 0302.

#### 3.5.3.5 Floodways

Please reference attached Floodway Data Tables for further information.

#### 3.5.3.6 Flood Profiles

Please reference attached Flood Profile Sheets.

### 3.5.6 Spring Brook Creek (SCSB)

#### 3.5.6.1 Tributary Description

Spring Brook is located in DuPage County, in northeastern Illinois, approximately 30 miles west of downtown Chicago. The Spring Brook watershed covers approximately 14.7 square miles (9408 acres). This watershed includes parts of the Villages of Itasca, Bloomingdale, Addison, Roselle, Elk Grove Village and Schaumburg and areas in unincorporated Addison and Bloomingdale Townships. Spring Brook discharges into Salt Creek between Thorndale Avenue and the CMSPP (Metra) Railroad.

The mainstem of Spring Brook begins in the Village of Schaumburg in an industrial park located north of the Elgin-O'Hare Expressway and west of Roselle Road. Spring Brook flows south into the Village of Roselle to the Meacham Grove Forest Preserve northeast of Bloomingdale Road and Lake Street. From there, Spring Brook flows east into Lake Kadijah. From the outlet of Lake Kadijah, Spring Brook flows generally northeast through Itasca and then the Itasca Country Club before discharging into Salt Lake Creek approximately 2000 feet north of the CMSPP railroad.

Spring Brook has two major tributaries and several minor tributaries. The major tributaries are Meacham Creek which joins Spring Brook at Lake Kadijah and Unnamed Tributary No. 1 to Spring Brook which meets Spring Brook in the Meacham Grove Forest Preserve. Meacham Creek flows from north to south parallel to Meacham/Medinah Road. It begins at a detention pond located south of Virginia Drive in Elk Grove Village. It flows south through the wetlands adjacent to the Elgin-O'Hare Expressway and then through a culvert under Medinah Road. South of Thorndale Avenue it flows into the Medinah Country Club where it eventually discharges into Lake Kadijah.

Unnamed Tributary No. 1 to Spring Brook is not very long but it has a large drainage area in the Village of Bloomingdale. It is mostly contained in storm sewers until it becomes an open channel north of Lake Street and east of Rosedale Avenue.

#### 3.5.6.2 Hydrologic Analysis

Hydrologic analyses were carried out to establish the peak discharge-frequency relationship for Spring Brook Creek and Meacham Creek.

Peak flows for the 10-, 50-, 100-, and 500-year floods on Spring Brook Creek and the West Branch Tributary Spring Brook Creek were computed using the TR-20 computer program (U.S. Department of Agriculture, 1965) with data furnished by the SCS. Discharges for this study were coordinated with the ISWS and approved by the IDWR.

Discharges for the 10-year, 50-year, and 100-year floods for Meacham Creek were computed using the log-Pearson Type III method (U.S. Department of Commerce, 1976) for gaged streams and regional equations for ungaged streams (U.S. Department of the Interior, 1973; State of Illinois, 1973). The 500-year flood discharges for streams studied in detail were estimated by straight-line extrapolation.

For Meacham Creek, a gauging station on Salt Creek located about 20 miles downstream of Itasca was one source of data for defining discharge-frequency relationships. This gage has been operated since 1945. A gauging station on Meacham Creek at Medinah in the northwest part of Itasca was used in defining discharge-frequency relationships. This gage was operated from 1953-1972. Values of the 10-, 50-, and 100-year peak discharges were obtained from a log-Pearson Type III distribution of annual peak flow data (U.S. Water Resources Council Hydrologic Committee, 1976). However, much channel work has been performed on Salt Creek and rapid urbanization of the watershed has occurred during the operation period of the stream gages, especially in the past 10 years. The effect of these changes has not been adequately recorded. Water from large floods has overflowed into a quarry about 10 miles upstream of the gage. Therefore, peak discharge-drainage area relationships were developed from a combination of historic flood data and unit hydrograph rainfall-runoff relationships. Flood routing was done with the "SCS-TR-20 Project Formulation Computer Program" (U.S. Department of Agriculture, 1974). Linear regression analysis was used to determine the 10-, 50-, and 100-year peak discharges as a function of the drainage area at any given cross section. The 500-year peak discharge was determined by a log-log extrapolation of peak discharges computed for frequencies up to 100 years. The peak discharges obtained were substantiated by regional flood flow equations for northeastern Illinois.

A summary of the drainage area-peak discharge relationships for the portions of the streams studied by detailed methods is shown in Table SCSB.1.

**Table SCSB.1: Spring Brook Creek Summary of Discharges**  
Summary of Discharges

Flooding Source And Location	Drainage Area (mi <sup>2</sup> )	Peak Discharges (cfs)			
		<u>10-yr</u>	<u>50-yr</u>	<u>100-yr</u>	<u>500-yr</u>
<u>Spring Brook Creek</u>					
- approximately 1,716 ft u/s of Route 53	12.0	642	1,040	1,264	1,800
- at mouth	14.4	493	880	1,090	1,650
- at Medinah Road	6.55	518	790	910	1,208



- at Circle Avenue	4.97	408	614	704	926
- at Foster Avenue	2.60	197	296	340	446
<u>Meacham Creek</u>					
- at Lake Kadajah	5.10	192	283	325	426
- at Thorndale Avenue	3.60	115	195	235	328
<u>West Branch Tributary to Spring Brook Creek</u>					
- at Roselle Road	1.50	124	186	211	275

### 3.5.6.3 Hydraulic Analysis

Analysis of the hydraulic characteristics of flooding from the sources studied was carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Channel cross-section data were obtained from field surveys. All bridges and culverts were surveyed to obtain elevation data and structural geometry

Locations of selected cross-sections used in the hydraulic analysis are shown on the Flood Profiles and on the Flood Insurance Rate Map.

Cross-section data for the backwater analyses of Spring Brook Creek and the West Branch Tributary to Spring Brook Creek were obtained by field surveys during April-May 1979. At that time, the ISWS crew conducting the fieldwork also obtained elevation data and structural geometry for the bridges on each creek. Elevation data for portions of Spring Brook Creek were also provided by the SCS.

Cross-section and bridge data for Meacham Creek were obtained from field surveys by the Illinois Division of Water Resources supplemented with field surveys by a contractor for the SCS. In some cases, these cross sections were extended using topographic maps with a 2-foot contour interval (Floodplain Topographic Maps, 1973).

Flood profiles on Spring Brook Creek and the West Branch Tributary to Spring Brook Creek for the 10-, 50-, 100-, and 500-year floods were computed by the ISWS with the SCS WSP-2 step-backwater program (Wight Consulting Engineers, Inc., 1978); the necessary input information was supplied by SCS and the field surveys by ISWS.

Water-surface profiles for Meacham Creek were developed using the SCS "WSP-2 Water-Surface Profile Computer Program" (U.S. Department of

Agriculture, 1974). Profiles were determined for the 10-, 50-, 100-, and 500-year floods for all flooding sources.

Starting water-surface elevations on Spring Brook Creek for all designated recurrence intervals were determined from downstream profiles of Spring Brook Creek. Starting water-surface elevations for the West Branch Tributary Spring Brook Creek were taken from profiles of the mainstem Spring Brook Creek.

Starting elevations for Meacham Creek were taken from previously published data (Des Plaines River Steering Committee, 1975).

Channel roughness factors (Manning's "n") used in the hydraulic computations, for Spring Brook Creek and West Branch Tributary Spring Brook Creek were selected on the basis of field inspection of floodplain areas. The factors were chosen to be consistent with commonly reported values (U.S. Department of Agriculture, 1965; Chow, V. T., 1964; Chow, V. T., 1959). Refer to Table SCSB.2 for further details.

Valley and channel roughness coefficients for Meacham Creek were determined from field observations, USGS' "Water Supply Paper 1849" (U.S. Department of the Interior, 1967), and the SCS' "Guide for Selecting Roughness Coefficients" (U.S. Department of Agriculture, 1963). Refer to Table SCSB.2 for further details

**Table SCSB.2: Spring Brook Creek Manning's "n" Values**  
Manning's "n" Values

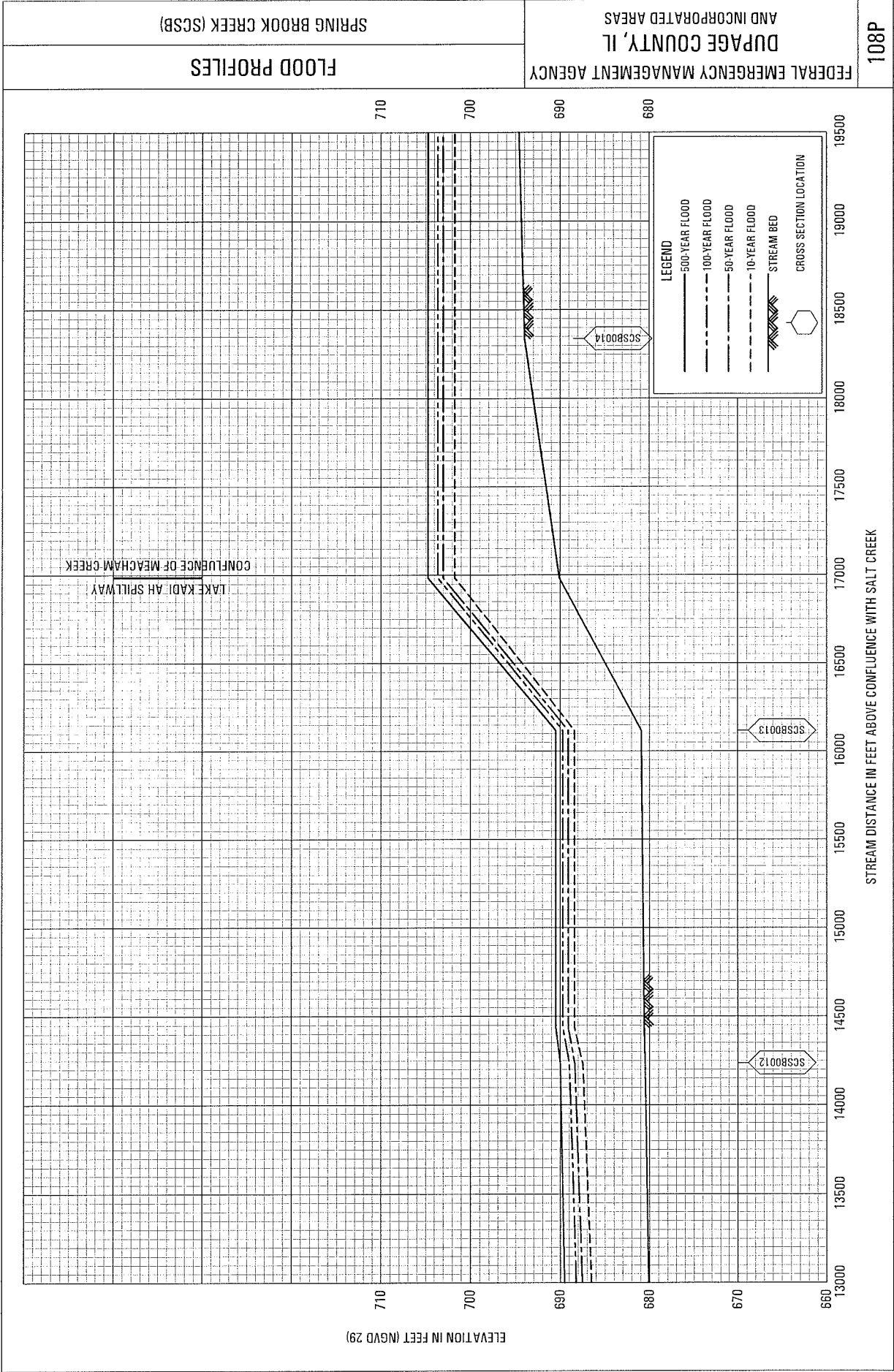
<u>Stream</u>	<u>Channel "n"</u>	<u>Overbank "n"</u>
- Spring Brook Creek	0.035 - 0.070	0.035 - 0.100
- Meacham Creek	0.045 - 0.065	0.065 - 0.085
- West Branch Tributary to Spring Brook Creek	0.040 - 0.050	0.040 - 0.120

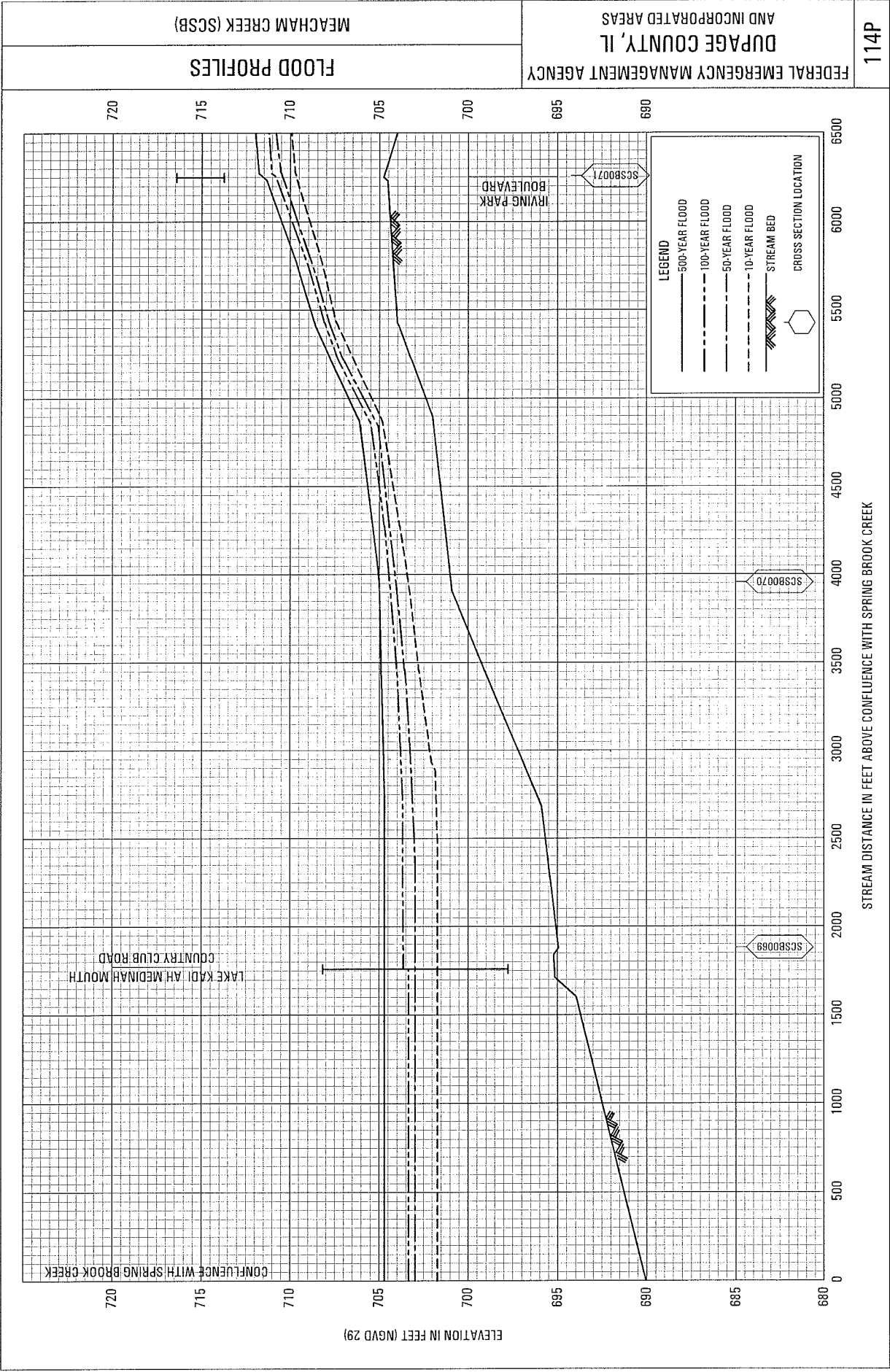
#### 3.5.6.4 Flood Boundaries

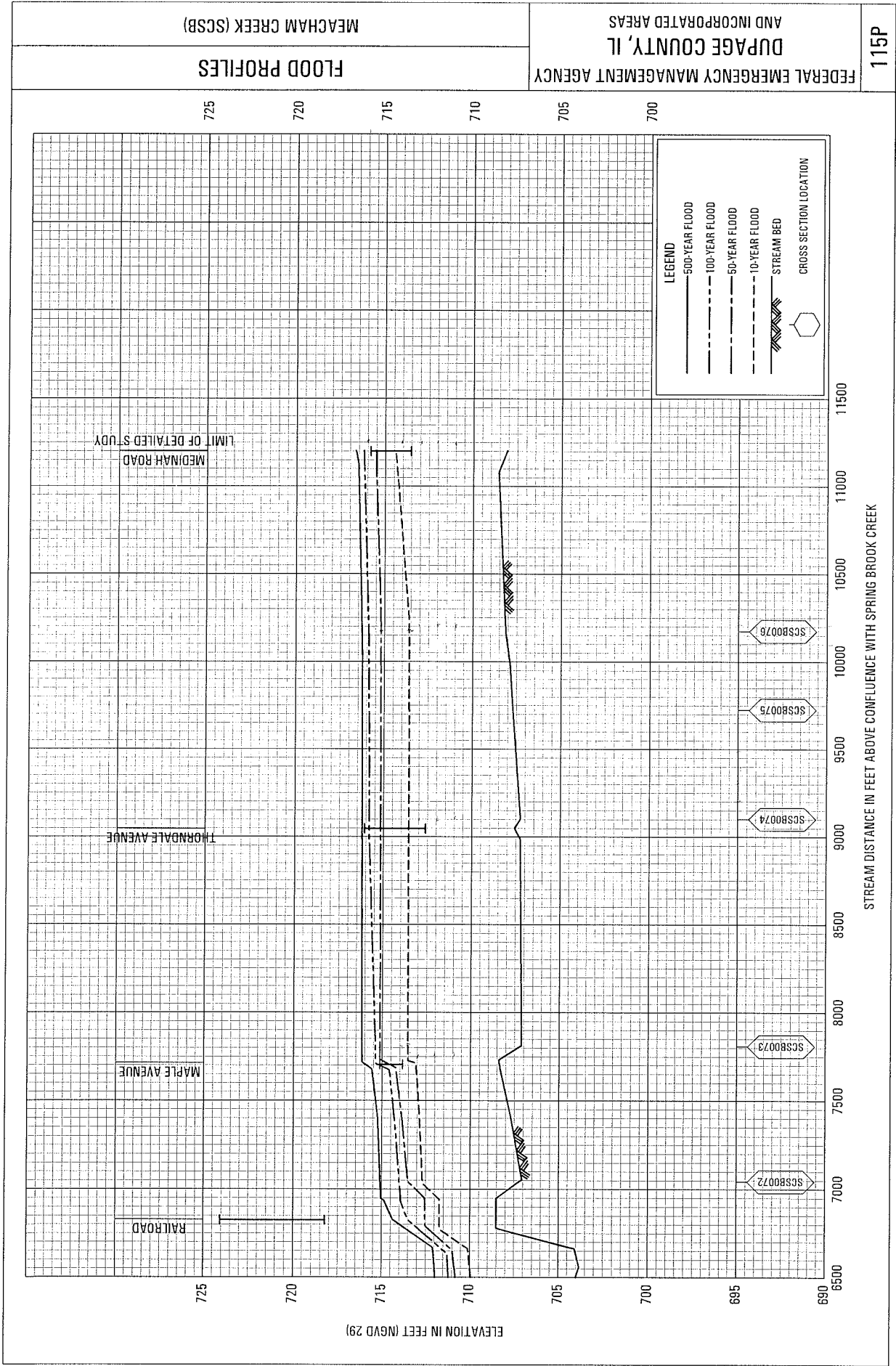
To reference the flood boundaries for Spring Brook Creek, see Map Panels: 0202, 0203, 0205, 0206, 0301, 0302 and 0304.

#### 3.5.6.5 Floodways

FLOODING SOURCE		FLOODWAY				BASE FLOOD WATER SURFACE ELEVATION (FEET NGVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE	
Meacham Creek (SCSB) SCSB0069 SCSB0070 SCSB0071 SCSB0072 SCSB0073 SCSB0074 SCSB0075 SCSB0076	1,880 <sup>1</sup>	176	841	0.4	703.7	703.7	703.8	0.1	
	3,955 <sup>1</sup>	125	255	1.2	704.3	704.3	704.4	0.1	
	6,257 <sup>1</sup>	25	112	2.5	710.8	710.8	710.9	0.1	
	7,043 <sup>1</sup>	130	367	0.8	713.9	713.9	714.0	0.1	
	7,808 <sup>1</sup>	150	437	0.6	715.3	715.3	715.4	0.1	
	9,101 <sup>1</sup>	1,376	6,125	0.1	715.9	715.9	716.0	0.1	
	9,724 <sup>1</sup>	1,257	6,413	0.1	715.9	715.9	716.0	0.1	
	10,174 <sup>1</sup>	293	1,197	0.2	715.9	715.9	716.0	0.1	
<sup>1</sup> In feet above confluence with Spring Brook Creek									
FEDERAL EMERGENCY MANAGEMENT AGENCY DUPAGE COUNTY AND INCORPORATED AREAS		FLOODWAY DATA							
TABLE 5		MEACHAM CREEK (SCSB)							







<u>Tributary 1</u>					
- at river mile 0.23	2.33	324	*	617	*
<u>Sawmill Creek -</u>					
<u>Tributary 3</u>					
- at mouth	1.14	241	427	559	960
<u>Sawmill Creek -</u>					
<u>West Branch</u>					
- at I-55	0.75	178	290	345	495
- near Cass School	0.58	149	245	290	420
- near Bay View	0.42	146	238	285	402

### 3.6.1.3 Hydraulic Analysis

Analysis of the hydraulic characteristics of flooding from the sources studied was carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Channel cross-section data were obtained from field surveys. All bridges and culverts were surveyed to obtain elevation data and structural geometry

Locations of selected cross-sections used in the hydraulic analysis are shown on the Flood Profiles and on the Flood Insurance Rate Map.

The water-surface elevations for the streams studied in detail and limited detail were computed using either the SCS WSP-2 backwater computer program or the USACE HEC-2 step-backwater computer program (U.S. Department of Agriculture, 1974; USACE, HEC-2 Water-Surface Profiles, Computer Program 723-X6-L202A, 1973). The USACE HEC-2 model was used for all streams studied in detail and limited detail except for Meacham Creek, Sawmill Creek, Salt Creek, Spring Brook, and Westwood Creek, which were modeled utilizing the SCS WSP-2 program (U.S. Department of Agriculture, 1974).

Stream cross-sections and bridge sections for East Branch Sawmill Creek, Sawmill Creek, and West Branch Sawmill Creek were surveyed using land survey techniques. All of the cross sections on Sawmill Creek and the cross sections downstream from 75<sup>th</sup> Street on East Branch Sawmill Creek were surveyed by the SCS; upstream sections were surveyed by Harza. All sections on West Branch Sawmill Creek were surveyed by Harza.

Water-surface elevations for floods of the selected recurrence intervals were computed using hydraulic models for East Branch Sawmill Creek and Sawmill Creek prepared by the SCS (Des Plaines River Watershed

# Tab 4



## **SECTION 4**

### **SITE PHOTOGRAPHS**

ELGIN O'HARE EXPRESSWAY

CREST AVE

MEDINAH ROAD

**Elgin O'Hare Expressway Upstream Channel**





**Elgin O'Hare Expressway Upstream Face**





**Elgin O'Hare Expressway Downstream Face**





## Elgin O'Hare Expressway Downstream Channel





**Crest Avenue Upstream Channel**





**Crest Avenue Upstream Face**





## Crest Avenue Downstream Face





## Crest Avenue Downstream Channel





## Medinah Road Upstream Channel





**Medinah Road Upstream Face**





## Medinah Road Downstream Channel





**Medinah Road Downstream Face**



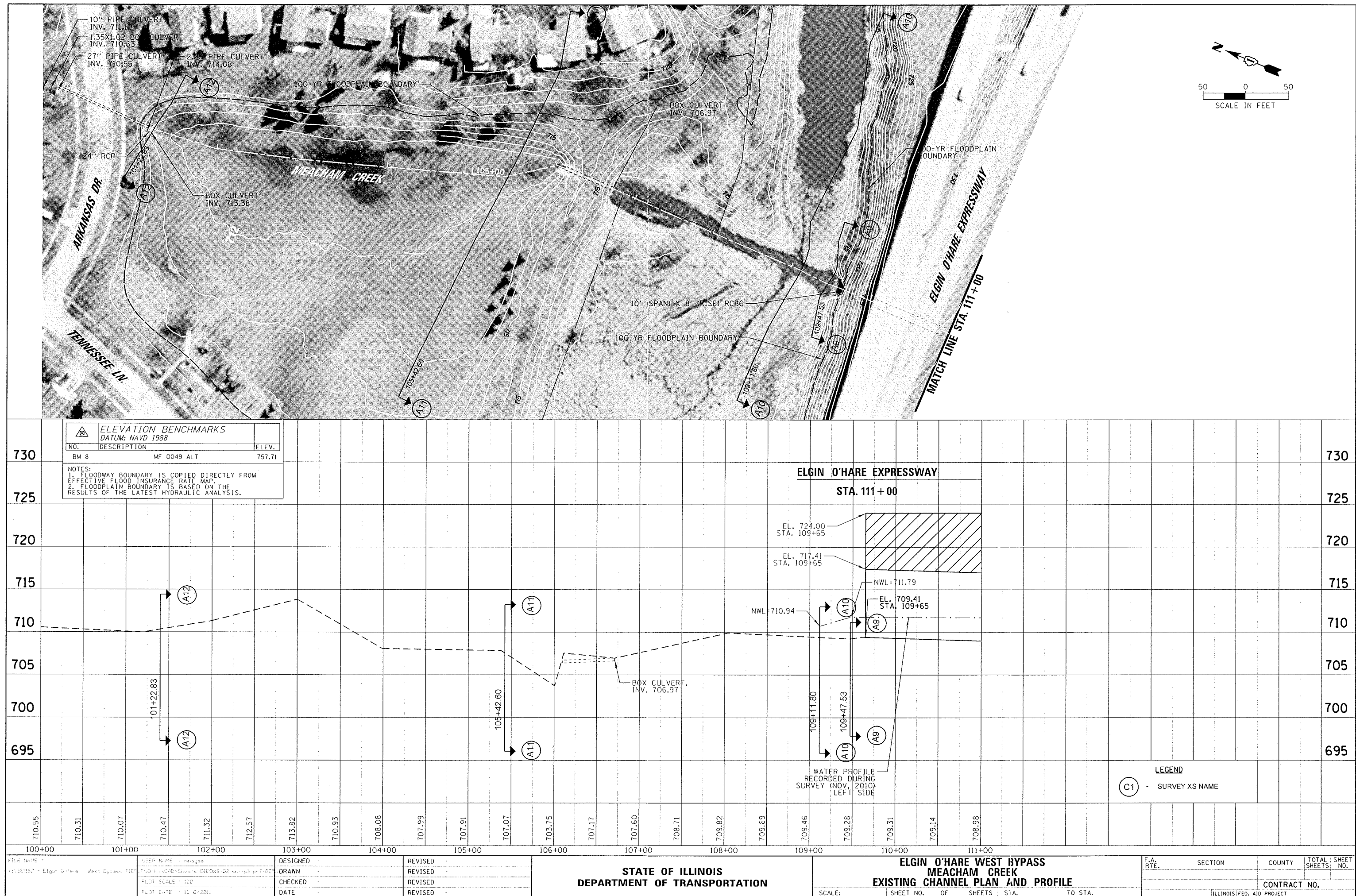
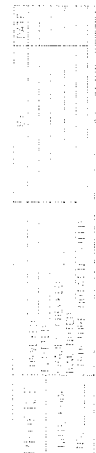


# Tab 5

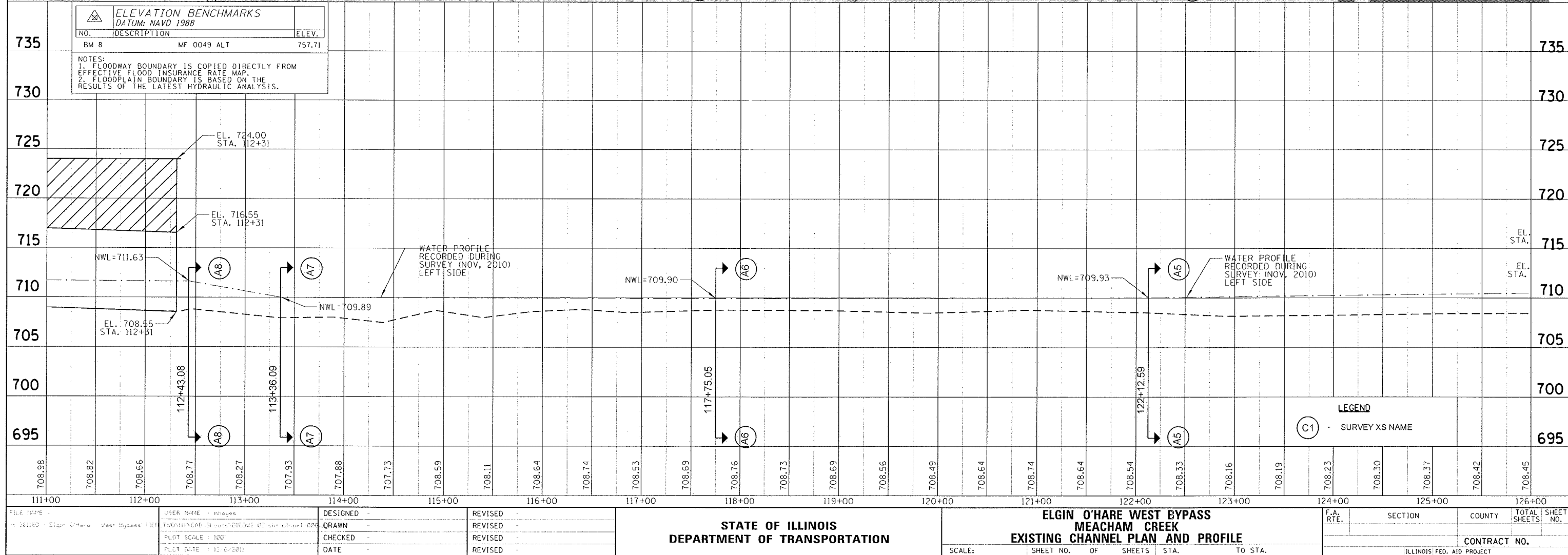


## **SECTION 5**

**STREAMBED PLAN AND PROFILE  
ROADWAY PLAN AND PROFILE**

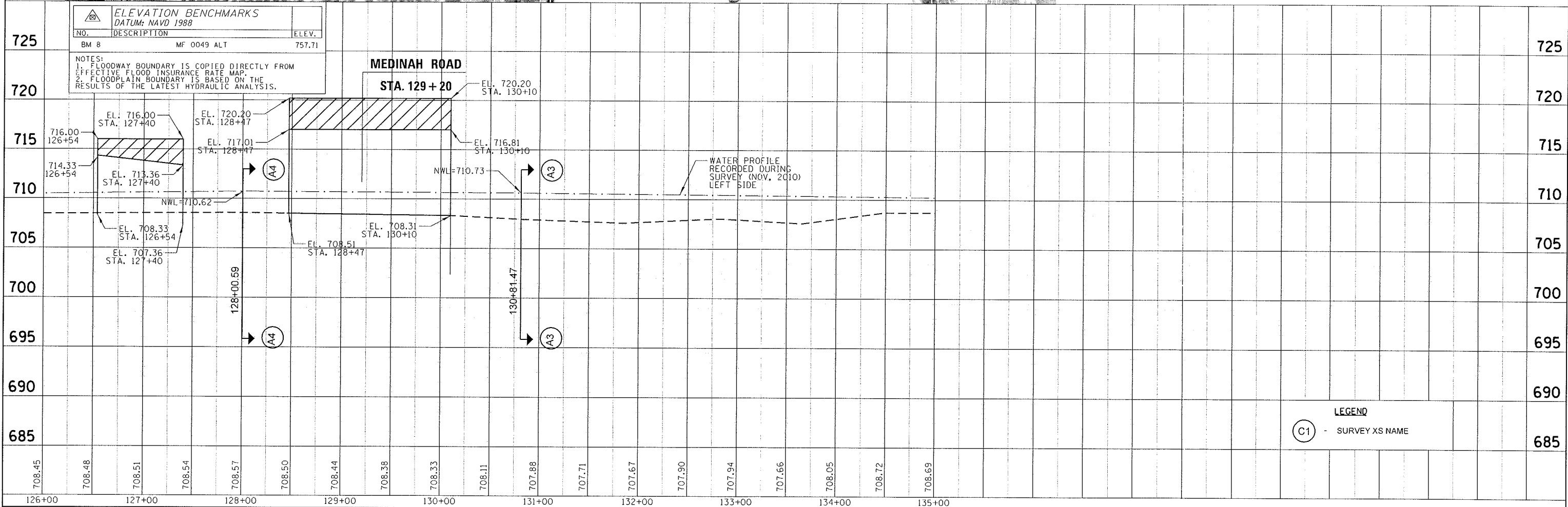
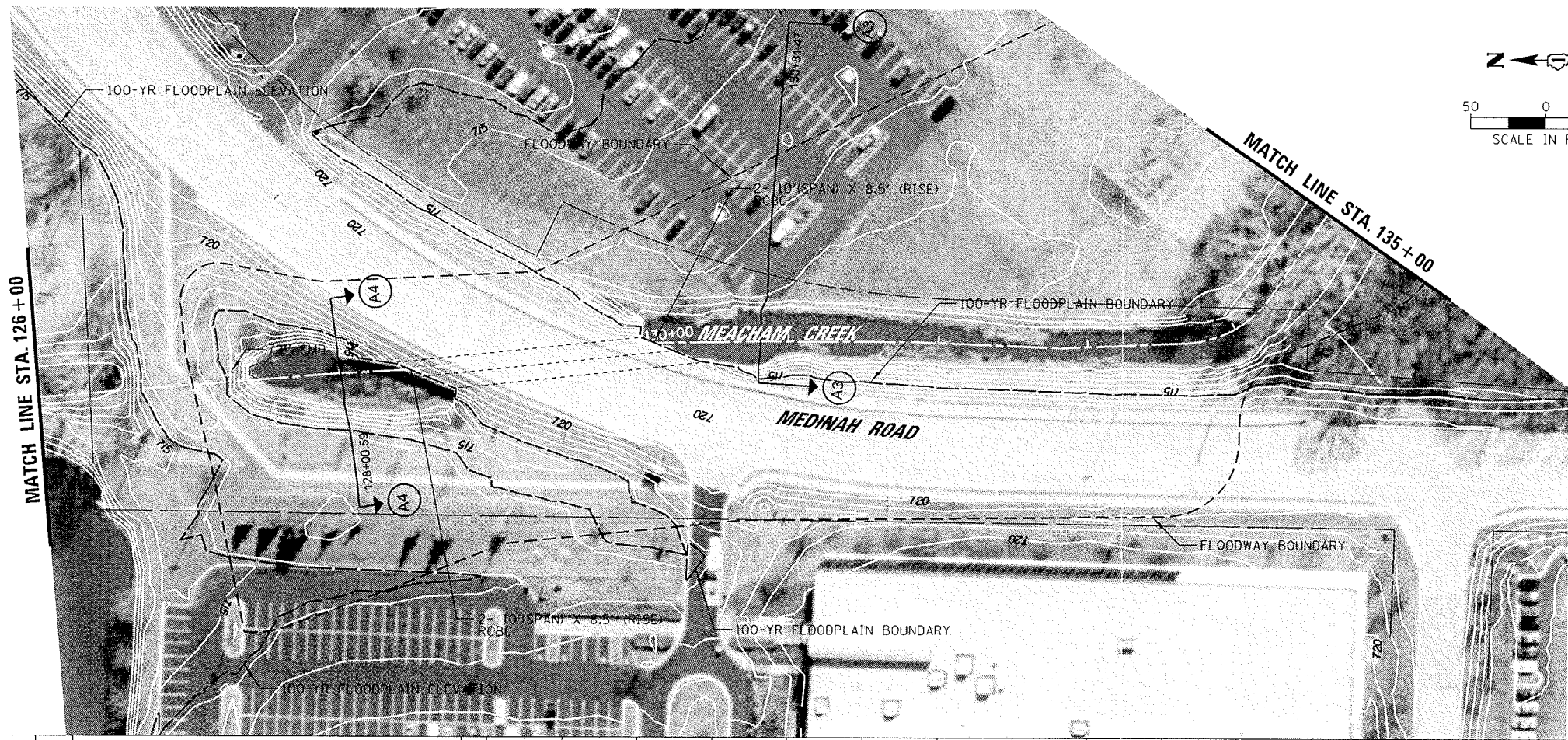




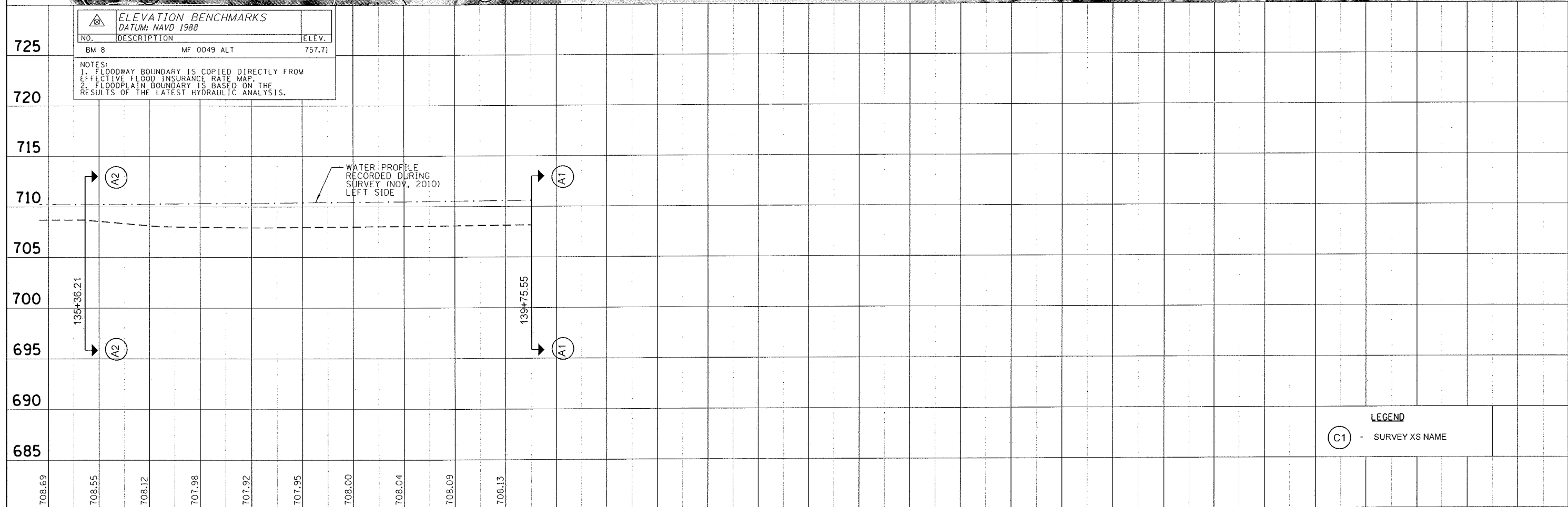
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DRAWN BY	DATE
NOTED BY	DATE
PROJECT NO.	DATE

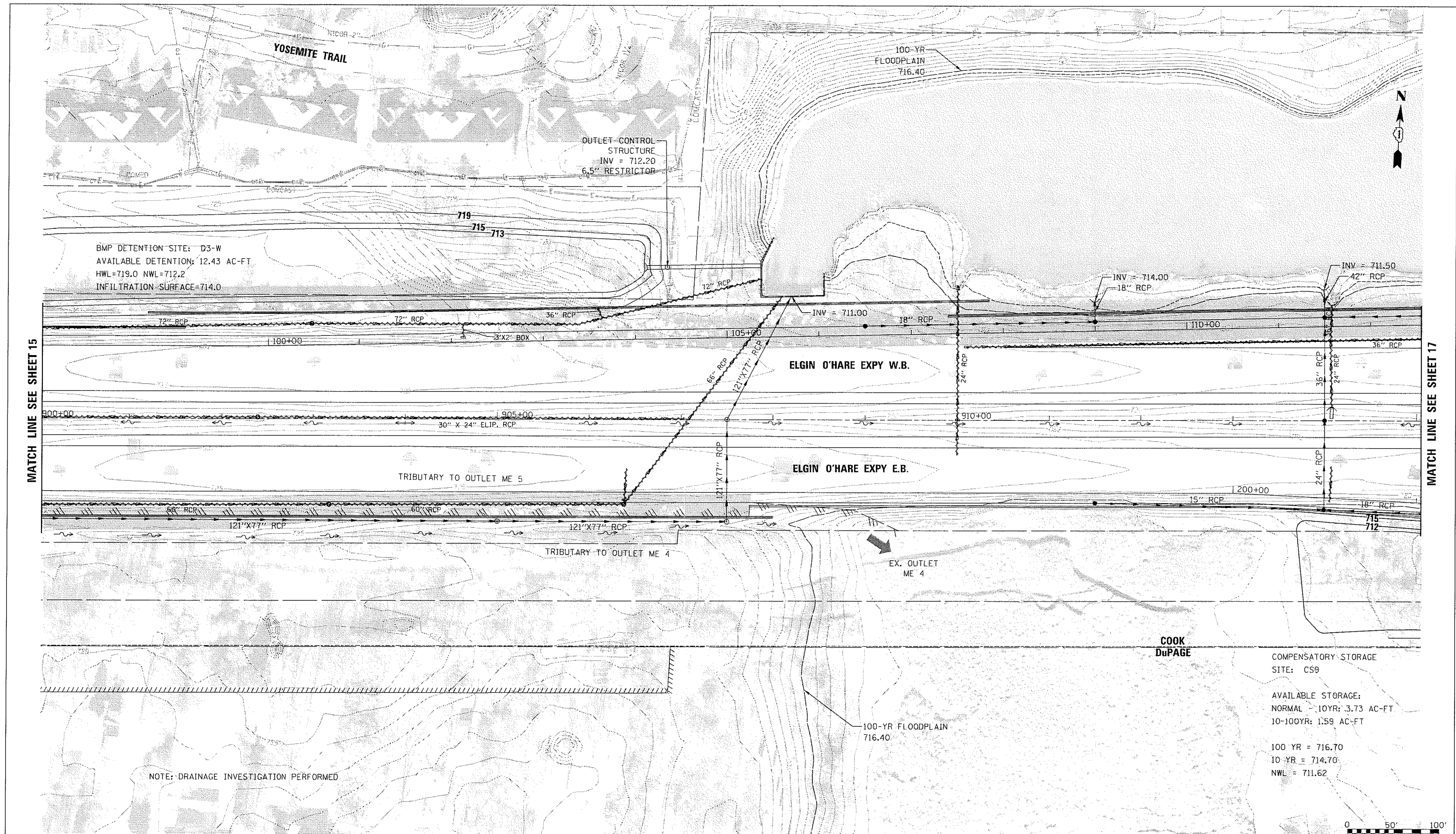
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PROJECT NO.	DATE
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10/16/13 AM



NOTE: DRAINAGE INVESTIGATION PERFORMED

LEGEND:

BOUNDARY LINES/STATIONING	EXISTING	PROPOSED	SWALE	EXISTING	PROPOSED	OVERFLOW	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE	---	---	DITCH	---	---	OUTLET	---	---
RIGHT OF WAY LINE	---	---	DITCH SUMMIT	---	---	SHEET FLOW	---	---
COUNTY LINE	---	---	CULVERT SIZE/TYPE	2 X 2 BOX	2 X 2 BOX	DITCH CHECK	---	---
DRAINAGE DIVIDE (HYDROLOGIC ATLAS)	---	---	HEADWALL	---	---	DRAINAGE BOUNDARY	---	---
TEMPORARY EASEMENT	---	---	CATCH BASIN	---	---			
PERMANENT EASEMENT	---	---	INLET/SCUPPER	---	---			
STORM SEWER REMOVAL	---	---	MANHOLE	---	---			
			INVERT	---	---			
			STORM SEWER	---	---			

FILE NAME =	USER NAME = eanderson	DESIGNED MA	REVISED -
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	PLOT SCALE = 100'	CHECKED CW	REVISED -
	PLOT DATE = 6/27/2012	DATE -	REVISED -

DRAINAGE PROPOSAL

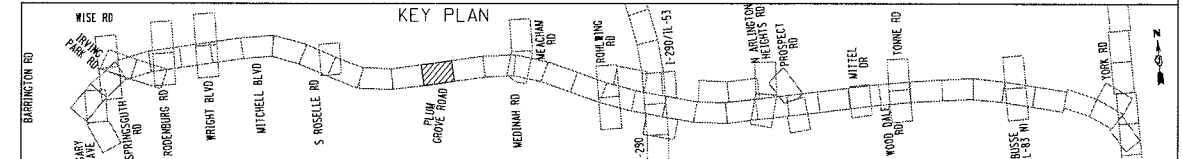
- MAINTAIN EXISTING STORM SEWERS AND EXISTING DITCHES UNLESS NOTED TO CONTRARY.
- CONSTRUCT NEW DETENTION BASINS(S).
- CONSTRUCT COMPENSATORY STORAGE BASIN(S).
- CONSTRUCT PROPOSED DRAINAGE SYSTEM INCLUDING STORM SEWERS, DITCHES AND PIPE CULVERTS. INLET LOCATIONS ARE FOR ILLUSTRATION PURPOSE ONLY



ELGIN O'HARE  
WEST BYPASS  
communities. opportunities. solutions.



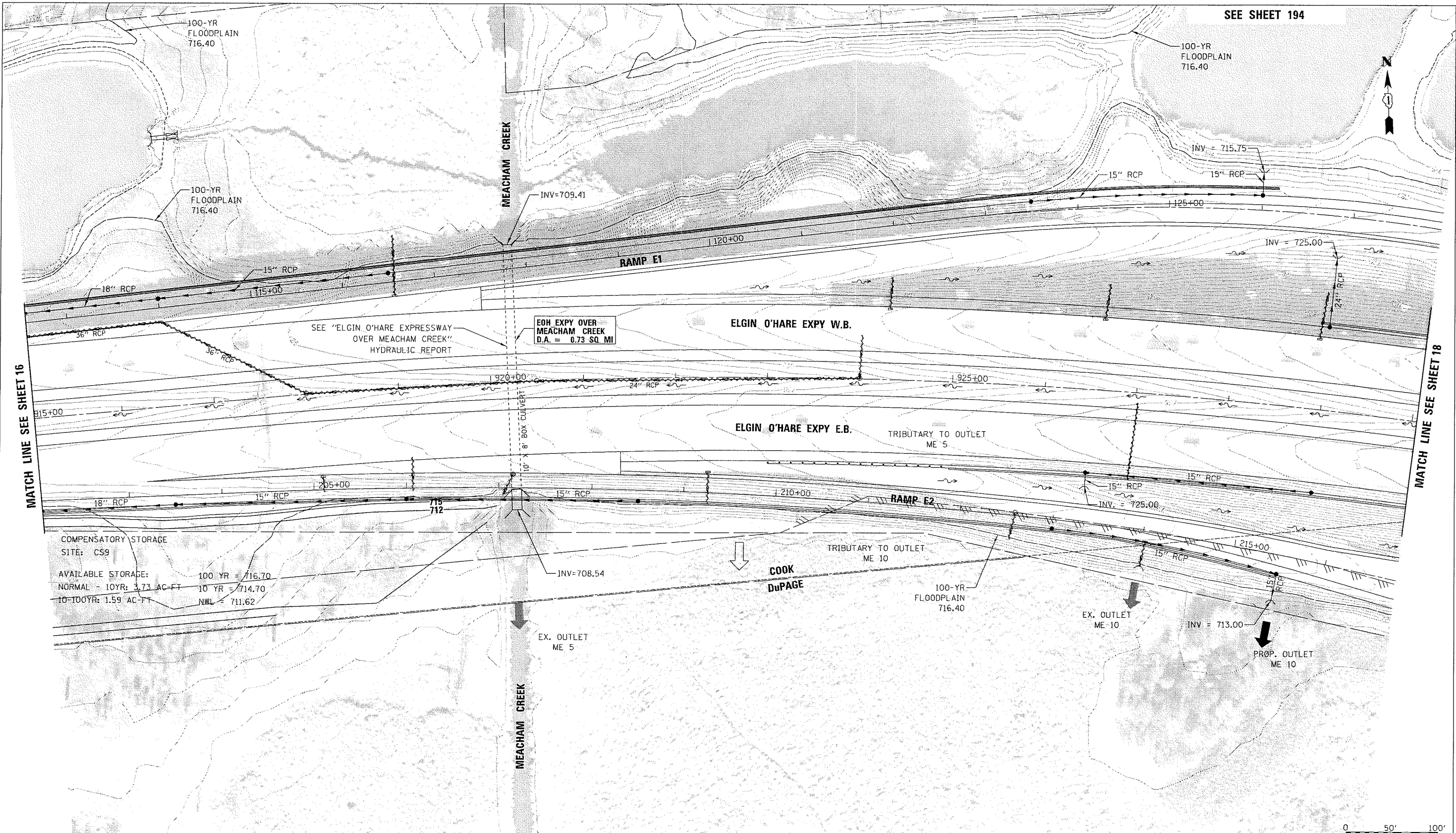
ILLINOIS Department  
of Transportation  
CHRISTOPHER B. BURKE  
GOVERNOR



PROPOSED DRAINAGE PLAN MEACHAM CREEK WATERSHED ELGIN O'HARE EXPRESSWAY				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: 1"=50'						COOK, DuPAGE	231	16
SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO.				
				ILLINOIS FED. AID PROJECT				



SEE SHEET 194



MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 16

COMPENSATORY STORAGE  
SITE: CS9  
AVAILABLE STORAGE:  
NORMAL - 10YR: 3.73 AC-FT  
10-100YR: 1.59 AC-FT  
100 YR = 716.70  
10 YR = 714.70  
NWL = 711.62

SEE "ELGIN O'HARE EXPRESSWAY  
OVER MEACHAM CREEK"  
HYDRAULIC REPORT

EOH EXPY OVER  
MEACHAM CREEK  
D.A. = 0.73 SQ MI

ELGIN O'HARE EXPY W.B.

ELGIN O'HARE EXPY E.B.

TRIBUTARY TO OUTLET  
ME 5

TRIBUTARY TO OUTLET  
ME 10

COOK  
DuPAGE

100-YR  
FLOODPLAIN  
716.40

EX. OUTLET  
ME 10

PROP. OUTLET  
ME 10

LEGEND:

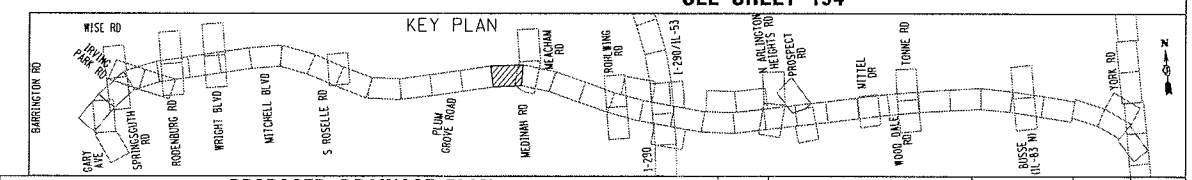
BOUNDARY LINES/SYMBOLS	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE	---	---
RIGHT OF WAY LINE	---	---
COUNTY LINE	---	---
DRAINAGE DIVIDE	---	---
HYDROLOGIC ATLAS	---	---
TEMPORARY EASEMENT	---	---
PERMANENT EASEMENT	---	---
STORM SEWER REMOVAL	---	---

SWALE	EXISTING	PROPOSED
DITCH	---	---
DITCH SUMMIT	---	---
CULVERT SIZE/TYPE	2 X 2 BOX	2 X 2 BOX
HEADWALL	---	---
CATCH BASIN	---	---
INLET/SCUPPER	---	---
MANHOLE	---	---
INVERT	---	---
STORM SEWER	---	---

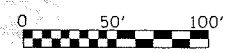
OVERFLOW	EXISTING	PROPOSED
OUTLET	---	---
SHEET FLOW	---	---
DITCH CHECK	---	---
DRAINAGE BOUNDARY	---	---

DRAINAGE PROPOSAL

- MAINTAIN EXISTING STORM SEWERS AND EXISTING DITCHES UNLESS NOTED TO CONTRARY.
- CONSTRUCT COMPENSATORY STORAGE BASINS.
- CONSTRUCT PROPOSED DRAINAGE SYSTEM INCLUDING STORM SEWERS, DITCHES AND PIPE CULVERTS. INLET LOCATIONS ARE FOR ILLUSTRATION PURPOSE ONLY



SEE SHEET 194



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DEONB-sh1-pr-drain-EOPI6_FulBuild.dgn		DRAWN MYG	REVISED -
		CHECKED CW	REVISED -
		DATE -	REVISED -

ELGIN O'HARE  
WEST BYPASS  
communities. opportunities. solutions.

Illinois Department  
of Transportation

**PROPOSED DRAINAGE PLAN**  
**MEACHAM CREEK WATERSHED**  
**ELGIN O'HARE EXPRESSWAY**  
SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK, DuPAGE	231	17
			CONTRACT NO.	

ILLINOIS FED. AID PROJECT

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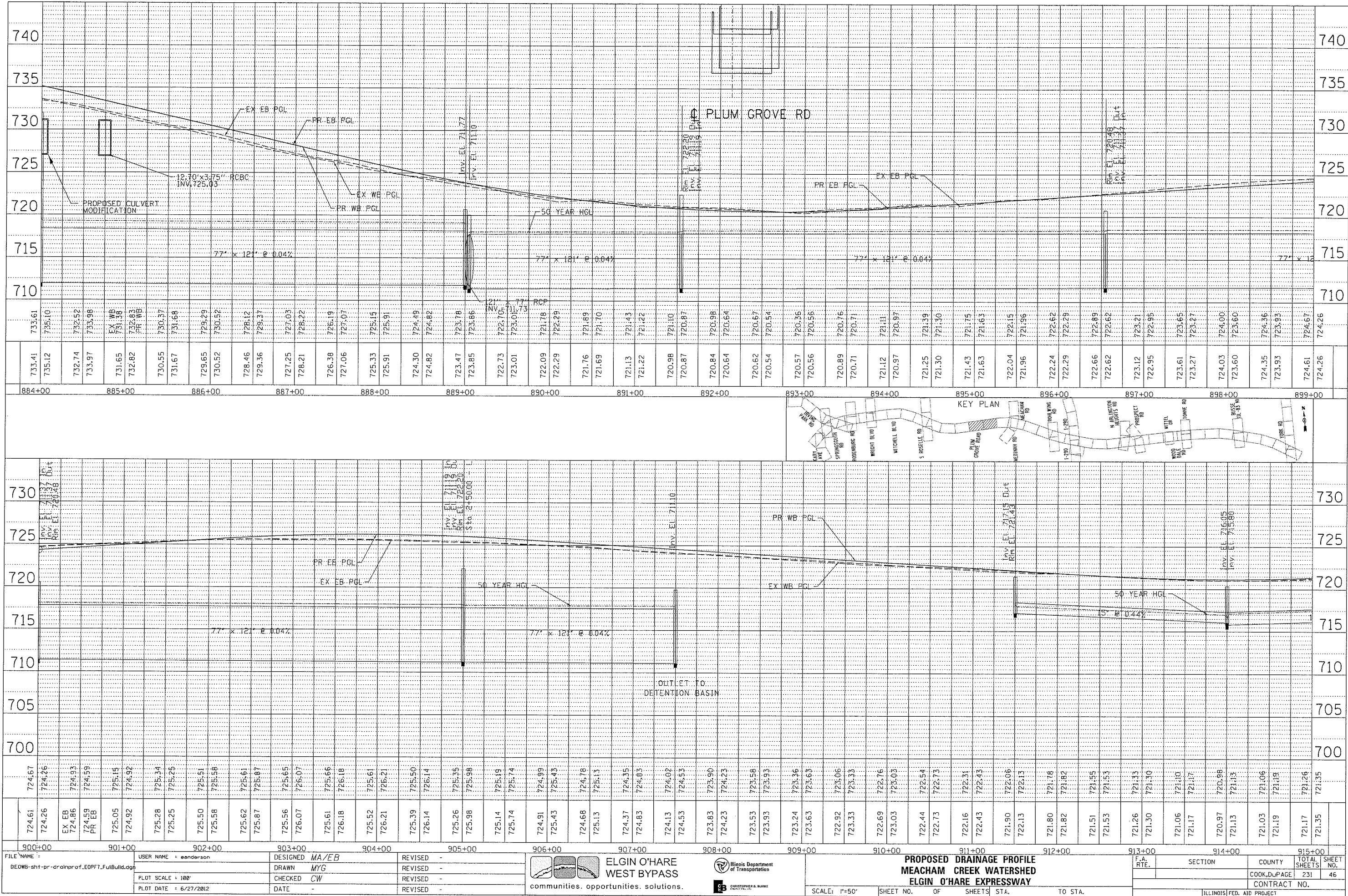




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ALIGNED	NOTED		
NOTE BOOK	CHECKED		
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PROFILE	SURVEYED	BY	DATE
NOTED	NOTED		
NOTE BOOK	CHECKED		
NO.	CADD FILE NAME		

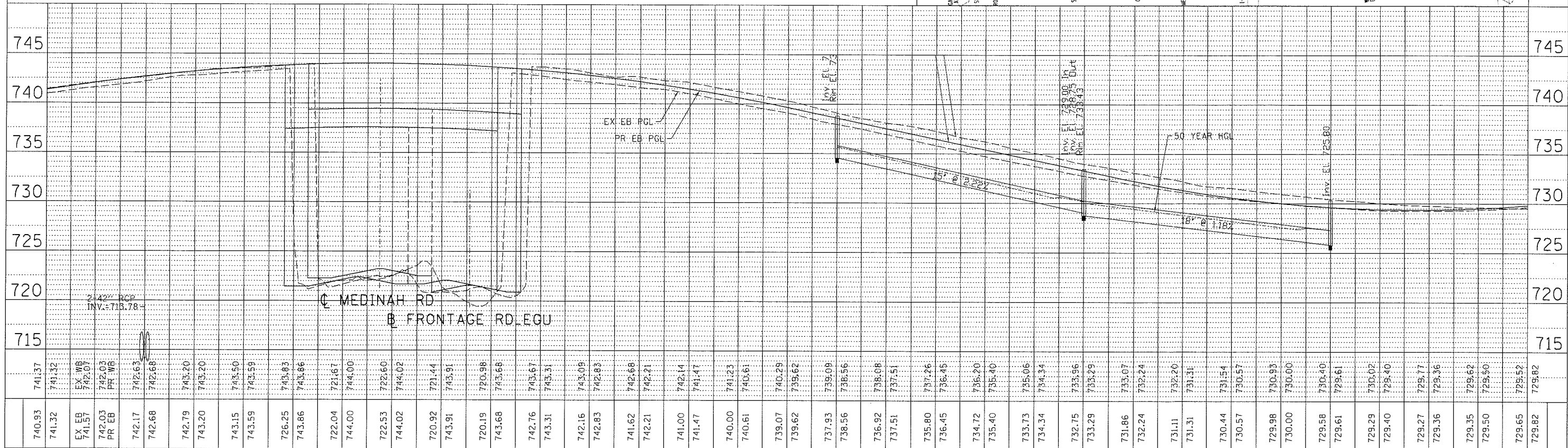
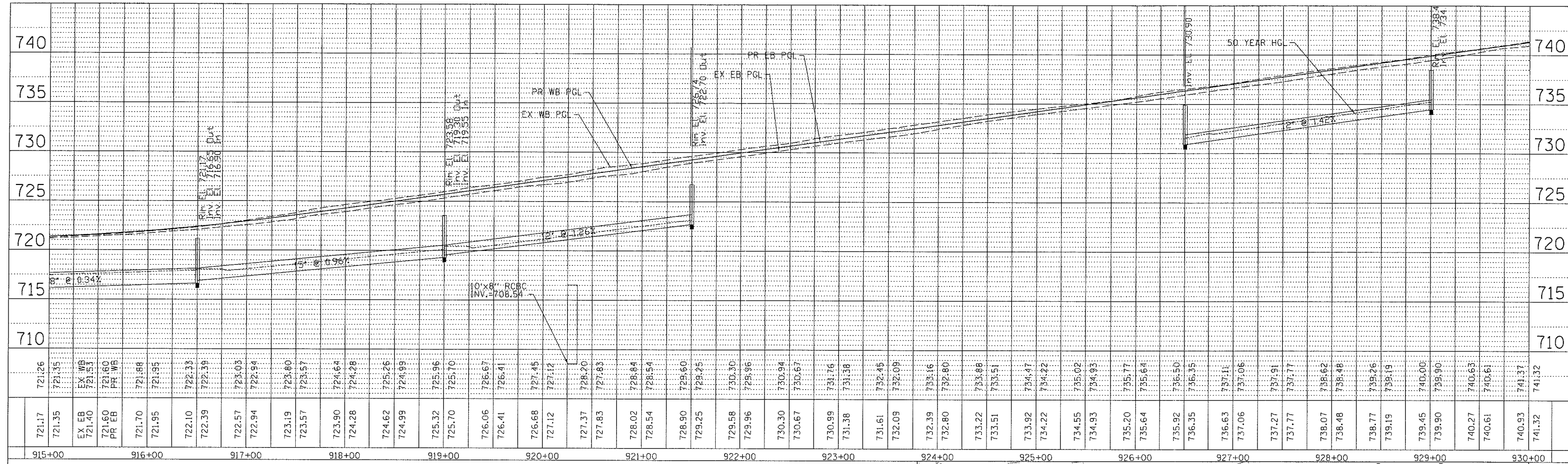
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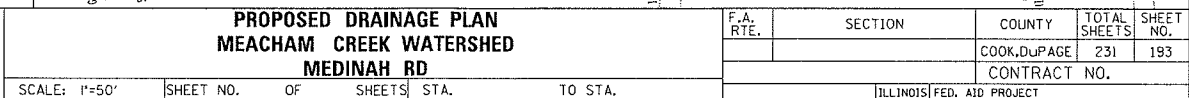
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NOTE BOOK	ALIGNMENT CHECKED		
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NOTED	PLOTTED		
NOTE BOOK	ALIGNMENT CHECKED		
NO.	CADD FILE NAME		

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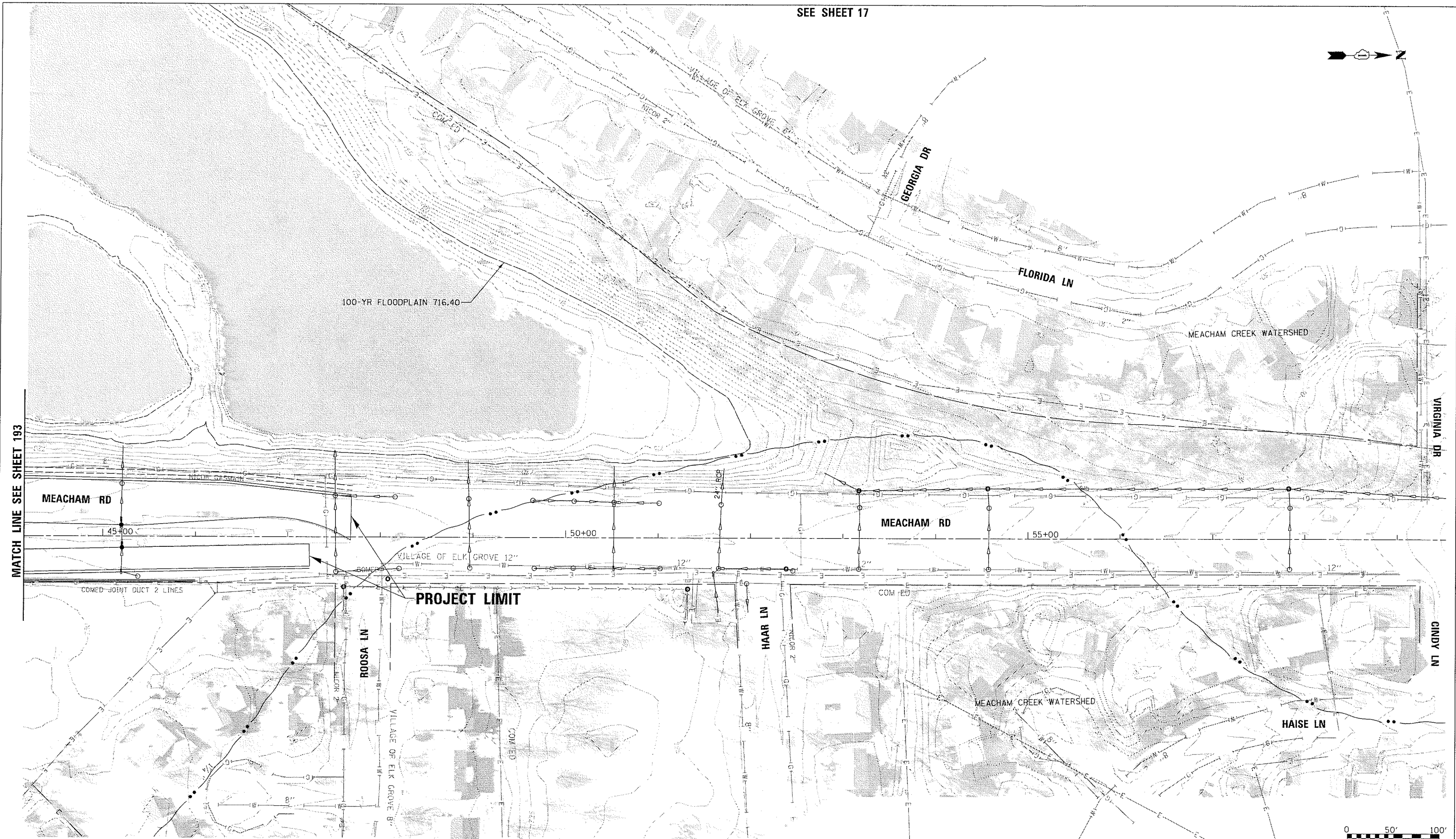
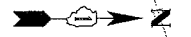
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PLOT SCALE = 100'		CHECKED CW	REVISED -	CONTRACT NO.												
PLOT DATE = 6/27/2012		DATE -	REVISED -	communities. opportunities. solutions.												
						 CURTIS D. BURKE ENGINEER	SCALE: 1"=50'		SHEET NO.	OF	SHEETS	STA.	TO STA.			
													ILLINOIS FED. AID PROJECT			



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SEE SHEET 17



MATCH LINE SEE SHEET 193

LEGEND:

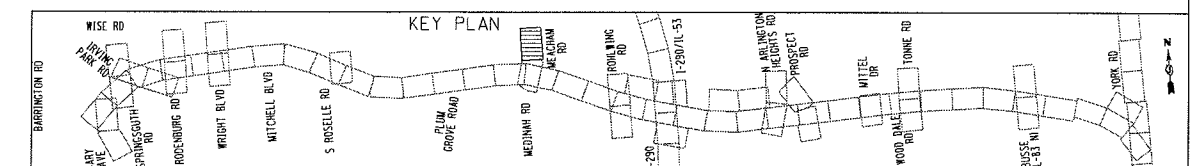
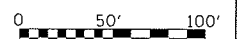
BOUNDARY LINES/SYMBOLS	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE	---	---
RIGHT OF WAY LINE	---	---
COUNTY LINE	---	---
DRAINAGE DIVIDE (HYDROLOGIC ATLAS)	---	---
TEMPORARY EASEMENT	---	---
PERMANENT EASEMENT	---	---
STORM SEWER REMOVAL	---	---
SWALE	---	---
DITCH	---	---
CULVERT SIZE/TYPE	2 X 2 BOX	2 X 2 BOX
HEADWALL	---	---
CATCH BASIN	---	---
INLET/SCUPPER	---	---
MANHOLE	---	---
INVERT	---	---
STORM SEWER	---	---

EXISTING	PROPOSED
OVERFLOW	---
OUTLET	---
SHEET FLOW	---
DITCH CHECK	---
DRAINAGE BOUNDARY	---

DRAINAGE PROPOSAL

•MAINTAIN EXISTING STORM SEWERS AND EXISTING DITCHES UNLESS NOTED TO CONTRARY.

SEE SHEET 18



PROPOSED DRAINAGE PLAN  
MEACHAM CREEK WATERSHED  
MEDINAH RD

SCALE: 1"=50' SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK, DuPAGE	231	194
			CONTRACT NO.	

ILLINOIS FED. AID PROJECT

ELGIN O'HARE  
WEST BYPASS  
communities. opportunities. solutions.



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10/20/24 AM

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USER NAME = eanderson

DESIGNED MA

DRAWN MYG

CHECKED CW

DATE -

REVISED -

REVISED -

REVISED -

REVISED -



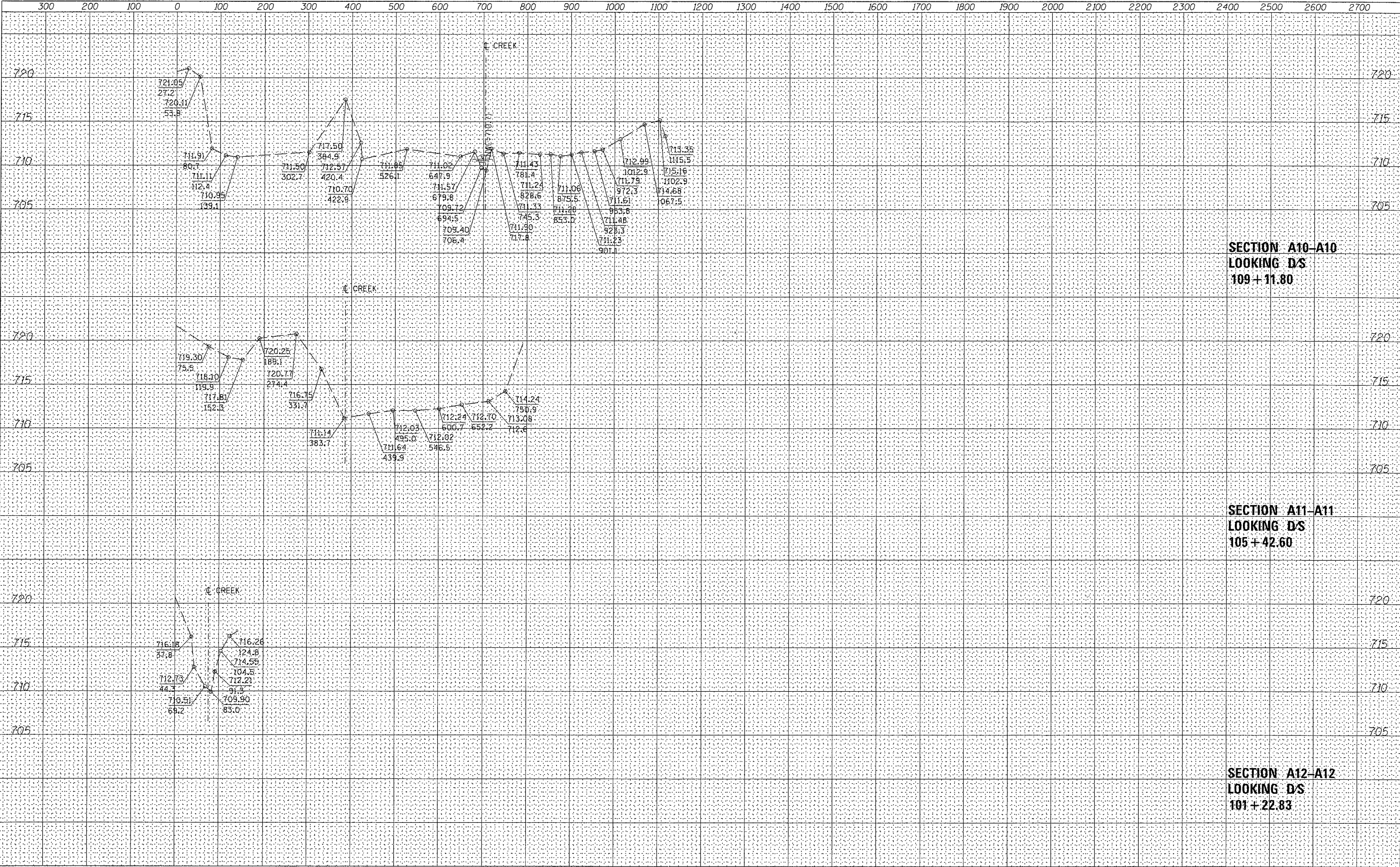
# Tab 6

## **SECTION 6**

**CROSS SECTION PLOTS  
STRUCTURE OPENING PLOTS**

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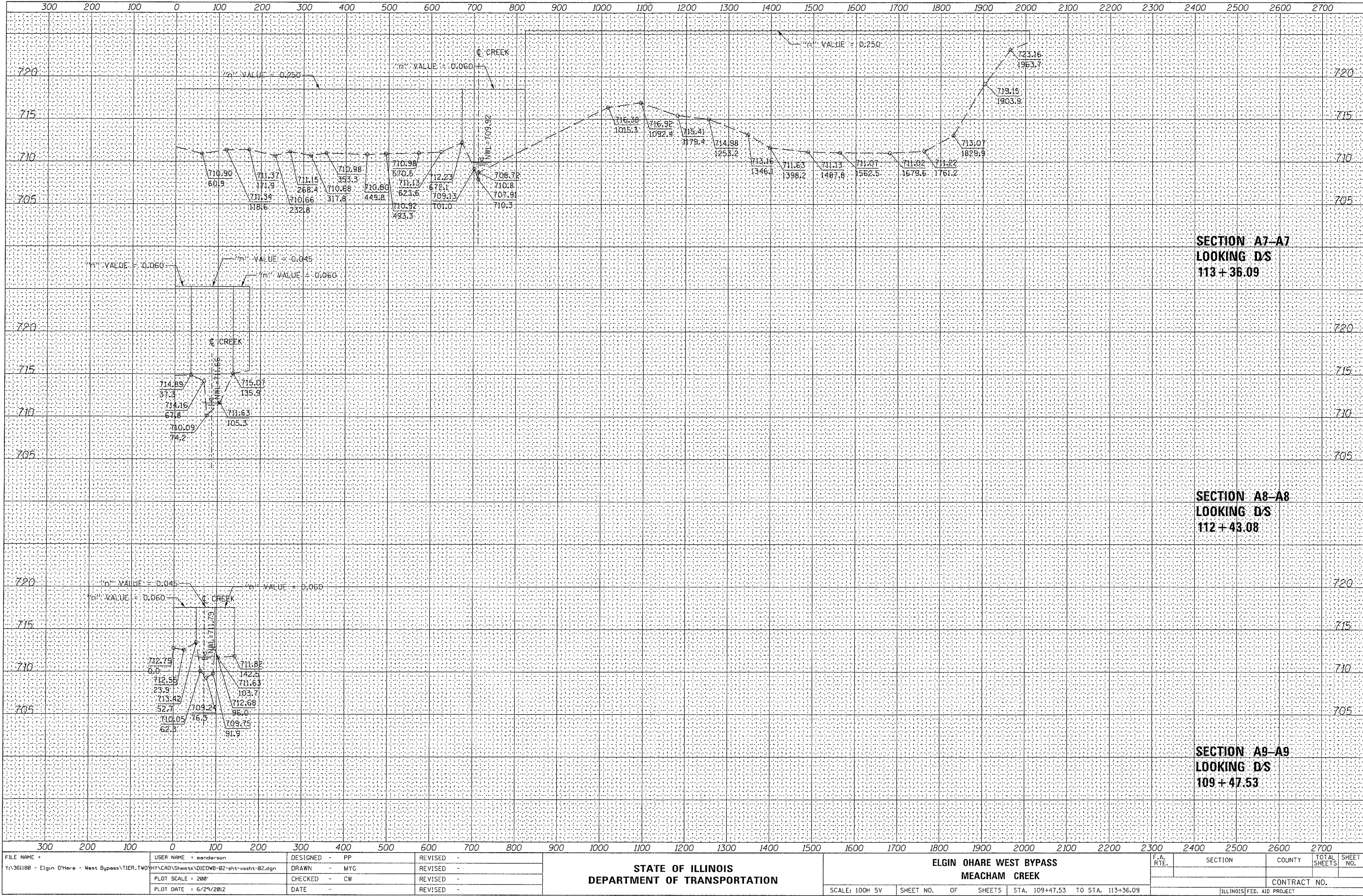
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DATE	BY
SURVEYED	TEMPL
NO.	NO.
NOTE BOOK	AREAS CHECKED

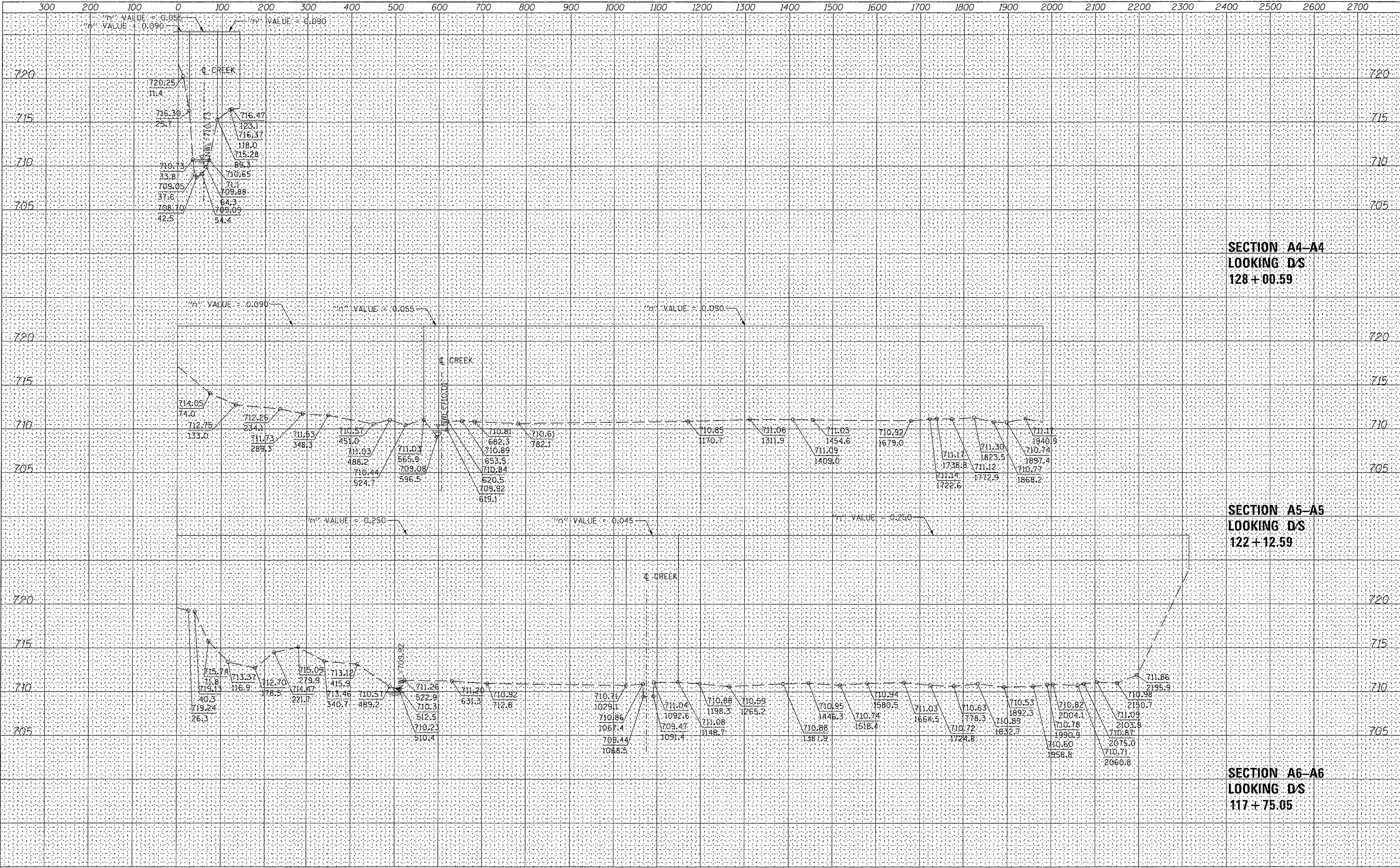
DATE	BY
ORIGINAL	PL
NO.	NO.
NOTE BOOK	AREAS CHECKED





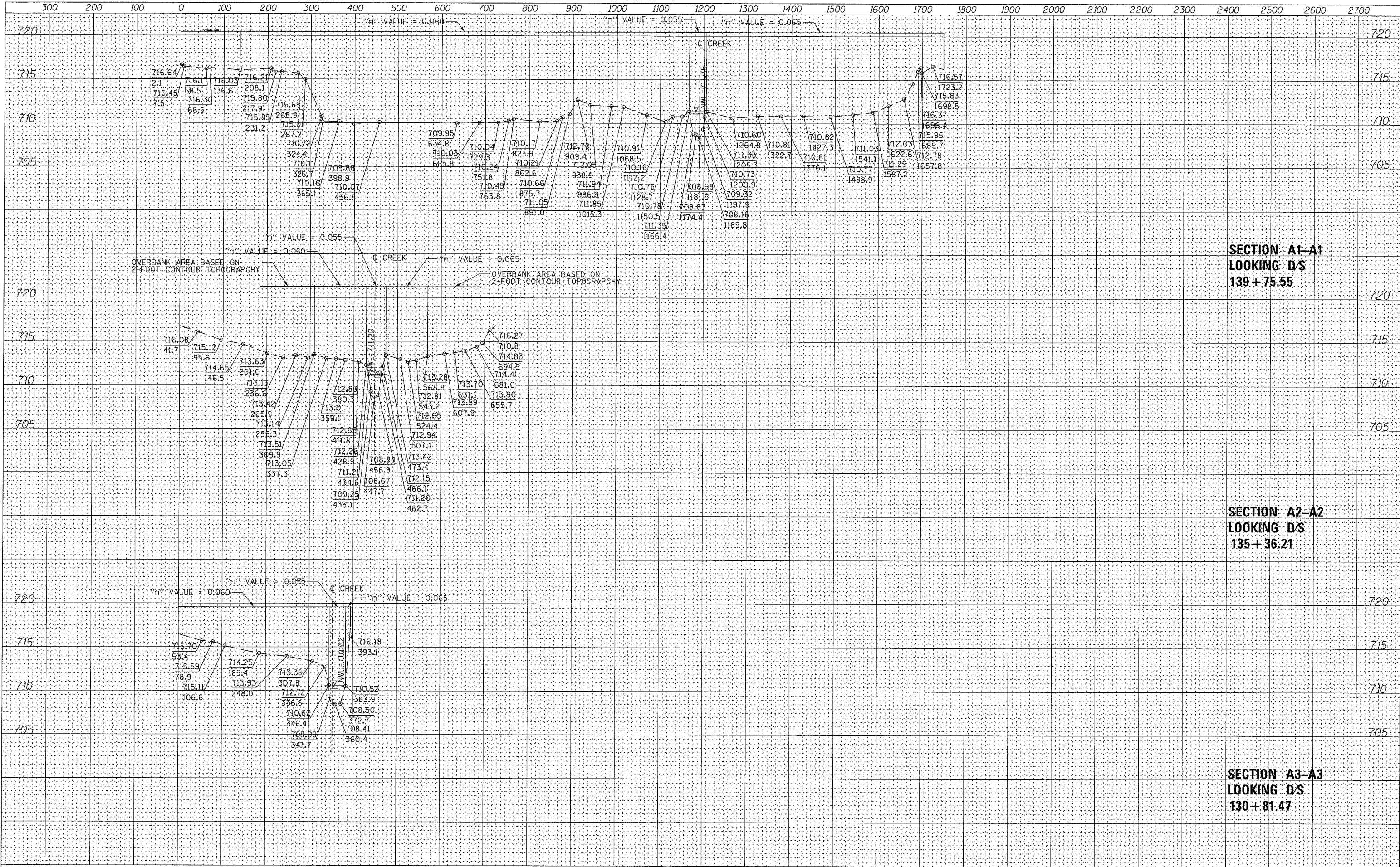
FINAL SURVEY	DATE
	BY
	SURVEYED
	PLOTTED
NO.	NOTE BOOK
	DATE
	AREAS CHECKED

ORIGINAL SURVEY	DATE
	BY
	SURVEYED
	PLOTTED
NO.	NOTE BOOK
	DATE
	AREAS CHECKED



FINAL SURVEY	DATE
	BY
	SURVEYED
	PLOTTED
NOTE BOOK	NO.
	DATE
	BY
	NO.

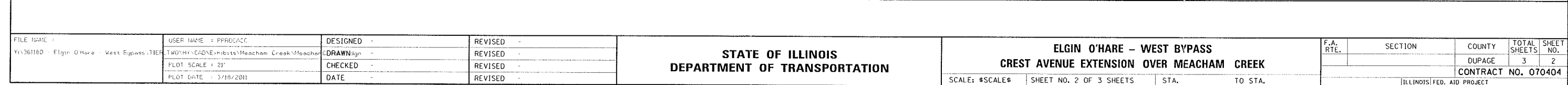
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	BY
	SURVEYED
	PLOTTED
NOTE BOOK	NO.
	DATE
	BY
	NO.







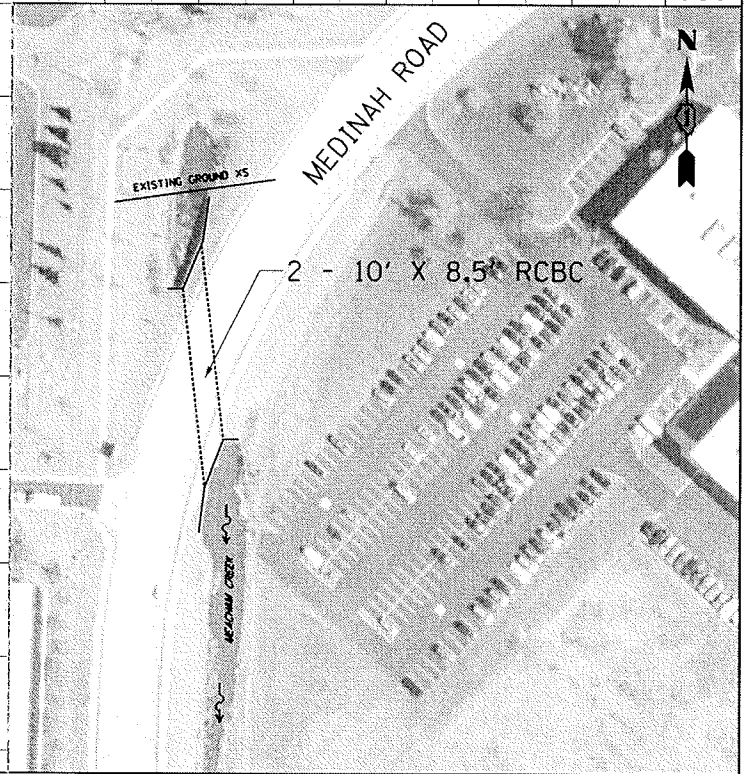
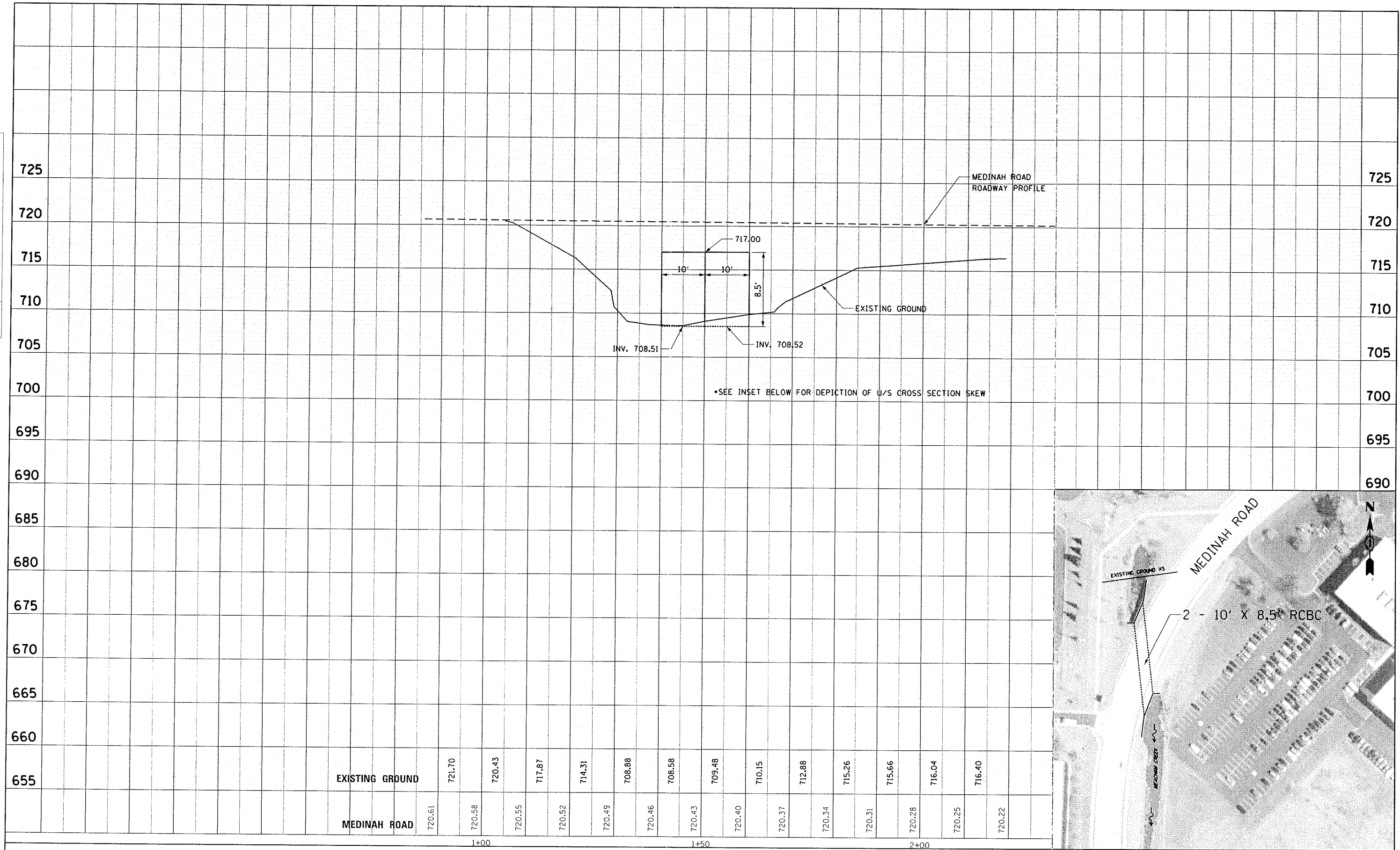
DATE	FILE	RECEIVED	DATE	FILE	RECEIVED





PLAN	DESIGNED	BY	DATE
	NOTED		
	ALIGNED		
	CHECKED		
	NO.		

PROFILE	DESIGNED	BY	DATE
	NOTED		
	ALIGNED		
	CHECKED		
	NO.		



FILE NAME - Y:\361180 - Elgin O'Hare - West Bypass\TIER	USER NAME - PPRGACC	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELGIN O'HARE - WEST BYPASS MEDINAH ROAD OVER MEACHAM CREEK	SCALE: *SCALE* SHEET NO. 3 OF 3 SHEETS STA. TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TWO\HY\CAD\VE-Hubbs\Meacham Creek\Meacham	DRAWN -	REVISED -								
		CHECKED -	REVISED -								
		DATE -	REVISED -								

**Tab 7**

## **SECTION 7**

### **REGULATORY HYDROLOGIC AND HYDRAULIC MODELING**

The regulatory water profile information was taken from the Flood Insurance Study information included in SECTION 3.

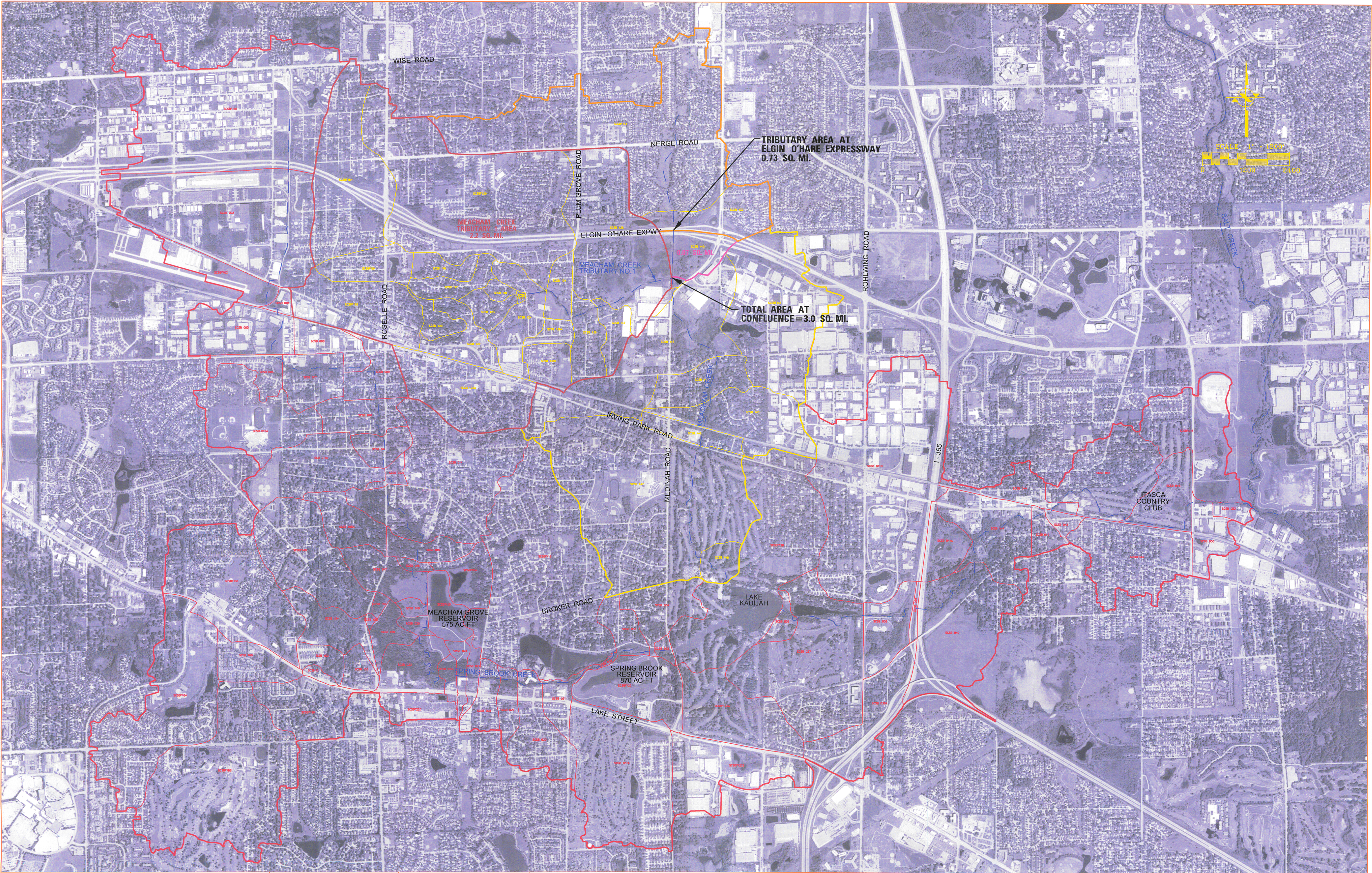


**TAB 8**

## **SECTION 8**

### **BASELINE CONDITIONS ANALYSIS**







# SPRING BROOK FEQ MODEL SCHEMATIC

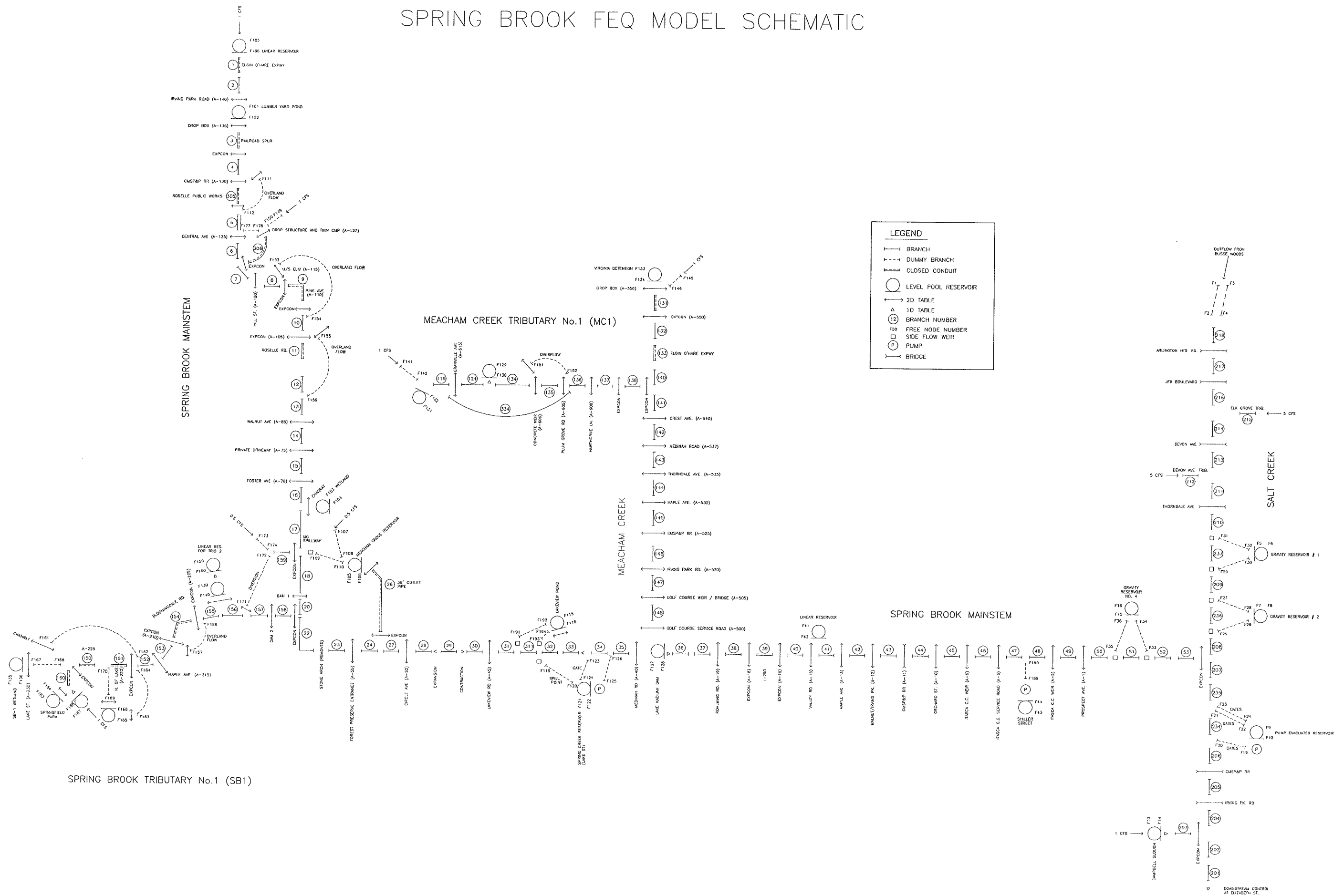


Figure No. A-1  
SPRING BROOK FEQ MODEL SCHEMATIC



Baseline Conditions

[Floder: \SpringBrookTSC\FEQ\070404\baseline]  
FEQ Input File for Long TSF: scsblong.feq  
FEQ Peak File for Long TSF: scsblong.fff  
FEQ Output File for Long TSF: scsblong  
FEQ Input File for BIG TSF: scsbb15a.feq  
FEQ Peak File for BIG TSF: scsbb15a.fff  
FEQ Output File for BIG TSF: scsbb15a  
PVSTATS Analysis: See Folder pvstats\_BL

Existing Conditions

[Floder: \SpringBrookTSC\FEQ\070404\Exist]  
FEQ Input File for Long TSF: sblNGe5.feq  
FEQ Peak File for Long TSF: sblNGe5.fff  
FEQ Output File for Long TSF: sblNGe5  
FEQ Input File for BIG TSF: sb815e5.feq  
FEQ Peak File for BIG TSF: sb815e5.fff  
FEQ Output File for BIG TSF: sb815e5  
PVSTATS Analysis: See Folder pvstats\_e5

Natural Conditions - Remove Elgin O'Hare Expressway, and keep Crest Avenue and Medinah (Table 3 of the Report)

[Floder: \SpringBrookTSC\FEQ\070404\natural1]  
FEQ Input File for Long TSF: sblNGn1c.feq  
FEQ Peak File for Long TSF: sblNGn1c.fff  
FEQ Output File for Long TSF: sblNGn1c  
FEQ Input File for BIG TSF: sb815n1c.feq  
FEQ Peak File for BIG TSF: sb815n1c.fff  
FEQ Output File for BIG TSF: sb815n1c  
PVSTATS Analysis: See Folder pvstats\_n1c

Natural Conditions - Remove Crest Avenue, and keep Elgin O'Hare Expressway and Medinah Road (Table 4 of the Report)

[Floder: \Devon\FEQ\070404\natural4]  
FEQ Input File for Long TSF: sblNGn4c.feq  
FEQ Peak File for Long TSF: sblNGn4c.fff  
FEQ Output File for Long TSF: sblNGn4c  
FEQ Input File for BIG TSF: sb815n4c.feq  
FEQ Peak File for BIG TSF: sb815n4c.fff  
FEQ Output File for BIG TSF: sb815n4c  
PVSTATS Analysis: See Folder pvstats\_n4c

Natural Conditions - Remove Medinah Road, and keep Elgin O'Hare Expressway and Crest Avenue (Table 5 of the Report)

[Floder: \SpringBrookTSC\FEQ\070404\natural12]  
FEQ Input File for Long TSF: sblNGn2c.feq  
FEQ Peak File for Long TSF: sblNGn2c.fff  
FEQ Output File for Long TSF: sblNGn2c  
FEQ Input File for BIG TSF: sb815n2c.feq  
FEQ Peak File for BIG TSF: sb815n2c.fff  
FEQ Output File for BIG TSF: sb815n2c  
PVSTATS Analysis: See Folder pvstats\_n2c

Natural Conditions - Remove Medinah Road and Crest Avenue, and keep Elgin O'Hare Expressway (Table 6 of the Report)

[Floder: \SpringBrookTSC\FEQ\070404\natural13]  
FEQ Input File for Long TSF: sblNGn3c.feq  
FEQ Peak File for Long TSF: sblNGn3c.fff  
FEQ Output File for Long TSF: sblNGn3c  
FEQ Input File for BIG TSF: sb815n3c.feq  
FEQ Peak File for BIG TSF: sb815n3c.fff  
FEQ Output File for BIG TSF: sb815n3c  
PVSTATS Analysis: See Folder pvstats\_n3c

Proposed Conditions

[Floder: \SpringBrookTSC\FEQ\070404\Proposed]  
FEQ Input File for Long TSF: sblNGp3.feq  
FEQ Peak File for Long TSF: sblNGp3.fff  
FEQ Output File for Long TSF: sblNGp3  
FEQ Input File for BIG TSF: sb815p3.feq

FEQ Peak File for BIG TSF: sb815p3.fff  
FEQ Output File for BIG TSF: sb815p3  
PVSTATS Analysis: See Folder pvstats\_p3

Vertical Datum Shift at Tribshed Centroid:  
(NGVD29 Z) - (NAVD88 Z) = Vert\_Datum\_Z\_Diff

Tribshed	Centroid_X	Centroid_Y	Vert_Datum_Z_Diff
DPAC	1090851.805	1915917.988	0.284
DPBD	1090300.408	1928251.631	0.289
DPBP	1069526.246	1834401.078	0.273
DPCT	1095138.663	1933742.369	0.297
DPDP	1086075.951	1836308.959	0.281
DPFC	1092186.933	1862169.450	0.273
DPWL	1087693.122	1935775.362	0.290
DULC	1068557.762	1844102.949	0.269
DUSG	1024560.823	1846891.871	0.260
EBAR	1054307.337	1912078.738	0.265
EBAT	1063079.858	1918498.724	0.271
EBCR	1063409.687	1850057.241	0.269
EBE1	1064848.564	1908545.753	0.274
EBE2	1056600.283	1905924.860	0.266
EBE3	1067754.554	1889224.245	0.274
EBE6	1049763.550	1858655.226	0.266
EBE7	1050951.260	1852487.637	0.266
EBEB	1057861.023	1878313.365	0.269
EBGL	1056727.717	1890149.084	0.267
EBGP	1068420.299	1882803.828	0.271
EBLA	1069166.542	1877016.345	0.270
EBPR	1067217.160	1857896.209	0.269
EBRC	1042528.535	1874506.900	0.263
EBSJ	1071053.387	1867231.853	0.268
EBSM	1062134.451	1921591.295	0.271
EBTS	1068312.705	1886187.964	0.273
EBWI	1050210.931	1882005.809	0.266
FRBC	1012948.509	1932703.573	0.260
FRIC	1006861.549	1867709.057	0.238
FRNC	1010296.442	1920800.567	0.250
FRWA	1012353.067	1853795.526	0.244
SCBW	1086620.100	1874905.185	0.269
SCDA	1069824.327	1939096.404	0.282
SCGC	1081124.119	1882900.764	0.273
SCOB	1083032.901	1888401.164	0.278
SCSB	1058010.472	1933660.642	0.280
SCSC	1083902.855	1908499.038	0.282
SCSU	1077616.404	1893610.873	0.276
SCWC	1070755.062	1916608.760	0.277
SWSW	1083447.228	1846508.809	0.268
SWWD	1074386.588	1847435.676	0.266
WBCC	1034367.472	1867556.844	0.263
WBFE	1014752.456	1876081.139	0.252
WBFX	1037056.063	1845059.989	0.267
WBKC	1040926.759	1912276.937	0.260
WBKR	1010353.705	1900888.881	0.245
WBSP	1040160.456	1887762.853	0.257
WBSR	1041615.540	1862408.865	0.266
WBW1	1040852.583	1928887.384	0.269
WBW2	1028202.170	1938439.343	0.262
WBW3	1022203.395	1909294.269	0.256
WBW4	1031770.194	1914696.360	0.262
WBW5	1026104.116	1900851.136	0.256
WBW6	1043797.510	1856220.038	0.266
WBW7	1044498.398	1853424.223	0.265
WBW8	1035709.627	1840964.889	0.269
WBWB	1032468.229	1902535.180	0.258
WBWF	1043025.773	1898112.419	0.256
WBWG	1034722.953	1849634.602	0.268

Spring Brnck

## **Summary of Flood Elevations**



**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Baseline Conditions Elevations**  
**FEQ Model Used: scsbLONG.feq and sbscB15a.feq**  
**September 21, 2011**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0:F134)		710.72	717.60	719.16	719.71	720.85
XS_512c	U132 386 feet us Elgin-OHare Culvert (132:1321)	13550	709.22	714.88	716.37	716.84	717.89
XS_512	D132 USF of Elgin-OHare Culvert (132:1326)	13164	709.32	714.87	716.37	716.84	717.89
XS_510c	U140 USF of Elgin-OHare Culvert (140:1401)	12900	708.72	714.69	716.27	716.78	717.86
XS_510	644 feet DS of Elgin-OHare Culvert (140:1408)	12256	708.16	714.33	716.04	716.64	717.80
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1412)	11733	708.55	714.33	716.04	716.64	717.80
XS_501c	D140 Confluec of Trib 1 (140:1414)	11694	708.55	714.33	716.04	716.64	717.80
XS_500c	U141 Confluec of Trib 1 (141:1411)	11694	708.59	714.33	716.04	716.64	717.80
XS_498	D141 USF of Crest Ave (141:1423)	11470	708.36	714.33	716.01	716.61	717.78
XS_489c	U142 DSF of Crest Ave (142:1421)	11348	708.01	713.80	715.30	715.95	717.58
XS_489	D142 USF of Medinah Road (142:1424)	11323	708.01	713.80	715.29	715.94	717.56
XS_488c	U143 DSF of Medinah Road (143:1431)	11103	708.81	713.69	715.18	715.83	717.22
XS_488	120 feet DS of Medinah Road (143:1433)	10983	708.81	713.69	715.18	715.83	717.22
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.69	715.17	715.82	717.22
XS_486	590 feet DS of Medinah Road (143:1440)	10513	709.02	713.69	715.12	715.76	717.22
XS_485	925 feet DS of Medinah Road (143:1444)	10178	708.69	713.67	715.12	715.76	717.22
XS_484	1095 feet DS of Medinah Road (143:1447)	10008	708.73	713.67	715.12	715.76	717.22
XS_985	D143 USF of Thorndale Road (143:1455)	8976	707.18	713.61	715.12	715.76	717.22
XS_470	U144 DSF of Thorndale Road (144:1441)	8842	708.32	713.16	714.66	715.35	717.22
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	713.04	714.60	715.31	717.22
XS_460	D144 USF of Maple Ave (144:1451)	7781	708.47	712.73	714.40	715.19	717.22

## Summary of Flow Rates

PVSTATS Statistical Analysis Results  
Meacham Creek - Baseline Conditions Elevations  
FEQ Model Used: scsBLONG.feq and sbscB15a.feq  
September 21, 2011

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)		710.72	261	550	684	1012
XS_512c	U132 386 feet us Elgin-OHare Culvert (132:1321)	13550	709.22	262	551	683	1010
XS_512	D132 USF of Elgin-OHare Culvert (132:1326)	13164	709.32	260	565	706	1058
XS_510c	U140 USF of Elgin-OHare Culvert (140:1401)	12900	708.72	260	566	707	1062
XS_510	644 feet DS of Elgin-OHare Culvert (140:1408)	12256	708.16	49	84	100	141
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1412)	11733	708.55	62	108	131	199
XS_501c	D140 Confluec of Trib 1 (140:1414)	11694	708.55	63	109	134	203
XS_500c	U141 Confluec of Trib 1 (141:1411)	11694	708.59	152	424	601	1050
XS_498	D141 USF of Crest Ave (141:1423)	11470	708.36	148	424	611	1024
XS_489c	U142 DSF of Crest Ave (142:1421)	11348	708.01	148	424	611	1024
XS_489	D142 USF of Medinah Road (142:1424)	11323	708.01	149	426	613	1025
XS_488c	U143 DSF of Medinah Road (143:1431)	11103	708.81	149	426	613	1025
XS_488	120 feet DS of Medinah Road (143:1433)	10983	708.81	172	409	559	1081
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	153	443	634	1057
XS_486	590 feet DS of Medinah Road (143:1440)	10513	709.02	182	401	526	910
XS_485	925 feet DS of Medinah Road (143:1444)	10178	708.69	202	383	464	661
XS_484	1095 feet DS of Medinah Road (143:1447)	10008	708.73	199	376	455	646
XS_985	D143 USF of Thorndale Road (143:1455)	8976	707.18	171	352	460	806
XS_470	U144 DSF of Thorndale Road (144:1441)	8842	708.32	171	352	460	806
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	168	337	438	764
XS_460	D144 USF of Maple Ave (144:1451)	7781	708.47	169	336	436	760



## **An Excerpt from PSTATS Output File**

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):					
	2.0	5.0	10.0	25.0	50.0	75.0
1	77.6	164.4	261.3	421.1	550.3	627.8
2	78.7	165.4	262.2	421.8	550.5	627.7
3	69.9	156.7	260.2	428.9	564.7	646.6
4	69.8	156.7	260.3	429.3	565.7	647.9
5	23.4	35.8	48.7	68.1	83.7	93.2
6	29.4	47.3	62.2	86.2	107.5	121.1
7	29.6	47.9	63.0	87.6	109.3	123.3
8	69.1	110.8	152.3	273.0	424.0	525.6
9	68.9	109.6	148.3	264.4	424.1	533.1
10	68.9	109.6	148.3	264.4	424.1	533.1
11	68.9	109.6	148.6	265.9	426.1	535.1
12	68.9	109.6	148.6	265.9	426.1	535.1
13	70.0	116.4	172.0	290.4	409.0	492.3
14	70.0	112.6	153.4	277.8	442.5	553.8
15	71.9	123.2	181.8	294.2	400.5	471.3
16	76.6	134.2	202.2	303.3	382.5	429.8
17	76.3	132.3	199.4	298.3	375.7	421.8
18	78.7	124.6	171.4	262.0	352.0	412.9
19	78.7	124.6	171.4	262.0	352.0	412.9
20	78.6	123.3	168.1	252.9	336.7	393.6
21	79.1	124.2	169.4	253.1	335.9	392.1

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	683.6	821.5	904.5	964.5	1011.8
2	683.4	820.7	903.3	963.1	1010.1
3	705.9	853.0	942.3	1007.2	1058.4
4	707.4	855.5	945.3	1010.6	1062.3
5	100.1	117.2	127.5	135.0	140.8
6	131.4	158.2	175.5	188.4	198.8
7	133.8	161.4	179.1	192.3	203.0
8	601.4	791.4	904.9	986.2	1049.6
9	611.2	793.3	896.3	968.6	1024.4
10	611.2	793.3	896.3	968.6	1024.4
11	613.1	794.5	897.1	968.9	1024.5
12	613.1	794.5	897.1	968.9	1024.5
13	558.7	748.5	882.6	989.8	1080.7
14	633.6	820.4	926.0	999.9	1056.9
15	525.8	673.5	771.9	847.8	910.4
16	463.8	547.2	597.0	632.9	661.0
17	454.8	535.8	584.1	618.8	646.0
18	460.1	590.0	678.7	748.1	806.0
19	460.1	590.0	678.7	748.1	806.0
20	437.8	559.7	643.2	708.7	763.5
21	435.9	557.0	640.2	705.5	760.1

Flood Frequency Summary for Peak Elevation:

Sect	Return Period (years):					
	2.0	5.0	10.0	25.0	50.0	75.0
1	715.96	717.10	717.88	718.82	719.44	719.77
2	712.79	714.02	715.16	716.11	716.65	716.93
3	712.78	714.00	715.15	716.11	716.65	716.93
4	712.74	713.85	714.97	715.98	716.55	716.85
5	712.74	713.75	714.49	715.39	716.02	716.37
6	712.81	713.91	714.61	715.42	715.98	716.30
7	712.80	713.89	714.60	715.42	715.98	716.29
8	712.83	713.79	714.61	715.63	716.32	716.68
9	712.85	713.80	714.61	715.61	716.29	716.65
10	712.66	713.47	714.08	714.93	715.58	715.96
11	712.65	713.46	714.08	714.93	715.57	715.95
12	712.62	713.39	713.90	714.76	715.44	715.82
13	712.61	713.36	713.88	714.77	715.46	715.84
14	712.60	713.35	713.88	714.76	715.45	715.83
15	712.53	713.36	713.97	714.75	715.31	715.62
16	712.29	713.28	713.94	714.78	715.32	715.59
17	712.29	713.29	713.95	714.79	715.30	715.56
18	712.47	713.26	713.89	714.76	715.40	715.77
19	712.23	712.91	713.44	714.26	714.94	715.34
20	712.08	712.78	713.32	714.18	714.88	715.30
21	711.78	712.43	713.01	713.93	714.68	715.14

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	719.99	720.50	720.78	720.98	721.13
2	717.12	717.57	717.82	718.00	718.14
3	717.12	717.58	717.84	718.02	718.17
4	717.06	717.53	717.80	717.99	718.14
5	716.61	717.14	717.42	717.62	717.77
6	716.52	717.04	717.34	717.55	717.71

7	716.51	717.02	717.31	717.51	717.67
8	716.92	717.46	717.74	717.94	718.08
9	716.89	717.43	717.71	717.91	718.06
10	716.23	716.91	717.33	717.62	717.86
11	716.22	716.90	717.31	717.61	717.84
12	716.09	716.70	717.02	717.24	717.40
13	716.11	716.71	717.03	717.25	717.41
14	716.10	716.69	717.01	717.23	717.39
15	715.85	716.39	716.71	716.93	717.11
16	715.77	716.15	716.35	716.48	716.57
17	715.73	716.10	716.29	716.43	716.52
18	716.04	716.67	717.06	717.33	717.55
19	715.63	716.34	716.77	717.09	717.34
20	715.59	716.34	716.79	717.13	717.39
21	715.47	716.30	716.81	717.19	717.50



**TAB 9**

## **SECTION 9**

### **EXISTING CONDITIONS ANALYSIS**

Baseline Conditions

[Folder: \SpringBrookTSC\FEQ\070404\baseline]  
FEQ Input File for Long TSF: scsblong.feq  
FEQ Peak File for Long TSF: scsblong.fff  
FEQ Output File for Long TSF: scsblong  
FEQ Input File for BIG TSF: scsbb15a.feq  
FEQ Peak File for BIG TSF: scsbb15a.fff  
FEQ Output File for BIG TSF: scsbb15a  
PVSTATS Analysis: See Folder pvstats\_BL

Existing Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Exist]  
FEQ Input File for Long TSF: sbLNGe6.feq  
FEQ Peak File for Long TSF: sbLNGe6.fff  
FEQ Output File for Long TSF: sbLNGe6  
FEQ Input File for BIG TSF: sbB15e6.feq  
FEQ Peak File for BIG TSF: sbB15e6.fff  
FEQ Output File for BIG TSF: sbB15e6  
PVSTATS Analysis: See Folder pvstats\_e6

Natural Conditions - Remove Elgin O'Hare Expressway, and keep Crest Avenue and Medinah (Table 3 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural1]  
FEQ Input File for Long TSF: sbLNGn1e.feq  
FEQ Peak File for Long TSF: sbLNGn1e.fff  
FEQ Output File for Long TSF: sbLNGn1e  
FEQ Input File for BIG TSF: sbB15n1e.feq  
FEQ Peak File for BIG TSF: sbB15n1e.fff  
FEQ Output File for BIG TSF: sbB15n1e  
PVSTATS Analysis: See Folder pvstats\_n1e

Natural Conditions - Remove Crest Avenue, and keep Elgin O'Hare Expressway and Medinah Road (Table 4 of the Report)

[Folder: \Devon\FEQ\070404\natural4]  
FEQ Input File for Long TSF: sbLNGn4e.feq  
FEQ Peak File for Long TSF: sbLNGn4e.fff  
FEQ Output File for Long TSF: sbLNGn4e  
FEQ Input File for BIG TSF: sbB15n4e.feq  
FEQ Peak File for BIG TSF: sbB15n4e.fff  
FEQ Output File for BIG TSF: sbB15n4e  
PVSTATS Analysis: See Folder pvstats\_n4e

Natural Conditions - Remove Medinah Road, and keep Elgin O'Hare Expressway and Crest Avenue (Table 5 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural2]  
FEQ Input File for Long TSF: sbLNGn2e.feq  
FEQ Peak File for Long TSF: sbLNGn2e.fff  
FEQ Output File for Long TSF: sbLNGn2e  
FEQ Input File for BIG TSF: sbB15n2e.feq  
FEQ Peak File for BIG TSF: sbB15n2e.fff  
FEQ Output File for BIG TSF: sbB15n2e  
PVSTATS Analysis: See Folder pvstats\_n2e

Natural Conditions - Remove Medinah Road and Crest Avenue, and keep Elgin O'Hare Expressway (Table 6 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural3]  
FEQ Input File for Long TSF: sbLNGn3e.feq  
FEQ Peak File for Long TSF: sbLNGn3e.fff  
FEQ Output File for Long TSF: sbLNGn3e  
FEQ Input File for BIG TSF: sbB15n3e.feq  
FEQ Peak File for BIG TSF: sbB15n3e.fff  
FEQ Output File for BIG TSF: sbB15n3e  
PVSTATS Analysis: See Folder pvstats\_n3e

Proposed Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Proposed]  
FEQ Input File for Long TSF: sbLNGp4.feq  
FEQ Peak File for Long TSF: sbLNGp4.fff  
FEQ Output File for Long TSF: sbLNGp4  
FEQ Input File for BIG TSF: sbB15p4.feq  
FEQ Peak File for BIG TSF: sbB15p4.fff  
FEQ Output File for BIG TSF: sbB15p4  
PVSTATS Analysis: See Folder pvstats\_p4



## **Summary of Flood Elevations**

PVSTATS Statistical Analysis Results  
Meacham Creek - Existing Conditions Elevations  
FEQ Model Used: sBLNGe6.feq and sbB15e6.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS30 10-Year (ft-NAVD88)	PVS30 50-Year (ft-NAVD88)	PVS30 100-Year (ft-NAVD88)	PVS30 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0:F134)	99999	710.72	717.54	719.05	719.61	720.78
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.39	716.04	716.62	717.86
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.38	715.87	716.39	717.86
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	714.38	715.86	716.39	717.86
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.31	715.76	716.39	717.86
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.30	715.74	716.39	717.86
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.74	716.39	717.86
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.74	716.39	717.86
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.74	716.39	717.86
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.74	716.39	717.86
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.74	716.39	717.86
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.74	716.39	717.86
XS 498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.74	716.39	717.67
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.89	715.52	717.09
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.87	715.51	717.09
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.49	714.87	715.50	717.03
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.78	715.38	716.85
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.45	714.78	715.38	716.85
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.45	714.78	715.38	716.85
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.45	714.78	715.38	716.85
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.44	714.78	715.38	716.85
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.44	714.78	715.38	716.85
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.41	714.78	715.38	716.85
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.38	716.85
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.20	714.86	716.54
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.85	714.15	714.81	716.54
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.97	714.68	716.54

## Summary of Flow Rates



PVSTATS Statistical Analysis Results  
Meacham Creek - Existing Conditions Elevations  
FEQ Model Used: sblNGe6.feq and sbB15e6.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virginia Detention ( 0:F134)	99999	710.72	256	541	679	1032
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	256	540	678	1028
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	308	629	783	1178
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	309	625	780	1181
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	309	626	781	1183
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	294	599	751	1148
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	92	159	194	290
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	50	117	156	275
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	60	101	129	227
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	64	108	137	238
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	65	110	137	227
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	158	345	464	856
XS 498	USF of Crest Ave (141:1423)	11470	708.36	153	333	447	822
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	153	333	447	822
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	153	333	448	823
XS 489	USF of Medinah Road (142:1427)	11323	708.01	153	333	448	822
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	153	333	448	822
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	154	335	451	829
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	158	345	463	854
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	163	335	436	742
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	166	336	435	733
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	169	312	384	573
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	162	301	375	574
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	150	287	377	673
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	150	287	377	673
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	150	277	359	628
XS_460	USF of Maple Ave (144:1451)	7781	708.47	151	280	363	635

## **An Excerpt from PSTATS Output File**

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (Years):			25.0	50.0	75.0
	2.0	5.0	10.0			
1	78.5	164.5	255.6	410.2	540.8	620.9
2	79.5	165.3	256.2	410.5	540.4	620.0
3	103.0	199.2	308.1	483.4	628.9	718.0
4	107.1	204.7	309.2	480.1	625.1	714.8
5	107.3	204.8	309.4	480.4	625.6	715.4
6	105.5	197.7	294.1	457.6	598.8	686.7
7	45.7	69.3	91.7	127.3	158.7	178.7
8	28.8	35.5	49.7	84.3	117.1	138.8
9	29.1	46.3	60.1	80.1	100.9	116.2
10	31.6	49.8	64.0	86.0	108.4	124.2
11	31.9	50.3	64.6	87.6	109.8	125.0
12	72.7	114.1	157.6	248.9	344.6	411.2
13	71.2	111.1	152.5	240.7	333.1	397.1
14	71.2	111.1	152.5	240.7	333.1	397.1
15	71.2	111.2	152.6	240.9	333.3	397.3
16	71.3	111.3	152.8	241.0	333.4	397.4
17	71.3	111.3	152.8	241.0	333.4	397.4
18	71.7	111.9	153.5	242.2	335.3	400.0
19	73.1	114.6	158.4	249.6	344.7	410.6
20	73.7	117.7	163.4	250.0	335.0	392.1
21	74.3	119.6	166.0	252.5	336.1	391.8
22	72.9	121.8	168.9	245.2	311.6	353.3
23	70.8	117.7	162.0	235.4	301.3	343.4
24	74.9	114.0	149.7	215.2	286.7	337.3
25	74.9	114.0	149.7	215.2	286.7	337.3
26	74.7	114.3	149.5	211.9	277.2	323.0
27	75.4	115.1	151.2	214.4	280.2	326.4

sect	Return Period (Years):			400.0	500.0	500.0
	100.0	200.0	300.0			
1	679.3	825.6	915.0	980.2	1031.9	1031.9
2	678.1	823.3	911.9	976.6	1027.8	1027.8
3	783.2	946.7	1047.0	1120.3	1178.4	1178.4
4	780.4	945.7	1047.2	1121.5	1180.5	1180.5
5	781.2	946.9	1048.8	1123.3	1182.5	1182.5
6	751.3	914.7	1015.5	1089.5	1148.4	1148.4
7	193.7	232.5	256.9	275.1	289.7	289.7
8	155.5	201.0	231.7	255.5	275.3	275.3
9	128.6	164.7	190.1	210.3	227.3	227.3
10	136.8	173.3	199.3	220.1	237.5	237.5
11	137.1	170.7	193.7	211.7	226.6	226.6
12	463.5	609.4	710.0	789.2	855.6	855.6
13	447.4	587.2	683.4	759.1	822.4	822.4
14	447.4	587.2	683.4	759.1	822.4	822.4
15	447.6	587.5	683.7	759.4	822.7	822.7
16	447.6	587.2	683.2	758.7	822.0	822.0
17	447.6	587.2	683.2	758.7	822.0	822.0
18	450.7	591.8	688.8	765.1	829.0	829.0
19	462.5	607.6	708.0	787.5	854.2	854.2
20	435.8	553.8	632.0	692.2	741.8	741.8
21	434.5	549.6	625.9	684.6	732.9	732.9
22	383.9	461.6	509.5	544.8	572.8	572.8
23	374.6	455.1	505.7	543.4	573.8	573.8
24	376.8	486.5	562.3	622.2	672.5	672.5
25	376.8	486.5	562.3	622.2	672.5	672.5
26	358.9	458.8	527.7	582.1	627.8	627.8
27	362.6	463.6	533.4	588.6	634.9	634.9



Flood Frequency Summary for Peak Elevation:

Sect	Return Period (Years):				75.0
	2.0	5.0	10.0	25.0	
1	715.96	717.09	717.82	718.72	719.66
2	712.63	713.67	714.67	715.68	716.66
3	712.62	713.71	714.65	715.59	716.45
4	712.61	713.72	714.66	715.59	716.44
5	712.59	713.68	714.58	715.51	716.33
6	712.62	713.65	714.58	715.43	716.21
7	712.34	713.02	713.43	713.92	714.44
8	712.38	713.34	714.01	714.72	715.44
9	712.70	713.63	714.31	715.17	716.21
10	712.69	713.66	714.31	715.14	716.13
11	712.69	713.66	714.31	715.14	716.12
12	712.72	713.68	714.39	715.28	716.32
13	712.71	713.62	714.35	715.30	716.41
14	712.50	713.26	713.78	714.55	715.53
15	712.49	713.25	713.77	714.53	715.52
16	712.48	713.24	713.77	714.53	715.51
17	712.47	713.23	713.74	714.47	715.40
18	712.47	713.22	713.73	714.46	715.39
19	712.45	713.21	713.73	714.47	715.39
20	712.39	713.19	713.73	714.44	715.27
21	712.35	713.15	713.69	714.41	715.26
22	712.35	713.17	713.72	714.45	715.30
23	712.36	713.14	713.69	714.42	715.31
24	712.39	713.14	713.69	714.46	715.41
25	712.17	712.80	713.24	713.88	714.48
26	712.02	712.68	713.13	713.81	714.87
27	711.72	712.34	712.83	713.58	714.66

Sect	Return Period (Years):				500.0
	100.0	200.0	300.0	400.0	
1	719.89	720.41	720.70	720.90	721.06
2	716.90	717.45	717.76	717.98	718.14
3	716.65	717.13	717.41	717.60	717.75
4	716.65	717.15	717.43	717.64	717.80
5	716.52	717.00	717.28	717.48	717.63
6	716.42	716.93	717.24	717.48	717.66
7	714.56	714.84	715.00	715.11	715.19
8	715.61	716.00	716.22	716.37	716.48
9	716.48	717.14	717.54	717.83	718.06
10	716.39	717.03	717.41	717.69	717.91
11	716.38	717.02	717.40	717.68	717.89
12	716.59	717.25	717.64	717.92	718.14
13	716.67	717.25	717.57	717.78	717.95
14	715.80	716.45	716.84	717.13	717.36
15	715.79	716.45	716.85	717.14	717.37
16	715.78	716.42	716.80	717.08	717.31
17	715.64	716.25	716.62	716.88	717.09
18	715.64	716.25	716.62	716.89	717.10
19	715.64	716.25	716.63	716.90	717.12
20	715.49	716.01	716.32	716.55	716.72
21	715.48	716.02	716.34	716.58	716.76
22	715.52	716.05	716.37	716.59	716.77
23	715.54	716.10	716.43	716.68	716.87
24	715.66	716.28	716.65	716.92	717.13
25	715.14	715.82	716.24	716.55	716.79
26	715.09	715.79	716.21	716.53	716.78
27	714.96	715.71	716.18	716.53	716.82

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 -1189.8 717.10 1  
 -1187.7 716.92 1  
 -1182.2 716.73 1  
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 -1123.2 716.58 1  
 -1053.2 716.31 2  
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 -971.8 716.08 2  
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 -902.6 715.29 2  
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 -863.0 710.39 2  
 -824.7 710.44 2  
 -790.8 710.16 2  
 -733.0 710.35 2  
 -555.0 710.23 2  
 -504.0 710.31 2  
 -460.4 710.32 2  
 -438.0 710.52 2  
 -426.0 710.73 2  
 -365.8 710.45 2  
 -327.2 710.49 2  
 -314.0 710.94 2  
 -298.8 711.33 2  
 -280.3 712.98 2  
 -250.9 712.33 2  
 -202.9 712.22 2  
 -174.5 712.13 2  
 -121.3 711.19 2  
 -77.6 710.44 2  
 -61.1 711.03 2  
 -39.2 711.06 2  
 -23.3 711.63 3  
 -15.4 709.11 3  
 -7.8 708.96 3  
 0.0 708.44 3  
 8.2 709.60 3  
 11.1 711.01 3  
 15.5 711.61 4  
 75.1 710.88 4  
 133.0 711.09 4  
 186.3 711.09 4  
 237.5 711.10 4  
 299.2 711.05 4  
 351.4 711.31 4  
 397.4 711.57 4  
 432.9 712.31 4  
 468.1 713.06 4  
 500.0 716.24 4  
 506.6 716.65 4  
 508.7 716.11 4  
 533.4 716.85 4  
 558.0 716.53 4  
 598.0 718.28 -1

FEQX  
 GISID= 005SCSB9002  
 TABLE#= 9002 NEWBETAM OUT22  
 STATION= 10603.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 4 0.060 0.055 0.065 0.040

XSEC A2  
 -588.0 720.28 1  
 -498.0 718.28 1  
 -398.0 717.28 1  
 -358.0 716.28 1  
 -308.0 715.28 1  
 -228.0 714.28 1  
 -137.9 713.79 1  
 -110.5 713.33 1  
 -88.7 713.29 1  
 -67.4 713.11 1  
 -36.0 712.93 1  
 -18.9 712.54 2  
 -13.2 711.49 2  
 -8.6 709.53 2  
 0.0 708.95 2  
 9.1 709.12 2



15.0	711.48	2
18.4	712.43	2
25.6	713.70	3
59.4	713.22	3
76.7	712.93	3
95.5	713.09	3
121.1	713.56	4
211.0	717.28	4
271.0	718.28	4
291.0	720.28	-1

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NAVM= 0 SCALE= 1.00 SHIFT= 0.00
NSUB 4 0.060 0.055 0.065 0.040
XSEC A3
-461.0 719.28 1
-361.0 718.28 1
-360.4 716.74 1
-307.1 715.98 1
-281.5 715.87 1
-253.8 715.39 1
-175.0 714.53 1
-112.4 714.21 1
-52.7 713.66 1
-23.9 713.00 1
-14.0 710.90 2
-12.7 709.27 2
0.0 708.69 2
12.3 708.78 2
23.4 710.80 3
32.7 716.46 3
34.3 717.55 4
104.0 720.28 -1
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STATION= 11383.00 LEFT= 0.00 RIGHT= 0.00
NAVM= 0 SCALE= 1.00 SHIFT= 0.00
NSUB 4 0.090 0.055 0.090 0.250
XSEC A4
-42.5 721.98 1
-31.1 720.53 1
-16.9 716.58 2
-8.8 711.01 2
-5.0 709.33 2
0.0 708.98 2
11.9 709.37 2
21.7 710.16 2
28.5 710.93 2
46.7 715.56 3
75.5 716.65 3
80.6 716.75 3
98.3 716.86 3
198.0 717.28 4
238.0 718.28 4
288.0 719.28 -1
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NAVM= 0 SCALE= 1.00 SHIFT= 0.00
NSUB 3 0.090 0.055 0.090
XSEC A5
-596.5 717.44 1
-522.4 714.33 1
-463.4 713.03 1
-362.3 712.54 1
-307.2 712.01 1
-248.2 711.81 1
-145.5 710.85 1
-108.3 711.31 1
-71.7 710.72 1
-30.6 711.31 2
0.0 709.37 2
22.6 710.21 2
24.0 711.12 2
57.1 711.17 3
85.8 711.09 3
185.6 710.89 3
222.3 711.00 3
281.3 711.14 3
329.1 711.23 3
391.2 711.21 3
466.9 710.60 3
574.2 711.13 3
715.5 711.34 3
812.5 711.37 3
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858.1	711.31	3
1082.5	711.20	3
1126.2	711.42	3
1142.4	711.45	3
1176.4	711.40	3
1227.0	711.58	3
1271.7	711.05	3
1301.0	711.02	3
1344.4	711.45	3
1384.0	711.02	3
1974.0	714.28	3
2024.0	716.28	3
2044.0	718.28	3
2069.0	720.28	-1

FEQX  
 GISID= 005SCSB9006  
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 STATION= 12366.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 3 0.250 0.045 0.250

XSEC A6

-1068.5	719.86	1
-1042.2	719.52	1
-1028.2	719.41	1
-996.7	716.02	1
-951.6	713.65	1
-890.1	712.98	1
-846.9	714.75	1
-788.7	715.37	1
-727.8	713.74	1
-652.6	713.40	1
-579.3	710.85	1
-558.1	710.51	1
-556.0	710.59	1
-545.6	711.54	1
-437.3	711.48	1
-355.7	711.20	1
-282.3	711.40	1
-218.0	711.35	1
-163.8	711.35	1
-119.7	711.24	1
-77.2	711.42	2
-39.4	710.99	2
-1.1	711.14	2
0.0	709.72	2
22.9	709.75	2
24.1	711.32	2
80.1	711.36	3
129.8	711.16	3
196.7	710.87	3
319.4	711.16	3
377.8	711.23	3
449.9	711.02	3
512.0	711.22	3
596.0	711.31	3
656.3	711.00	3
709.8	710.91	3
764.1	711.17	3
823.8	710.81	3
890.3	710.88	3
922.3	711.06	3
935.6	711.10	3
992.3	710.99	3
1006.5	711.15	3
1035.4	711.37	3
1082.1	711.26	3
1127.4	712.14	3
1246.5	724.11	-1

FEQX  
 GISID= 005SCSB9007  
 TABLE# 9007 NEWBETAM OUT22  
 STATION= 12800.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 3 0.250 0.045 0.250

XSEC A7

-745.0	720.28	1
-710.3	711.97	1
-649.5	711.18	1
-591.7	711.62	1
-538.5	711.65	1
-477.5	710.94	1
-442.0	711.43	1
-392.5	710.97	1
-357.0	711.26	1
-260.5	711.08	1
-217.0	711.20	1
-139.8	711.26	1
-86.8	711.41	1
-38.2	712.51	2
-9.4	709.41	2
0.0	708.19	2

0.4	709.00	2
7.3	709.71	2
9.3	711.69	2
67.3	712.17	3
153.6	713.29	3
220.2	714.64	3
304.9	716.66	3
382.1	717.20	3
469.1	715.69	3
542.9	715.26	3
635.8	713.44	3
687.8	711.92	3
777.4	711.41	3
852.2	711.35	3
969.3	711.30	3
1050.9	711.50	3
1119.5	713.35	3
1193.6	719.43	3
1253.4	723.44	3
1299.0	724.38	-1

FEQX  
 GISID= 005SCSB9008  
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 STATION= 12900.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 3 0.060 0.045 0.060  
 XSEC A8

-94.0	720.28	1
-74.2	715.07	1
-36.9	715.17	2
-6.4	714.44	2
0.0	710.37	2
0.1	708.83	2
2.0	708.83	2
2.1	710.37	2
31.1	711.91	2
61.7	715.35	3
99.9	715.68	3
145.0	720.28	-1

FEQX  
 GISID= 005SCSB9009  
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 STATION= 13165.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 3 0.060 0.045 0.060  
 XSEC A9

-109.3	720.28	1
-76.3	713.03	1
-52.5	712.83	1
-23.6	713.70	2
-14.0	710.33	2
0.0	709.52	2
15.5	710.03	2
19.6	712.96	3
27.3	711.91	3
66.2	712.10	3
86.0	720.28	-1

FEQX  
 GISID= 005SCSB9010  
 TABLE#= 9010 NEWBETAM OUT22  
 STATION= 13205.00 LEFT= 0.00 RIGHT= 0.00  
 NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
 NSUB 3 0.060 0.045 0.060  
 XSEC A10

-706.4	720.96	1
-679.2	721.33	1
-652.5	720.39	2
-625.7	712.19	2
-594.1	711.39	2
-567.3	711.23	2
-403.7	711.78	2
-283.6	710.98	2
-180.3	712.13	2
-58.5	711.30	2
-26.6	711.85	2
-11.9	710.00	2
0.0	709.68	2
11.4	712.18	2
38.9	711.61	2
75.0	711.71	2
122.2	711.52	2
146.6	711.56	2
169.1	711.34	2
194.6	711.51	2
216.9	711.77	2
247.4	711.89	2
265.8	712.08	2
306.5	713.27	2
361.0	714.96	2
396.4	715.44	2



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413.3	713.17	2
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1271.0	725.00	-1

FINISH

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TABID= -1

FEQX  
GISID= 005SCSB0498  
TABLE#= 498 SAVE22 NEWBETAM NOOUT EXTEND  
STATION= 11469.64 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 4 0.090 0.055 0.001 0.250  
xsec copied from x-sec SCSB0500 to 25 feet upstream of Crest Avenue APPROACH  
; -366.52 720.32 1 1938469.75 577121.06 0001 XDI Ext. Sta.  
; -322.77 720.10 1 1938467.38 577077.38 0002 XDI Ext. Sta.  
; -279.02 718.70 1 1938464.88 577033.69 0003 XDI Ext. Sta.  
; -235.27 717.00 1 1938462.50 576990.06 0004 XDI Ext. Sta.  
; -191.52 715.61 1 1938460.13 576946.38 0005 XDI  
; -103.49 715.19 1 1938442.00 576860.19 0006 xdi  
; -87.00 714.42 1 INTERPOLATED  
; -16.26 711.09 2 1938418.75 576776.13 0007 XDI  
; -3.71 709.40 2 1938413.25 576764.88 0008 XDI  
; 3.65 708.64 2 1938412.75 576757.50 0009 Adjusted to match culvert  
; 11.59 710.34 2 1938412.13 576749.63 0010 XDI  
; 27.73 712.93 3 1938409.88 576733.63 0011 XDI  
; 27.73 799.99 -1 fabricated vertical frictionless wall  
; 77.73 709.65 3 1938408.50 576683.63 0012 XDI Ext. Sta.  
; 127.73 708.78 3 1938407.13 576633.69 0013 XDI Ext. Sta.  
; 177.73 709.19 3 1938405.75 576583.69 0014 XDI Ext. Sta.  
; 227.73 709.45 3 1938404.38 576533.69 0015 XDI Ext. Sta.  
; 277.73 711.24 4 1938403.00 576483.75 0016 XDI Ext. Sta.  
; 327.73 716.27 -1 1938401.63 576433.75 0017 XDI Ext. Sta.

FEQX  
GISID= 005SCSB9004  
TABLE#= 9004 SAVE22 NEWBETAM NOOUT EXTEND  
STATION= 11383.00 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 4 0.090 0.055 0.090 0.250  
XSEC A4  
; -42.6 800.00 1  
; -42.5 721.98 1  
; -31.1 720.53 1  
; -16.9 716.58 2  
; -8.8 711.01 2  
; -5.0 709.33 2  
; 0.0 708.98 2  
; 11.9 709.37 2  
; 21.7 710.16 2  
; 28.5 710.93 2  
; 46.7 715.56 3  
; 75.5 716.65 3  
; 80.6 716.75 3  
; 98.3 716.86 3  
; 198.0 717.28 4  
; 238.0 718.28 4  
; 288.0 719.28 -1

MULCON  
TABID= 540 SAVE22 OLDBETA NOOUT  
WSLOT= 0.01  
HSLOT= 100  
NPIPES= 1  
TYPE= CIRC  
SPAN= 6.00  
RISE= 6.00  
BOTT= .00  
ROUG= 0.024

CULVERT  
TABID= C9540  
TYPE= 13  
LABEL= 72in CMP UNDER CREST AVENUE  
APPROACH SECTION DATA  
APPTAB= 498  
APPELV= 708.64  
APPLEN= 25.0  
APPLOS= 0.2  
APPEXP= 0.5  
CULVERT DESCRIPTION  
NODEID=YES  
SFAC= 1.0  
NODE NODENAME XTAB STATION ELEVATION  
1 UPSTREAM 540 86.00 708.61  
  
-1 DNSTREAM 540 0.00 707.64  
CULCLS=PIPE

DEPARTURE SECTION DESCRIPTION

DEPTAB= 9004  
 DEPELV= 708.98  
 LOSOPT=MOMENTUM  
 DISCHARGE COEFFICIENT DATA  
 KRB=0  
 KWING=0  
 KPROJ=0  
 C46=0

TYPE 5 flow parameters

RBVALUE= 0.03  
 BVANGLE= 0.00  
 WWANGLE= 0.0  
 LPOVERD= 0.0  
 TYPE5SBF= 0.75

ROADWAY DESCRIPTION

PLCWTB=9994  
 GLCWTB=9995  
 PHCWTB=9996  
 GHCWTB=9997  
 PSUBTB=9998  
 GSUBTB=9999

OFFSET	CREST	WIDTH	APPROACH	SURFACE
-87.000	716.060	85.00	714.420	PAVED
-16.260	716.418		711.090	
-3.710	716.481		709.400	
0.000	716.500		709.017	
3.650	716.561		708.640	
11.590	716.692		710.340	
27.730	716.960		712.930	END
-24.000	716.379	85.00	712.000	PAVED
-10.000	716.449		710.000	
-7.000	716.465		709.910	
.000	716.500		708.640	
10.000	716.664		710.000	
20.000	716.828		712.000	
24.500	716.900		714.260	END
39.000	717.140		712.032	
50.000	716.203		712.050	
66.000	714.840		712.051	
133.500	715.610		712.053	
233.000	716.000		712.057	
300.000	718.000		712.060	END

UPSTREAM HEADS TO USE IN COMPUTING THE TABLE

NFRAC=40

POWER=2.0

.500  
 .750  
 1.000  
 1.500  
 2.000  
 2.500  
 3.000  
 3.500  
 4.000  
 4.500  
 5.000  
 5.500  
 6.000  
 6.500  
 7.000  
 8.000  
 9.000  
 10.000  
 11.000  
 12.000  
 13.000  
 -1.000

; EMBANKQ FOR THE RIGHT OVERBANK AT CREST AVENUE

EMBANKQ

TABID= E9540 CSHIFT= 0.00

PLCWTB=9994  
 GLCWTB=9995  
 PHCWTB=9996  
 GHCWTB=9997  
 PSUBTB=9998  
 GSUBTB=9999

LABEL=EMBANK FLOW FOR THE RIGHT OVERBANK OF CREST AVENUE

OFFSET	CREST	WIDTH	APPROACH	SURFACE
27.730	716.960	85.00	712.930	PAVED
39.000	717.140		712.191	
77.730	716.849		709.650	
127.730	716.473		708.780	
177.730	716.097		709.190	
201.350	715.920		709.313	
227.730	716.061		709.450	
277.730	716.328		711.240	
327.730	716.595		716.270	END
24.500	716.900	85.00	714.260	PAVED
39.000	717.140		712.032	
50.000	716.203		712.050	



```
; 66.000 714.840 712.051
; 133.500 715.610 712.053
; 233.000 716.000 712.057
; 300.000 718.000 712.060 END
```

UPSTREAM HEADS TO USE IN COMPUTING THE TABLE

```
NFRAC= 40
POWER= 2.0
LIPREC= 0.02
MINPFD= 0.01
.100
8.000
-1.000
```

FEQX

```
TABID= 52 SAVE22 NEWBETAM NOOUT EXTEND
STATION= 0.0
```

NAVM=00000

```
NSUB 2 0.055 0.250
```

CHAN SECTION FOR FLOW OVER RIGHT OVERBANK CREST AVE

```
27.73 716.96 1 INTERPOLATED FOR CHANRAT
34.68 716.26 1 1938270.63 576728.88 0009 TOB 2203
201.35 715.92 2 1938273.25 576562.25 0010 XDI Ext. Sta.
368.01 716.81 2 1938275.75 576395.63 0011 XDI Ext. Sta.
369.00 750.00 -1 Fabricated extension
```

CHANRAT

```
TABID= R9540
```

```
TYPE= 13
```

LABEL= RIGHT OVERBANK FLOW - Meachem Creek at Crest Avenue

```
XSTAB= 52
```

```
BOTSLP= .000
```

```
LENGTH= 75.0 MIDELEV= 715.92
```

UPSTREAM HEADS USED IN COMPUTING THE TABLE

```
NFRAC= 40
POWER= 2.0
LIPREC= 0.02
MINPFD= 0.01
0.01
4.00
-1
```

FEQX

```
TABID= 67 SAVE22 NEWBETAM NOOUT EXTEND
```

```
STATION= 0.0
```

NAVM= 0

```
NSUB 2 0.005 0.060
```

CHANRAT SECTION FOR FLOW OVER LEFT OVERBANK CREST AVENUE

```
; -580.1 740.00 1 FRICTIONLESS WALL
; -580.0 720.00 2 EXTENDED FROM TOPO
; -280.0 718.00 2 EXTENDED FROM TOPO
; -196.0 716.95 2 1938378.67 576951.00 EOP 1214
; -193.0 716.950 2
; -87.0 716.060 2
; -48.0 716.257 2
; -24.0 716.379 -1
```

CHANRAT

```
TABID= L540
```

```
TYPE= 13
```

LABEL= OVERBANK FLOW - MEACHAM CREEK AT CREST AVENUE

```
XSTAB= 67
```

```
BOTSLP= .000
```

```
LENGTH= 145.0 MIDELEV=716.06
```

UPSTREAM HEADS USED IN COMPUTING THE TABLE

```
NFRAC= 40
POWER= 2.0
LIPREC= 0.02
MINPFD= 0.01
; 0.25
; 3.00
; -1.00
```

FINISH

FTABIN  
FILE= \ut\header\embweir.mtb  
FILE= \ut\header\type5.mtb  
TABID= -1

\* MEDINAH ROAD (MEACHAM ROAD) AT MEACHAM CREEK

FEQX  
GISID= 005SCSB0489  
TABLE#= 489 NEWBETAM NOOUT EXTEND SAVE22  
STATION= 11323.20 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 6 0.250 0.090 0.055 0.001 0.055 0.250  
XS-6 57 FT DOWNSTREAM OF CREST AVE HALFF SURVEY (APPROACH TO MEDINAH RD.)  
; -802.89 722.94 1 1938398.75 577552.44 0001 XDI Ext. Sta.  
; -636.23 721.99 1 1938374.50 577387.56 0002 XDI Ext. Sta.  
; -469.56 720.00 2 1938350.25 577222.63 0003 XDI Ext. Sta.  
; -69.56 722.52 3 1938261.88 576832.50 0004 TC/CONC 2199  
; -61.97 722.22 3 1938262.88 576825.00 0005 TOB 2200  
; -49.75 799.99 4 fabricated vertical frictionless wall  
; -49.75 719.00 5 INTERPOLATED  
; -15.26 709.91 5 1938265.75 576778.38 0006 WATER/E 2201  
; -3.20 708.29 5 1938266.00 576766.31 0007 WATER CL 2313  
; 8.83 709.91 5 1938269.13 576754.69 0008 WATER/E 2202  
; 34.68 716.26 -1 1938270.63 576728.88 0009 TOB 2203  
; 201.35 715.92 6 1938273.25 576562.25 0010 XDI Ext. Sta.  
; 368.01 716.81 -1 1938275.75 576395.63 0011 XDI Ext. Sta.

FEQX  
GISID= 005SCSB9003  
TABLE#= 9003 NEWBETAM NOOUT EXTEND SAVE22  
STATION= 11038.00 LEFT= 0.00 RIGHT= 0.00  
NAVM= 0 SCALE= 1.00 SHIFT= 0.00  
NSUB 4 0.060 0.055 0.065 0.040  
XSEC A3  
; -461.1 800.00 1  
; -461.0 719.28 1  
; -361.0 718.28 1  
; -360.4 716.74 1  
; -307.1 715.98 1  
; -281.5 715.87 1  
; -253.8 715.39 1  
; -175.0 714.53 1  
; -112.4 714.21 1  
; -52.7 713.66 1  
; -23.9 713.00 1  
; -14.0 710.90 2  
; -12.7 709.27 2  
; 0.0 708.69 2  
; 12.3 708.78 2  
; 23.4 710.80 3  
; 32.7 716.46 3  
; 34.3 717.55 4  
; 104.0 720.28 -1

MULCON  
TABID= 608 NOOUT SAVE22 OLDBETA  
WSLOT=0.01  
HSLOT=100  
NPIPES= 2  
TYPE= BOX BOX  
SPAN= 10.0 10.0  
RISE= 8.50 8.50  
BOTT= 0.00 0.00  
ROUG= 0.013 0.013

MULCON  
TABID= 609 NOOUT SAVE22 OLDBETA  
WSLOT=0.01  
HSLOT=100  
NPIPES= 2  
TYPE= BOX BOX  
SPAN= 10.0 10.0  
RISE= 8.50 8.50  
BOTT= 0.00 0.00  
ROUG= 0.013 0.013

CULVERT  
TABID= C9537  
TYPE= 13  
LABEL=2-10X8.5 BOX CULVERT  
APPROACH SECTION DATA  
APPTAB= 489  
APPELV=708.29  
APPLEN=20.0  
APPLOS=0.2  
APPEXP=0.0  
CULVERT DESCRIPTION  
NODEID=YES

SFAC=1.0  
NODE NODEID XNUM STATION ELEVATION KA KD HTAB  
100 UPSTRM 608 163.0 708.79

DNSTRM 608 0.0 708.59

-1  
CULCLS= BOX  
DEPARTURE SECTION DATA  
DEPTAB= 9003  
DEPELV= 708.69 708.50 0.0 1.0  
LOSOPT=MOMENTUM

DISCHARGE COEFFICIENT DATA

KRB=0.0

KWING=0.00

KPROJ=0.00

C46=0.00

TYPE 5 PARAMETERS

RBVALUE= 0.00

BVANGLE= 0.00

WWANGLE= 45.0

LPOVERD= 0.00

TYPE5SBF= 0.75

ROADWAY DESCRIPTION

PLCWTB=9994

GLCWTB=9995

PHCWTB=9996

GHCWTB=9997

PSUBTB=9998

GSUBTB=9999

OFFSET	CREST	WIDTH	APPROACH	SURFACE
-49.75	920.32	50.0	719.00	PAVED
-41.00	920.29		716.69	
-15.26	920.21		709.91	
-3.20	920.18		708.29	
0.00	920.17		708.72	
8.83	920.14		709.91	
34.68	920.06		716.26	END

HEAD SEQUENCE DEFINITION

NFRAC=11

POWER=2.0

0.5

1.0

2.0

2.5

3.0

3.5

4.0

4.5

5.0

5.5

6.0

6.5

7.0

7.5

8.0

9.0

10.0

11.0

12.0

13.0

14.0

-1

FEQX

TABID= 59 SAVE22 NEWBETAM NOOUT EXTEND

STATION= 0.0

NAVM=00000

NSUB 1 0.040

CHAN SECTION FOR FLOW OVER RIGHT OVERBANK MEDINAH ROAD (PER 1-FOOT TOPO)

-831.10	800.00	1
-831.00	723.28	1
-591.00	722.28	1
-381.00	722.28	1
0.00	722.28	1
201.00	721.28	1
415.00	720.28	1
475.00	719.28	-1

CHANRAT

TABID= R9537

TYPE= 13

LABEL= ROADWAY OVERFLOW - MEACHAM CREEK AT MEDINAH ROAD

XSTAB= 59

BOTS L P= .000

LENGTH= 50.0 MIDELEV= 719.28

UPSTREAM HEADS USED IN COMPUTING THE TABLE

NFRAC= 40

POWER= 2.0

LIPREC= 0.02

MINPFD= 0.01

0.01

0.50

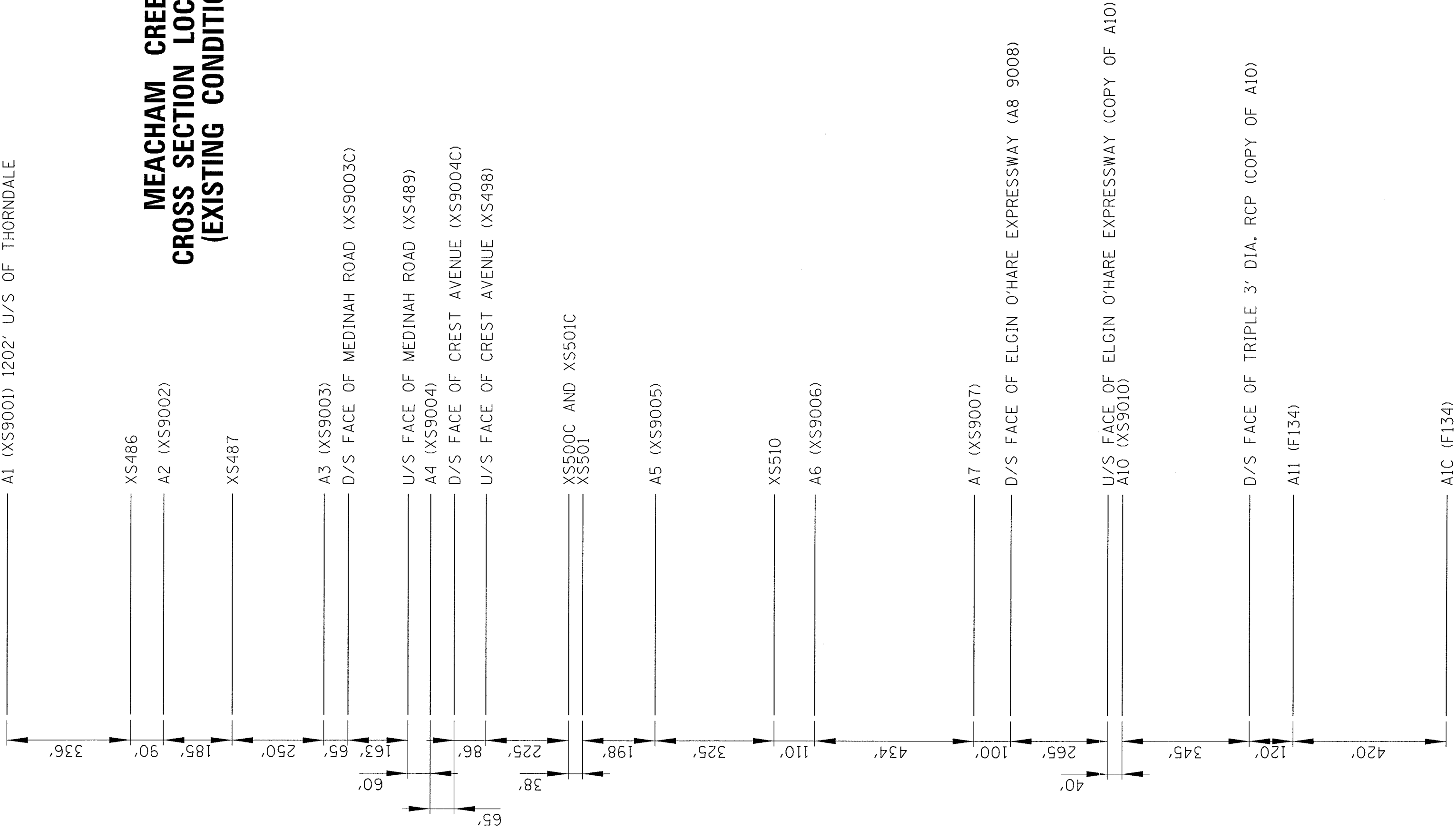


10.00  
10.50  
-1

FINISH

A1 (XS9001) 1202' U/S OF THORNDALE

MEACHAM CREEK  
CROSS SECTION LOCATION  
(EXISTING CONDITIONS)



TRIBUTARY AREA CALCULATIONS (EX6)

Project Name: Elgin O'Hare  
Project No: 07-0404  
Date: 10/2/2012

Tributary Area for Existing FEQ Model (E5)										
		Total Area	IMPRV	FGRSS	MGRSS	SGRSS	FORST	AGRIC	Total (sq.mi)	Total (acre)
F134	2	399.6	0.1441	0.2228	0.1590	0.0705	0.0280	0.0000	0.6244	399.62
B-132	1	70.5	0.0263	0.0474	0.0142	0.0162	0.0061	0.0000	0.1102	70.53
B-140	1	44.9	0.0143	0.0165	0.0267	0.0049	0.0078	0.0000	0.0702	44.93
B-143	1	437.7	0.2940	0.1691	0.1214	0.0467	0.0527	0.0000	0.6839	437.70
B-138	1	220.9	0.1091	0.1391	0.0513	0.0203	0.0254	0.0000	0.3452	220.93
F130	2	401.9	0.1479	0.1945	0.1583	0.0924	0.0349	0.0000	0.6280	401.92
F132	1	623.9	0.2400	0.3322	0.1810	0.1383	0.0834	0.0000	0.9749	623.94
Total		2199.6	0.9757	1.1216	0.7119	0.3893	0.2383	0.0000	3.4368	2199.55

Redistribution of F132 Trib Area										
Area Assign to B-132	1	23.7	0.0091	0.0126	0.0069	0.0053	0.0032	0.0000	0.0370	23.70
New Area to F132	1	600.2	0.2309	0.3196	0.1741	0.1330	0.0802	0.0000	0.9379	600.24
Total	1	623.9	0.2400	0.3322	0.1810	0.1383	0.0834	0.0000	0.9749	623.94

Redistribution of F130 Trib Area										
Area Assign to B-132	2	50.7	0.0187	0.0245	0.0200	0.0117	0.0044	0.0000	0.0792	50.70
New Area to F130	2	351.2	0.1292	0.1700	0.1383	0.0807	0.0305	0.0000	0.5488	351.22
Total	1	401.9	0.1479	0.1945	0.1583	0.0924	0.0349	0.0000	0.6280	401.92

Redistribution of B-138 Trib Area										
Area Assign to B-132	1	103.4	0.0511	0.0651	0.0240	0.0095	0.0119	0.0000	0.1616	103.40
New Area to B-138	1	117.5	0.0580	0.0740	0.0273	0.0108	0.0135	0.0000	0.1836	117.53
Total	1	220.9	0.1091	0.1391	0.0513	0.0203	0.0254	0.0000	0.3452	220.93

Redistribution of B-140 Trib Area										
Area Assign to B-132	1	9.0	0.0029	0.0033	0.0053	0.0010	0.0016	0.0000	0.0141	9.00
New Area to B-140	1	35.9	0.0114	0.0132	0.0214	0.0039	0.0062	0.0000	0.0561	35.93
Total	1	44.9	0.0143	0.0165	0.0267	0.0049	0.0078	0.0000	0.0702	44.93

Redistribution of B-143 Trib Area										
Area Assign to B-132	1	17.3	0.0116	0.0067	0.0048	0.0018	0.0021	0.0000	0.0270	17.30
New Area to B-143	1	420.4	0.2824	0.1624	0.1166	0.0449	0.0506	0.0000	0.6569	420.40
Total	1	437.7	0.2940	0.1691	0.1214	0.0467	0.0527	0.0000	0.6839	437.70

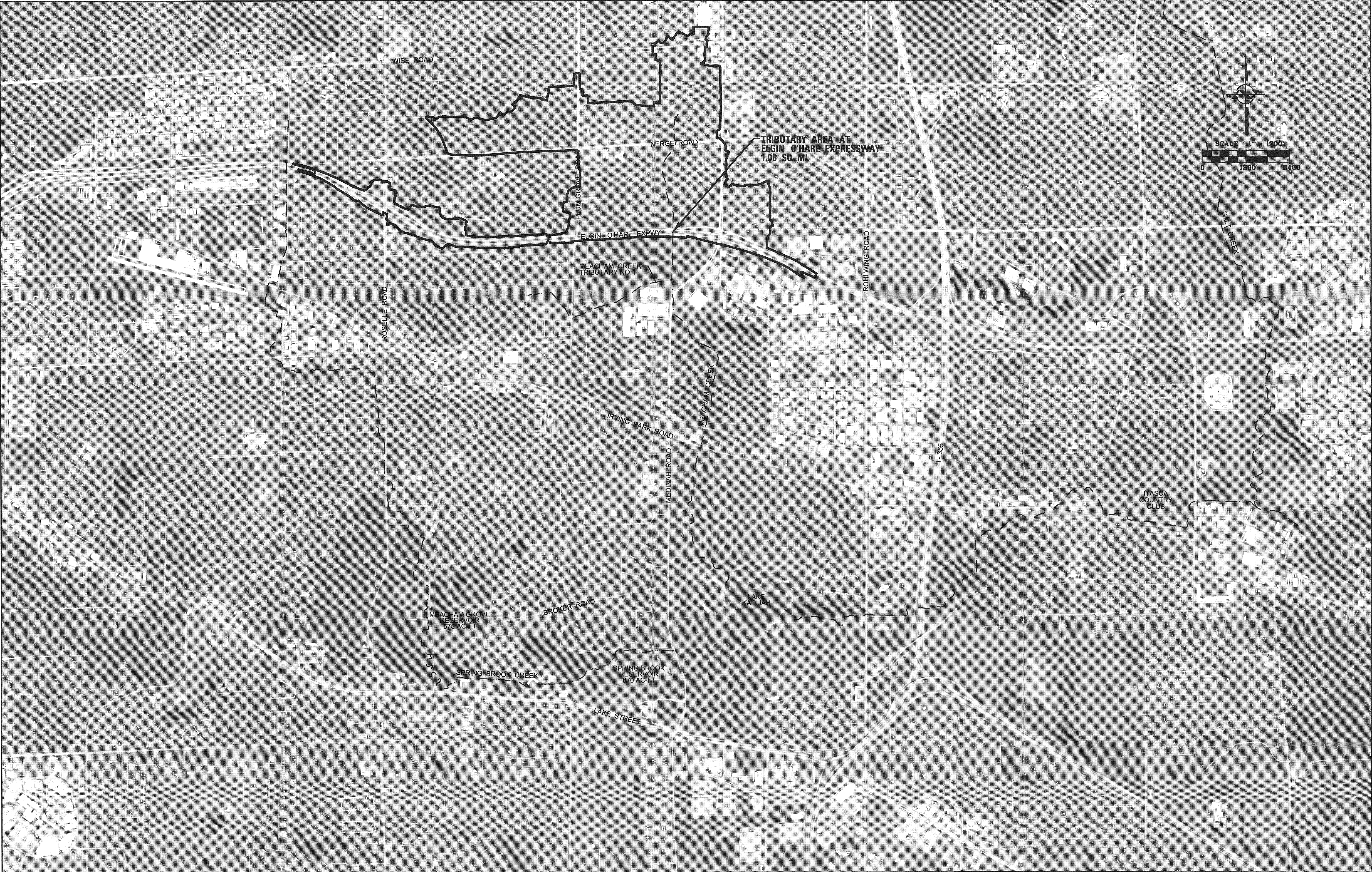
Additional of B-132 Trib Area										
Additional Area to B-132	1	1.3	0.0013	0.0007	0.0000	0.0000	0.0000	0.0000	0.0020	1.28
Total	1	1.3	0.0013	0.0007	0.0000	0.0000	0.0000	0.0000	0.0020	1.28

Area Assignments for the revised Existing FEQ Model (E6)										
		Total Area	IMPRV	FGRSS	MGRSS	SGRSS	FORST	AGRIC	Total (sq.mi)	Total (acre)
F134	2	399.6	0.1441	0.2228	0.1590	0.0705	0.0280	0.0000	0.6244	399.62
B-132	1	275.9	0.1209	0.1603	0.0752	0.0454	0.0292	0.0000	0.4311	275.91
B-140	1	35.9	0.0114	0.0132	0.0214	0.0039	0.0062	0.0000	0.0561	35.93
B-143	1	420.4	0.2824	0.1624	0.1166	0.0449	0.0506	0.0000	0.6569	420.40
B-138	1	117.5	0.0580	0.0740	0.0273	0.0108	0.0135	0.0000	0.1836	117.53
F130	2	351.2	0.1292	0.1700	0.1383	0.0807	0.0305	0.0000	0.5488	351.22
F132	1	600.2	0.2309	0.3196	0.1741	0.1330	0.0802	0.0000	0.9379	600.24
Total		2200.9	0.9770	1.1223	0.7119	0.3893	0.2383	0.0000	3.4388	2200.83









FILE NAME =		USER NAME = eanderson	DESIGNED -	REVISED -	<div><div>ELGIN O'HARE WEST BYPASS</div><div>ILLINOIS DEPARTMENT OF TRANSPORTATION</div><div>CH2M HILL</div></div>	EXISTING CONDITIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\dot\070404\Water\Exhibit MDC\070404\Exh Sec9 Ex watershed.dgn		Plot Scale = 1200.0000" / in.	DRAWN -	REVISED -		MEACHAM CREEK WATERSHED					\$TOTAL	\$NUM
PLOT DATE = 9/28/2012			CHECKED -	REVISED -		SCALE:	SHEET NO. \$NUM OF \$TOTAL SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
			DATE -	REVISED -						EXHIBIT 9.2		



**TAB 10**



## **SECTION 10**

### **NATURAL CONDITIONS ANALYSIS**

Baseline Conditions

[Folder: \SpringBrookTSC\FEQ\070404\baseline]  
FEQ Input File for Long TSF: scsblong.feq  
FEQ Peak File for Long TSF: scsblong.fff  
FEQ Output File for Long TSF: scsblong  
FEQ Input File for BIG TSF: scsbb15a.feq  
FEQ Peak File for BIG TSF: scsbb15a.fff  
FEQ Output File for BIG TSF: scsbb15a  
PVSTATS Analysis: See Folder pvstats\_BL

Existing Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Exist]  
FEQ Input File for Long TSF: sbLNGe6.feq  
FEQ Peak File for Long TSF: sbLNGe6.fff  
FEQ Output File for Long TSF: sbLNGe6  
FEQ Input File for BIG TSF: sbB15e6.feq  
FEQ Peak File for BIG TSF: sbB15e6.fff  
FEQ Output File for BIG TSF: sbB15e6  
PVSTATS Analysis: See Folder pvstats\_e6

Natural Conditions - Remove Elgin O'Hare Expressway, and keep Crest Avenue and Medinah (Table 3 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural1]  
FEQ Input File for Long TSF: sbLNGn1e.feq  
FEQ Peak File for Long TSF: sbLNGn1e.fff  
FEQ Output File for Long TSF: sbLNGn1e  
FEQ Input File for BIG TSF: sbB15n1e.feq  
FEQ Peak File for BIG TSF: sbB15n1e.fff  
FEQ Output File for BIG TSF: sbB15n1e  
PVSTATS Analysis: See Folder pvstats\_n1e

Natural Conditions - Remove Crest Avenue, and keep Elgin O'Hare Expressway and Medinah Road (Table 4 of the Report)

[Folder: \Devon\FEQ\070404\natural4]  
FEQ Input File for Long TSF: sbLNGn4e.feq  
FEQ Peak File for Long TSF: sbLNGn4e.fff  
FEQ Output File for Long TSF: sbLNGn4e  
FEQ Input File for BIG TSF: sbB15n4e.feq  
FEQ Peak File for BIG TSF: sbB15n4e.fff  
FEQ Output File for BIG TSF: sbB15n4e  
PVSTATS Analysis: See Folder pvstats\_n4e

Natural Conditions - Remove Medinah Road, and keep Elgin O'Hare Expressway and Crest Avenue (Table 5 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural2]  
FEQ Input File for Long TSF: sbLNGn2e.feq  
FEQ Peak File for Long TSF: sbLNGn2e.fff  
FEQ Output File for Long TSF: sbLNGn2e  
FEQ Input File for BIG TSF: sbB15n2e.feq  
FEQ Peak File for BIG TSF: sbB15n2e.fff  
FEQ Output File for BIG TSF: sbB15n2e  
PVSTATS Analysis: See Folder pvstats\_n2e

Natural Conditions - Remove Medinah Road and Crest Avenue, and keep Elgin O'Hare Expressway (Table 6 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural3]  
FEQ Input File for Long TSF: sbLNGn3e.feq  
FEQ Peak File for Long TSF: sbLNGn3e.fff  
FEQ Output File for Long TSF: sbLNGn3e  
FEQ Input File for BIG TSF: sbB15n3e.feq  
FEQ Peak File for BIG TSF: sbB15n3e.fff  
FEQ Output File for BIG TSF: sbB15n3e  
PVSTATS Analysis: See Folder pvstats\_n3e

Proposed Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Proposed]  
FEQ Input File for Long TSF: sbLNGp4.feq  
FEQ Peak File for Long TSF: sbLNGp4.fff  
FEQ Output File for Long TSF: sbLNGp4  
FEQ Input File for BIG TSF: sbB15p4.feq  
FEQ Peak File for BIG TSF: sbB15p4.fff  
FEQ Output File for BIG TSF: sbB15p4  
PVSTATS Analysis: See Folder pvstats\_p4

A1 (XS9001) 1202' U/S OF THORNDALE

XS486

A2 (XS9002)

XS487

A3 (XS9003)

D/S FACE OF MEDINAH ROAD (XS9003C)

U/S FACE OF MEDINAH ROAD (XS489)

A4 (XS9004)

D/S FACE OF CREST AVENUE (XS9004C)

U/S FACE OF CREST AVENUE (XS498)

XS500C AND XS501C  
XS501

A5 (XS9005)

XS510

A6 (XS9006)

A7 (XS9007)

D/S FACE OF ELGIN O'HARE EXPRESSWAY (A8 9008)

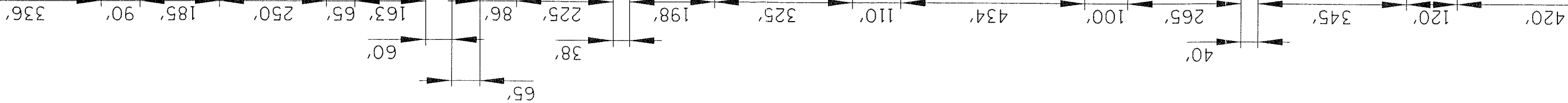
U/S FACE OF ELGIN O'HARE EXPRESSWAY (COPY OF A10)  
A10 (XS9010)

D/S FACE OF TRIPLE 3' DIA. RCP (COPY OF A10)

A11 (F134)

A1C (F134)

**MEACHAM CREEK  
CROSS SECTION LOCATION  
(EXISTING CONDITIONS)**





## **Summary of Flood Elevations**

**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Natural 1 Conditions Elevations (Keep Medinah and Crest Avenue, Remove Elgin O'Hare)**  
**FEQ Model Used: sbLNGn1e.feq and sbB15n1e.feq**  
**October 3, 2012**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0:F134)	99999	710.72	717.53	719.00	719.55	720.68
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.15	715.75	716.31	717.54
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	713.98	715.64	716.30	717.54
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	713.98	715.64	716.30	717.54
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	713.98	715.64	716.30	717.54
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	713.87	715.64	716.30	717.54
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	713.87	715.64	716.30	717.54
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	713.87	715.64	716.30	717.54
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	713.87	715.64	716.30	717.54
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	713.87	715.64	716.30	717.54
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	713.87	715.64	716.30	717.54
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	713.87	715.64	716.30	717.54
XS 498	USF of Crest Ave (141:1423)	11470	708.36	713.87	715.58	716.21	717.54
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.38	714.70	715.31	716.82
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.37	714.69	715.29	716.80
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.36	714.68	715.28	716.76
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.35	714.66	715.26	716.75
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.35	714.66	715.26	716.75
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.35	714.66	715.26	716.75
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.35	714.66	715.26	716.51
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.33	714.56	715.13	716.51
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.33	714.56	715.13	716.51
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.32	714.56	715.13	716.51
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.28	714.56	715.13	716.51
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.85	713.96	714.59	716.19
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.75	713.92	714.58	716.19
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.46	713.77	714.42	716.13

**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Natural 2 Conditions Elevations (Keep Elgin-O'Hare and Crest Avenue, Remove Medinah**  
**FEQ Model Used: sbLNGn2e.feq and sbB15n2e.feq**  
**October 4, 2012**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0:F134)	99999	710.72	717.54	719.04	719.60	720.76
XS9010c	385 feet us Elgin-O'Hare Culvert (132:1321)	13550	709.40	714.39	716.01	716.58	717.77
XS9010	40 feet us Elgin-O'Hare Culvert (132:1325)	13205	709.40	714.39	715.86	716.45	717.64
XS9010c2	USF Elgin-O'Hare Culvert (132:1328)	13165	709.40	714.37	715.86	716.45	717.64
XS9008	DSF Elgin-O'Hare Culvert (140:1401)	12900	708.55	714.36	715.82	716.45	717.64
XS9007	100 DS of Elgin-O'Hare Culvert (140:1405)	12800	707.91	714.36	715.82	716.45	717.64
XS9006	534 DS of Elgin-O'Hare Culvert (140:1409)	12366	709.44	714.07	715.82	716.45	717.64
XS_510	644 feet DS of Elgin-O'Hare Culvert (140:1413)	12256	708.16	714.07	715.82	716.45	717.64
XS9005	969 DS of Elgin-O'Hare Culvert (140:1417)	11931	709.09	714.07	715.82	716.45	717.64
XS_501	1167 feet DS of Elgin-O'Hare Culvert (140:1421)	11733	708.55	714.07	715.82	716.45	717.64
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.07	715.82	716.45	717.64
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.07	715.82	716.45	717.64
XS_498	USF of Crest Ave (141:1423)	11470	708.36	714.07	715.82	716.45	717.59
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.51	714.93	715.57	717.17
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.51	714.91	715.55	717.14
XS_489	USF of Medinah Road (142:1427)	11323	708.01	713.51	714.91	715.54	717.13
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.51	714.91	715.54	717.13
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.51	714.90	715.54	717.13
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.51	714.89	715.52	717.05
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.51	714.89	715.52	717.05
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.49	714.89	715.52	717.05
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.49	714.89	715.52	717.05
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.47	714.89	715.52	717.05
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	713.45	714.89	715.52	717.05
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	712.99	714.31	714.97	716.74
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.89	714.27	714.95	716.74
XS_460	USF of Maple Ave (144:1451)	7781	708.47	712.60	714.10	714.83	716.74



PVSTATS Statistical Analysis Results  
Meacham Creek - Natural 3 Conditions Elevations (Keep Elgin-O'Hare, Remove Medinah and Crest Avenue)  
FEQ Model Used: sbLNGn3e.feq and sbB15n3e.feq  
October 4, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virgina Detention ( 0:F134)	99999	710.72	717.53	719.04	719.60	720.78
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.07	715.53	716.08	717.50
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	713.90	715.36	716.00	717.50
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	713.83	715.36	716.00	717.50
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	713.83	715.36	716.00	717.50
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	713.83	715.36	716.00	717.50
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	713.83	715.36	716.00	717.50
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	713.83	715.36	716.00	717.50
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	713.83	715.36	716.00	717.50
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	713.83	715.36	716.00	717.50
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	713.83	715.36	716.00	717.50
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	713.82	715.36	716.00	717.50
XS 498	USF of Crest Ave (141:1423)	11470	708.36	713.81	715.36	716.00	717.50
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.81	715.36	716.00	717.50
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.80	715.36	716.00	717.50
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.80	715.36	716.00	717.50
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.80	715.36	716.00	717.50
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.80	715.36	716.00	717.50
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.80	715.36	716.00	717.50
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.80	715.36	716.00	717.50
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.80	715.36	716.00	717.50
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.80	715.36	716.00	717.50
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.79	715.36	716.00	717.50
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.74	715.36	716.00	717.50
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	713.29	714.81	715.51	717.46
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	713.19	714.76	715.48	717.46
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.89	714.58	715.37	717.46

PVSTATS Statistical Analysis Results  
Meacham Creek - Natural 4 Conditions Elevations (Keep Elgin-O'Hare and Medinah, Remove Crest Avenue)  
FEQ Model Used: sbLNGn4e.feq and sbB15n4e.feq  
October 4, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0:F134)	9999	710.72	717.52	719.03	719.59	720.76
XS9010c	385 feet us Elgin-O'Hare Culvert (132:1321)	13550	709.40	714.07	715.59	716.18	717.78
XS9010	40 feet us Elgin-O'Hare Culvert (132:1325)	13205	709.40	713.94	715.41	716.08	717.78
XS9010c2	USF Elgin-O'Hare Culvert (132:1328)	13165	709.40	713.94	715.41	716.08	717.78
XS9008	DSF Elgin-O'Hare Culvert (140:1401)	12900	708.55	713.94	715.41	716.08	717.78
XS9007	100 DS of Elgin-O'Hare Culvert (140:1405)	12800	707.91	713.94	715.41	716.08	717.78
XS9006	534 DS of Elgin-O'Hare Culvert (140:1409)	12366	709.44	713.89	715.41	716.08	717.78
XS 510	644 feet DS of Elgin-O'Hare Culvert (140:1413)	12256	708.16	713.89	715.41	716.08	717.78
XS9005	969 DS of Elgin-O'Hare Culvert (140:1417)	11931	709.09	713.89	715.41	716.08	717.78
XS 501	1167 feet DS of Elgin-O'Hare Culvert (140:1421)	11733	708.55	713.89	715.41	716.08	717.78
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	713.89	715.41	716.08	717.78
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	713.89	715.41	716.08	717.78
XS 498	USF of Crest Ave (141:1423)	11470	708.36	713.88	715.35	716.01	717.65
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.87	715.35	716.01	717.65
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.86	715.35	716.01	717.63
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.86	715.35	716.01	717.63
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.81	715.26	715.87	717.48
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.80	715.26	715.87	717.48
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.77	715.26	715.86	717.37
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.77	715.26	715.86	717.34
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.77	715.26	715.86	717.33
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.77	715.26	715.86	717.31
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.77	715.26	715.86	717.31
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.75	715.26	715.86	717.31
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	713.26	714.76	715.45	717.31
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	713.17	714.69	715.38	717.31
XS 460	USF of Maple Ave (144:1451)	7781	708.47	712.88	714.53	715.30	717.31



## Summary of Flow Rates

**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Natural 1 Conditions Elevations (Keep Medinah and Crest Avenue, Remove Elgin O'Hare)**  
**FEQ Model Used: sbLNGn1e.feq and sbB15n1e.feq**  
**October 3, 2012**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)	99999	710.72	261	565	717	1113
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	261	564	715	1108
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	331	689	878	1387
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	338	711	908	1431
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	260	586	783	1384
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	270	563	738	1282
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	41	97	156	447
XS_510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	43	71	91	144
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	59	94	117	204
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	62	101	123	190
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	63	102	123	189
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	140	277	363	636
XS_498	USF of Crest Ave (141:1423)	11470	708.36	136	269	354	628
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	136	269	354	628
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	136	269	354	628
XS_489	USF of Medinah Road (142:1427)	11323	708.01	136	271	357	635
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	136	271	357	635
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	137	273	361	646
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	143	288	378	671
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	148	276	350	572
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	151	274	343	538
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	154	262	314	446
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	148	256	313	463
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	140	255	332	577
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	140	255	332	577
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	142	256	328	564
XS_460	USF of Maple Ave (144:1451)	7781	708.47	141	259	332	572

PVSTATS Statistical Analysis Results  
Meacham Creek - Natural 4 Conditions Elevations (Keep Elgin-O'Hare and Medinah, Remove Crest Avenue)  
FEQ Model Used: sbLNGn4e.feq and sbB15n4e.feq  
October 4, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)	99999	710.72	253	536	671	1012
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	256	537	674	1024
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	277	548	673	973
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	287	536	665	1013
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	287	536	664	1010
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	277	561	699	1047
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	100	209	269	420
XS_510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	71	149	185	279
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	65	111	136	208
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	70	118	144	217
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	71	120	145	217
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	227	472	611	1041
XS_498	USF of Crest Ave (141:1423)	11470	708.36	218	448	578	980
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	218	448	578	980
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	218	448	578	979
XS_489	USF of Medinah Road (142:1427)	11323	708.01	220	458	594	1022
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	220	458	594	1022
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	221	460	597	1023
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	225	463	598	1014
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	226	466	599	1002
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	228	464	594	986
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	222	435	548	872
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	210	407	514	824
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	179	362	472	839
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	179	362	472	839
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	177	348	452	793
XS_460	USF of Maple Ave (144:1451)	7781	708.47	178	348	451	792



**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Natural 2 Conditions Elevations (Keep Elgin-O'Hare and Crest Avenue, Remove Medinah**  
**FEQ Model Used: sbLNGn2e.feq and sbB15n2e.feq**  
**October 4, 2012**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)	99999	710.72	256	541	678	1026
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	257	540	677	1021
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	305	621	778	1191
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	313	633	789	1186
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	309	626	781	1183
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	294	600	753	1152
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	93	167	208	327
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	50	124	168	307
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	61	104	136	237
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	65	112	144	248
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	65	112	145	249
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	161	369	507	978
XS 498	USF of Crest Ave (141:1423)	11470	708.36	156	357	489	938
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	156	357	489	938
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	156	357	489	938
XS 489	USF of Medinah Road (142:1427)	11323	708.01	156	357	489	936
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	156	357	489	936
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	157	361	496	954
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	162	368	502	962
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	169	366	486	866
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	171	367	486	863
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	175	337	422	650
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	167	326	413	656
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	153	299	394	703
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	153	299	394	703
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	153	288	371	643
XS 460	USF of Maple Ave (144:1451)	7781	708.47	154	291	374	647

**PVSTATS Statistical Analysis Results**  
**Meacham Creek - Natural 3 Conditions Elevations (Keep Elgin-O'Hare, Remove Medinah and Crest Avenue)**  
**FEQ Model Used: sbLNGn3e.feq and sbB15n3e.feq**  
**October 4, 2012**

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)	99999	710.72	255	540	677	1025
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	256	540	677	1023
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	269	516	632	913
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	284	528	654	996
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	283	527	653	995
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	260	505	626	928
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	109	231	296	464
XS_510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	77	169	214	336
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	65	109	133	199
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	69	115	138	201
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	69	116	140	205
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	232	504	665	1179
XS_498	USF of Crest Ave (141:1423)	11470	708.36	223	478	628	1105
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	223	478	628	1105
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	224	478	628	1104
XS_489	USF of Medinah Road (142:1427)	11323	708.01	224	478	627	1104
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	224	478	627	1104
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	227	491	649	1159
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	230	496	652	1154
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	232	496	649	1133
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	240	517	676	1171
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	234	483	619	1022
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	218	450	579	971
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	181	378	501	917
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	181	378	501	917
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	179	361	473	851
XS_460	USF of Maple Ave (144:1451)	7781	708.47	180	359	470	845

## **An Excerpt from PSTATS Output File**



Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):				
	2.0	5.0	10.0	25.0	50.0
1	79.1	166.9	260.6	423.7	564.8
2	80.1	167.7	261.0	423.6	564.0
3	121.8	224.8	331.1	518.3	688.5
4	126.4	229.3	337.7	532.4	710.5
5	100.2	174.9	260.1	422.8	585.7
6	96.0	183.6	270.0	419.1	563.4
7	32.2	35.8	40.9	60.0	96.7
8	24.8	33.2	43.1	56.6	71.2
9	28.4	45.6	58.6	77.1	94.3
10	30.8	48.8	62.3	82.8	101.3
11	31.0	49.2	62.8	83.3	101.7
12	67.3	104.7	140.1	207.0	276.8
13	66.3	102.3	136.2	200.8	269.0
14	66.3	102.3	136.2	200.8	269.0
15	66.2	102.3	136.3	200.9	269.2
16	66.4	102.6	136.4	201.3	270.5
17	66.4	102.6	136.4	201.3	270.5
18	66.9	103.1	137.1	202.6	272.9
19	68.2	106.1	143.2	214.0	287.7
20	68.2	109.1	147.5	212.5	275.7
21	68.8	111.4	150.6	214.4	274.1
22	67.5	113.7	154.0	212.3	261.7
23	67.2	110.7	148.2	205.3	256.3
24	72.3	108.4	140.3	195.2	255.2
25	72.3	108.4	140.3	195.2	255.2
26	71.6	108.8	142.1	198.0	255.8
27	71.7	107.3	140.6	200.0	258.8

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	716.9	879.8	980.3	1054.0	1112.6
2	715.1	876.7	976.4	1049.5	1107.6
3	878.0	1085.5	1215.1	1310.8	1387.2
4	907.8	1122.0	1255.0	1352.9	1430.8
5	783.2	1016.7	1170.8	1288.3	1384.4
6	738.4	947.5	1086.8	1193.8	1281.5
7	155.8	246.6	321.2	386.9	446.8
8	90.6	112.2	125.9	136.0	144.2
9	116.8	147.5	170.2	188.5	203.9
10	123.3	149.1	166.2	179.2	189.9
11	123.4	148.8	165.5	178.3	188.7
12	362.7	466.1	536.2	590.8	636.2
13	353.7	456.7	527.0	582.1	628.1
14	353.7	456.7	527.0	582.1	628.1
15	353.8	456.5	526.7	581.7	627.6
16	356.5	461.1	532.6	588.6	635.4
17	356.5	461.1	532.6	588.6	635.4
18	360.5	467.3	540.5	597.9	645.9
19	378.3	488.1	563.2	622.0	671.1
20	350.3	436.6	493.3	536.5	571.9
21	342.9	420.4	470.3	507.8	538.3
22	344.3	369.4	402.8	426.9	445.9
23	312.9	374.3	412.6	440.8	463.4
24	331.6	423.6	486.4	535.7	576.8
25	331.6	423.6	486.4	535.7	576.8
26	328.0	416.3	476.9	524.5	564.4
27	332.0	421.5	483.0	531.3	571.7

Flood Frequency Summary for Peak Elevation:

Sect	Return Period (years):			
	2.0	5.0	10.0	75.0
1	715.96	717.08	717.81	719.28
2	712.51	713.49	714.43	716.36
3	712.54	713.38	714.16	715.70
4	712.55	713.40	714.18	715.69
5	712.44	713.39	714.26	715.55
6	712.49	713.39	714.12	715.31
7	712.19	713.03	713.67	715.02
8	712.36	713.30	713.85	714.96
9	712.62	713.50	714.15	715.59
10	712.62	713.52	714.13	715.56
11	712.62	713.52	714.13	715.56
12	712.62	713.49	714.15	715.92
13	712.60	713.48	714.15	715.86
14	712.42	713.16	713.66	714.39
15	712.41	713.15	713.65	714.38
16	712.40	713.14	713.64	714.37
17	712.39	713.13	713.62	714.33
18	712.39	713.12	713.61	714.33
19	712.38	713.11	713.63	714.36
20	712.31	713.10	713.63	714.30
21	712.26	713.07	713.60	714.27
22	712.25	713.07	713.61	714.30
23	712.28	713.07	713.60	714.29
24	712.33	713.04	713.56	714.28
25	712.11	712.72	713.33	713.69
26	711.95	712.57	713.03	713.62
27	711.66	712.27	712.74	713.43

Sect	Return Period (years):			
	100.0	200.0	300.0	500.0
1	719.83	720.33	720.61	720.96
2	716.59	717.13	717.43	717.81
3	716.20	716.69	716.98	717.34
4	716.19	716.67	716.96	717.33
5	715.99	716.42	716.67	716.97
6	715.72	716.09	716.30	716.44
7	715.60	716.19	716.54	716.79
8	715.39	715.80	716.03	716.31
9	716.25	716.94	717.36	717.66
10	716.19	716.85	717.26	717.91
11	716.19	716.85	717.25	717.78
12	716.58	717.15	717.45	717.77
13	716.49	717.08	717.41	717.82
14	715.59	716.22	716.60	717.10
15	715.57	716.20	716.58	716.88
16	715.56	716.18	716.55	717.08
17	715.47	716.06	716.52	717.04
18	715.48	716.08	716.42	716.88
19	715.54	716.16	716.44	716.91
20	715.30	715.80	716.53	717.03
21	715.24	715.72	716.10	716.48
22	715.31	715.81	716.00	716.36
23	715.33	715.85	716.10	716.48
24	715.41	715.99	716.16	716.56
25	714.87	715.51	715.90	716.79
26	714.86	715.53	715.94	716.41
27	714.70	715.40	715.83	716.47

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):				50.0	75.0
	2.0	5.0	10.0	25.0		
1	77.5	161.3	252.9	407.1	535.5	613.8
2	79.8	163.5	255.5	408.0	537.0	616.2
3	101.0	185.5	276.8	425.2	547.5	620.5
4	109.8	201.6	286.9	420.3	536.3	610.1
5	109.3	201.3	286.8	420.1	535.8	609.3
6	101.3	185.7	277.1	430.3	560.7	640.7
7	45.9	71.9	100.3	154.9	209.3	243.9
8	30.4	46.6	70.7	114.0	148.9	169.9
9	30.6	49.0	65.1	89.2	110.8	124.8
10	32.6	52.7	70.0	95.9	118.4	132.9
11	32.6	53.3	71.0	97.2	119.7	134.2
12	90.1	156.5	227.3	354.2	472.0	550.6
13	88.7	151.5	218.3	337.7	447.9	521.2
14	88.7	151.5	218.3	337.7	447.9	521.2
15	88.7	151.5	218.3	337.7	447.8	521.1
16	88.9	152.1	220.0	342.8	457.6	534.6
17	88.9	152.1	220.0	342.8	457.6	534.6
18	89.1	152.8	221.3	347.7	459.9	537.0
19	89.9	155.1	224.7	348.5	463.1	539.2
20	90.5	155.6	226.4	351.2	465.5	540.8
21	91.4	157.1	228.0	351.3	463.5	537.3
22	87.0	152.8	222.0	335.2	434.8	499.1
23	82.4	145.4	209.7	314.4	407.4	467.8
24	80.0	128.1	179.1	271.7	362.1	424.0
25	80.0	128.1	179.1	271.7	362.1	424.0
26	80.2	127.7	176.7	263.5	348.4	406.5
27	80.8	129.0	177.5	263.5	347.8	405.5

Sect	Return Period (years):				500.0	
	100.0	200.0	300.0	400.0		
1	670.8	812.9	899.5	962.5	1012.4	
2	674.1	819.1	907.9	972.7	1024.1	
3	672.7	800.2	876.0	930.4	972.9	
4	665.1	806.5	895.1	960.8	1013.3	
5	664.0	804.7	892.8	958.0	1010.2	
6	699.0	844.2	932.4	996.5	1047.0	
7	269.2	332.4	370.7	398.5	420.4	
8	185.3	223.8	247.5	264.8	278.6	
9	135.5	163.9	182.3	196.2	207.5	
10	143.9	172.8	191.4	205.4	216.8	
11	143.1	173.7	192.0	205.8	216.9	
12	611.1	775.7	885.8	970.8	1041.0	
13	577.8	731.7	834.7	914.2	979.9	
14	577.8	731.7	834.7	914.2	979.9	
15	577.6	731.2	834.0	913.4	979.0	
16	594.2	756.9	866.4	951.3	1021.6	
17	594.2	756.9	866.4	951.3	1021.6	
18	596.6	759.3	868.6	953.3	1023.4	
19	597.8	757.1	863.5	945.8	1013.7	
20	598.5	754.0	857.1	936.4	1001.7	
21	593.7	745.2	845.4	922.3	985.6	
22	547.6	675.5	758.4	821.2	872.3	
23	513.6	635.3	714.7	775.1	824.4	
24	472.4	608.1	702.1	776.5	839.1	
25	472.4	608.1	702.1	776.5	839.1	
26	451.9	578.6	666.1	735.1	793.1	
27	450.8	577.2	664.7	733.8	791.9	



### Flood Frequency Summary for Peak Elevation:

Sect	Return Period (years):			
	2.0	5.0	10.0	25.0
1	715.95	717.06	717.80	718.70
2	712.56	713.52	714.35	715.26
3	712.54	713.53	714.20	714.98
4	712.56	713.48	714.10	714.90
5	712.55	713.45	714.08	714.87
6	712.52	713.45	714.22	715.07
7	712.31	713.14	713.72	714.51
8	712.38	713.31	713.97	714.71
9	712.62	713.48	714.09	714.87
10	712.62	713.49	714.11	714.89
11	712.60	713.50	714.12	714.89
12	712.62	713.52	714.17	715.03
13	712.63	713.52	714.16	715.00
14	712.62	713.51	714.15	714.98
15	712.61	713.50	714.13	714.97
16	712.59	713.50	714.14	714.99
17	712.58	713.47	714.09	714.89
18	712.58	713.46	714.08	714.89
19	712.56	713.43	714.05	714.86
20	712.53	713.39	714.02	714.84
21	712.49	713.35	713.99	714.81
22	712.46	713.39	714.05	714.86
23	712.45	713.39	714.05	714.85
24	712.49	713.34	714.03	714.92
25	712.27	712.98	713.54	715.54
26	712.12	712.87	713.45	714.37
27	711.81	712.53	713.16	714.30
28	711.81	712.53	713.16	714.07
29	711.81	712.53	713.16	714.81
30	711.81	712.53	713.16	715.25
31	711.81	712.53	713.16	715.25
32	711.81	712.53	713.16	715.25
33	711.81	712.53	713.16	715.25
34	711.81	712.53	713.16	715.25
35	711.81	712.53	713.16	715.25
36	711.81	712.53	713.16	715.25
37	711.81	712.53	713.16	715.25
38	711.81	712.53	713.16	715.25
39	711.81	712.53	713.16	715.25
40	711.81	712.53	713.16	715.25
41	711.81	712.53	713.16	715.25
42	711.81	712.53	713.16	715.25
43	711.81	712.53	713.16	715.25
44	711.81	712.53	713.16	715.25
45	711.81	712.53	713.16	715.25
46	711.81	712.53	713.16	715.25
47	711.81	712.53	713.16	715.25
48	711.81	712.53	713.16	715.25
49	711.81	712.53	713.16	715.25
50	711.81	712.53	713.16	715.25
51	711.81	712.53	713.16	715.25
52	711.81	712.53	713.16	715.25
53	711.81	712.53	713.16	715.25
54	711.81	712.53	713.16	715.25
55	711.81	712.53	713.16	715.25
56	711.81	712.53	713.16	715.25
57	711.81	712.53	713.16	715.25
58	711.81	712.53	713.16	715.25
59	711.81	712.53	713.16	715.25
60	711.81	712.53	713.16	715.25
61	711.81	712.53	713.16	715.25
62	711.81	712.53	713.16	715.25
63	711.81	712.53	713.16	715.25
64	711.81	712.53	713.16	715.25
65	711.81	712.53	713.16	715.25
66	711.81	712.53	713.16	715.25
67	711.81	712.53	713.16	715.25
68	711.81	712.53	713.16	715.25
69	711.81	712.53	713.16	715.25
70	711.81	712.53	713.16	715.25
71	711.81	712.53	713.16	715.25
72	711.81	712.53	713.16	715.25

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	719.87	720.39	720.68	720.89	721.04
2	716.46	717.02	717.34	717.57	717.74
3	716.04	716.54	716.82	717.02	717.18
4	716.03	716.58	716.91	717.14	717.32
5	716.00	716.54	716.85	717.07	717.25
6	716.13	716.65	716.95	717.17	717.34
7	715.63	716.13	716.41	716.60	716.74
8	715.66	716.08	716.32	716.49	716.61
9	716.09	716.71	717.09	717.36	717.58
10	716.03	716.60	716.94	717.19	717.38
11	716.00	716.55	716.88	717.11	717.29
12	716.36	717.07	717.50	717.81	718.06
13	716.29	716.96	717.37	717.67	717.90
14	716.29	716.97	717.39	717.69	717.93
15	716.26	716.95	717.36	717.66	717.90
16	716.29	716.97	717.38	717.67	717.91
17	716.13	716.78	717.18	717.46	717.69
18	716.15	716.82	717.23	717.53	717.76
19	716.09	716.74	717.13	717.42	717.65
20	716.08	716.72	717.11	717.39	717.62
21	716.05	716.70	717.10	717.38	717.61
22	716.01	716.58	716.92	717.16	717.35
23	716.00	716.58	716.92	717.17	717.36
24	716.14	716.71	717.05	717.29	717.48
25	715.73	716.45	716.90	717.23	717.49
26	715.66	716.39	716.84	717.17	717.43
27	715.58	716.40	716.91	717.29	717.59

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):				
	2.0	5.0	10.0	25.0	50.0
1	78.6	164.7	256.1	410.8	540.8
2	79.6	165.4	256.6	411.1	540.4
3	104.4	200.2	305.2	475.5	620.6
4	107.2	205.5	312.6	487.1	633.3
5	107.2	204.5	309.1	480.2	625.5
6	105.5	197.4	293.8	457.9	599.8
7	45.7	69.6	93.0	131.7	167.1
8	29.0	35.6	49.9	86.8	123.8
9	29.3	46.6	60.7	81.5	104.4
10	31.8	50.1	64.5	87.2	111.8
11	32.1	50.5	64.9	87.7	112.4
12	73.4	115.1	160.8	260.5	368.7
13	71.9	112.2	155.6	252.1	356.5
14	71.9	112.2	155.6	252.1	356.5
15	71.9	112.2	155.6	252.1	356.5
16	72.0	112.3	156.1	252.7	356.9
17	72.0	112.3	156.1	252.7	356.9
18	72.3	112.9	156.7	254.3	360.5
19	73.7	115.8	162.2	261.5	367.6
20	74.1	119.7	169.4	267.0	365.7
21	75.1	121.1	171.0	268.7	367.0
22	73.5	123.6	175.2	260.7	337.0
23	71.2	119.0	167.4	250.0	326.4
24	75.1	114.8	152.8	223.8	299.4
25	75.1	114.8	152.8	223.8	299.4
26	74.9	115.2	152.5	219.9	287.7
27	75.6	115.8	153.7	222.1	290.7
					75.0
					620.3
					619.4
					711.2
					723.1
					715.4
					688.1
					190.4
					148.5
					121.7
					129.7
					130.4
					445.7
					430.4
					430.5
					430.6
					430.6
					435.8
					442.6
					433.4
					434.2
					385.6
					376.0
					352.4
					352.4
					334.5
					337.8

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	678.2	822.7	910.8	975.0	1025.8
2	676.9	820.3	907.6	971.1	1021.4
3	778.0	947.3	1052.2	1129.2	1190.5
4	788.6	953.2	1053.9	1127.6	1186.0
5	781.2	947.1	1049.0	1123.6	1182.8
6	753.0	917.1	1018.3	1092.5	1151.6
7	208.1	255.0	285.4	308.4	327.1
8	167.7	220.2	256.0	283.9	307.1
9	135.5	174.0	199.9	220.0	236.7
10	143.9	183.1	209.7	230.5	247.7
11	144.6	183.9	210.5	231.3	248.5
12	506.9	680.1	801.1	897.2	978.2
13	489.1	654.6	769.9	861.4	938.4
14	489.1	654.6	769.9	861.4	938.4
15	489.1	654.3	769.5	860.8	937.6
16	489.0	653.8	768.5	859.5	936.0
17	489.0	653.8	768.5	859.5	936.0
18	495.5	664.4	782.1	875.5	954.2
19	502.1	670.6	788.7	882.6	961.9
20	486.0	630.1	727.3	802.9	865.6
21	486.4	629.4	725.8	800.6	862.6
22	421.7	514.3	572.3	615.2	649.5
23	413.3	510.3	572.2	618.6	656.1
24	393.7	508.5	587.7	650.3	702.8
25	393.7	508.5	587.7	650.3	702.8
26	370.9	472.1	541.7	596.6	642.5
27	374.4	476.0	545.8	600.8	647.0

Flood Frequency Summary for Peak Elevation:

Sect	Return Period (Years):					
	2.0	5.0	10.0	25.0	50.0	75.0
1	715.96	717.08	717.82	718.72	719.32	719.65
2	712.64	713.69	714.66	715.66	716.29	716.63
3	712.63	713.72	714.67	715.60	716.14	716.43
4	712.62	713.72	714.65	715.58	716.14	716.43
5	712.60	713.68	714.60	715.52	716.04	716.31
6	712.64	713.65	714.64	715.55	716.07	716.35
7	712.34	713.03	713.85	713.94	714.28	714.46
8	712.39	713.35	713.99	714.68	715.13	715.38
9	712.70	713.64	714.32	715.20	715.88	716.27
10	712.69	713.66	714.32	715.16	715.79	716.16
11	712.69	713.66	714.31	715.16	715.78	716.15
12	712.70	713.62	714.35	715.35	716.05	716.42
13	712.70	713.62	714.35	715.35	716.10	716.49
14	712.49	713.25	713.79	714.58	715.21	715.58
15	712.48	713.24	713.78	714.57	715.19	715.56
16	712.47	713.24	713.79	714.58	715.19	715.56
17	712.47	713.23	713.78	714.57	715.19	715.55
18	712.47	713.23	713.76	714.55	715.18	715.55
19	712.45	713.21	713.77	714.55	715.16	715.52
20	712.39	713.21	713.79	714.55	715.12	715.45
21	712.35	713.17	713.75	714.51	715.09	715.43
22	712.35	713.18	713.77	714.55	715.14	715.48
23	712.37	713.17	713.75	714.53	715.13	715.48
24	712.40	713.15	713.73	714.54	715.17	715.54
25	712.17	712.81	713.27	713.96	714.59	714.97
26	712.02	712.69	713.17	713.89	714.55	714.95
27	711.73	712.36	712.88	713.68	714.38	714.80

Sect	Return Period (years):				
	100.0	200.0	300.0	400.0	500.0
1	719.88	720.39	720.68	720.88	721.04
2	716.86	717.39	717.68	717.89	718.05
3	716.63	717.08	717.33	717.51	717.65
4	716.63	717.10	717.37	717.56	717.71
5	716.50	716.94	717.19	717.36	717.50
6	716.54	717.00	717.27	717.47	717.62
7	714.59	714.88	715.04	715.14	715.23
8	715.54	715.91	716.12	716.26	716.37
9	716.55	717.21	717.60	717.88	718.09
10	716.42	717.06	717.44	717.72	717.94
11	716.41	717.04	717.42	717.70	717.92
12	716.67	717.23	717.54	717.75	717.92
13	716.73	717.26	717.54	717.72	717.87
14	715.85	716.52	716.92	717.22	717.45
15	715.83	716.49	716.89	717.19	717.42
16	715.82	716.46	716.84	717.12	717.34
17	715.81	716.47	716.86	717.15	717.38
18	715.82	716.48	716.89	717.18	717.41
19	715.78	716.43	716.83	717.12	717.35
20	715.68	716.25	716.59	716.84	717.03
21	715.67	716.26	716.61	716.87	717.07
22	715.72	716.30	716.64	716.89	717.09
23	715.73	716.34	716.70	716.97	717.18
24	715.80	716.44	716.83	717.11	717.33
25	715.25	715.93	716.35	716.65	716.90
26	715.23	715.94	716.38	716.71	716.96
27	715.11	715.89	716.37	716.73	717.02



Confidential Business Information

2012 NSQP 2.0 Potential Stipulated Penalties

Division	Site	Item	Penalty	Notes
New England	Various	SWPPP		Based on SWPPP review - no penalty (9/7/12)
New England	Reading Woods (05-NE-12)	Training	\$100	(1 untrained)
Michigan	Hamlet (33-MI-12)	SIR	\$100	(1 miss/late report)
Michigan	Pinehurst (35-MI-12)	D-SIR	\$100	(1 material failure)
Minnesota	The Willows (71-MN-12)	SIR	\$600	(6 miss/late reports)
Minnesota	Elm Creek Highlands (72-MN-12)	SIR	\$700	(7 miss/late reports)
Minnesota	Fox Ridge (73-MN-12)	SIR	\$100	(1 miss/late report)
			<u>\$1,700</u>	

Based on audits completed by CBBEL

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):			25.0	50.0	75.0
	2.0	5.0	10.0			
1	77.7	162.8	254.9	409.9	539.8	619.2
2	78.6	163.7	255.7	410.4	539.9	619.0
3	101.2	183.7	269.2	404.3	516.1	583.6
4	109.8	200.1	283.7	414.3	528.0	600.3
5	109.3	199.6	283.2	413.7	527.3	599.6
6	101.3	180.3	259.5	390.8	504.9	575.1
7	46.4	75.9	108.6	171.0	230.9	268.7
8	30.9	50.1	76.8	126.2	168.5	194.9
9	30.6	48.8	65.0	88.8	109.4	122.7
10	32.1	51.6	68.6	93.5	114.5	127.8
11	32.4	51.8	68.9	94.2	115.8	129.5
12	91.6	158.5	232.0	370.5	503.9	594.3
13	154.4	223.4	353.4	477.8	562.0	652.0
14	90.1	154.4	223.4	353.4	477.8	562.0
15	90.0	154.4	223.5	353.5	477.9	562.0
16	90.0	154.4	223.5	353.5	477.9	561.9
17	90.0	154.4	223.5	353.6	477.9	561.9
18	90.4	156.2	226.9	361.0	490.9	579.4
19	90.6	157.3	229.8	365.5	495.5	583.6
20	91.1	158.0	231.7	367.1	495.7	582.3
21	92.3	161.3	240.0	383.1	517.1	606.9
22	88.0	156.7	233.6	364.6	482.7	560.0
23	83.4	147.1	218.3	339.6	450.3	523.4
24	80.2	128.4	181.0	279.7	378.4	446.6
25	80.2	128.4	181.0	279.7	378.4	446.6
26	80.7	129.0	179.3	270.5	360.9	423.5
27	81.2	129.5	179.5	269.6	359.1	421.0

Sect	Return Period (years):			400.0	500.0	
	100.0	200.0	300.0			
1	677.0	821.6	909.7	974.0	1024.9	
2	676.6	820.6	908.5	972.5	1023.2	
3	632.1	751.1	822.1	873.2	913.1	
4	654.3	793.0	880.1	944.6	996.3	
5	653.4	792.0	878.9	943.3	994.8	
6	626.2	752.8	829.2	884.4	927.8	
7	296.4	365.9	408.4	439.3	463.8	
8	214.3	263.8	294.9	317.9	336.3	
9	132.7	159.0	176.0	188.8	199.2	
10	137.6	163.2	179.4	191.4	201.1	
11	139.7	166.1	182.8	195.2	205.2	
12	664.8	858.9	990.7	1093.4	1178.8	
13	627.5	807.9	930.3	1025.6	1104.9	
14	627.5	807.9	930.3	1025.6	1104.9	
15	627.5	807.7	930.0	1025.2	1104.4	
16	627.3	807.4	929.5	1024.6	1103.6	
17	627.3	807.4	929.5	1024.6	1103.6	
18	648.6	840.2	971.0	1073.4	1158.8	
19	652.2	841.4	970.1	1070.7	1154.4	
20	649.3	832.9	956.6	1052.7	1132.5	
21	676.2	865.0	991.6	1089.7	1170.9	
22	618.9	776.1	879.2	958.0	1022.4	
23	579.4	730.4	830.5	907.4	970.8	
24	500.5	653.1	760.1	845.3	917.4	
25	500.5	653.1	760.1	845.3	917.4	
26	472.8	611.8	708.8	785.8	850.8	
27	469.8	607.5	703.6	780.0	844.5	

Flood Frequency Summary for Peak Elevation:

Sect	Return Period (Years):				75.0
	2.0	5.0	10.0	25.0	
1	715.95	717.07	717.81	718.71	719.66
2	712.58	713.53	714.35	715.23	716.13
3	712.55	713.53	714.18	714.97	715.83
4	712.57	713.47	714.05	714.77	715.61
5	712.56	713.45	714.02	714.73	715.53
6	712.54	713.43	714.00	714.72	715.55
7	712.35	713.22	713.84	714.60	715.42
8	712.39	713.36	714.04	714.83	715.65
9	712.61	713.47	714.07	714.87	715.82
10	712.58	713.48	714.10	714.87	715.75
11	712.56	713.49	714.11	714.87	715.73
12	712.62	713.50	714.10	714.92	715.92
13	712.63	713.50	714.09	714.89	715.86
14	712.63	713.50	714.09	714.88	715.86
15	712.61	713.49	714.07	714.87	715.84
16	712.60	713.47	714.07	714.86	715.82
17	712.60	713.47	714.07	714.86	715.82
18	712.59	713.47	714.07	714.86	715.82
19	712.57	713.44	714.05	714.85	715.86
20	712.53	713.38	714.01	714.83	715.85
21	712.49	713.35	714.00	714.85	715.88
22	712.47	713.40	714.08	714.91	715.88
23	712.47	713.39	714.07	714.90	715.86
24	712.49	713.31	714.02	714.96	716.02
25	712.28	713.00	713.57	714.41	715.50
26	712.13	712.88	713.47	714.34	715.45
27	711.82	712.55	713.17	714.10	715.31

Sect	Return Period (years):				500.0
	100.0	200.0	300.0	400.0	
1	719.88	720.41	720.70	720.90	721.06
2	716.36	716.88	717.18	717.39	717.55
3	716.05	716.56	716.85	717.05	717.21
4	715.82	716.34	716.64	716.86	717.03
5	715.74	716.23	716.52	716.72	716.88
6	715.76	716.27	716.57	716.79	716.96
7	715.62	716.09	716.36	716.55	716.70
8	715.86	716.33	716.60	716.79	716.93
9	716.07	716.69	717.06	717.32	717.53
10	715.97	716.50	716.82	717.04	717.22
11	715.95	716.47	716.77	716.99	717.15
12	716.19	716.86	717.27	717.57	717.80
13	716.12	716.77	717.15	717.44	717.66
14	716.12	716.77	717.16	717.45	717.68
15	716.10	716.74	717.14	717.42	717.65
16	716.08	716.71	717.09	717.36	717.58
17	716.08	716.71	717.10	717.38	717.60
18	716.13	716.78	717.17	717.46	717.68
19	716.12	716.78	717.19	717.49	717.72
20	716.12	716.80	717.21	717.51	717.75
21	716.16	716.85	717.28	717.59	717.83
22	716.11	716.71	717.06	717.32	717.52
23	716.10	716.71	717.07	717.33	717.53
24	716.28	716.92	717.29	717.56	717.78
25	715.79	716.52	716.97	717.30	717.56
26	715.76	716.52	716.99	717.34	717.61
27	715.65	716.50	717.03	717.43	717.74



**TAB 11**

## **SECTION 11**

### **PROPOSED CONDITIONS ANALYSIS**

Baseline Conditions

[Folder: \SpringBrookTSC\FEQ\070404\baseline]  
FEQ Input File for Long TSF: scsblong.feq  
FEQ Peak File for Long TSF: scsblong.fff  
FEQ Output File for Long TSF: scsblong  
FEQ Input File for BIG TSF: scsbb15a.feq  
FEQ Peak File for BIG TSF: scsbb15a.fff  
FEQ Output File for BIG TSF: scsbb15a  
PVSTATS Analysis: See Folder pvstats\_BL

Existing Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Exist]  
FEQ Input File for Long TSF: sbLNGe6.feq  
FEQ Peak File for Long TSF: sbLNGe6.fff  
FEQ Output File for Long TSF: sbLNGe6  
FEQ Input File for BIG TSF: sbB15e6.feq  
FEQ Peak File for BIG TSF: sbB15e6.fff  
FEQ Output File for BIG TSF: sbB15e6  
PVSTATS Analysis: See Folder pvstats\_e6

Natural Conditions - Remove Elgin O'Hare Expressway, and keep Crest Avenue and Medinah (Table 3 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural1]  
FEQ Input File for Long TSF: sbLNGn1e.feq  
FEQ Peak File for Long TSF: sbLNGn1e.fff  
FEQ Output File for Long TSF: sbLNGn1e  
FEQ Input File for BIG TSF: sbB15n1e.feq  
FEQ Peak File for BIG TSF: sbB15n1e.fff  
FEQ Output File for BIG TSF: sbB15n1e  
PVSTATS Analysis: See Folder pvstats\_n1e

Natural Conditions - Remove Crest Avenue, and keep Elgin O'Hare Expressway and Medinah Road (Table 4 of the Report)

[Folder: \Devon\FEQ\070404\natural4]  
FEQ Input File for Long TSF: sbLNGn4e.feq  
FEQ Peak File for Long TSF: sbLNGn4e.fff  
FEQ Output File for Long TSF: sbLNGn4e  
FEQ Input File for BIG TSF: sbB15n4e.feq  
FEQ Peak File for BIG TSF: sbB15n4e.fff  
FEQ Output File for BIG TSF: sbB15n4e  
PVSTATS Analysis: See Folder pvstats\_n4e

Natural Conditions - Remove Medinah Road, and keep Elgin O'Hare Expressway and Crest Avenue (Table 5 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural2]  
FEQ Input File for Long TSF: sbLNGn2e.feq  
FEQ Peak File for Long TSF: sbLNGn2e.fff  
FEQ Output File for Long TSF: sbLNGn2e  
FEQ Input File for BIG TSF: sbB15n2e.feq  
FEQ Peak File for BIG TSF: sbB15n2e.fff  
FEQ Output File for BIG TSF: sbB15n2e  
PVSTATS Analysis: See Folder pvstats\_n2e

Natural Conditions - Remove Medinah Road and Crest Avenue, and keep Elgin O'Hare Expressway (Table 6 of the Report)

[Folder: \SpringBrookTSC\FEQ\070404\natural3]  
FEQ Input File for Long TSF: sbLNGn3e.feq  
FEQ Peak File for Long TSF: sbLNGn3e.fff  
FEQ Output File for Long TSF: sbLNGn3e  
FEQ Input File for BIG TSF: sbB15n3e.feq  
FEQ Peak File for BIG TSF: sbB15n3e.fff  
FEQ Output File for BIG TSF: sbB15n3e  
PVSTATS Analysis: See Folder pvstats\_n3e

Proposed Conditions

[Folder: \SpringBrookTSC\FEQ\070404\Proposed]  
FEQ Input File for Long TSF: sbLNGp4.feq  
FEQ Peak File for Long TSF: sbLNGp4.fff  
FEQ Output File for Long TSF: sbLNGp4  
FEQ Input File for BIG TSF: sbB15p4.feq  
FEQ Peak File for BIG TSF: sbB15p4.fff  
FEQ Output File for BIG TSF: sbB15p4  
PVSTATS Analysis: See Folder pvstats\_p4



\_\_\_\_\_ A1 (XS9001) 1202' U/S OF THORNDALE

\_\_\_\_\_ XS486

\_\_\_\_\_ A2 (XS9002)

\_\_\_\_\_ XS487

\_\_\_\_\_ A3 (XS9003)

\_\_\_\_\_ D/S FACE OF MEDINAH ROAD (XS9003C)

\_\_\_\_\_ U/S FACE OF MEDINAH ROAD (XS489)

\_\_\_\_\_ A4 (XS9004)

\_\_\_\_\_ D/S FACE OF CREST AVENUE (XS9004C)

\_\_\_\_\_ U/S FACE OF CREST AVENUE (XS498)

\_\_\_\_\_ XS500C AND XS501C  
\_\_\_\_\_ XS501

\_\_\_\_\_ A5 (XS9005)

\_\_\_\_\_ XS510

\_\_\_\_\_ A6 (XS9006)

\_\_\_\_\_ A7 (XS9007)

\_\_\_\_\_ D/S FACE OF ELGIN O'HARE EXPRESSWAY (A8 9008)

\_\_\_\_\_ U/S FACE OF ELGIN O'HARE EXPRESSWAY (COPY OF A10)  
\_\_\_\_\_ A10 (XS9010)

\_\_\_\_\_ D/S FACE OF TRIPLE 3' DIA. RCP (COPY OF A10)

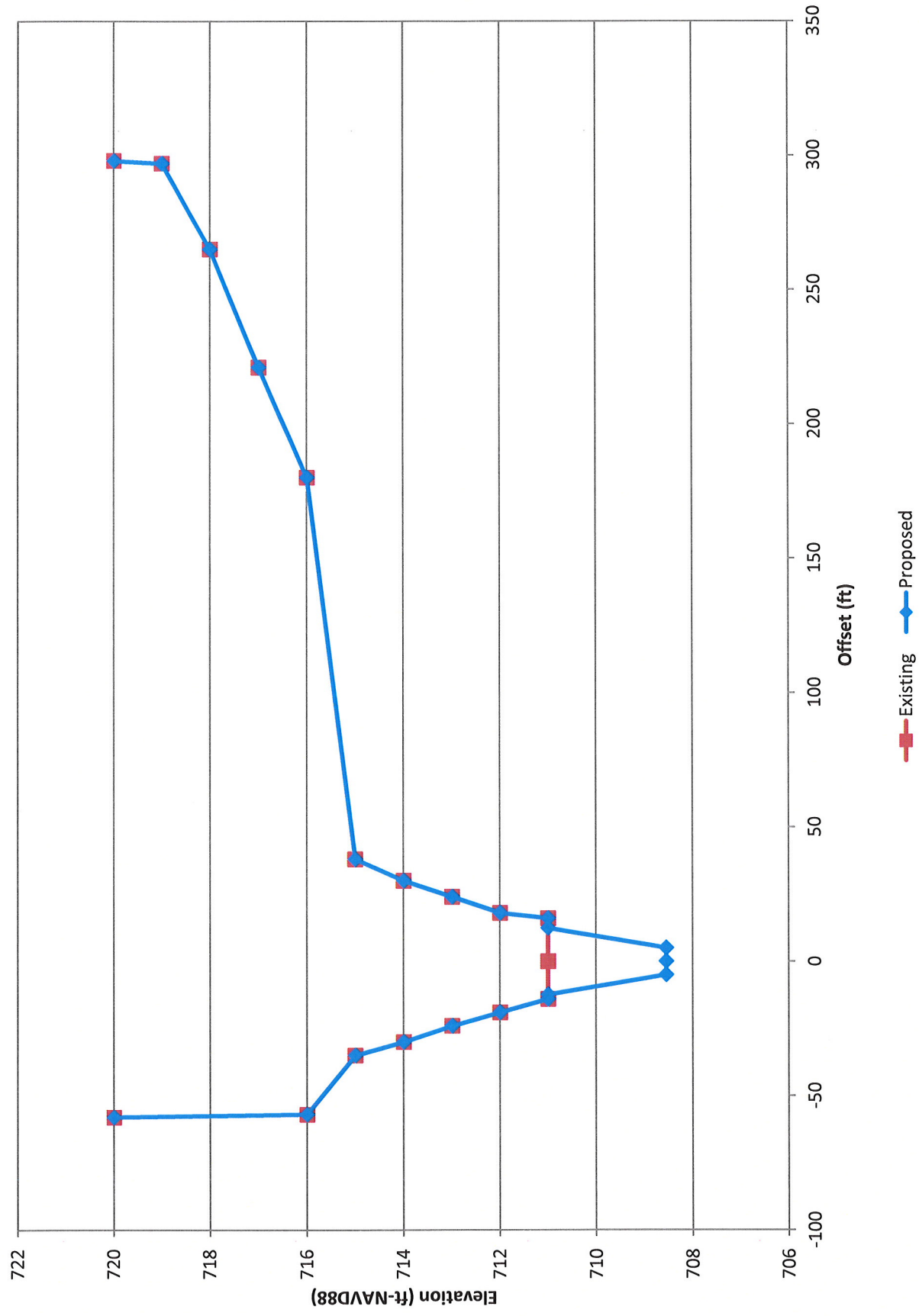
\_\_\_\_\_ A11 (F134)

\_\_\_\_\_ A1C (F134)

**MEACHAM CREEK  
CROSS SECTION LOCATION  
(PROPOSED CONDITIONS)**

336'  
90'  
185'  
250'  
65'  
163'  
60'  
65'  
86'  
225'  
38'  
198'  
325'  
110'  
434'  
88'  
277'  
40'  
345'  
120'  
420'

# Proposed Cross Section A8



## **Summary of Flood Elevations**



PVSTATS Statistical Analysis Results  
Meacham Creek - Proposed Conditions Elevations  
FEQ Model Used: sbLNGp4.feq and sbB15p4.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NAVD88)	PVS330 10-Year (ft-NAVD88)	PVS330 50-Year (ft-NAVD88)	PVS330 100-Year (ft-NAVD88)	PVS330 500-Year (ft-NAVD88)
F134	Virginia Detention ( 0:F134)	9999	710.72	717.55	719.04	719.59	720.74
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	714.38	716.04	716.62	717.91
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	714.35	715.86	716.42	717.91
XS9010c2	USF Elgin-OHare Culvert (132:1326)	13165	709.40	714.35	715.86	716.42	717.91
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	714.35	715.82	716.34	717.91
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	714.35	715.82	716.34	717.91
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	714.11	715.69	716.34	717.91
XS 510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	714.11	715.69	716.34	717.91
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	714.11	715.69	716.34	717.91
XS 501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	714.11	715.69	716.34	717.91
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	714.11	715.69	716.34	717.91
XS 500c	Confluec of Trib 1 (141:1411)	11694	708.59	714.11	715.69	716.34	717.91
XS 498	USF of Crest Ave (141:1423)	11470	708.36	714.11	715.66	716.32	717.91
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	713.50	714.90	715.54	717.15
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	713.49	714.89	715.54	717.15
XS 489	USF of Medinah Road (142:1427)	11323	708.01	713.48	714.89	715.54	717.14
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	713.46	714.80	715.40	716.91
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	713.46	714.79	715.40	716.89
XS 487	315 feet DS of Medinah Road (143:1436)	10788	708.78	713.46	714.78	715.40	716.89
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	713.46	714.78	715.40	716.89
XS 486	590 feet DS of Medinah Road (143:1443)	10513	709.02	713.45	714.78	715.40	716.89
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	713.45	714.78	715.40	716.89
XS 484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	713.43	714.78	715.40	716.89
XS 985	USF of Thorndale Road (143:1458)	8976	707.18	713.41	714.78	715.40	716.89
XS 470	DSF of Thorndale Road (144:1441)	8842	708.32	712.96	714.21	714.87	716.58
XS 994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	712.85	714.16	714.83	716.58
XS_460	USF of Maple Ave (144:1451)	7781	708.47	712.55	713.98	714.69	716.58

## **Summary of Flow Rates**

PVSTATS Statistical Analysis Results  
Meacham Creek - Proposed Conditions Elevations  
FEQ Model Used: sblNGp4.feq and sbB15p4.feq  
October 3, 2012

Cross Section ID	Description	Station (ft)	Invert Elevation (ft-NGVD88)	PVS330 10-Year (cfs)	PVS330 50-Year (cfs)	PVS330 100-Year (cfs)	PVS330 500-Year (cfs)
F134	Virgina Detention ( 0:F134)	99999	710.72	255	538	676	1026
XS9010c	385 feet us Elgin-OHare Culvert (132:1321)	13550	709.40	255	538	674	1021
XS9010	40 feet us Elgin-OHare Culvert (132:1325)	13205	709.40	299	614	770	1179
XS9010c2	USF Elgin-OHare Culvert (132:1328)	13165	709.40	298	610	759	1134
XS9008	DSF Elgin-OHare Culvert (140:1401)	12900	708.55	297	610	760	1137
XS9007	100 DS of Elgin-OHare Culvert (140:1405)	12800	707.91	288	592	740	1119
XS9006	534 DS of Elgin-OHare Culvert (140:1409)	12366	709.44	89	157	201	352
XS_510	644 feet DS of Elgin-OHare Culvert (140:1413)	12256	708.16	45	119	171	365
XS9005	969 DS of Elgin-OHare Culvert (140:1417)	11931	709.09	60	101	131	242
XS_501	1167 feet DS of Elgin-OHare Culvert (140:1421)	11733	708.55	64	108	137	242
XS501c	Confluec of Trib 1 (140:1423)	11694	708.55	65	109	138	244
XS_500c	Confluec of Trib 1 (141:1411)	11694	708.59	157	346	466	866
XS_498	USF of Crest Ave (141:1423)	11470	708.36	152	336	452	838
XS9004c	DSF of Crest Ave (142:1421)	11448	708.70	152	336	452	838
XS9004	65 feet DSF of Crest Ave (142:1424)	11383	708.70	152	336	452	838
XS_489	USF of Medinah Road (142:1427)	11323	708.01	153	336	452	834
XS9003c	DSF of Medinah Road (143:1431)	11103	708.41	153	336	452	834
XS9003	65 feet DS of Medinah Road (143:1433)	11038	708.41	153	339	456	845
XS_487	315 feet DS of Medinah Road (143:1436)	10788	708.78	159	346	465	862
XS9002	500 feet DS of Medinah Road (143:1439)	10603	708.67	164	335	435	741
XS_486	590 feet DS of Medinah Road (143:1443)	10513	709.02	166	337	435	734
XS9001	925 feet DS of Medinah Road (143:1447)	10178	708.16	170	312	382	565
XS_484	1095 feet DS of Medinah Road (143:1450)	10008	708.73	162	302	375	575
XS_985	USF of Thorndale Road (143:1458)	8976	707.18	150	288	377	673
XS_470	DSF of Thorndale Road (144:1441)	8842	708.32	150	288	377	673
XS_994	459 feet DS of Thorndale Road (144:1445)	8383	708.38	150	278	360	633
XS_460	USF of Maple Ave (144:1451)	7781	708.47	151	281	363	638



## **Associated FEQUTL Files**

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-1131.3 716.45 1  
-1123.2 716.58 1  
-1053.2 716.31 2  
-981.7 716.49 2  
-971.8 716.08 2  
-958.5 716.13 2  
-920.8 715.97 2  
-902.6 715.29 2  
-865.4 711.00 2  
-863.0 710.39 2  
-824.7 710.44 2  
-790.8 710.16 2  
-733.0 710.35 2  
-555.0 710.23 2  
-504.0 710.31 2  
-460.4 710.32 2  
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-202.9 712.22 2  
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-121.3 711.19 2  
-77.6 710.44 2  
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-23.3 711.63 3  
-15.4 709.11 3  
-7.8 708.96 3  
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8.2 709.60 3  
11.1 711.01 3  
15.5 711.61 4  
75.1 710.88 4  
133.0 711.09 4  
186.3 711.09 4  
237.5 711.10 4  
299.2 711.05 4  
351.4 711.31 4  
397.4 711.57 4  
432.9 712.31 4  
468.1 713.06 4  
500.0 716.24 4  
506.6 716.65 4  
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533.4 716.85 4

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 -358.0 716.28 1  
 -308.0 715.28 1  
 -228.0 714.28 1  
 -137.9 713.79 1  
 -110.5 713.33 1  
 -88.7 713.29 1  
 -67.4 713.11 1  
 -36.0 712.93 1  
 -18.9 712.54 2  
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 0.0 708.95 2  
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 15.0 711.48 2  
 18.4 712.43 2  
 25.6 713.70 3  
 59.4 713.22 3  
 76.7 712.93 3  
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 -361.0 718.28 1  
 -360.4 716.74 1  
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 -281.5 715.87 1  
 -253.8 715.39 1  
 -175.0 714.53 1  
 -112.4 714.21 1  
 -52.7 713.66 1  
 -23.9 713.00 1  
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 0.0 708.69 2  
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-8.8 711.01 2  
-5.0 709.33 2  
0.0 708.98 2  
11.9 709.37 2  
21.7 710.16 2  
28.5 710.93 2  
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75.5 716.65 3  
80.6 716.75 3  
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-522.4 714.33 1  
-463.4 713.03 1  
-362.3 712.54 1  
-307.2 712.01 1  
-248.2 711.81 1  
-145.5 710.85 1  
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22.6 710.21 2  
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57.1 711.17 3  
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185.6 710.89 3  
222.3 711.00 3  
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466.9 710.60 3  
574.2 711.13 3  
715.5 711.34 3  
812.5 711.37 3  
858.1 711.31 3  
1082.5 711.20 3  
1126.2 711.42 3  
1142.4 711.45 3  
1176.4 711.40 3  
1227.0 711.58 3  
1271.7 711.05 3  
1301.0 711.02 3  
1344.4 711.45 3  
1384.0 711.02 3  
1974.0 714.28 3  
2024.0 716.28 3  
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NSUB XSEC A6  
-1068.5 719.86 1  
-1042.2 719.52 1  
-1028.2 719.41 1  
-996.7 716.02 1  
-951.6 713.65 1  
-890.1 712.98 1  
-846.9 714.75 1  
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-652.6 713.40 1  
-579.3 710.85 1  
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-119.7 711.24 1  
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-39.4 710.99 2  
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0.0 709.72 2  
22.9 709.75 2  
24.1 711.32 2  
80.1 711.36 3  
129.8 711.16 3  
196.7 710.87 3  
319.4 711.16 3  
377.8 711.23 3  
449.9 711.02 3  
512.0 711.22 3  
596.0 711.31 3  
656.3 711.00 3  
709.8 710.91 3  
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823.8 710.81 3  
890.3 710.88 3  
922.3 711.06 3  
935.6 711.10 3  
992.3 710.99 3  
1006.5 711.15 3  
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NSUB XSEC A7  
-745.0 720.28 1  
-710.3 711.97 1  
-649.5 711.18 1  
-591.7 711.62 1  
-538.5 711.65 1

-477.5	710.94	1
-442.0	711.43	1
-392.5	710.97	1
-357.0	711.26	1
-260.5	711.08	1
-217.0	711.20	1
-139.8	711.26	1
-86.8	711.41	1
-38.2	712.51	2
-9.4	709.41	2
0.0	708.19	2
0.4	709.00	2
7.3	709.71	2
9.3	711.69	2
67.3	712.17	3
153.6	713.29	3
220.2	714.64	3
304.9	716.66	3
382.1	717.20	3
469.1	715.69	3
542.9	715.26	3
635.8	713.44	3
687.8	711.92	3
777.4	711.41	3
852.2	711.35	3
969.3	711.30	3
1050.9	711.50	3
1119.5	713.35	3
1193.6	719.43	3
1233.4	723.44	3
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GISID= 005SCS89008  
TABLE#= 9008 NEWBETAM OUT22  
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2.1 710.37 2  
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99.9 715.68 3  
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XSEC A9  
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0.0 709.52 2  
15.5 710.03 2  
19.6 712.96 3



27.3	711.91	3
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86.0	720.28	-1

FEQX

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XSEC A10

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-652.5 720.39 2

-625.7 712.19 2

-594.1 711.39 2

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-11.9 710.00 2

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11.4 712.18 2

38.9 711.61 2

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122.2 711.52 2

146.6 711.56 2

169.1 711.34 2

194.6 711.51 2

216.9 711.77 2

247.4 711.89 2

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FINISH

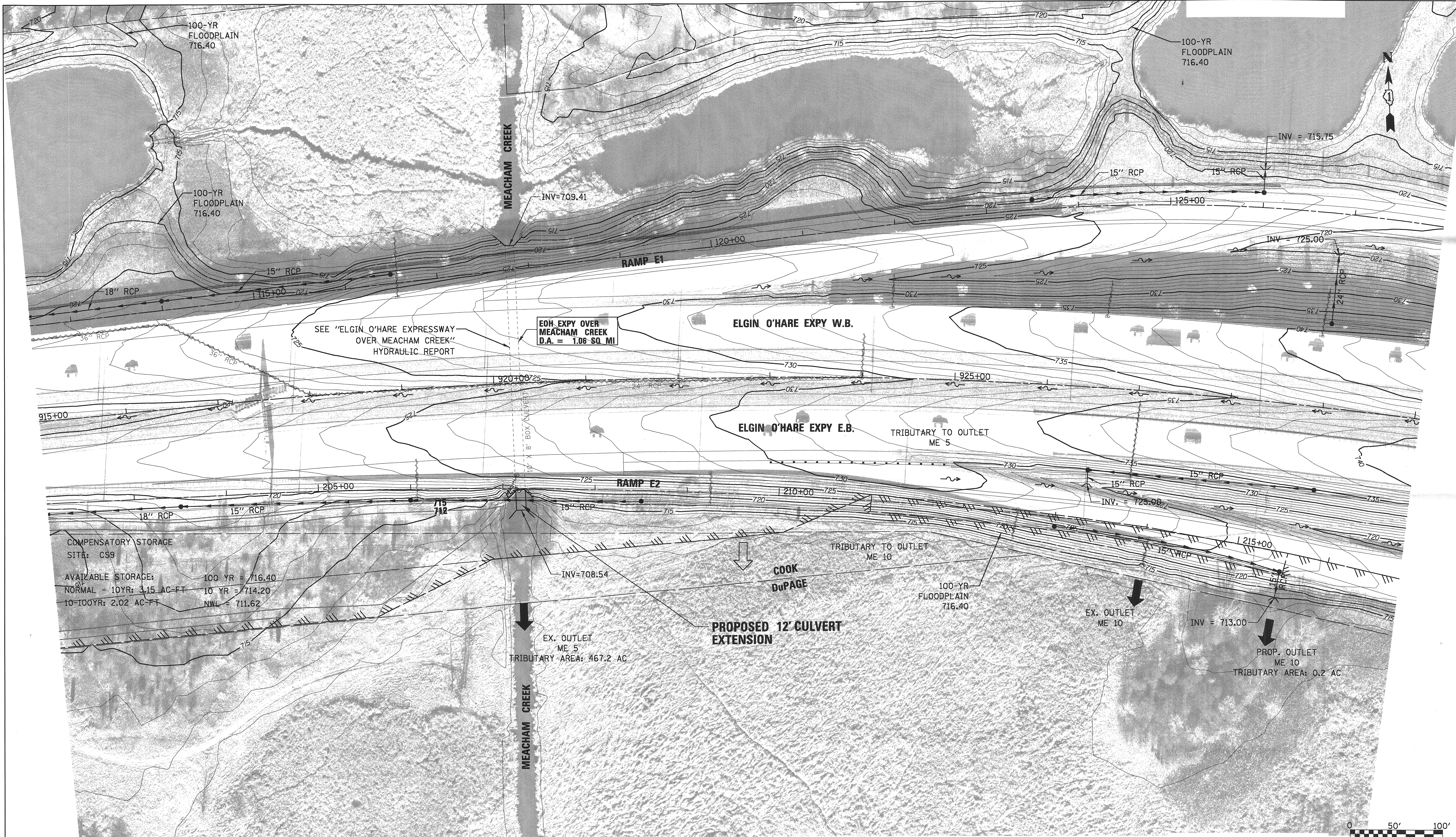
## **An Excerpt from PSTATS Output File**

Flood Frequency Summary for Peak Discharge:

Sect	Return Period (years):			
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1	78.6	164.2	254.6	617.5
2	73.7	165.1	255.2	616.6
3	103.8	193.7	299.2	703.9
4	109.0	194.5	297.9	696.4
5	109.4	194.6	297.0	696.5
6	108.6	192.1	288.2	677.2
7	50.8	69.7	88.8	181.8
8	32.8	36.6	45.0	147.7
9	29.3	46.2	60.1	117.5
10	31.6	50.0	64.2	123.5
11	31.9	50.4	64.7	124.8
12	72.5	113.8	157.2	413.4
13	71.1	111.0	152.3	401.1
14	71.1	111.0	152.3	401.1
15	71.1	111.0	152.4	401.2
16	71.1	111.1	152.9	400.8
17	71.1	111.1	152.9	400.8
18	71.5	111.7	153.4	400.8
19	73.0	114.5	158.6	404.3
20	73.6	117.8	163.6	412.7
21	74.1	119.5	166.2	391.8
22	72.5	122.0	169.8	392.3
23	70.6	117.8	162.1	352.3
24	75.1	114.6	150.4	343.7
25	75.1	114.6	150.4	337.6
26	74.8	114.6	149.7	337.6
27	75.5	115.4	151.4	324.0
			214.6	326.9
			250.5	
			252.2	
			336.5	
			311.5	
			301.5	
			287.6	
			287.6	
			212.0	
			212.0	
			214.6	
			400.0	
			500.0	
			1025.7	
			1021.4	
			1118.2	
			1134.3	
			1137.2	
			1118.5	
			351.9	
			325.8	
			329.4	
			364.6	
			242.2	
			241.6	
			241.6	
			243.7	
			865.7	
			838.3	
			838.3	
			837.6	
			833.6	
			833.6	
			845.0	
			779.0	
			794.0	
			691.1	
			740.6	
			685.4	
			733.8	
			538.0	
			544.2	
			574.6	
			622.1	
			672.6	
			586.9	
			633.4	
			591.0	
			637.7	

Sect	Return Period (years):			
	100.0	200.0	300.0	500.0
1	675.5	820.8	909.6	1025.7
2	674.2	818.4	906.4	1021.4
3	770.2	938.1	1041.9	1178.9
4	759.0	915.2	1010.2	1134.3
5	739.5	896.6	1012.3	1137.2
6	739.6	896.4	992.5	1082.0
7	201.2	256.4	295.0	1062.7
8	170.8	238.9	288.7	325.8
9	131.1	171.0	199.7	329.4
10	136.5	174.3	201.5	364.6
11	137.9	176.1	203.4	242.2
12	466.3	614.6	717.0	241.6
13	452.4	595.7	694.7	223.2
14	452.4	595.7	694.7	223.2
15	452.4	595.5	694.3	223.2
16	451.6	593.7	691.6	223.2
17	451.6	593.7	691.6	223.2
18	456.1	600.6	700.3	223.2
19	465.0	611.7	713.5	223.2
20	435.4	553.0	631.0	223.2
21	435.0	550.2	626.6	223.2
22	382.2	457.7	504.1	223.2
23	375.0	455.6	506.4	223.2
24	376.8	486.3	562.1	223.2
25	376.8	486.3	562.1	223.2
26	360.3	461.5	531.5	223.2
27	363.3	464.9	535.3	223.2





**LEGEND:**

BOUNDARY LINES/SYMBOLS	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE AND STATIONING	1+330+00	1+715+00
RIGHT OF WAY LINE	---	---
COUNTY LINE	---	---
DRAINAGE DIVIDE (HYDROLOGIC ATLAS)	---	---
TEMPORARY EASEMENT	---	---
PERMANENT EASEMENT	---	---
STORM SEWER REMOVAL	---	---

EXISTING	PROPOSED
SWALE	---
DITCH	---
DITCH SUMMIT	---
CULVERT SIZE/TYPE	2 X 2 BOX
HEADWALL	---
CATCH BASIN	---
INLET/SCUPPER	---
MANHOLE	---
INVERT	---
STORM SEWER	---

EXISTING	PROPOSED
OVERFLOW	---
OUTLET	---
SHEET FLOW	---
DITCH CHECK	---
DRAINAGE BOUNDARY	---

FILE NAME = DIEQWB-sht-pr-drain-EOP16.EXH

USER NAME = mgoldenberg

DESIGNED MA

DRAWN MYG

CHECKED CW

DATE -

PLOT SCALE = 50'

PLOT DATE = 11/13/2012

REVISED -

REVISED -

REVISED -

REVISED -

**ELGIN O'HARE WEST BYPASS**

communities. opportunities. solutions.

**PROPOSED DRAINAGE PLAN**

**MEACHAM CREEK WATERSHED**

**ELGIN O'HARE EXPRESSWAY**

F.A. RTE.

SECTION

COUNTY

TOTAL SHEETS

SHEET NO.

COOK, DuPAGE

EXHIBIT 11.1

ILLINOIS FED. AID PROJECT

FULL BUILD

SHEET NO. OF SHEETS

STA. TO STA.

N:\VGS\107046\Water\Exhibit\ MDC\DieQWB-sht-pr-drain-EOP16.EXH  
4/4/2012 10:44:25 PM



## **Comparison of Elevations and Flow from the Existing and the Proposed Conditions FEQ Models**

Meacham Creek FEQ Modeling (CBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 F134 Virgina Detention ( 0:F134)  
 1. Branch# 99999; Node ID: VIRG DET; Station: 0.0000

Nodes ==>	(1) sblNGe6.FFF 134		(2) sblNGp4.FFF 134		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	711.00	0.00	711.00	0.00	0.00	0.00
1949/04/08	714.66	29.53	714.66	29.48	-0.01	-0.05
1949/06/21	715.12	39.41	715.11	39.05	-0.02	-0.36
1949/07/27	714.95	36.29	714.89	35.27	-0.06	-1.02
1949/12/31	714.70	27.81	714.70	27.80	0.00	-0.01
1950/01/31	715.27	45.83	715.26	45.79	-0.01	-0.04
1950/05/03	715.28	45.07	715.30	46.03	0.02	0.96
1950/06/11	714.50	25.11	714.49	24.89	-0.01	-0.22
1951/03/09	714.89	34.19	714.89	34.20	0.00	0.02
1951/05/17	713.82	16.75	713.81	16.77	-0.02	0.02
1951/07/29	715.09	41.44	715.08	41.19	-0.01	-0.24
1952/01/25	715.05	38.79	715.05	38.76	0.00	-0.03
1952/03/28	713.95	17.58	713.93	17.59	-0.02	0.01
1953/03/23	715.29	47.05	715.29	47.25	-0.01	0.21
1953/06/16	715.70	62.38	715.70	62.38	0.00	0.00
1953/07/28	713.70	18.06	713.68	18.28	-0.03	0.23
1954/04/05	715.11	34.40	715.11	34.40	0.00	0.00
1954/05/08	715.32	47.71	715.31	47.69	-0.01	-0.02
1954/08/29	717.12	181.96	717.12	181.92	0.00	-0.04
1954/10/25	716.90	154.24	716.90	154.05	0.00	-0.19
1955/03/09	715.25	45.16	715.25	45.15	0.00	-0.01
1956/05/18	714.01	19.12	714.00	19.34	0.00	0.22
1957/01/27	715.21	44.22	715.20	44.15	0.00	-0.07
1957/03/04	715.97	69.44	715.97	69.44	0.00	0.00
1957/07/28	717.97	301.43	717.96	300.40	-0.01	-1.03
1958/04/30	714.75	32.64	714.75	32.66	0.00	0.03
1958/06/19	716.36	98.71	716.31	95.05	-0.05	-3.66
1958/07/11	716.39	102.02	716.40	103.04	0.01	1.02
1959/04/07	715.28	47.50	715.28	47.48	0.00	-0.02
1959/07/27	713.02	15.02	713.01	15.21	-0.01	0.19
1960/01/21	717.48	229.06	717.48	229.11	0.00	0.05
1960/04/04	716.39	101.44	716.39	101.43	0.00	-0.01
1961/08/09	715.42	52.06	715.41	51.98	0.00	-0.08
1961/10/06	716.74	134.73	716.75	135.50	0.01	0.77
1962/04/15	715.30	47.97	715.30	47.99	0.00	0.02
1962/07/08	715.75	64.54	715.75	64.71	0.00	0.17
1963/05/07	714.53	25.61	714.52	25.50	0.00	-0.11
1964/04/12	713.89	17.92	713.88	17.94	-0.01	0.03
1964/07/25	715.90	69.50	715.90	69.39	-0.01	-0.10
1965/03/22	715.35	48.03	715.35	48.02	0.00	-0.01
1966/02/15	714.66	29.13	714.66	29.12	0.00	-0.01
1966/05/18	715.44	49.56	715.44	49.56	0.00	0.00
1967/04/09	715.05	39.52	715.05	39.51	-0.01	-0.01
1967/07/01	715.52	55.44	715.52	55.44	0.00	0.01
1968/08/24	717.75	272.87	717.75	273.09	0.00	0.22
1969/04/13	714.94	37.15	714.93	37.04	-0.01	-0.11
1969/06/15	713.34	15.78	713.33	15.84	-0.01	0.06
1969/08/01	715.00	38.64	714.99	38.54	-0.01	-0.10
1969/10/25	717.01	164.75	717.02	165.77	0.01	1.02
1970/05/20	714.39	23.57	714.39	23.60	0.00	0.03
1970/12/18	713.72	17.17	713.70	17.18	-0.02	0.01
1971/03/04	713.25	15.14	713.24	15.20	-0.01	0.06
1971/08/28	715.67	60.86	715.68	61.29	0.01	0.43
1972/03/21	716.69	131.88	716.69	131.93	0.00	0.05
1972/04/27	714.32	19.66	714.29	19.25	-0.02	-0.40
1972/09/01	720.32	645.26	720.31	647.07	-0.01	1.81
1972/10/05	717.03	170.24	717.03	169.87	0.00	-0.37
1973/01/08	716.19	83.56	716.19	83.50	0.00	-0.06
1973/05/08	716.34	97.99	716.34	98.08	0.00	0.09
1974/02/28	716.08	77.10	716.08	77.03	0.00	-0.08
1974/04/21	715.50	54.16	715.50	54.27	-0.01	0.12
1974/05/25	715.12	42.16	715.11	42.17	0.00	0.01
1975/01/16	715.44	51.33	715.44	51.33	0.00	0.00
1975/05/05	716.66	127.79	716.66	128.41	0.01	0.62
1975/09/08	715.94	71.85	715.93	71.54	-0.01	-0.31
1976/03/21	715.72	61.45	715.72	61.44	0.00	-0.01
1977/07/05	714.80	32.94	714.79	33.01	-0.01	0.07
1977/08/13	715.91	70.43	715.93	71.11	0.01	0.68
1977/09/07	713.85	18.03	713.84	18.02	-0.01	-0.01
1978/04/02	713.25	15.84	713.23	15.89	-0.02	0.05
1978/05/21	715.09	41.86	715.09	41.85	0.00	-0.01
1978/07/09	714.91	36.60	714.91	36.61	0.00	0.01
1978/09/25	714.40	24.82	714.39	24.85	-0.01	0.03
1979/04/18	716.75	137.16	716.75	137.15	0.00	-0.01
1979/09/05	715.22	45.17	715.22	45.27	0.00	0.10
1980/01/21	714.89	35.97	714.89	35.93	0.00	-0.04
1980/08/26	713.61	17.10	713.61	17.29	0.00	0.19
1980/09/26	716.51	112.49	716.51	112.50	0.00	0.01
1981/05/03	716.84	148.24	716.83	147.29	-0.01	-0.95
1981/06/05	712.82	9.25	712.74	8.66	-0.08	-0.59
1981/06/21	714.55	27.14	714.55	27.15	0.00	0.01



1981/08/23	713.66	17.42	713.66	17.46	-0.01	0.04
1982/03/28	715.73	61.12	715.72	61.07	0.00	-0.05
1982/07/31	713.71	16.14	713.69	16.30	-0.02	0.16
1982/08/14	718.14	342.65	718.13	341.70	-0.01	-0.95
1982/12/12	716.01	68.66	716.01	68.62	0.00	-0.04
1983/01/04	715.01	36.48	715.01	36.37	0.00	-0.10
1983/04/22	715.03	39.02	715.02	38.88	-0.01	-0.14
1983/06/04	712.32	10.83	712.32	10.94	0.00	0.11
1983/07/09	719.30	589.52	719.30	589.82	0.00	0.30
1983/12/05	714.58	27.89	714.59	28.29	0.01	0.40
1984/02/25	715.63	56.22	715.63	56.22	0.00	0.00
1984/04/03	715.69	61.60	715.69	61.68	0.00	0.08
1985/03/19	715.76	59.67	715.76	59.66	0.00	-0.01
1985/12/11	713.85	16.51	713.85	16.51	-0.01	0.01
1986/07/19	716.35	98.89	716.35	98.85	0.00	-0.04
1986/10/10	717.61	252.85	717.61	252.70	0.00	-0.15
1987/09/06	717.41	219.64	717.41	219.75	0.00	0.11
1988/01/01	713.40	15.71	713.39	15.77	-0.01	0.06
1988/02/07	714.67	30.23	714.67	30.23	0.00	0.00
1988/04/13	714.91	36.41	714.89	36.15	-0.01	-0.26
1988/10/26	713.69	14.60	713.67	14.51	-0.02	-0.09
1989/08/18	714.92	37.08	714.92	37.04	0.00	-0.03
1989/09/18	716.72	134.12	716.72	134.84	0.00	0.72
1990/03/16	715.84	66.13	715.84	66.19	-0.01	0.06
1990/05/19	716.55	116.05	716.55	115.87	0.00	-0.18
1990/08/28	713.97	17.75	713.97	17.78	0.00	0.03
1990/12/10	716.28	91.82	716.28	91.76	0.00	-0.06
1991/04/23	715.37	49.84	715.37	49.87	-0.01	0.02
1991/06/02	715.36	49.79	715.36	49.81	0.00	0.02
1991/10/09	714.24	19.75	714.23	19.72	0.00	-0.03
1991/11/08	714.58	27.82	714.58	27.83	0.00	0.01
1991/12/18	712.16	9.27	712.14	9.32	-0.02	0.06
1992/09/21	715.59	58.21	715.59	58.03	-0.01	-0.18
1993/01/11	716.14	81.86	716.14	81.85	0.00	-0.01
1993/04/29	714.62	29.37	714.62	29.27	0.00	-0.09
1993/07/06	714.07	18.14	714.04	18.04	-0.03	-0.10
1994/03/13	714.96	36.58	714.95	36.64	0.00	0.07
1994/07/02	714.50	23.77	714.49	23.73	-0.01	-0.04
1994/08/24	716.28	93.22	716.30	94.99	0.02	1.76
1995/01/25	714.79	32.66	714.79	32.63	-0.01	-0.03
1995/05/06	714.04	18.51	714.04	18.57	0.00	0.06
1995/08/24	715.67	60.83	715.64	60.04	-0.02	-0.79
1995/11/18	714.98	37.93	714.97	37.94	0.00	0.01
1996/06/27	715.24	46.11	715.24	46.16	0.00	0.05
1996/08/05	718.56	424.11	718.56	424.13	0.00	0.02
1997/03/06	716.51	110.23	716.51	109.75	0.00	-0.48
1998/03/25	713.24	15.31	713.22	15.33	-0.02	0.02
1998/05/15	714.08	18.21	714.07	18.18	-0.01	-0.03
1998/08/15	717.08	175.41	717.07	175.48	0.00	0.07
1998/09/14	716.41	103.50	716.41	104.20	0.01	0.70
1998/10/25	715.29	46.72	715.29	46.69	0.00	-0.03
1999/02/09	715.21	42.89	715.21	42.89	0.00	0.00
1999/05/06	715.63	57.60	715.62	57.56	0.00	-0.04
2000/04/28	716.11	78.79	716.10	78.64	0.00	-0.14
2001/03/02	716.86	149.62	716.86	149.64	0.00	0.02
2001/09/06	713.35	14.71	713.35	14.79	0.00	0.08
2001/09/30	714.44	24.66	714.43	24.48	-0.01	-0.18
2001/10/31	718.05	322.93	718.05	322.98	0.00	0.05
2002/03/15	714.46	24.15	714.45	24.10	0.00	-0.05
2002/05/22	715.06	39.65	715.05	39.60	-0.01	-0.05
2002/07/14	716.93	157.77	716.93	157.73	0.00	-0.04
2002/08/29	714.36	17.99	714.36	17.89	0.00	-0.10
2003/05/19	714.55	25.85	714.54	25.77	0.00	-0.08
2003/08/13	715.80	66.44	715.80	66.42	0.00	-0.02
2003/11/29	714.66	30.23	714.66	30.20	0.00	-0.03
2004/03/11	713.77	17.31	713.76	17.33	-0.01	0.03
2004/06/18	714.93	37.19	714.93	37.17	0.00	-0.02
2005/01/18	715.65	57.51	715.65	57.50	0.00	-0.01
2006/03/18	713.34	15.89	713.34	16.08	-0.01	0.20
2006/07/03	715.49	53.85	715.53	55.29	0.03	1.44
2006/09/29	713.11	14.56	713.10	14.62	-0.01	0.05
2006/10/09	717.32	208.63	717.32	208.72	0.00	0.09
2007/03/15	714.78	33.26	714.77	33.17	-0.01	-0.09
2007/08/31	715.65	58.47	715.65	58.93	0.00	0.46
2008/03/09	716.13	80.00	716.13	79.91	0.00	-0.09
2008/05/18	716.27	92.40	716.25	90.64	-0.02	-1.76
2008/09/23	716.40	98.92	716.41	99.25	0.00	0.33

MaximumS&F 720.32 645.26 720.31 647.07  
 StormEvent 1972/09/01 1972/09/01 1972/09/01 1972/09/01

0

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9010c 385 feet us Elgin-OHare Culvert (132:1321)  
 2. Branch# 132; Node ID: DSA550 ; Station: 13550.0000

Nodes ==>	(1) sblNGe6.FFF 1321		(2) sblNGp4.FFF 1321		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	710.19	1.00	710.19	1.00	0.00	0.00
1949/04/08	712.42	30.52	712.42	30.47	0.00	-0.05
1949/06/21	713.01	40.41	713.01	40.05	0.00	-0.36
1949/07/27	712.14	37.27	712.14	36.25	0.00	-1.03
1949/12/31	712.80	28.81	712.80	28.80	0.00	-0.01
1950/01/31	712.46	46.82	712.46	46.78	0.00	-0.04
1950/05/03	713.20	46.06	713.20	47.03	0.00	0.97
1950/06/11	712.67	26.10	712.67	25.88	0.00	-0.22
1951/03/09	712.35	35.18	712.35	35.20	0.00	0.02
1951/05/17	712.50	17.75	712.50	17.77	0.00	0.02
1951/07/29	712.20	42.43	712.20	42.19	0.00	-0.24
1952/01/25	712.73	39.78	712.73	39.75	0.00	-0.03
1952/03/28	712.06	18.57	712.05	18.58	0.00	0.01
1953/03/23	712.41	48.03	712.41	48.24	0.00	0.21
1953/06/16	712.11	63.35	712.04	63.35	-0.07	0.00
1953/07/28	712.93	19.04	712.79	19.27	-0.15	0.23
1954/04/05	713.81	35.40	713.81	35.40	0.00	0.00
1954/05/08	712.83	48.70	712.83	48.67	0.00	-0.02
1954/08/29	712.67	182.95	712.58	182.91	-0.10	-0.04
1954/10/25	714.84	155.23	714.84	155.05	0.00	-0.18
1955/03/09	712.27	46.15	712.27	46.15	0.00	0.00
1956/05/18	712.28	20.10	712.28	20.32	0.00	0.22
1957/01/27	712.11	45.21	712.11	45.15	-0.01	-0.07
1957/03/04	713.10	70.44	713.10	70.44	0.00	0.00
1957/07/28	715.36	302.43	715.37	301.40	0.00	-1.03
1958/04/30	712.49	33.59	712.31	33.61	-0.18	0.02
1958/06/19	712.36	99.70	712.36	96.03	0.00	-3.67
1958/07/11	712.10	103.00	712.02	104.03	-0.08	1.03
1959/04/07	711.87	48.49	711.86	48.48	-0.01	-0.01
1959/07/27	711.44	16.01	711.40	16.20	-0.04	0.19
1960/01/21	713.33	230.06	713.33	230.11	0.00	0.05
1960/04/04	712.44	102.44	712.43	102.43	-0.01	-0.01
1961/08/09	711.75	53.04	711.72	52.96	-0.03	-0.08
1961/10/06	713.80	135.73	713.80	136.50	0.00	0.77
1962/04/15	711.95	48.96	711.95	48.98	-0.01	0.02
1962/07/08	712.21	65.51	712.21	65.67	0.00	0.16
1963/05/07	712.11	26.60	712.10	26.49	0.00	-0.11
1964/04/12	711.85	18.91	711.84	18.94	0.00	0.03
1964/07/25	712.45	70.49	712.45	70.38	0.00	-0.10
1965/03/22	712.42	49.02	712.42	49.01	0.00	-0.01
1966/02/15	712.32	30.13	712.32	30.12	0.00	-0.01
1966/05/18	712.84	50.56	712.84	50.56	0.00	0.00
1967/04/09	712.21	40.51	712.20	40.50	0.00	-0.01
1967/07/01	712.33	56.42	712.33	56.42	0.00	0.01
1968/08/24	713.44	273.87	713.45	274.09	0.00	0.22
1969/04/13	711.78	38.15	711.77	38.03	-0.01	-0.11
1969/06/15	712.19	16.78	712.19	16.83	0.00	0.06
1969/08/01	711.66	39.63	711.64	39.53	-0.02	-0.10
1969/10/25	713.50	165.75	713.50	166.77	0.00	1.02
1970/05/20	712.10	24.57	712.10	24.60	0.00	0.03
1970/12/18	711.65	18.16	711.64	18.17	-0.01	0.01
1971/03/04	711.60	16.16	711.57	16.23	-0.02	0.07
1971/08/28	712.04	61.84	712.04	62.27	0.00	0.43
1972/03/21	712.64	132.88	712.64	132.92	0.00	0.04
1972/04/27	712.66	20.65	712.66	20.25	0.00	-0.41
1972/09/01	714.90	646.26	714.91	648.07	0.00	1.81
1972/10/05	712.54	171.22	712.53	170.85	-0.02	-0.37
1973/01/08	713.65	84.56	713.65	84.50	0.00	-0.06
1973/05/08	712.15	98.96	712.15	99.05	0.00	0.09
1974/02/28	712.85	78.10	712.85	78.02	0.00	-0.08
1974/04/21	711.93	55.15	711.86	55.27	-0.06	0.12
1974/05/25	712.00	43.14	711.99	43.15	0.00	0.01
1975/01/16	712.57	52.32	712.57	52.32	0.00	0.00
1975/05/05	712.53	128.78	712.53	129.41	0.00	0.63
1975/09/08	712.69	72.83	712.69	72.52	0.00	-0.31
1976/03/21	712.52	62.44	712.52	62.43	0.00	-0.01
1977/07/05	711.90	33.93	711.88	34.00	-0.02	0.07
1977/08/13	711.94	71.42	711.93	72.10	-0.01	0.69
1977/09/07	711.63	19.03	711.59	19.02	-0.04	-0.01
1978/04/02	711.43	16.84	711.42	16.89	-0.02	0.05
1978/05/21	711.68	42.82	711.67	42.81	-0.02	-0.02
1978/07/09	712.23	37.57	712.23	37.58	0.00	0.01
1978/09/25	712.23	25.81	712.23	25.84	0.00	0.03
1979/04/18	714.10	138.16	714.10	138.15	0.00	-0.01
1979/09/05	712.05	46.14	712.05	46.25	0.00	0.11
1980/01/21	711.72	36.96	711.70	36.93	-0.02	-0.03
1980/08/26	712.12	18.08	712.11	18.27	0.00	0.19
1980/09/26	712.02	113.46	712.00	113.48	-0.02	0.02
1981/05/03	712.32	149.21	712.32	148.28	0.01	-0.93
1981/06/05	712.63	10.25	712.63	9.66	0.00	-0.59
1981/06/21	711.85	28.13	711.84	28.14	-0.01	0.01

1981/08/23	711.70	18.42	711.70	18.45	0.00	0.04
1982/03/28	712.94	62.12	712.94	62.07	0.00	-0.05
1982/07/31	712.17	17.12	712.17	17.31	0.00	0.19
1982/08/14	713.03	343.65	712.92	342.70	-0.11	-0.95
1982/12/12	714.29	69.66	714.29	69.62	0.00	-0.04
1983/01/04	712.50	37.47	712.50	37.37	0.00	-0.10
1983/04/22	712.96	40.01	712.96	39.87	0.00	-0.13
1983/06/04	711.76	11.82	711.69	11.93	-0.07	0.12
1983/07/09	713.99	590.52	713.96	590.82	-0.03	0.30
1983/12/05	712.47	28.90	712.47	29.28	0.00	0.38
1984/02/25	713.20	57.22	713.20	57.22	0.00	0.00
1984/04/03	712.37	62.58	712.37	62.66	0.00	0.08
1985/03/19	713.98	60.67	713.98	60.66	0.00	-0.01
1985/12/11	712.15	17.50	712.15	17.50	0.00	0.01
1986/07/19	711.86	99.89	711.84	99.86	-0.02	-0.03
1986/10/10	712.50	253.85	712.36	253.69	-0.14	-0.16
1987/09/06	715.98	220.64	715.98	220.75	0.01	0.11
1988/01/01	711.81	16.71	711.80	16.79	0.00	0.08
1988/02/07	711.90	31.23	711.89	31.22	-0.01	0.00
1988/04/13	711.84	37.41	711.83	37.14	-0.01	-0.26
1988/10/26	712.45	15.60	712.44	15.50	0.00	-0.09
1989/08/18	712.62	38.05	712.62	38.01	0.00	-0.04
1989/09/18	712.59	135.12	712.59	135.82	0.00	0.70
1990/03/16	712.75	67.12	712.75	67.17	0.00	0.06
1990/05/19	713.19	117.05	713.19	116.86	0.00	-0.19
1990/08/28	712.39	18.74	712.28	18.77	-0.11	0.03
1990/12/10	712.82	92.80	712.82	92.75	0.00	-0.06
1991/04/23	712.30	50.83	712.30	50.85	0.00	0.02
1991/06/02	712.06	50.78	712.06	50.80	0.00	0.02
1991/10/09	712.17	20.74	712.17	20.71	0.00	-0.03
1991/11/08	711.88	28.82	711.87	28.82	-0.01	0.00
1991/12/18	711.46	10.26	711.41	10.32	-0.05	0.06
1992/09/21	711.80	59.20	711.77	59.02	-0.03	-0.18
1993/01/11	712.76	82.85	712.76	82.84	0.00	-0.01
1993/04/29	712.81	30.35	712.81	30.26	0.00	-0.09
1993/07/06	712.17	19.13	712.17	19.03	0.00	-0.11
1994/03/13	712.63	37.57	712.63	37.63	0.00	0.06
1994/07/02	712.53	24.76	712.53	24.72	0.00	-0.04
1994/08/24	711.95	94.18	711.86	95.95	-0.09	1.76
1995/01/25	712.26	33.65	712.26	33.62	0.00	-0.03
1995/05/06	712.05	19.50	712.05	19.56	0.00	0.06
1995/08/24	711.89	61.82	711.88	61.03	-0.01	-0.78
1995/11/18	712.36	38.92	712.36	38.93	0.00	0.01
1996/06/27	712.17	47.10	712.17	47.15	0.00	0.05
1996/08/05	714.53	425.11	714.53	425.13	0.00	0.02
1997/03/06	714.80	111.23	714.80	110.75	0.00	-0.48
1998/03/25	711.91	16.31	711.91	16.32	0.00	0.01
1998/05/15	712.09	19.21	712.08	19.18	0.00	-0.03
1998/08/15	712.55	176.41	712.55	176.47	0.00	0.06
1998/09/14	712.14	104.48	711.99	105.18	-0.14	0.70
1998/10/25	712.33	47.71	712.33	47.68	0.00	-0.03
1999/02/09	713.01	43.89	713.01	43.89	0.00	0.00
1999/05/06	712.66	58.60	712.66	58.55	0.00	-0.05
2000/04/28	712.65	79.78	712.65	79.63	0.00	-0.14
2001/03/02	713.19	150.62	713.19	150.63	0.00	0.01
2001/09/06	713.34	15.70	713.34	15.79	0.00	0.08
2001/09/30	712.05	25.65	712.05	25.47	0.00	-0.18
2001/10/31	714.40	323.93	714.41	323.98	0.00	0.05
2002/03/15	712.11	25.14	712.10	25.09	0.00	-0.05
2002/05/22	712.16	40.63	712.16	40.58	0.00	-0.05
2002/07/14	712.34	158.76	712.21	158.72	-0.13	-0.04
2002/08/29	713.08	18.99	713.08	18.89	0.00	-0.10
2003/05/19	712.16	26.85	712.15	26.77	0.00	-0.08
2003/08/13	711.77	67.42	711.76	67.40	-0.02	-0.02
2003/11/29	711.71	31.23	711.70	31.20	-0.01	-0.03
2004/03/11	711.68	18.30	711.67	18.33	-0.01	0.03
2004/06/18	711.82	38.18	711.72	38.16	-0.09	-0.02
2005/01/18	713.11	58.51	713.11	58.50	0.00	-0.01
2006/03/18	711.62	16.90	711.62	17.09	0.00	0.19
2006/07/03	711.97	54.84	711.96	56.28	-0.01	1.44
2006/09/29	711.64	15.57	711.59	15.63	-0.05	0.06
2006/10/09	712.77	209.63	712.61	209.72	-0.16	0.09
2007/03/15	712.43	34.26	712.43	34.17	0.00	-0.09
2007/08/31	712.61	59.47	712.61	59.94	0.00	0.46
2008/03/09	713.31	80.99	713.31	80.91	0.00	-0.09
2008/05/18	711.85	93.37	711.83	91.61	-0.02	-1.76
2008/09/23	715.15	99.92	715.15	100.25	0.00	0.33

Maximums&F 715.98 646.26 715.98 648.07  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

0



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9010 40 feet us Elgin-OHare Culvert (132:1321)  
 3. Branch# 132; Node ID: A10 ; Station: 13205.0000

Nodes ==>	(1) sbLNge6.FFF 1325		(2) sbLNge4.FFF 1325		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	710.07	1.07	710.06	1.06	-0.01	-0.01
1949/04/08	712.42	43.60	712.42	43.38	0.00	-0.22
1949/06/21	713.01	125.01	713.01	119.96	0.00	-5.05
1949/07/27	712.14	89.50	712.14	100.21	0.00	10.71
1949/12/31	712.80	61.24	712.80	59.37	0.00	-1.87
1950/01/31	712.46	66.32	712.46	68.46	0.00	2.14
1950/05/03	713.20	116.01	713.20	115.15	0.00	-0.86
1950/06/11	712.67	90.59	712.67	95.59	0.00	5.00
1951/03/09	712.35	54.14	712.34	54.84	0.00	0.69
1951/05/17	712.50	32.32	712.50	33.02	0.00	0.70
1951/07/29	712.20	71.39	712.20	73.78	0.00	2.39
1952/01/25	712.73	54.18	712.73	53.95	0.00	-0.23
1952/03/28	712.06	30.19	712.05	30.29	0.00	0.10
1953/03/23	712.41	85.21	712.41	91.55	0.00	6.33
1953/06/16	712.11	85.42	712.04	87.10	-0.07	1.68
1953/07/28	712.93	212.83	712.78	211.46	-0.15	-1.37
1954/04/05	713.81	198.92	713.81	192.73	0.00	-6.19
1954/05/08	712.83	75.93	712.83	77.69	0.00	1.77
1954/08/29	712.67	178.69	712.58	179.28	-0.09	0.59
1954/10/25	714.84	148.36	714.84	147.95	0.00	-0.41
1955/03/09	712.27	45.43	712.27	45.08	0.00	-0.35
1956/05/18	712.28	49.76	712.28	52.40	0.00	2.64
1957/01/27	712.11	44.86	712.11	44.67	-0.01	-0.19
1957/03/04	713.10	94.20	713.10	99.51	0.00	5.31
1957/07/28	715.36	234.91	715.37	234.08	0.00	-0.83
1958/04/30	712.48	152.04	712.30	155.07	-0.18	3.03
1958/06/19	712.36	113.43	712.36	106.38	0.00	-7.05
1958/07/11	712.07	94.35	712.02	97.91	-0.06	3.56
1959/04/07	711.86	55.57	711.85	58.62	-0.01	3.05
1959/07/27	711.30	20.76	711.26	21.42	-0.04	0.67
1960/01/21	713.33	190.07	713.33	190.21	0.00	0.14
1960/04/04	712.43	88.76	712.43	87.08	-0.01	-1.68
1961/08/09	711.72	52.30	711.71	55.03	-0.01	2.72
1961/10/06	713.80	185.20	713.80	181.38	0.00	-3.82
1962/04/15	711.95	41.43	711.94	42.25	-0.01	0.83
1962/07/08	712.21	87.59	712.21	89.33	0.00	1.74
1963/05/07	712.11	40.14	712.10	41.81	0.00	1.67
1964/04/12	711.84	31.66	711.84	32.03	0.00	0.37
1964/07/25	712.45	80.85	712.44	86.25	0.00	5.40
1965/03/22	712.42	56.34	712.42	55.72	0.00	-0.61
1966/02/15	712.32	38.71	712.32	39.82	0.00	1.11
1966/05/18	712.84	72.76	712.84	81.26	0.00	8.50
1967/04/09	712.21	52.92	712.20	53.03	0.00	0.10
1967/07/01	712.33	78.70	712.33	85.29	0.00	6.59
1968/08/24	713.44	230.01	713.45	228.52	0.00	-1.49
1969/04/13	711.77	44.81	711.76	45.99	-0.01	1.17
1969/06/15	712.19	28.13	712.19	28.02	0.00	-0.11
1969/08/01	711.62	39.79	711.62	39.39	-0.01	-0.40
1969/10/25	713.50	197.89	713.50	193.53	0.00	-4.36
1970/05/20	712.10	49.05	712.10	52.77	0.00	3.72
1970/12/18	711.64	34.23	711.63	33.83	-0.01	-0.40
1971/03/04	711.55	32.73	711.55	33.53	-0.01	0.80
1971/08/28	712.04	64.94	712.04	71.50	0.00	6.56
1972/03/21	712.64	156.15	712.64	152.80	0.00	-3.35
1972/04/27	712.66	162.19	712.66	164.15	0.00	1.96
1972/09/01	714.90	498.75	714.91	490.27	0.00	-8.48
1972/10/05	712.53	160.41	712.53	156.82	-0.01	-3.59
1973/01/08	713.65	115.88	713.65	114.37	0.00	-1.51
1973/05/08	712.15	90.40	712.15	101.85	0.00	11.45
1974/02/28	712.85	84.19	712.85	82.88	0.00	-1.31
1974/04/21	711.89	76.21	711.86	84.11	-0.03	7.90
1974/05/25	711.99	36.47	711.99	37.19	0.00	0.72
1975/01/16	712.57	57.81	712.57	56.76	0.00	-1.06
1975/05/05	712.53	101.28	712.53	105.52	0.00	4.24
1975/09/08	712.69	62.36	712.69	66.27	0.00	3.91
1976/03/21	712.52	90.50	712.52	94.00	0.00	3.49
1977/07/05	711.89	58.53	711.88	59.80	-0.01	1.28
1977/08/13	711.94	73.61	711.93	77.97	-0.01	4.36
1977/09/07	711.54	43.88	711.51	43.67	-0.04	-0.22
1978/04/02	711.33	17.62	711.31	18.28	-0.02	0.66
1978/05/21	711.67	39.03	711.66	40.35	0.00	1.32
1978/07/09	712.23	48.17	712.23	51.72	0.00	3.55
1978/09/25	712.23	104.76	712.23	111.71	0.00	6.95
1979/04/18	714.10	167.61	714.10	161.54	0.00	-6.07
1979/09/05	712.05	73.36	712.05	82.54	0.00	9.18
1980/01/21	711.69	34.64	711.68	35.02	-0.01	0.37
1980/08/26	712.12	84.17	712.11	94.21	0.00	10.04
1980/09/26	712.01	77.38	711.99	87.50	-0.01	10.12
1981/05/03	712.32	102.87	711.45	114.30	-0.87	11.43
1981/06/05	712.63	112.20	712.63	110.73	0.00	-1.47
1981/06/21	711.85	44.54	711.84	43.93	-0.01	-0.61

1981/08/23	711.70	46.95	711.70	49.17	0.00	2.22
1982/03/28	712.94	87.74	712.94	86.95	0.00	-0.79
1982/07/31	712.17	82.21	712.17	87.60	0.00	5.38
1982/08/14	713.02	245.30	712.91	242.68	-0.11	-2.62
1982/12/12	714.29	200.48	714.29	198.93	0.00	-1.55
1983/01/04	712.50	113.28	712.50	121.91	0.00	8.63
1983/04/22	712.96	69.64	712.96	72.71	0.00	3.07
1983/06/04	711.72	60.76	711.67	66.35	-0.05	5.59
1983/07/09	713.99	398.52	713.95	392.69	-0.03	-5.83
1983/12/05	712.47	64.41	712.47	68.36	0.00	3.95
1984/02/25	713.20	71.54	713.20	71.45	0.00	-0.09
1984/04/03	712.37	100.93	712.37	100.51	0.00	-0.42
1985/03/19	713.98	102.53	713.98	102.44	0.00	-0.09
1985/12/11	712.15	53.57	712.15	54.87	0.00	1.30
1986/07/19	711.77	71.86	711.64	81.90	-0.13	10.04
1986/10/10	712.48	169.48	712.36	178.63	-0.12	9.15
1987/09/06	715.98	288.29	715.98	285.81	0.01	-2.48
1988/01/01	711.80	40.62	711.80	42.16	0.00	1.54
1988/02/07	711.89	41.19	711.89	41.81	-0.01	0.62
1988/04/13	711.83	40.61	711.82	40.25	-0.01	-0.36
1988/10/26	712.45	80.67	712.44	87.90	0.00	7.24
1989/08/18	712.62	145.68	712.62	141.49	0.00	-4.19
1989/09/18	712.59	132.82	712.59	135.24	0.00	2.42
1990/03/16	712.75	127.23	712.75	123.76	0.00	-3.47
1990/05/19	713.19	129.52	713.19	125.68	0.00	-3.84
1990/08/28	712.39	132.80	712.28	134.92	-0.11	2.12
1990/12/10	712.82	93.85	712.82	93.83	0.00	-0.01
1991/04/23	712.30	60.79	712.30	60.97	0.00	0.19
1991/06/02	712.06	54.06	712.05	55.08	-0.01	1.02
1991/10/09	712.17	38.91	712.17	40.37	0.00	1.46
1991/11/08	711.87	48.03	711.87	48.78	-0.01	0.76
1991/12/18	711.35	25.13	711.29	25.70	-0.06	0.57
1992/09/21	711.78	55.89	711.76	58.70	-0.02	2.81
1993/01/11	712.76	88.46	712.76	93.83	0.00	5.36
1993/04/29	712.81	43.11	712.81	42.97	0.00	-0.13
1993/07/06	712.17	77.99	712.17	86.64	0.00	8.66
1994/03/13	712.63	50.70	712.63	53.49	0.00	2.79
1994/07/02	712.53	72.05	712.53	77.17	0.00	5.12
1994/08/24	711.91	83.29	711.76	94.75	-0.15	11.46
1995/01/25	712.26	40.58	712.26	40.92	0.00	0.34
1995/05/06	712.05	31.07	712.05	32.03	0.00	0.96
1995/08/24	711.88	69.33	711.88	77.40	-0.01	8.07
1995/11/18	712.36	53.51	712.36	55.62	0.00	2.11
1996/06/27	712.17	64.47	712.17	71.65	0.00	7.17
1996/08/05	714.53	330.04	714.53	327.42	0.00	-2.62
1997/03/06	714.80	145.50	714.80	144.19	0.00	-1.31
1998/03/25	711.91	25.97	711.91	25.76	0.00	-0.21
1998/05/15	712.09	30.95	712.08	31.61	0.00	0.66
1998/08/15	712.55	169.58	712.55	173.76	0.00	4.18
1998/09/14	712.12	105.53	711.97	109.81	-0.15	4.28
1998/10/25	712.33	45.89	712.33	47.20	0.00	1.31
1999/02/09	713.01	50.84	713.01	50.88	0.00	0.04
1999/05/06	712.66	77.79	712.66	76.40	0.00	-1.38
2000/04/28	712.65	119.28	712.65	121.19	0.00	1.91
2001/03/02	713.19	159.02	713.19	158.59	0.00	-0.43
2001/09/06	713.34	192.20	713.34	184.27	0.00	-7.93
2001/09/30	712.05	41.10	712.05	43.15	0.00	2.06
2001/10/31	714.40	308.04	714.41	303.40	0.00	-4.64
2002/03/15	712.10	31.40	712.10	31.66	0.00	0.26
2002/05/22	712.16	52.58	712.15	52.98	0.00	0.40
2002/07/14	712.32	140.19	712.21	146.57	-0.11	6.38
2002/08/29	713.08	126.12	713.08	121.53	0.00	-4.59
2003/05/19	712.16	52.19	712.15	53.88	0.00	1.69
2003/08/13	711.63	58.81	711.50	60.98	-0.13	2.17
2003/11/29	711.70	40.47	711.69	40.22	-0.01	-0.25
2004/03/11	711.67	26.89	711.66	27.54	-0.01	0.66
2004/06/18	711.79	67.46	711.63	74.68	-0.17	7.22
2005/01/18	713.11	69.43	713.11	69.30	0.00	-0.13
2006/03/18	711.61	34.85	711.61	35.83	0.00	0.98
2006/07/03	711.96	66.39	711.96	70.63	-0.01	4.24
2006/09/29	711.57	46.95	711.52	47.92	-0.04	0.97
2006/10/09	712.77	205.85	712.60	201.97	-0.17	-3.88
2007/03/15	712.43	68.38	712.43	75.29	0.00	6.92
2007/08/31	712.61	124.00	712.61	126.58	0.00	2.58
2008/03/09	713.31	86.94	713.31	85.90	0.00	-1.04
2008/05/18	711.75	72.81	711.70	80.15	-0.05	7.34
2008/09/23	715.15	176.97	715.15	176.11	0.00	-0.86

MaximumS&F 715.98 498.75 715.98 490.27  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

0

Meacham Creek FEQ Modeling (CBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS9010c USF Elgin-OHare Culvert (132:1326)  
 4. Branch# 132; Node ID: USELGOH; Station: 13165.0000

Nodes ==>	(1) sblNGE6.FFF 1328		(2) sblNGp4.FFF 1328		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	710.01	1.08	710.00	1.07	-0.01	-0.01
1949/04/08	712.42	45.04	712.42	44.77	0.00	-0.27
1949/06/21	713.01	134.79	713.01	129.19	0.00	-5.60
1949/07/27	712.14	97.74	712.14	109.26	0.00	11.53
1949/12/31	712.80	65.41	712.80	63.67	0.00	-1.74
1950/01/31	712.46	69.54	712.46	71.69	0.00	2.15
1950/05/03	713.20	124.95	713.20	123.94	0.00	-1.01
1950/06/11	712.67	99.55	712.67	104.33	0.00	4.78
1951/03/09	712.35	58.53	712.34	59.24	0.00	0.70
1951/05/17	712.50	34.06	712.50	34.84	0.00	0.78
1951/07/29	712.20	78.70	712.20	81.08	0.00	2.38
1952/01/25	712.73	57.78	712.73	57.89	0.00	0.11
1952/03/28	712.06	31.56	712.05	31.66	0.00	0.10
1953/03/23	712.41	89.39	712.41	96.01	0.00	6.62
1953/06/16	712.10	92.91	712.04	94.35	-0.06	1.44
1953/07/28	712.93	238.75	712.78	237.12	-0.15	-1.63
1954/04/05	713.81	220.10	713.81	213.15	0.00	-6.95
1954/05/08	712.83	79.00	712.83	80.86	0.00	1.86
1954/08/29	712.67	191.10	712.58	190.81	-0.09	-0.29
1954/10/25	714.84	152.81	714.84	152.35	0.00	-0.46
1955/03/09	712.27	45.34	712.27	46.36	0.00	1.02
1956/05/18	712.28	54.65	712.28	57.42	0.00	2.78
1957/01/27	712.11	44.79	712.11	44.58	0.00	-0.21
1957/03/04	713.10	105.30	713.10	110.87	0.00	5.57
1957/07/28	715.36	255.82	715.37	254.83	0.00	-0.99
1958/04/30	712.48	167.18	712.30	170.44	-0.18	3.26
1958/06/19	712.36	114.96	712.36	107.40	0.00	-7.56
1958/07/11	712.07	93.19	712.02	96.80	-0.05	3.61
1959/04/07	711.86	56.12	711.85	59.54	-0.01	3.43
1959/07/27	711.27	21.94	711.23	22.15	-0.03	0.21
1960/01/21	713.33	187.15	713.33	187.24	0.00	0.09
1960/04/04	712.43	87.14	712.43	85.24	-0.01	-1.90
1961/08/09	711.72	58.18	711.71	61.12	-0.01	2.93
1961/10/06	713.80	192.80	713.80	186.62	0.00	-6.18
1962/04/15	711.95	40.66	711.94	41.52	-0.01	0.87
1962/07/08	712.21	96.30	712.21	97.96	0.00	1.66
1963/05/07	712.11	42.68	712.10	44.49	0.00	1.81
1964/04/12	711.84	34.52	711.84	35.24	0.00	0.72
1964/07/25	712.45	87.65	712.44	93.40	0.00	5.76
1965/03/22	712.42	57.17	712.42	56.49	0.00	-0.68
1966/02/15	712.32	41.59	712.32	42.81	0.00	1.22
1966/05/18	712.84	81.25	712.84	90.44	0.00	9.19
1967/04/09	712.21	54.45	712.20	54.31	0.00	-0.13
1967/07/01	712.33	85.90	712.33	92.89	0.00	6.99
1968/08/24	713.44	225.66	713.45	223.77	0.00	-1.89
1969/04/13	711.77	45.70	711.76	47.69	-0.01	1.99
1969/06/15	712.19	29.97	712.19	30.60	0.00	0.63
1969/08/01	711.62	39.88	711.62	39.37	-0.01	-0.51
1969/10/25	713.50	201.63	713.50	196.61	0.00	-5.02
1970/05/20	712.10	53.60	712.10	57.74	0.00	4.14
1970/12/18	711.64	36.02	711.63	35.63	-0.01	-0.38
1971/03/04	711.55	34.62	711.54	35.52	-0.01	0.90
1971/08/28	712.04	72.72	712.04	80.07	0.00	7.35
1972/03/21	712.64	159.98	712.64	155.80	0.00	-4.18
1972/04/27	712.66	179.12	712.66	181.20	0.00	2.08
1972/09/01	714.90	490.64	714.91	481.41	0.00	-9.23
1972/10/05	712.53	160.74	712.53	156.43	0.00	-4.31
1973/01/08	713.65	119.50	713.65	117.82	0.00	-1.68
1973/05/08	712.15	89.93	712.15	101.43	0.00	11.50
1974/02/28	712.85	85.40	712.85	83.90	0.00	-1.50
1974/04/21	711.88	78.52	711.86	87.08	-0.02	8.57
1974/05/25	711.99	36.75	711.99	37.94	0.00	1.19
1975/01/16	712.57	58.41	712.57	57.78	0.00	-0.64
1975/05/05	712.53	108.31	712.53	115.67	0.00	7.36
1975/09/08	712.69	65.17	712.69	66.22	0.00	1.04
1976/03/21	712.52	99.40	712.52	103.15	0.00	3.75
1977/07/05	711.89	61.25	711.88	62.48	-0.01	1.23
1977/08/13	711.94	74.01	711.93	78.30	-0.01	4.29
1977/09/07	711.53	47.37	711.51	47.27	-0.03	-0.10
1978/04/02	711.31	18.55	711.29	19.38	-0.02	0.83
1978/05/21	711.67	40.26	711.66	41.72	0.00	1.45
1978/07/09	712.23	49.86	712.23	53.57	0.00	3.71
1978/09/25	712.23	115.08	712.23	122.63	0.00	7.55
1979/04/18	714.10	171.17	714.10	164.36	0.00	-6.81
1979/09/05	712.05	76.24	712.05	86.31	0.00	10.07
1980/01/21	711.69	34.32	711.68	34.70	-0.02	0.38
1980/08/26	712.12	94.41	712.11	105.11	0.00	10.70
1980/09/26	712.00	75.89	711.99	85.62	-0.01	9.72
1981/05/03	712.32	102.06	712.32	114.40	0.01	12.34
1981/06/05	712.63	124.26	712.63	122.70	0.00	-1.56
1981/06/21	711.85	47.16	711.84	46.62	-0.01	-0.54



1981/08/23	711.70	52.57	711.70	54.88	0.00	2.30
1982/03/28	712.94	90.69	712.94	89.82	0.00	-0.88
1982/07/31	712.17	89.72	712.17	95.34	0.00	5.62
1982/08/14	713.02	243.05	712.91	240.82	-0.11	-2.23
1982/12/12	714.29	216.83	714.29	215.17	0.00	-1.66
1983/01/04	712.50	125.76	712.50	135.09	0.00	9.33
1983/04/22	712.96	72.90	712.96	76.11	0.00	3.20
1983/06/04	711.70	67.96	711.67	74.06	-0.03	6.10
1983/07/09	713.99	400.27	713.95	394.08	-0.03	-6.19
1983/12/05	712.47	69.93	712.47	74.06	0.00	4.12
1984/02/25	713.20	73.56	713.20	73.46	0.00	-0.10
1984/04/03	712.37	105.43	712.37	104.54	0.00	-0.89
1985/03/19	713.98	107.84	713.98	107.74	0.00	-0.10
1985/12/11	712.15	58.12	712.15	59.57	0.00	1.46
1986/07/19	711.76	70.55	711.64	80.80	-0.11	10.26
1986/10/10	712.48	167.99	712.36	175.98	-0.12	7.99
1987/09/06	715.98	307.54	715.98	304.64	0.01	-2.90
1988/01/01	711.80	43.20	711.80	44.95	0.00	1.75
1988/02/07	711.89	44.09	711.89	44.82	-0.01	0.73
1988/04/13	711.83	41.05	711.82	40.66	-0.01	-0.39
1988/10/26	712.45	88.99	712.44	96.62	0.00	7.63
1989/08/18	712.62	163.20	712.62	158.37	0.00	-4.83
1989/09/18	712.59	139.88	712.59	148.32	0.00	8.44
1990/03/16	712.75	134.16	712.75	130.27	0.00	-3.89
1990/05/19	713.19	132.21	713.19	127.58	0.00	-4.63
1990/08/28	712.38	148.86	712.28	151.03	-0.10	2.17
1990/12/10	712.82	95.25	712.82	95.00	0.00	-0.25
1991/04/23	712.30	61.85	712.30	61.90	0.00	0.05
1991/06/02	712.06	54.89	712.05	56.01	0.00	1.12
1991/10/09	712.17	41.86	712.17	43.47	0.00	1.61
1991/11/08	711.87	51.81	711.86	52.78	-0.01	0.97
1991/12/18	711.30	27.94	711.29	28.61	-0.01	0.67
1992/09/21	711.77	59.22	711.76	62.78	-0.01	3.56
1993/01/11	712.76	90.91	712.76	96.61	0.00	5.71
1993/04/29	712.81	45.27	712.81	44.95	0.00	-0.32
1993/07/06	712.17	85.48	712.17	94.79	0.00	9.31
1994/03/13	712.63	53.76	712.63	56.77	0.00	3.01
1994/07/02	712.53	77.53	712.53	82.81	0.00	5.27
1994/08/24	711.90	84.39	711.76	95.37	-0.15	10.99
1995/01/25	712.26	41.35	712.26	41.72	0.00	0.37
1995/05/06	712.05	32.36	712.05	33.38	0.00	1.02
1995/08/24	711.88	72.80	711.88	81.84	-0.01	9.04
1995/11/18	712.36	54.97	712.36	57.31	0.00	2.34
1996/06/27	712.17	71.83	712.17	79.32	0.00	7.49
1996/08/05	714.53	323.46	714.53	320.44	0.00	-3.02
1997/03/06	714.80	149.79	714.80	148.34	0.00	-1.45
1998/03/25	711.91	27.00	711.91	27.27	0.00	0.26
1998/05/15	712.09	32.53	712.08	33.24	0.00	0.71
1998/08/15	712.55	169.83	712.55	173.55	0.00	3.72
1998/09/14	712.11	106.17	711.97	110.26	-0.15	4.09
1998/10/25	712.33	46.44	712.33	47.78	0.00	1.34
1999/02/09	713.01	54.44	713.01	54.48	0.00	0.05
1999/05/06	712.66	79.99	712.66	78.45	0.00	-1.54
2000/04/28	712.65	126.03	712.65	128.02	0.00	1.99
2001/03/02	713.19	160.37	713.19	159.56	0.00	-0.81
2001/09/06	713.34	215.31	713.34	206.39	0.00	-8.92
2001/09/30	712.05	45.50	712.05	47.72	0.00	2.22
2001/10/31	714.40	306.30	714.41	301.18	0.00	-5.12
2002/03/15	712.10	32.83	712.10	33.24	0.00	0.41
2002/05/22	712.16	53.89	712.15	54.30	0.00	0.41
2002/07/14	712.32	138.94	712.21	144.68	-0.11	5.74
2002/08/29	713.08	139.44	713.08	134.21	0.00	-5.23
2003/05/19	712.16	55.85	712.15	57.82	0.00	1.97
2003/08/13	711.59	58.16	711.41	60.55	-0.18	2.40
2003/11/29	711.70	41.48	711.69	41.27	-0.01	-0.21
2004/03/11	711.67	27.95	711.66	28.65	-0.01	0.71
2004/06/18	711.78	76.04	711.54	83.33	-0.24	7.29
2005/01/18	713.11	70.69	713.11	70.72	0.00	0.03
2006/03/18	711.61	37.42	711.61	38.51	0.00	1.09
2006/07/03	711.96	67.51	711.96	71.83	-0.01	4.32
2006/09/29	711.53	52.58	711.52	53.60	-0.01	1.02
2006/10/09	712.76	205.45	712.60	201.00	-0.16	-4.45
2007/03/15	712.43	74.31	712.43	81.83	0.00	7.53
2007/08/31	712.61	131.50	712.61	134.20	0.00	2.70
2008/03/09	713.31	87.63	713.31	86.62	0.00	-1.00
2008/05/18	711.73	71.57	711.70	79.50	-0.04	7.92
2008/09/23	715.15	186.66	715.15	185.70	0.00	-0.96

MaximumS&F	715.98	490.64	715.98	481.41
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9008 DSF Elgin-OHare Culvert (140:1401)  
 5. Branch# 140; Node ID: DSELGOH ; Station: 999999.0000

Nodes ==>	(1) sblNGe6.FFF 1401		(2) sblNGp4.FFF 1401		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	710.01	1.11	710.00	1.09	-0.01	-0.02
1949/04/08	712.41	44.93	712.41	44.63	0.00	-0.31
1949/06/21	713.01	134.46	713.01	128.77	0.00	-5.69
1949/07/27	712.14	97.53	712.14	109.05	0.00	11.52
1949/12/31	712.80	65.23	712.80	63.47	0.00	-1.76
1950/01/31	712.46	69.36	712.46	71.48	0.00	2.12
1950/05/03	713.19	124.73	713.20	123.64	0.00	-1.09
1950/06/11	712.67	99.35	712.67	104.11	0.00	4.76
1951/03/09	712.34	58.38	712.34	59.03	0.00	0.66
1951/05/17	712.50	34.00	712.50	34.78	0.00	0.78
1951/07/29	712.20	78.58	712.20	80.91	0.00	2.33
1952/01/25	712.73	57.60	712.73	57.72	0.00	0.12
1952/03/28	712.05	31.49	712.05	31.58	0.00	0.09
1953/03/23	712.41	89.32	712.41	95.81	0.00	6.48
1953/06/16	712.04	92.77	712.04	94.16	0.00	1.39
1953/07/28	712.59	238.39	712.59	236.69	0.00	-1.70
1954/04/05	713.80	219.73	713.81	212.67	0.00	-7.06
1954/05/08	712.83	78.85	712.83	80.67	0.00	1.82
1954/08/29	712.57	190.99	712.57	190.59	0.00	-0.40
1954/10/25	714.83	152.49	714.84	152.01	0.00	-0.48
1955/03/09	712.27	45.28	712.26	46.24	0.00	0.96
1956/05/18	712.28	54.56	712.28	57.25	0.00	2.70
1957/01/27	712.11	44.69	712.10	44.47	0.00	-0.22
1957/03/04	713.10	105.08	713.10	110.60	0.00	5.52
1957/07/28	715.36	255.34	715.36	254.30	0.00	-1.04
1958/04/30	712.27	166.93	712.20	170.14	-0.08	3.21
1958/06/19	712.36	114.75	712.35	107.13	0.00	-7.62
1958/07/11	712.02	92.99	712.01	96.58	-0.01	3.59
1959/04/07	711.86	55.98	711.85	59.35	-0.01	3.37
1959/07/27	711.27	21.92	711.23	22.05	-0.03	0.13
1960/01/21	713.33	186.91	713.33	186.95	0.00	0.04
1960/04/04	712.43	87.02	712.42	85.09	-0.01	-1.92
1961/08/09	711.71	58.08	711.70	60.93	-0.01	2.85
1961/10/06	713.80	192.39	713.80	186.28	0.00	-6.11
1962/04/15	711.95	40.58	711.94	41.44	-0.01	0.86
1962/07/08	712.21	96.09	712.21	97.75	0.00	1.66
1963/05/07	712.10	42.58	712.10	44.36	0.00	1.78
1964/04/12	711.84	34.42	711.84	34.66	0.00	0.24
1964/07/25	712.44	87.46	712.44	93.19	0.00	5.74
1965/03/22	712.42	57.07	712.42	56.37	0.00	-0.69
1966/02/15	712.32	41.55	712.32	42.78	0.00	1.22
1966/05/18	712.83	81.37	712.83	90.42	0.00	9.04
1967/04/09	712.20	54.33	712.20	54.16	0.00	-0.17
1967/07/01	712.33	85.77	712.33	92.71	0.00	6.94
1968/08/24	713.44	225.35	713.44	223.42	0.00	-1.93
1969/04/13	711.77	45.61	711.76	47.49	-0.01	1.88
1969/06/15	712.19	29.91	712.18	30.10	0.00	0.20
1969/08/01	711.62	39.84	711.61	39.23	-0.01	-0.62
1969/10/25	713.50	201.28	713.50	196.10	0.00	-5.18
1970/05/20	712.10	53.56	712.09	57.66	0.00	4.09
1970/12/18	711.63	35.92	711.63	35.49	-0.01	-0.44
1971/03/04	711.55	34.51	711.54	35.38	-0.01	0.87
1971/08/28	712.04	72.62	712.03	79.86	0.00	7.23
1972/03/21	712.64	159.83	712.64	155.55	0.00	-4.28
1972/04/27	712.66	178.99	712.66	180.87	0.00	1.88
1972/09/01	714.90	490.11	714.90	480.81	0.00	-9.30
1972/10/05	712.52	160.56	712.52	156.15	0.00	-4.41
1973/01/08	713.65	119.23	713.65	117.53	0.00	-1.70
1973/05/08	712.15	89.88	712.14	101.07	0.00	11.19
1974/02/28	712.85	85.18	712.85	83.65	0.00	-1.53
1974/04/21	711.87	78.44	711.86	86.98	-0.01	8.54
1974/05/25	711.99	36.86	711.99	37.24	0.00	0.38
1975/01/16	712.57	58.30	712.57	57.57	0.00	-0.74
1975/05/05	712.53	108.13	712.53	115.45	0.00	7.32
1975/09/08	712.69	65.07	712.69	66.13	0.00	1.05
1976/03/21	712.52	99.18	712.52	102.90	0.00	3.72
1977/07/05	711.88	61.12	711.88	62.28	-0.01	1.15
1977/08/13	711.93	73.91	711.93	78.07	-0.01	4.16
1977/09/07	711.52	47.33	711.51	47.13	-0.02	-0.20
1978/04/02	711.31	18.50	711.29	19.06	-0.02	0.56
1978/05/21	711.67	40.20	711.66	41.61	-0.01	1.41
1978/07/09	712.23	49.74	712.23	53.40	0.00	3.66
1978/09/25	712.23	114.86	712.23	122.39	0.00	7.53
1979/04/18	714.09	170.95	714.09	164.05	0.00	-6.90
1979/09/05	712.05	76.21	712.05	85.83	0.00	9.62
1980/01/21	711.69	34.26	711.67	34.62	-0.02	0.36
1980/08/26	712.11	94.22	712.11	104.90	0.00	10.68
1980/09/26	712.00	75.78	711.99	85.39	-0.01	9.61
1981/05/03	712.31	101.89	712.32	114.18	0.01	12.29
1981/06/05	712.63	124.08	712.63	122.47	0.00	-1.61
1981/06/21	711.84	47.08	711.84	46.42	-0.01	-0.65

1981/08/23	711.70	52.47	711.70	54.82	0.00	2.36
1982/03/28	712.94	90.45	712.94	89.56	0.00	-0.90
1982/07/31	712.17	89.56	712.17	95.13	0.00	5.57
1982/08/14	712.89	242.86	712.89	240.51	0.00	-2.35
1982/12/12	714.29	216.40	714.29	214.70	0.00	-1.70
1983/01/04	712.50	125.52	712.49	134.84	0.00	9.32
1983/04/22	712.96	72.77	712.96	75.90	0.00	3.14
1983/06/04	711.67	67.83	711.67	73.82	0.00	5.99
1983/07/09	713.60	400.14	713.61	393.88	0.00	-6.26
1983/12/05	712.47	69.79	712.46	73.85	0.00	4.06
1984/02/25	713.20	73.43	713.20	73.32	0.00	-0.11
1984/04/03	712.37	105.26	712.37	104.28	0.00	-0.98
1985/03/19	713.98	107.63	713.98	107.52	0.00	-0.11
1985/12/11	712.15	58.00	712.14	59.37	0.00	1.38
1986/07/19	711.70	70.47	711.64	80.57	-0.06	10.10
1986/10/10	712.36	167.94	712.36	175.80	0.00	7.86
1987/09/06	715.97	307.05	715.98	304.09	0.01	-2.96
1988/01/01	711.80	43.12	711.80	44.83	0.00	1.71
1988/02/07	711.89	44.01	711.89	44.64	-0.01	0.63
1988/04/13	711.83	40.97	711.82	40.49	-0.01	-0.48
1988/10/26	712.44	88.82	712.44	96.41	0.00	7.59
1989/08/18	712.62	162.97	712.62	158.03	0.00	-4.94
1989/09/18	712.59	139.60	712.59	148.03	0.00	8.43
1990/03/16	712.75	133.93	712.75	130.00	0.00	-3.93
1990/05/19	713.19	132.02	713.19	127.29	0.00	-4.73
1990/08/28	712.28	148.63	712.28	150.73	0.00	2.10
1990/12/10	712.82	95.07	712.82	94.77	0.00	-0.29
1991/04/23	712.30	61.72	712.30	61.73	0.00	0.00
1991/06/02	712.06	54.82	712.05	55.79	-0.01	0.97
1991/10/09	712.17	41.77	712.16	43.37	0.00	1.60
1991/11/08	711.87	51.66	711.86	52.50	-0.01	0.83
1991/12/18	711.30	27.84	711.29	28.51	-0.01	0.67
1992/09/21	711.77	59.10	711.76	62.55	-0.01	3.44
1993/01/11	712.75	90.70	712.75	96.38	0.00	5.68
1993/04/29	712.81	45.16	712.81	44.84	0.00	-0.32
1993/07/06	712.17	85.30	712.17	94.60	0.00	9.30
1994/03/13	712.62	53.61	712.62	56.57	0.00	2.96
1994/07/02	712.53	77.38	712.53	82.54	0.00	5.16
1994/08/24	711.84	84.32	711.76	95.17	-0.08	10.85
1995/01/25	712.25	41.23	712.25	41.60	0.00	0.36
1995/05/06	712.05	32.26	712.05	33.27	0.00	1.00
1995/08/24	711.88	72.80	711.87	81.48	-0.01	8.68
1995/11/18	712.36	54.84	712.36	57.09	0.00	2.25
1996/06/27	712.17	71.63	712.16	79.10	0.00	7.47
1996/08/05	714.52	323.06	714.52	319.99	0.00	-3.07
1997/03/06	714.80	149.50	714.80	148.03	0.00	-1.47
1998/03/25	711.91	26.93	711.90	27.20	0.00	0.27
1998/05/15	712.08	32.44	712.08	33.12	0.00	0.68
1998/08/15	712.55	169.70	712.55	173.26	0.00	3.56
1998/09/14	712.02	106.06	711.96	110.07	-0.06	4.01
1998/10/25	712.33	46.35	712.32	47.68	0.00	1.33
1999/02/09	713.01	54.37	713.01	54.42	0.00	0.04
1999/05/06	712.66	79.78	712.65	78.22	0.00	-1.56
2000/04/28	712.65	125.65	712.65	127.67	0.00	2.02
2001/03/02	713.18	160.17	713.18	159.32	0.00	-0.85
2001/09/06	713.33	215.04	713.34	205.96	0.00	-9.08
2001/09/30	712.05	45.37	712.05	47.55	0.00	2.17
2001/10/31	714.40	305.83	714.40	300.66	0.00	-5.17
2002/03/15	712.10	32.75	712.10	33.20	0.00	0.45
2002/05/22	712.16	53.71	712.15	54.10	0.00	0.39
2002/07/14	712.21	138.82	712.21	144.55	-0.01	5.73
2002/08/29	713.08	139.22	713.08	133.88	0.00	-5.34
2003/05/19	712.15	55.70	712.15	57.51	0.00	1.81
2003/08/13	711.55	58.05	711.41	60.30	-0.14	2.25
2003/11/29	711.70	41.38	711.68	41.11	-0.01	-0.28
2004/03/11	711.67	27.88	711.66	28.58	-0.01	0.70
2004/06/18	711.72	75.90	711.54	83.10	-0.17	7.20
2005/01/18	713.11	70.58	713.11	70.62	0.00	0.04
2006/03/18	711.61	37.33	711.61	38.39	0.00	1.06
2006/07/03	711.96	67.34	711.95	71.65	-0.01	4.31
2006/09/29	711.53	52.47	711.52	53.38	-0.01	0.91
2006/10/09	712.55	205.31	712.55	200.70	0.00	-4.61
2007/03/15	712.43	74.15	712.43	81.64	0.00	7.49
2007/08/31	712.61	131.10	712.61	133.77	0.00	2.67
2008/03/09	713.31	87.42	713.31	86.39	0.00	-1.03
2008/05/18	711.70	71.47	711.69	79.25	-0.01	7.78
2008/09/23	715.14	186.26	715.15	185.28	0.00	-0.98

Maximums&F 715.97 490.11 715.98 480.81  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01  
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Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9007 100 DS of Elgin-OHare Culvert (140:1405)  
 6. Branch# 140; Node ID: A7 ; Station: 12800.0000

Nodes ==>	(1) sblNGe6.FFF 1405		(2) sblNGp4.FFF 1405		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	710.00	1.12	710.00	1.11	0.00	-0.01
1949/04/08	712.41	42.95	712.41	43.08	0.00	0.14
1949/06/21	713.01	126.00	713.01	121.33	0.00	-4.67
1949/07/27	712.14	96.16	712.14	107.79	0.00	11.63
1949/12/31	712.79	61.49	712.80	60.80	0.00	-0.69
1950/01/31	712.46	65.96	712.46	69.02	0.00	3.06
1950/05/03	713.19	118.97	713.20	118.65	0.00	-0.32
1950/06/11	712.67	94.92	712.67	102.83	0.00	7.91
1951/03/09	712.34	55.39	712.34	57.02	0.00	1.63
1951/05/17	712.50	32.62	712.50	33.56	0.00	0.94
1951/07/29	712.20	75.26	712.20	78.59	0.00	3.34
1952/01/25	712.73	54.18	712.73	55.28	0.00	1.10
1952/03/28	712.05	30.32	712.05	30.55	0.00	0.23
1953/03/23	712.41	86.75	712.41	93.77	0.00	7.02
1953/06/16	712.04	89.46	712.04	91.60	0.00	2.14
1953/07/28	712.59	232.04	712.59	231.77	0.00	-0.27
1954/04/05	713.80	209.40	713.81	203.48	0.00	-5.92
1954/05/08	712.82	74.77	712.83	77.21	0.00	2.44
1954/08/29	712.57	184.71	712.57	185.51	0.00	0.80
1954/10/25	714.83	145.02	714.84	145.42	0.00	0.40
1955/03/09	712.26	44.20	712.26	45.72	0.00	1.52
1956/05/18	712.28	54.13	712.28	56.91	0.00	2.78
1957/01/27	712.10	42.74	712.10	42.76	0.00	0.02
1957/03/04	713.09	100.75	713.10	107.21	0.00	6.46
1957/07/28	715.36	243.81	715.36	244.17	0.01	0.36
1958/04/30	712.20	161.48	712.20	165.94	0.00	4.46
1958/06/19	712.35	109.23	712.35	102.55	0.00	-6.68
1958/07/11	712.01	89.00	712.01	93.00	0.00	3.99
1959/04/07	711.85	55.07	711.85	58.46	0.00	3.39
1959/07/27	711.23	21.92	711.23	22.01	0.00	0.10
1960/01/21	713.32	179.17	713.33	180.10	0.00	0.93
1960/04/04	712.42	83.91	712.42	82.37	0.00	-1.54
1961/08/09	711.70	57.53	711.70	60.50	0.00	2.96
1961/10/06	713.80	181.86	713.80	177.03	0.00	-4.83
1962/04/15	711.94	39.16	711.94	40.16	0.00	1.00
1962/07/08	712.21	91.83	712.21	94.26	0.00	2.43
1963/05/07	712.10	41.71	712.10	43.59	0.00	1.89
1964/04/12	711.84	34.52	711.84	34.76	0.00	0.24
1964/07/25	712.44	84.14	712.44	90.53	0.00	6.39
1965/03/22	712.41	54.79	712.41	54.37	0.00	-0.42
1966/02/15	712.32	40.60	712.32	41.95	0.00	1.34
1966/05/18	712.83	80.56	712.83	89.62	0.00	9.06
1967/04/09	712.20	51.95	712.20	52.16	0.00	0.21
1967/07/01	712.33	83.66	712.33	91.04	0.00	7.38
1968/08/24	713.44	215.75	713.44	214.95	0.00	-0.80
1969/04/13	711.76	45.30	711.76	46.56	0.00	1.27
1969/06/15	712.18	29.19	712.18	30.15	0.00	0.96
1969/08/01	711.61	39.60	711.61	38.99	0.00	-0.61
1969/10/25	713.50	190.50	713.50	186.48	0.00	-4.02
1970/05/20	712.09	53.12	712.09	57.20	0.00	4.08
1970/12/18	711.63	35.76	711.63	35.32	0.00	-0.44
1971/03/04	711.54	34.18	711.54	35.06	0.00	0.88
1971/08/28	712.03	72.64	712.03	79.70	0.00	7.06
1972/03/21	712.64	153.41	712.64	150.34	0.00	-3.07
1972/04/27	712.66	173.56	712.66	176.63	0.00	3.07
1972/09/01	714.90	464.02	714.90	457.93	0.00	-6.09
1972/10/05	712.52	153.13	712.52	150.05	0.00	-3.08
1973/01/08	713.65	112.98	713.65	112.04	0.00	-0.94
1973/05/08	712.14	85.92	712.14	97.19	0.00	11.28
1974/02/28	712.85	80.58	712.85	79.65	0.00	-0.93
1974/04/21	711.85	77.45	711.85	86.37	0.00	8.92
1974/05/25	711.99	37.03	711.99	37.40	0.00	0.37
1975/01/16	712.57	55.91	712.57	56.60	0.00	0.69
1975/05/05	712.53	105.29	712.53	113.51	0.00	8.22
1975/09/08	712.69	62.59	712.69	65.25	0.00	2.66
1976/03/21	712.52	94.95	712.52	99.43	0.00	4.48
1977/07/05	711.87	58.63	711.87	60.41	0.00	1.78
1977/08/13	711.93	71.35	711.93	75.93	0.00	4.58
1977/09/07	711.51	47.38	711.50	47.16	0.00	-0.22
1978/04/02	711.29	18.52	711.29	18.97	0.00	0.45
1978/05/21	711.66	39.79	711.66	41.23	0.00	1.44
1978/07/09	712.23	48.41	712.23	52.28	0.00	3.87
1978/09/25	712.23	110.62	712.23	119.26	0.00	8.64
1979/04/18	714.09	162.93	714.09	156.90	0.00	-6.03
1979/09/05	712.05	75.83	712.05	85.25	0.00	9.42
1980/01/21	711.67	33.55	711.67	34.00	0.00	0.45
1980/08/26	712.11	92.96	712.11	103.78	0.00	10.82
1980/09/26	711.98	72.27	711.99	82.11	0.00	9.84
1981/05/03	712.31	96.92	712.32	109.62	0.01	12.70
1981/06/05	712.63	117.95	712.63	120.66	0.00	2.71
1981/06/21	711.84	47.10	711.84	46.43	0.00	-0.67

1981/08/23	711.70	52.69	711.70	54.82	0.00	2.13
1982/03/28	712.93	85.44	712.94	85.15	0.00	-0.29
1982/07/31	712.17	86.68	712.17	93.40	0.00	6.72
1982/08/14	712.88	231.84	712.89	230.27	0.00	-1.57
1982/12/12	714.29	206.02	714.29	205.55	0.00	-0.47
1983/01/04	712.49	122.40	712.49	132.76	0.00	10.36
1983/04/22	712.96	70.25	712.96	74.26	0.00	4.01
1983/06/04	711.67	68.06	711.67	73.91	0.00	5.85
1983/07/09	713.60	385.51	713.61	379.98	0.00	-5.53
1983/12/05	712.46	67.02	712.46	72.08	0.00	5.06
1984/02/25	713.19	70.81	713.20	71.01	0.00	0.21
1984/04/03	712.36	100.62	712.36	100.80	0.00	0.18
1985/03/19	713.98	102.33	713.98	102.85	0.00	0.52
1985/12/11	712.14	55.56	712.14	57.71	0.00	2.15
1986/07/19	711.64	69.52	711.64	79.48	0.00	9.96
1986/10/10	712.36	162.72	712.36	171.06	0.00	8.34
1987/09/06	715.97	293.69	715.98	292.31	0.00	-1.38
1988/01/01	711.80	42.60	711.80	44.33	0.00	1.72
1988/02/07	711.88	43.92	711.88	44.55	0.00	0.63
1988/04/13	711.82	40.70	711.82	40.22	0.00	-0.48
1988/10/26	712.44	86.47	712.44	94.53	0.00	8.05
1989/08/18	712.62	155.87	712.62	151.96	0.00	-3.91
1989/09/18	712.59	135.78	712.59	145.49	0.00	9.71
1990/03/16	712.75	128.13	712.75	125.03	0.00	-3.10
1990/05/19	713.19	126.01	713.19	121.90	0.00	-4.11
1990/08/28	712.28	143.02	712.28	146.22	0.00	3.20
1990/12/10	712.81	90.38	712.81	90.59	0.00	0.21
1991/04/23	712.30	59.05	712.30	60.65	0.00	1.60
1991/06/02	712.05	54.66	712.05	55.60	0.00	0.94
1991/10/09	712.16	40.43	712.16	42.20	0.00	1.77
1991/11/08	711.86	51.71	711.86	52.50	0.00	0.79
1991/12/18	711.29	27.98	711.29	28.63	0.00	0.65
1992/09/21	711.75	59.23	711.75	62.58	0.00	3.35
1993/01/11	712.75	86.81	712.75	93.10	0.00	6.29
1993/04/29	712.81	43.08	712.81	43.01	0.00	-0.07
1993/07/06	712.17	83.81	712.17	93.24	0.00	9.43
1994/03/13	712.62	52.33	712.62	55.39	0.00	3.06
1994/07/02	712.53	73.95	712.53	80.24	0.00	6.30
1994/08/24	711.75	82.99	711.75	94.05	0.00	11.06
1995/01/25	712.25	39.23	712.25	39.84	0.00	0.61
1995/05/06	712.04	31.15	712.04	32.28	0.00	1.13
1995/08/24	711.87	72.14	711.87	80.67	0.00	8.53
1995/11/18	712.36	53.92	712.36	56.19	0.00	2.27
1996/06/27	712.16	70.44	712.16	78.02	0.00	7.58
1996/08/05	714.52	309.19	714.52	307.73	0.00	-1.46
1997/03/06	714.79	142.36	714.80	141.73	0.00	-0.63
1998/03/25	711.90	26.70	711.90	26.78	0.00	0.08
1998/05/15	712.08	31.91	712.08	32.63	0.00	0.72
1998/08/15	712.55	161.76	712.55	165.97	0.00	4.21
1998/09/14	711.96	102.20	711.96	107.70	0.00	5.50
1998/10/25	712.32	44.48	712.32	45.95	0.00	1.47
1999/02/09	713.01	52.81	713.01	53.04	0.00	0.23
1999/05/06	712.65	75.29	712.65	74.27	0.00	-1.02
2000/04/28	712.65	118.97	712.65	121.88	0.00	2.91
2001/03/02	713.18	153.02	713.18	152.75	0.00	-0.27
2001/09/06	713.33	205.64	713.34	197.33	0.00	-8.31
2001/09/30	712.04	43.94	712.04	46.37	0.00	2.43
2001/10/31	714.40	290.49	714.40	287.13	0.00	-3.36
2002/03/15	712.10	32.60	712.10	32.31	0.00	-0.28
2002/05/22	712.15	50.62	712.15	51.39	0.00	0.78
2002/07/14	712.21	132.52	712.21	138.71	0.00	6.19
2002/08/29	713.08	132.14	713.08	128.60	0.00	-3.54
2003/05/19	712.15	55.77	712.15	57.51	0.00	1.74
2003/08/13	711.40	57.73	711.40	59.94	0.00	2.21
2003/11/29	711.68	41.12	711.68	40.81	0.00	-0.31
2004/03/11	711.66	27.35	711.66	28.10	0.00	0.75
2004/06/18	711.54	75.89	711.54	82.90	0.00	7.01
2005/01/18	713.10	68.00	713.11	68.46	0.00	0.47
2006/03/18	711.61	37.02	711.61	38.08	0.00	1.06
2006/07/03	711.95	64.86	711.95	69.45	0.00	4.59
2006/09/29	711.52	52.66	711.52	53.51	0.00	0.85
2006/10/09	712.55	197.34	712.55	193.42	0.00	-3.92
2007/03/15	712.43	73.67	712.43	81.07	0.00	7.39
2007/08/31	712.61	123.88	712.61	127.61	0.00	3.73
2008/03/09	713.30	82.90	713.31	82.52	0.00	-0.37
2008/05/18	711.69	70.93	711.69	78.62	0.00	7.69
2008/09/23	715.14	176.61	715.15	176.78	0.00	0.17

MaximumS&F	715.97	464.02	715.98	457.93
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

0

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9006 534 DS of Elgin-OHare Culvert (140:1409)  
 7. Branch# 140; Node ID: A6 ; Station: 12366.0000

Nodes ==>	(1) sblNG6.FFF 1409		(2) sblNGp4.FFF 1409		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.98	1.43	709.98	1.41	0.00	-0.02
1949/04/08	712.41	19.32	712.41	18.82	0.00	-0.50
1949/06/21	713.01	35.50	713.01	39.66	0.00	4.16
1949/07/27	712.13	48.32	712.13	62.22	0.00	13.90
1949/12/31	712.79	28.57	712.79	31.12	0.00	2.54
1950/01/31	712.46	29.73	712.46	34.84	0.00	5.11
1950/05/03	713.19	51.13	713.19	51.63	0.00	0.50
1950/06/11	712.67	52.73	712.67	58.74	0.00	6.01
1951/03/09	712.34	25.19	712.34	25.18	0.00	-0.01
1951/05/17	712.50	21.10	712.50	21.22	0.00	0.12
1951/07/29	712.20	36.85	712.20	44.20	0.00	7.34
1952/01/25	712.73	26.35	712.73	26.37	0.00	0.02
1952/03/28	712.05	16.46	712.05	16.61	0.00	0.15
1953/03/23	712.41	38.40	712.41	46.88	0.00	8.48
1953/06/16	712.04	49.05	712.04	51.14	0.00	2.09
1953/07/28	712.58	125.90	712.59	131.67	0.00	5.77
1954/04/05	713.80	79.38	713.81	76.80	0.00	-2.58
1954/05/08	712.82	36.32	712.83	37.42	0.00	1.09
1954/08/29	712.57	91.29	712.57	90.64	0.00	-0.65
1954/10/25	714.83	80.07	714.84	80.71	0.00	0.65
1955/03/09	712.26	29.69	712.26	29.51	0.00	-0.17
1956/05/18	712.27	25.79	712.27	28.26	0.00	2.47
1957/01/27	712.10	22.29	712.10	22.40	0.00	0.11
1957/03/04	713.09	43.35	713.09	51.77	0.00	8.42
1957/07/28	715.36	132.52	715.36	133.32	0.01	0.80
1958/04/30	712.20	73.18	712.20	83.85	0.00	10.68
1958/06/19	712.35	47.85	712.35	48.49	0.00	0.65
1958/07/11	712.01	39.87	712.01	42.55	0.00	2.68
1959/04/07	711.85	25.31	711.85	26.75	0.00	1.44
1959/07/27	711.23	14.41	711.23	14.63	0.00	0.22
1960/01/21	713.32	99.98	713.32	100.52	0.00	0.54
1960/04/04	712.42	51.84	712.42	50.68	0.00	-1.15
1961/08/09	711.70	27.20	711.70	30.24	0.00	3.04
1961/10/06	713.80	68.05	713.80	64.34	0.00	-3.72
1962/04/15	711.94	23.90	711.94	23.50	0.00	-0.40
1962/07/08	712.21	40.09	712.21	46.29	0.00	6.21
1963/05/07	712.10	20.18	712.10	22.24	0.00	2.06
1964/04/12	711.84	18.83	711.84	19.54	0.00	0.71
1964/07/25	712.44	42.21	712.44	46.88	0.00	4.68
1965/03/22	712.41	30.30	712.41	29.99	0.00	-0.30
1966/02/15	712.32	29.06	712.32	30.28	0.00	1.22
1966/05/18	712.83	42.21	712.83	52.29	0.00	10.08
1967/04/09	712.20	24.60	712.20	23.93	0.00	-0.66
1967/07/01	712.33	44.59	712.33	52.68	0.00	8.09
1968/08/24	713.44	115.63	713.44	114.96	0.00	-0.67
1969/04/13	711.76	20.44	711.76	20.80	0.00	0.36
1969/06/15	712.18	16.39	712.18	17.10	0.00	0.71
1969/08/01	711.61	18.87	711.61	18.54	0.00	-0.33
1969/10/25	713.50	75.84	713.50	71.76	0.00	-4.09
1970/05/20	712.09	28.62	712.09	32.32	0.00	3.70
1970/12/18	711.62	15.80	711.62	15.43	0.00	-0.37
1971/03/04	711.54	17.57	711.54	18.04	0.00	0.47
1971/08/28	712.03	38.27	712.03	43.53	0.00	5.26
1972/03/21	712.64	70.64	712.64	73.59	0.00	2.94
1972/04/27	712.66	81.50	712.66	94.24	0.00	12.74
1972/09/01	714.90	220.84	714.90	216.75	0.00	-4.09
1972/10/05	712.52	65.56	712.52	66.10	0.00	0.54
1973/01/08	713.65	44.48	713.65	43.76	0.00	-0.72
1973/05/08	712.14	35.03	712.14	43.97	0.00	8.93
1974/02/28	712.85	35.56	712.85	34.75	0.00	-0.82
1974/04/21	711.85	39.62	711.85	47.25	0.00	7.63
1974/05/25	711.99	22.17	711.99	23.01	0.00	0.85
1975/01/16	712.57	30.29	712.57	29.52	0.00	-0.78
1975/05/05	712.53	47.33	712.53	60.29	0.00	12.96
1975/09/08	712.69	37.00	712.69	39.26	0.00	2.27
1976/03/21	712.52	41.76	712.52	51.01	0.00	9.26
1977/07/05	711.87	26.33	711.87	28.69	0.00	2.37
1977/08/13	711.92	30.39	711.92	30.83	0.00	0.43
1977/09/07	711.50	22.40	711.50	23.58	0.00	1.19
1978/04/02	711.29	13.55	711.29	13.51	0.00	-0.05
1978/05/21	711.66	24.34	711.66	25.16	0.00	0.82
1978/07/09	712.23	22.73	712.23	25.23	0.00	2.49
1978/09/25	712.23	46.68	712.23	60.13	0.00	13.45
1979/04/18	714.09	70.87	714.09	66.16	0.00	-4.70
1979/09/05	712.05	37.94	712.05	44.70	0.00	6.76
1980/01/21	711.66	22.63	711.66	22.65	0.00	0.02
1980/08/26	712.11	45.76	712.11	58.84	0.00	13.08
1980/09/26	711.98	32.09	711.98	36.06	0.00	3.97
1981/05/03	712.31	42.75	712.32	52.97	0.01	10.22
1981/06/05	712.63	55.24	712.63	69.89	0.00	14.64
1981/06/21	711.84	22.81	711.84	23.85	0.00	1.04



1981/08/23	711.70	28.14	711.70	29.75	0.00	1.61
1982/03/28	712.93	31.06	712.94	34.23	0.00	3.17
1982/07/31	712.17	38.46	712.17	48.00	0.00	9.54
1982/08/14	712.88	91.45	712.89	90.73	0.00	-0.72
1982/12/12	714.29	85.44	714.29	86.11	0.00	0.66
1983/01/04	712.49	64.22	712.49	79.93	0.00	15.71
1983/04/22	712.96	28.32	712.96	32.91	0.00	4.59
1983/06/04	711.67	37.85	711.67	42.01	0.00	4.16
1983/07/09	713.60	184.45	713.61	182.00	0.00	-2.45
1983/12/05	712.46	24.56	712.46	31.44	0.00	6.89
1984/02/25	713.19	41.81	713.20	41.96	0.00	0.15
1984/04/03	712.36	42.78	712.36	45.00	0.00	2.22
1985/03/19	713.98	43.13	713.98	43.58	0.00	0.46
1985/12/11	712.14	26.03	712.14	31.81	0.00	5.78
1986/07/19	711.64	31.55	711.64	38.82	0.00	7.27
1986/10/10	712.36	78.75	712.36	91.06	0.00	12.32
1987/09/06	715.97	145.78	715.98	144.29	0.00	-1.49
1988/01/01	711.80	19.91	711.80	21.36	0.00	1.45
1988/02/07	711.88	21.58	711.88	22.03	0.00	0.46
1988/04/13	711.82	22.44	711.82	23.13	0.00	0.69
1988/10/26	712.44	37.25	712.44	47.46	0.00	10.21
1989/08/18	712.62	58.61	712.62	71.57	0.00	12.96
1989/09/18	712.59	71.72	712.59	87.46	0.00	15.74
1990/03/16	712.75	59.05	712.75	58.48	0.00	-0.58
1990/05/19	713.19	57.34	713.19	54.33	0.00	-3.01
1990/08/28	712.28	58.12	712.28	74.04	0.00	15.93
1990/12/10	712.81	40.43	712.81	39.85	0.00	-0.58
1991/04/23	712.30	27.41	712.30	29.67	0.00	2.26
1991/06/02	712.05	26.81	712.05	27.43	0.00	0.62
1991/10/09	712.16	21.01	712.16	23.85	0.00	2.84
1991/11/08	711.86	27.59	711.86	28.22	0.00	0.63
1991/12/18	711.29	17.20	711.29	17.92	0.00	0.72
1992/09/21	711.75	28.79	711.75	30.83	0.00	2.03
1993/01/11	712.75	44.90	712.75	44.64	0.00	-0.26
1993/04/29	712.81	23.01	712.81	23.26	0.00	0.25
1993/07/06	712.17	41.34	712.17	51.69	0.00	10.35
1994/03/13	712.62	25.64	712.62	27.28	0.00	1.64
1994/07/02	712.53	23.31	712.53	28.25	0.00	4.94
1994/08/24	711.75	38.00	711.75	47.00	0.00	9.00
1995/01/25	712.25	20.68	712.25	20.63	0.00	-0.05
1995/05/06	712.04	15.76	712.04	16.78	0.00	1.03
1995/08/24	711.87	35.86	711.87	42.89	0.00	7.03
1995/11/18	712.36	23.18	712.36	23.97	0.00	0.78
1996/06/27	712.16	33.44	712.16	41.12	0.00	7.69
1996/08/05	714.52	162.91	714.52	161.84	0.00	-1.07
1997/03/06	714.79	63.95	714.80	63.40	0.00	-0.56
1998/03/25	711.90	14.91	711.90	15.66	0.00	0.76
1998/05/15	712.08	18.00	712.08	18.08	0.00	0.08
1998/08/15	712.55	66.08	712.55	70.06	0.00	3.97
1998/09/14	711.96	47.65	711.96	54.90	0.00	7.25
1998/10/25	712.32	26.13	712.32	25.89	0.00	-0.24
1999/02/09	713.01	36.72	713.01	36.99	0.00	0.28
1999/05/06	712.65	26.75	712.65	25.97	0.00	-0.78
2000/04/28	712.65	44.82	712.65	47.83	0.00	3.01
2001/03/02	713.18	69.22	713.18	69.50	0.00	0.27
2001/09/06	713.33	81.59	713.34	91.58	0.00	9.98
2001/09/30	712.04	22.07	712.04	24.44	0.00	2.37
2001/10/31	714.40	128.72	714.40	126.05	0.00	-2.67
2002/03/15	712.10	19.53	712.10	20.35	0.00	0.83
2002/05/22	712.15	19.32	712.15	20.89	0.00	1.57
2002/07/14	712.21	51.96	712.20	57.96	0.00	6.01
2002/08/29	713.08	49.59	713.08	62.06	0.00	12.48
2003/05/19	712.15	29.30	712.15	30.33	0.00	1.03
2003/08/13	711.40	26.33	711.40	27.06	0.00	0.72
2003/11/29	711.68	18.09	711.68	19.22	0.00	1.13
2004/03/11	711.65	15.14	711.65	15.89	0.00	0.74
2004/06/18	711.54	39.18	711.54	44.75	0.00	5.57
2005/01/18	713.10	41.37	713.10	41.80	0.00	0.42
2006/03/18	711.61	19.05	711.61	19.78	0.00	0.74
2006/07/03	711.95	30.00	711.95	33.25	0.00	3.25
2006/09/29	711.52	27.16	711.52	28.08	0.00	0.93
2006/10/09	712.55	94.50	712.55	98.46	0.00	3.95
2007/03/15	712.43	40.43	712.43	47.43	0.00	7.00
2007/08/31	712.61	46.03	712.61	50.03	0.00	4.00
2008/03/09	713.30	41.31	713.31	41.43	0.00	0.12
2008/05/18	711.69	32.39	711.69	36.72	0.00	4.33
2008/09/23	715.14	68.31	715.15	69.91	0.00	1.60

Maximums&F	715.97	220.84	715.98	216.75
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

0

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_510 644 feet DS of Elgin-OHare Culvert (140:1413)  
 8. Branch# 140; Node ID: ; Station: 12256.0000

Nodes ==>	(1) sblNGe6.FFF 1413		(2) sblNGp4.FFF 1413		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.98	1.45	709.98	1.43	0.00	-0.02
1949/04/08	712.41	19.10	712.41	19.09	0.00	-0.01
1949/06/21	713.01	28.24	713.01	30.84	0.00	2.60
1949/07/27	712.13	29.67	712.13	42.90	0.00	13.24
1949/12/31	712.79	24.36	712.79	24.38	0.00	0.02
1950/01/31	712.46	20.97	712.46	22.85	0.00	1.89
1950/05/03	713.19	29.12	713.19	29.74	0.00	0.62
1950/06/11	712.67	40.75	712.67	46.96	0.00	6.21
1951/03/09	712.34	23.16	712.34	23.05	0.00	-0.10
1951/05/17	712.50	20.79	712.50	20.78	0.00	-0.01
1951/07/29	712.20	24.80	712.20	32.68	0.00	7.88
1952/01/25	712.73	25.00	712.73	24.92	0.00	-0.07
1952/03/28	712.05	15.00	712.05	14.92	0.00	-0.08
1953/03/23	712.41	22.48	712.41	30.00	0.00	7.51
1953/06/16	712.04	38.25	712.04	37.47	0.00	-0.78
1953/07/28	712.58	87.35	712.59	92.55	0.00	5.20
1954/04/05	713.80	39.88	713.81	39.87	0.00	-0.02
1954/05/08	712.82	29.22	712.83	30.24	0.00	1.02
1954/08/29	712.57	62.86	712.57	61.50	0.00	-1.36
1954/10/25	714.83	64.24	714.84	64.87	0.00	0.63
1955/03/09	712.26	25.18	712.26	24.83	0.00	-0.35
1956/05/18	712.27	17.68	712.27	18.67	0.00	0.99
1957/01/27	712.10	21.54	712.10	21.49	0.00	-0.05
1957/03/04	713.09	38.98	713.09	38.98	0.00	0.00
1957/07/28	715.36	107.20	715.36	108.04	0.01	0.84
1958/04/30	712.20	44.03	712.20	51.87	0.00	7.84
1958/06/19	712.35	28.24	712.35	30.61	0.00	2.37
1958/07/11	712.01	24.85	712.01	26.42	0.00	1.57
1959/04/07	711.85	18.67	711.85	18.59	0.00	-0.07
1959/07/27	711.23	12.18	711.23	12.38	0.00	0.20
1960/01/21	713.32	76.11	713.32	76.38	0.00	0.27
1960/04/04	712.42	41.46	712.42	40.21	0.00	-1.25
1961/08/09	711.70	20.24	711.70	20.29	0.00	0.04
1961/10/06	713.80	36.21	713.80	36.20	0.00	-0.01
1962/04/15	711.94	21.10	711.94	20.58	0.00	-0.52
1962/07/08	712.21	25.29	712.21	30.10	0.00	4.81
1963/05/07	712.10	20.07	712.10	20.05	0.00	-0.02
1964/04/12	711.84	15.91	711.84	16.46	0.00	0.55
1964/07/25	712.44	30.76	712.44	33.80	0.00	3.05
1965/03/22	712.41	23.87	712.41	23.83	0.00	-0.03
1966/02/15	712.32	25.77	712.32	26.69	0.00	0.91
1966/05/18	712.83	33.63	712.83	38.15	0.00	4.53
1967/04/09	712.20	19.91	712.20	19.85	0.00	-0.05
1967/07/01	712.33	31.91	712.33	38.96	0.00	7.05
1968/08/24	713.44	84.96	713.44	84.25	0.00	-0.71
1969/04/13	711.76	15.44	711.76	15.35	0.00	-0.09
1969/06/15	712.18	14.99	712.18	14.96	0.00	-0.03
1969/08/01	711.61	16.52	711.61	16.44	0.00	-0.08
1969/10/25	713.50	40.84	713.50	38.01	0.00	-2.83
1970/05/20	712.09	21.40	712.09	24.01	0.00	2.61
1970/12/18	711.62	12.36	711.62	12.23	0.00	-0.13
1971/03/04	711.54	13.56	711.54	14.01	0.00	0.45
1971/08/28	712.03	27.73	712.03	33.77	0.00	6.03
1972/03/21	712.64	42.15	712.64	46.52	0.00	4.36
1972/04/27	712.66	48.21	712.66	62.20	0.00	13.99
1972/09/01	714.90	154.50	714.90	151.01	0.00	-3.49
1972/10/05	712.52	36.78	712.52	37.61	0.00	0.83
1973/01/08	713.64	36.57	713.65	36.56	0.00	-0.01
1973/05/08	712.14	21.41	712.14	26.61	0.00	5.20
1974/02/28	712.85	27.19	712.85	27.20	0.00	0.01
1974/04/21	711.85	24.20	711.85	31.72	0.00	7.52
1974/05/25	711.99	19.79	711.99	20.57	0.00	0.78
1975/01/16	712.57	24.63	712.57	25.10	0.00	0.47
1975/05/05	712.53	31.03	712.53	40.37	0.00	9.34
1975/09/08	712.69	30.05	712.69	32.16	0.00	2.11
1976/03/21	712.52	25.47	712.52	36.09	0.00	10.62
1977/07/05	711.87	17.26	711.87	18.13	0.00	0.86
1977/08/13	711.92	21.34	711.92	19.34	0.00	-2.00
1977/09/07	711.50	17.42	711.50	17.34	0.00	-0.08
1978/04/02	711.28	12.69	711.28	12.63	0.00	-0.06
1978/05/21	711.66	19.81	711.66	20.42	0.00	0.61
1978/07/09	712.23	15.93	712.23	16.74	0.00	0.81
1978/09/25	712.23	26.49	712.23	39.16	0.00	12.67
1979/04/18	714.09	44.39	714.09	44.49	0.00	0.10
1979/09/05	712.05	23.59	712.05	30.39	0.00	6.80
1980/01/21	711.66	20.22	711.66	19.90	0.00	-0.33
1980/08/26	712.11	28.05	712.11	40.78	0.00	12.73
1980/09/26	711.98	25.83	711.98	23.84	0.00	-1.99
1981/05/03	712.31	30.93	712.32	38.72	0.01	7.80
1981/06/05	712.63	34.32	712.63	49.64	0.00	15.32
1981/06/21	711.84	17.84	711.84	17.81	0.00	-0.04

1981/08/23	711.70	22.95	711.70	24.13	0.00	1.18
1982/03/28	712.93	27.00	712.94	27.02	0.00	0.02
1982/07/31	712.17	23.05	712.17	31.25	0.00	8.20
1982/08/14	712.88	44.42	712.89	43.61	0.00	-0.81
1982/12/12	714.29	53.51	714.29	52.83	0.00	-0.68
1983/01/04	712.49	41.97	712.49	57.14	0.00	15.17
1983/04/22	712.96	26.08	712.96	26.08	0.00	0.00
1983/06/04	711.67	27.62	711.67	32.13	0.00	4.51
1983/07/09	713.60	130.05	713.61	128.22	0.00	-1.83
1983/12/05	712.46	17.98	712.46	17.97	0.00	-0.01
1984/02/25	713.19	33.03	713.20	33.13	0.00	0.11
1984/04/03	712.36	24.04	712.36	25.82	0.00	1.78
1985/03/19	713.98	41.40	713.98	41.42	0.00	0.01
1985/12/11	712.14	18.17	712.14	23.63	0.00	5.46
1986/07/19	711.64	21.73	711.64	25.23	0.00	3.50
1986/10/10	712.36	47.57	712.36	59.99	0.00	12.42
1987/09/06	715.97	126.93	715.98	126.04	0.00	-0.89
1988/01/01	711.80	12.96	711.80	14.30	0.00	1.33
1988/02/07	711.88	19.31	711.88	19.25	0.00	-0.07
1988/04/13	711.82	17.75	711.82	18.32	0.00	0.57
1988/10/26	712.44	21.24	712.44	30.69	0.00	9.45
1989/08/18	712.62	33.29	712.62	46.10	0.00	12.80
1989/09/18	712.59	45.92	712.59	61.67	0.00	15.74
1990/03/16	712.75	36.33	712.75	36.47	0.00	0.14
1990/05/19	713.19	34.56	713.19	31.92	0.00	-2.64
1990/08/28	712.28	30.72	712.28	46.94	0.00	16.22
1990/12/10	712.81	26.09	712.81	26.07	0.00	-0.02
1991/04/23	712.30	20.96	712.30	20.97	0.00	0.01
1991/06/02	712.05	19.30	712.05	19.24	0.00	-0.07
1991/10/09	712.16	19.06	712.16	19.05	0.00	-0.01
1991/11/08	711.86	21.75	711.86	22.51	0.00	0.76
1991/12/18	711.28	14.42	711.28	15.05	0.00	0.63
1992/09/21	711.75	23.06	711.75	24.68	0.00	1.61
1993/01/11	712.75	33.70	712.75	33.46	0.00	-0.24
1993/04/29	712.81	23.94	712.81	23.88	0.00	-0.06
1993/07/06	712.17	27.67	712.17	37.31	0.00	9.64
1994/03/13	712.62	24.26	712.62	24.17	0.00	-0.08
1994/07/02	712.53	21.87	712.53	21.98	0.00	0.10
1994/08/24	711.75	26.05	711.75	30.43	0.00	4.38
1995/01/25	712.25	21.50	712.25	21.44	0.00	-0.06
1995/05/06	712.04	15.51	712.04	15.43	0.00	-0.08
1995/08/24	711.87	23.53	711.87	30.19	0.00	6.66
1995/11/18	712.35	22.13	712.36	22.09	0.00	-0.04
1996/06/27	712.16	22.37	712.16	29.07	0.00	6.70
1996/08/05	714.52	117.72	714.52	116.75	0.00	-0.97
1997/03/06	714.79	57.15	714.80	57.08	0.00	-0.07
1998/03/25	711.90	13.13	711.90	13.72	0.00	0.59
1998/05/15	712.08	17.00	712.08	17.02	0.00	0.01
1998/08/15	712.55	34.07	712.55	38.06	0.00	3.98
1998/09/14	711.96	30.38	711.96	35.20	0.00	4.82
1998/10/25	712.32	22.58	712.32	22.70	0.00	0.13
1999/02/09	713.01	32.56	713.01	32.82	0.00	0.27
1999/05/06	712.65	23.81	712.65	23.83	0.00	0.01
2000/04/28	712.65	29.79	712.65	30.02	0.00	0.23
2001/03/02	713.18	40.83	713.18	41.45	0.00	0.62
2001/09/06	713.33	48.57	713.34	65.03	0.00	16.46
2001/09/30	712.04	16.50	712.04	18.74	0.00	2.24
2001/10/31	714.40	79.14	714.40	76.84	0.00	-2.30
2002/03/15	712.10	19.31	712.10	19.24	0.00	-0.07
2002/05/22	712.15	19.62	712.15	19.59	0.00	-0.03
2002/07/14	712.21	24.59	712.20	30.89	0.00	6.31
2002/08/29	713.08	31.01	713.08	43.40	0.00	12.39
2003/05/19	712.15	21.76	712.15	23.17	0.00	1.41
2003/08/13	711.39	19.64	711.39	18.75	0.00	-0.90
2003/11/29	711.68	16.19	711.68	16.08	0.00	-0.11
2004/03/11	711.65	14.64	711.65	14.54	0.00	-0.10
2004/06/18	711.54	31.07	711.54	35.72	0.00	4.65
2005/01/18	713.10	33.62	713.10	33.59	0.00	-0.04
2006/03/18	711.61	13.71	711.61	14.38	0.00	0.67
2006/07/03	711.95	20.88	711.95	21.34	0.00	0.45
2006/09/29	711.52	20.83	711.52	21.93	0.00	1.10
2006/10/09	712.55	58.49	712.55	66.50	0.00	8.01
2007/03/15	712.43	29.42	712.43	36.00	0.00	6.58
2007/08/31	712.61	27.48	712.61	27.61	0.00	0.13
2008/03/09	713.30	34.63	713.31	34.62	0.00	-0.02
2008/05/18	711.69	25.20	711.69	24.31	0.00	-0.89
2008/09/23	715.14	57.62	715.15	57.63	0.00	0.02

MaximumS&F	715.97	154.50	715.98	151.01
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
XS9005 969 DS of Elgin-OHare Culvert (140:1417)  
9. Branch# 140; Node ID: A5 ; Station: 11931.0000

Nodes ==>	(1) sbLNge6.FFF 1417		(2) sbLNge4.FFF 1417		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.96	1.49	709.96	1.47	0.00	-0.02
1949/04/08	712.41	22.92	712.41	22.95	0.00	0.02
1949/06/21	713.01	33.07	713.01	33.04	0.00	-0.03
1949/07/27	712.13	21.26	712.13	21.11	0.00	-0.15
1949/12/31	712.79	27.93	712.79	27.93	0.00	0.01
1950/01/31	712.46	25.64	712.46	25.57	0.00	-0.07
1950/05/03	713.19	33.60	713.19	33.58	0.00	-0.02
1950/06/11	712.67	24.64	712.67	24.60	0.00	-0.03
1951/03/09	712.34	23.77	712.34	23.73	0.00	-0.04
1951/05/17	712.50	23.64	712.50	23.61	0.00	-0.03
1951/07/29	712.20	19.09	712.20	19.00	0.00	-0.10
1952/01/25	712.73	31.36	712.73	31.36	0.00	0.00
1952/03/28	712.05	17.02	712.05	16.98	0.00	-0.04
1953/03/23	712.41	24.97	712.41	24.90	0.00	-0.07
1953/06/16	712.04	18.41	712.04	18.28	0.00	-0.13
1953/07/28	712.58	24.86	712.59	24.87	0.00	0.01
1954/04/05	713.80	45.51	713.81	45.52	0.00	0.02
1954/05/08	712.82	26.67	712.83	26.67	0.00	0.00
1954/08/29	712.57	26.22	712.57	26.17	0.00	-0.05
1954/10/25	714.83	60.27	714.84	60.24	0.00	-0.03
1955/03/09	712.26	24.87	712.26	24.81	0.00	-0.06
1956/05/18	712.27	18.71	712.27	18.69	0.00	-0.02
1957/01/27	712.10	24.12	712.10	24.09	0.00	-0.03
1957/03/04	713.09	40.12	713.09	40.12	0.00	0.00
1957/07/28	715.36	79.90	715.36	79.75	0.01	-0.15
1958/04/30	712.20	19.52	712.20	19.43	0.00	-0.09
1958/06/19	712.35	26.45	712.35	26.56	0.00	0.11
1958/07/11	712.01	26.00	712.01	25.85	0.00	-0.14
1959/04/07	711.84	19.11	711.85	19.06	0.00	-0.06
1959/07/27	711.23	9.28	711.23	9.43	0.00	0.15
1960/01/21	713.32	48.43	713.32	48.38	0.00	-0.05
1960/04/04	712.42	33.66	712.42	33.53	0.00	-0.13
1961/08/09	711.70	17.43	711.70	17.40	0.00	-0.03
1961/10/06	713.80	42.63	713.80	42.57	0.00	-0.05
1962/04/15	711.94	19.44	711.94	19.40	0.00	-0.04
1962/07/08	712.21	19.76	712.21	19.78	0.00	0.01
1963/05/07	712.10	21.59	712.10	21.55	0.00	-0.04
1964/04/12	711.84	14.74	711.84	14.62	0.00	-0.12
1964/07/25	712.44	27.94	712.44	27.96	0.00	0.02
1965/03/22	712.41	27.17	712.41	27.14	0.00	-0.03
1966/02/15	712.32	21.43	712.32	22.10	0.00	0.67
1966/05/18	712.83	31.83	712.83	31.84	0.00	0.01
1967/04/09	712.20	21.82	712.20	21.80	0.00	-0.02
1967/07/01	712.33	20.25	712.33	20.24	0.00	-0.01
1968/08/24	713.44	50.92	713.44	51.03	0.00	0.11
1969/04/13	711.76	14.45	711.76	14.34	0.00	-0.11
1969/06/15	712.18	17.37	712.18	17.38	0.00	0.01
1969/08/01	711.61	15.86	711.61	15.80	0.00	-0.06
1969/10/25	713.50	40.86	713.50	40.81	0.00	-0.05
1970/05/20	712.09	17.97	712.09	17.93	0.00	-0.04
1970/12/18	711.62	12.54	711.62	12.45	0.00	-0.09
1971/03/04	711.54	11.67	711.54	11.64	0.00	-0.03
1971/08/28	712.03	24.15	712.03	24.01	0.00	-0.14
1972/03/21	712.64	35.04	712.63	34.97	0.00	-0.07
1972/04/27	712.66	27.36	712.66	27.32	0.00	-0.04
1972/09/01	714.90	85.34	714.90	85.25	0.00	-0.09
1972/10/05	712.52	30.50	712.52	30.44	0.00	-0.07
1973/01/08	713.64	46.31	713.65	46.34	0.00	0.03
1973/05/08	712.14	21.95	712.14	21.93	0.00	-0.02
1974/02/28	712.85	33.87	712.85	33.92	0.00	0.05
1974/04/21	711.85	19.73	711.85	19.55	0.00	-0.19
1974/05/25	711.99	17.42	711.99	17.32	0.00	-0.09
1975/01/16	712.57	27.39	712.57	27.37	0.00	-0.01
1975/05/05	712.52	30.26	712.52	30.20	0.00	-0.06
1975/09/08	712.68	24.63	712.69	24.58	0.00	-0.05
1976/03/21	712.52	24.95	712.52	24.91	0.00	-0.04
1977/07/05	711.87	18.87	711.87	18.77	0.00	-0.09
1977/08/13	711.92	21.69	711.92	21.57	0.00	-0.11
1977/09/07	711.50	15.62	711.50	15.52	0.00	-0.11
1978/04/02	711.28	10.37	711.28	10.30	0.00	-0.07
1978/05/21	711.66	14.67	711.66	14.59	0.00	-0.08
1978/07/09	712.23	17.85	712.23	17.84	0.00	-0.01
1978/09/25	712.23	18.80	712.23	18.76	0.00	-0.04
1979/04/18	714.09	53.24	714.09	53.19	0.00	-0.05
1979/09/05	712.05	18.28	712.05	18.27	0.00	-0.01
1980/01/21	711.66	19.55	711.66	19.50	0.00	-0.04
1980/08/26	712.11	17.25	712.11	17.17	0.00	-0.09
1980/09/26	711.98	24.64	711.98	24.62	0.00	-0.02
1981/05/03	712.31	25.62	712.32	25.67	0.01	0.05
1981/06/05	712.63	24.90	712.63	24.86	0.00	-0.04
1981/06/21	711.83	18.11	711.84	18.06	0.00	-0.05

1981/08/23	711.70	11.95	711.70	12.61	0.00	0.66
1982/03/28	712.93	33.32	712.94	33.31	0.00	-0.01
1982/07/31	712.17	17.69	712.17	17.74	0.00	0.05
1982/08/14	712.88	40.88	712.88	40.65	0.00	-0.22
1982/12/12	714.29	52.24	714.29	52.32	0.00	0.08
1983/01/04	712.49	26.03	712.49	26.00	0.00	-0.02
1983/04/22	712.96	29.52	712.96	29.48	0.00	-0.04
1983/06/04	711.67	12.23	711.67	12.21	0.00	-0.01
1983/07/09	713.60	58.96	713.61	59.41	0.00	0.45
1983/12/05	712.46	21.26	712.46	21.26	0.00	0.00
1984/02/25	713.19	38.18	713.20	38.18	0.00	0.00
1984/04/03	712.36	26.70	712.36	26.62	0.00	-0.08
1985/03/19	713.98	51.49	713.98	51.56	0.00	0.07
1985/12/11	712.14	18.10	712.14	18.09	0.00	-0.01
1986/07/19	711.64	21.10	711.64	20.98	0.00	-0.11
1986/10/10	712.36	30.25	712.36	30.07	0.00	-0.18
1987/09/06	715.97	79.51	715.98	79.57	0.00	0.06
1988/01/01	711.80	14.56	711.80	14.56	0.00	0.01
1988/02/07	711.88	19.73	711.88	19.63	0.00	-0.10
1988/04/13	711.82	17.08	711.82	17.05	0.00	-0.03
1988/10/26	712.44	21.99	712.44	21.89	0.00	-0.09
1989/08/18	712.62	23.74	712.62	23.70	0.00	-0.04
1989/09/18	712.59	28.83	712.59	28.69	0.00	-0.14
1990/03/16	712.75	31.86	712.75	31.87	0.00	0.01
1990/05/19	713.19	34.20	713.19	34.13	0.00	-0.07
1990/08/28	712.28	19.01	712.28	18.97	0.00	-0.04
1990/12/10	712.81	28.69	712.81	28.73	0.00	0.04
1991/04/23	712.30	21.63	712.30	21.59	0.00	-0.05
1991/06/02	712.05	20.37	712.05	20.30	0.00	-0.06
1991/10/09	712.16	20.69	712.16	20.59	0.00	-0.11
1991/11/08	711.86	17.57	711.86	17.55	0.00	-0.02
1991/12/18	711.28	8.27	711.28	8.27	0.00	0.00
1992/09/21	711.75	20.87	711.75	20.79	0.00	-0.08
1993/01/11	712.75	34.96	712.75	34.97	0.00	0.01
1993/04/29	712.81	30.27	712.81	30.29	0.00	0.02
1993/07/06	712.17	17.19	712.17	17.17	0.00	-0.02
1994/03/13	712.62	29.56	712.62	29.60	0.00	0.05
1994/07/02	712.53	24.88	712.53	24.85	0.00	-0.03
1994/08/24	711.75	21.79	711.75	21.66	0.00	-0.13
1995/01/25	712.25	24.26	712.25	24.27	0.00	0.01
1995/05/06	712.04	16.28	712.04	16.29	0.00	0.01
1995/08/24	711.87	21.48	711.87	21.35	0.00	-0.13
1995/11/18	712.35	25.11	712.36	25.07	0.00	-0.04
1996/06/27	712.16	18.28	712.16	18.28	0.00	0.00
1996/08/05	714.52	67.79	714.52	67.72	0.00	-0.07
1997/03/06	714.79	70.60	714.80	70.64	0.00	0.04
1998/03/25	711.90	14.38	711.90	14.40	0.00	0.02
1998/05/15	712.08	17.66	712.08	17.64	0.00	-0.02
1998/08/15	712.55	30.83	712.55	30.76	0.00	-0.08
1998/09/14	711.96	26.10	711.96	25.94	0.00	-0.16
1998/10/25	712.32	24.10	712.32	24.04	0.00	-0.06
1999/02/09	713.01	31.77	713.01	31.81	0.00	0.04
1999/05/06	712.65	25.24	712.65	25.20	0.00	-0.03
2000/04/28	712.65	28.04	712.65	28.24	0.00	0.20
2001/03/02	713.18	39.75	713.18	39.72	0.00	-0.03
2001/09/06	713.33	35.71	713.34	35.65	0.00	-0.06
2001/09/30	712.04	15.45	712.04	15.43	0.00	-0.02
2001/10/31	714.40	55.69	714.40	55.71	0.00	0.03
2002/03/15	712.10	21.03	712.10	20.98	0.00	-0.06
2002/05/22	712.15	21.35	712.15	21.31	0.00	-0.04
2002/07/14	712.20	28.01	712.20	27.84	0.00	-0.18
2002/08/29	713.08	32.70	713.08	32.72	0.00	0.02
2003/05/19	712.15	22.13	712.15	22.07	0.00	-0.07
2003/08/13	711.39	18.40	711.39	18.35	0.00	-0.05
2003/11/29	711.68	16.81	711.68	16.68	0.00	-0.13
2004/03/11	711.65	14.33	711.65	14.28	0.00	-0.05
2004/06/18	711.54	15.40	711.54	15.34	0.00	-0.06
2005/01/18	713.10	38.23	713.10	38.22	0.00	-0.01
2006/03/18	711.61	11.51	711.61	11.50	0.00	-0.01
2006/07/03	711.95	21.42	711.95	21.35	0.00	-0.07
2006/09/29	711.52	10.46	711.52	10.45	0.00	-0.01
2006/10/09	712.55	34.51	712.55	34.34	0.00	-0.17
2007/03/15	712.43	24.48	712.43	24.49	0.00	0.01
2007/08/31	712.61	25.28	712.61	25.29	0.00	0.01
2008/03/09	713.30	43.07	713.31	43.04	0.00	-0.03
2008/05/18	711.69	16.21	711.69	16.02	0.00	-0.19
2008/09/23	715.14	65.25	715.15	65.29	0.00	0.04

Maximums&F 715.97 85.34 715.98 85.25  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01  
 0

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.00018)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_501 1167 feet DS of Elgin-OHare Culvert (140:1421)  
 10. Branch# 140; Node ID: ; Station: 11733.0000

Nodes ==>	(1) sblNGe6.FFF 1421		(2) sblNGp4.FFF 1421		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.94	1.49	709.94	1.48	0.00	-0.02
1949/04/08	712.41	24.85	712.41	24.87	0.00	0.01
1949/06/21	713.01	36.13	713.01	36.10	0.00	-0.02
1949/07/27	712.13	22.65	712.13	22.51	0.00	-0.13
1949/12/31	712.79	29.88	712.79	29.88	0.00	0.00
1950/01/31	712.46	27.81	712.46	27.82	0.00	0.01
1950/05/03	713.19	36.07	713.19	36.07	0.00	0.00
1950/06/11	712.67	27.18	712.67	27.16	0.00	-0.02
1951/03/09	712.34	24.82	712.34	24.82	0.00	0.00
1951/05/17	712.50	25.17	712.50	25.16	0.00	-0.02
1951/07/29	712.20	21.09	712.20	21.01	0.00	-0.08
1952/01/25	712.73	34.37	712.73	34.40	0.00	0.03
1952/03/28	712.05	18.70	712.05	18.68	0.00	-0.01
1953/03/23	712.41	26.93	712.41	26.86	0.00	-0.07
1953/06/16	712.04	20.01	712.04	19.94	0.00	-0.07
1953/07/28	712.58	27.18	712.59	27.17	0.00	-0.01
1954/04/05	713.80	48.79	713.81	48.94	0.00	0.15
1954/05/08	712.82	28.62	712.83	28.60	0.00	-0.01
1954/08/29	712.57	28.25	712.57	28.25	0.00	-0.01
1954/10/25	714.83	64.77	714.84	64.78	0.00	0.01
1955/03/09	712.26	26.12	712.26	26.02	0.00	-0.10
1956/05/18	712.27	20.25	712.27	20.23	0.00	-0.02
1957/01/27	712.10	25.49	712.10	25.46	0.00	-0.03
1957/03/04	713.09	43.39	713.09	43.44	0.00	0.04
1957/07/28	715.36	87.31	715.36	87.18	0.01	-0.13
1958/04/30	712.20	21.84	712.20	21.75	0.00	-0.09
1958/06/19	712.35	27.87	712.35	27.92	0.00	0.05
1958/07/11	712.01	27.33	712.01	27.17	0.00	-0.16
1959/04/07	711.84	19.53	711.85	19.53	0.00	0.00
1959/07/27	711.23	9.11	711.23	9.17	0.00	0.06
1960/01/21	713.32	52.93	713.32	52.82	0.00	-0.11
1960/04/04	712.42	35.52	712.42	35.36	0.00	-0.15
1961/08/09	711.70	17.87	711.70	17.81	0.00	-0.06
1961/10/06	713.80	45.81	713.80	45.74	0.00	-0.08
1962/04/15	711.94	20.10	711.94	20.08	0.00	-0.03
1962/07/08	712.21	22.37	712.21	22.40	0.00	0.03
1963/05/07	712.10	22.33	712.10	22.31	0.00	-0.02
1964/04/12	711.84	15.28	711.84	15.26	0.00	-0.02
1964/07/25	712.44	29.65	712.44	29.68	0.00	0.03
1965/03/22	712.41	28.76	712.41	28.72	0.00	-0.05
1966/02/15	712.32	22.13	712.32	22.14	0.00	0.01
1966/05/18	712.83	32.77	712.83	32.82	0.00	0.05
1967/04/09	712.20	23.10	712.20	23.16	0.00	0.06
1967/07/01	712.33	22.54	712.33	22.54	0.00	0.01
1968/08/24	713.44	54.62	713.44	54.55	0.00	-0.07
1969/04/13	711.76	14.45	711.76	14.36	0.00	-0.09
1969/06/15	712.18	18.53	712.18	18.49	0.00	-0.04
1969/08/01	711.61	15.81	711.61	15.77	0.00	-0.03
1969/10/25	713.50	43.93	713.50	43.95	0.00	0.02
1970/05/20	712.09	18.86	712.09	18.82	0.00	-0.04
1970/12/18	711.62	12.75	711.62	12.68	0.00	-0.07
1971/03/04	711.54	12.47	711.54	12.48	0.00	0.01
1971/08/28	712.03	25.58	712.03	25.45	0.00	-0.13
1972/03/21	712.63	37.91	712.63	37.85	0.00	-0.07
1972/04/27	712.66	29.37	712.66	29.38	0.00	0.02
1972/09/01	714.90	94.11	714.90	94.13	0.00	0.02
1972/10/05	712.52	32.12	712.52	32.03	0.00	-0.09
1973/01/08	713.64	51.38	713.65	51.49	0.00	0.12
1973/05/08	712.14	22.48	712.14	22.37	0.00	-0.11
1974/02/28	712.85	36.94	712.85	36.99	0.00	0.05
1974/04/21	711.85	19.92	711.85	19.74	0.00	-0.18
1974/05/25	711.99	17.45	711.99	17.40	0.00	-0.06
1975/01/16	712.57	29.32	712.57	29.34	0.00	0.02
1975/05/05	712.52	31.19	712.52	31.14	0.00	-0.05
1975/09/08	712.68	26.83	712.69	26.79	0.00	-0.04
1976/03/21	712.52	25.89	712.52	25.87	0.00	-0.02
1977/07/05	711.87	20.12	711.87	20.08	0.00	-0.04
1977/08/13	711.92	22.86	711.92	22.72	0.00	-0.14
1977/09/07	711.50	15.86	711.50	15.77	0.00	-0.09
1978/04/02	711.28	10.48	711.28	10.39	0.00	-0.09
1978/05/21	711.66	14.59	711.66	14.49	0.00	-0.10
1978/07/09	712.23	19.25	712.23	19.27	0.00	0.01
1978/09/25	712.23	21.30	712.23	21.25	0.00	-0.06
1979/04/18	714.09	58.33	714.09	58.35	0.00	0.02
1979/09/05	712.05	18.47	712.05	18.42	0.00	-0.05
1980/01/21	711.66	19.93	711.66	19.86	0.00	-0.07
1980/08/26	712.11	18.14	712.11	18.13	0.00	-0.01
1980/09/26	711.98	25.58	711.98	25.57	0.00	-0.01
1981/05/03	712.31	26.82	712.32	26.86	0.01	0.04
1981/06/05	712.63	27.72	712.63	27.68	0.00	-0.04
1981/06/21	711.83	18.52	711.83	18.47	0.00	-0.05



1981/08/23	711.70	12.94	711.70	12.93	0.00	-0.01
1982/03/28	712.93	36.30	712.94	36.27	0.00	-0.03
1982/07/31	712.17	18.51	712.17	18.60	0.00	0.09
1982/08/14	712.88	44.55	712.88	44.31	0.00	-0.24
1982/12/12	714.29	55.82	714.29	55.88	0.00	0.06
1983/01/04	712.49	27.22	712.49	27.22	0.00	0.00
1983/04/22	712.96	31.34	712.96	31.31	0.00	-0.03
1983/06/04	711.67	13.60	711.67	13.58	0.00	-0.01
1983/07/09	713.60	54.89	713.61	55.10	0.00	0.22
1983/12/05	712.46	22.88	712.46	22.90	0.00	0.01
1984/02/25	713.19	42.09	713.20	42.10	0.00	0.01
1984/04/03	712.36	28.70	712.36	28.63	0.00	-0.08
1985/03/19	713.98	56.15	713.98	56.25	0.00	0.09
1985/12/11	712.14	19.02	712.14	19.01	0.00	0.00
1986/07/19	711.64	22.10	711.64	21.98	0.00	-0.13
1986/10/10	712.36	31.98	712.36	31.80	0.00	-0.18
1987/09/06	715.97	86.01	715.98	86.02	0.00	0.01
1988/01/01	711.80	16.11	711.80	16.13	0.00	0.02
1988/02/07	711.88	20.43	711.88	20.35	0.00	-0.08
1988/04/13	711.82	17.09	711.82	17.09	0.00	0.00
1988/10/26	712.44	24.35	712.44	24.30	0.00	-0.05
1989/08/18	712.62	26.16	712.62	26.12	0.00	-0.04
1989/09/18	712.59	30.70	712.59	30.61	0.00	-0.09
1990/03/16	712.75	34.73	712.75	34.74	0.00	0.00
1990/05/19	713.19	36.84	713.19	36.79	0.00	-0.05
1990/08/28	712.28	21.10	712.28	21.09	0.00	-0.01
1990/12/10	712.81	30.24	712.81	30.26	0.00	0.02
1991/04/23	712.30	22.16	712.30	22.17	0.00	0.01
1991/06/02	712.05	21.00	712.05	20.92	0.00	-0.08
1991/10/09	712.16	22.61	712.16	22.59	0.00	-0.02
1991/11/08	711.86	18.24	711.86	18.15	0.00	-0.09
1991/12/18	711.28	8.86	711.28	8.84	0.00	-0.01
1992/09/21	711.75	21.37	711.75	21.30	0.00	-0.07
1993/01/11	712.75	37.83	712.75	37.79	0.00	-0.04
1993/04/29	712.80	33.13	712.81	33.12	0.00	-0.01
1993/07/06	712.17	18.79	712.17	18.78	0.00	-0.01
1994/03/13	712.62	31.95	712.62	32.02	0.00	0.06
1994/07/02	712.53	26.92	712.53	26.92	0.00	0.00
1994/08/24	711.75	22.66	711.75	22.51	0.00	-0.15
1995/01/25	712.25	25.63	712.25	25.64	0.00	0.01
1995/05/06	712.04	17.28	712.04	17.25	0.00	-0.03
1995/08/24	711.87	22.45	711.87	22.35	0.00	-0.10
1995/11/18	712.35	26.40	712.36	26.40	0.00	0.00
1996/06/27	712.16	19.18	712.16	19.18	0.00	0.00
1996/08/05	714.52	71.89	714.52	71.81	0.00	-0.08
1997/03/06	714.79	77.38	714.80	77.36	0.00	-0.02
1998/03/25	711.90	15.24	711.90	15.26	0.00	0.02
1998/05/15	712.08	18.83	712.08	18.79	0.00	-0.04
1998/08/15	712.55	33.13	712.55	33.00	0.00	-0.13
1998/09/14	711.96	27.46	711.96	27.34	0.00	-0.12
1998/10/25	712.32	25.38	712.32	25.37	0.00	-0.01
1999/02/09	713.01	35.04	713.01	35.10	0.00	0.05
1999/05/06	712.65	26.74	712.65	26.71	0.00	-0.03
2000/04/28	712.65	29.43	712.65	29.34	0.00	-0.09
2001/03/02	713.18	43.16	713.18	43.13	0.00	-0.03
2001/09/06	713.33	39.64	713.34	39.62	0.00	-0.02
2001/09/30	712.04	17.17	712.04	17.16	0.00	-0.01
2001/10/31	714.40	59.80	714.40	59.76	0.00	-0.04
2002/03/15	712.10	21.88	712.10	21.83	0.00	-0.06
2002/05/22	712.15	22.21	712.15	22.14	0.00	-0.07
2002/07/14	712.20	29.96	712.20	29.77	0.00	-0.19
2002/08/29	713.08	35.03	713.08	35.01	0.00	-0.02
2003/05/19	712.15	23.04	712.15	22.99	0.00	-0.05
2003/08/13	711.39	18.76	711.39	18.68	0.00	-0.07
2003/11/29	711.68	17.69	711.68	17.61	0.00	-0.08
2004/03/11	711.65	14.50	711.65	14.47	0.00	-0.04
2004/06/18	711.54	15.40	711.54	15.32	0.00	-0.07
2005/01/18	713.10	40.32	713.10	40.32	0.00	0.00
2006/03/18	711.61	12.67	711.61	12.67	0.00	0.00
2006/07/03	711.95	22.29	711.95	22.22	0.00	-0.06
2006/09/29	711.52	11.86	711.52	11.85	0.00	-0.01
2006/10/09	712.55	36.56	712.55	36.53	0.00	-0.03
2007/03/15	712.43	26.54	712.43	26.57	0.00	0.03
2007/08/31	712.61	27.06	712.61	27.01	0.00	-0.04
2008/03/09	713.30	47.45	713.31	47.45	0.00	0.00
2008/05/18	711.69	16.63	711.69	16.46	0.00	-0.17
2008/09/23	715.14	69.48	715.15	69.53	0.00	0.05

Maximums&F	715.97	94.11	715.98	94.13
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS501c Confluc of Trib 1 (140:1423)  
 11. Branch# 140; Node ID: MCLCONF ; Station: 11694.0000

Nodes ==>	(1) sblNGe6.FFF 1423		(2) sblNGp4.FFF 1423		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.94	1.49	709.94	1.47	0.00	-0.02
1949/04/08	712.41	25.07	712.41	25.09	0.00	0.02
1949/06/21	713.01	36.47	713.01	36.45	0.00	-0.02
1949/07/27	712.13	22.80	712.13	22.67	0.00	-0.13
1949/12/31	712.79	30.11	712.79	30.10	0.00	-0.01
1950/01/31	712.46	28.05	712.46	28.07	0.00	0.01
1950/05/03	713.19	36.37	713.19	36.36	0.00	0.00
1950/06/11	712.67	27.46	712.67	27.44	0.00	-0.02
1951/03/09	712.34	24.95	712.34	24.95	0.00	0.00
1951/05/17	712.50	25.34	712.50	25.33	0.00	-0.02
1951/07/29	712.20	21.32	712.20	21.24	0.00	-0.08
1952/01/25	712.73	34.70	712.73	34.73	0.00	0.04
1952/03/28	712.05	18.88	712.05	18.87	0.00	-0.01
1953/03/23	712.41	27.14	712.41	27.07	0.00	-0.07
1953/06/16	712.04	20.22	712.04	20.16	0.00	-0.06
1953/07/28	712.58	27.43	712.59	27.42	0.00	-0.01
1954/04/05	713.80	49.17	713.81	49.33	0.00	0.15
1954/05/08	712.82	28.85	712.83	28.83	0.00	-0.02
1954/08/29	712.57	28.49	712.57	28.48	0.00	-0.01
1954/10/25	714.83	65.29	714.84	65.30	0.00	0.01
1955/03/09	712.26	26.26	712.26	26.16	0.00	-0.10
1956/05/18	712.27	20.42	712.27	20.40	0.00	-0.02
1957/01/27	712.10	25.65	712.10	25.63	0.00	-0.03
1957/03/04	713.09	43.78	713.09	43.81	0.00	0.03
1957/07/28	715.36	88.13	715.36	88.01	0.01	-0.13
1958/04/30	712.20	22.09	712.20	22.00	0.00	-0.09
1958/06/19	712.35	28.02	712.35	28.12	0.00	0.10
1958/07/11	712.01	27.47	712.01	27.32	0.00	-0.16
1959/04/07	711.84	19.58	711.85	19.59	0.00	0.01
1959/07/27	711.23	9.27	711.23	9.27	0.00	0.00
1960/01/21	713.32	53.43	713.32	53.33	0.00	-0.10
1960/04/04	712.42	35.73	712.42	35.57	0.00	-0.15
1961/08/09	711.70	17.92	711.70	17.87	0.00	-0.05
1961/10/06	713.80	46.19	713.80	46.10	0.00	-0.08
1962/04/15	711.94	20.20	711.94	20.15	0.00	-0.05
1962/07/08	712.21	22.65	712.21	22.68	0.00	0.03
1963/05/07	712.10	22.42	712.10	22.39	0.00	-0.02
1964/04/12	711.84	15.40	711.84	15.38	0.00	-0.02
1964/07/25	712.44	29.83	712.44	29.86	0.00	0.03
1965/03/22	712.41	28.93	712.41	28.89	0.00	-0.04
1966/02/15	712.32	22.35	712.32	22.36	0.00	0.01
1966/05/18	712.83	32.88	712.83	32.93	0.00	0.05
1967/04/09	712.20	23.24	712.20	23.31	0.00	0.07
1967/07/01	712.33	22.78	712.33	22.79	0.00	0.01
1968/08/24	713.44	55.04	713.44	54.97	0.00	-0.07
1969/04/13	711.76	14.46	711.76	14.39	0.00	-0.07
1969/06/15	712.18	18.67	712.18	18.64	0.00	-0.03
1969/08/01	711.61	15.82	711.61	15.79	0.00	-0.03
1969/10/25	713.50	44.28	713.50	44.31	0.00	0.02
1970/05/20	712.09	18.96	712.09	18.92	0.00	-0.04
1970/12/18	711.62	12.82	711.62	12.79	0.00	-0.03
1971/03/04	711.54	12.56	711.54	12.57	0.00	0.01
1971/08/28	712.03	25.73	712.03	25.61	0.00	-0.12
1972/03/21	712.63	38.22	712.63	38.16	0.00	-0.06
1972/04/27	712.66	29.59	712.66	29.61	0.00	0.02
1972/09/01	714.90	95.07	714.90	95.09	0.00	0.03
1972/10/05	712.52	32.29	712.52	32.20	0.00	-0.09
1973/01/08	713.64	51.94	713.65	52.06	0.00	0.12
1973/05/08	712.14	22.54	712.14	22.43	0.00	-0.11
1974/02/28	712.85	37.28	712.85	37.33	0.00	0.04
1974/04/21	711.85	19.95	711.85	19.79	0.00	-0.16
1974/05/25	711.99	17.47	711.99	17.42	0.00	-0.05
1975/01/16	712.57	29.53	712.57	29.56	0.00	0.03
1975/05/05	712.52	31.30	712.52	31.25	0.00	-0.05
1975/09/08	712.68	27.08	712.69	27.04	0.00	-0.04
1976/03/21	712.52	26.02	712.52	25.98	0.00	-0.03
1977/07/05	711.87	20.32	711.87	20.27	0.00	-0.05
1977/08/13	711.92	22.99	711.92	22.85	0.00	-0.14
1977/09/07	711.50	15.92	711.50	15.83	0.00	-0.09
1978/04/02	711.28	10.52	711.28	10.46	0.00	-0.06
1978/05/21	711.66	14.61	711.66	14.51	0.00	-0.09
1978/07/09	712.23	19.42	712.23	19.42	0.00	0.01
1978/09/25	712.23	21.57	712.23	21.51	0.00	-0.06
1979/04/18	714.09	58.89	714.09	58.91	0.00	0.03
1979/09/05	712.05	18.50	712.05	18.46	0.00	-0.04
1980/01/21	711.66	19.98	711.66	19.90	0.00	-0.07
1980/08/26	712.11	18.34	712.11	18.33	0.00	-0.01
1980/09/26	711.98	25.68	711.98	25.67	0.00	-0.01
1981/05/03	712.31	26.96	712.32	27.01	0.01	0.05
1981/06/05	712.63	28.02	712.63	27.99	0.00	-0.04
1981/06/21	711.83	18.58	711.83	18.51	0.00	-0.06

1981/08/23	711.70	13.08	711.70	13.08	0.00	-0.01
1982/03/28	712.93	36.62	712.94	36.59	0.00	-0.03
1982/07/31	712.17	18.60	712.17	18.71	0.00	0.10
1982/08/14	712.88	44.95	712.88	44.72	0.00	-0.24
1982/12/12	714.29	56.24	714.29	56.29	0.00	0.04
1983/01/04	712.49	27.36	712.49	27.36	0.00	0.00
1983/04/22	712.96	31.56	712.96	31.53	0.00	-0.03
1983/06/04	711.67	13.74	711.67	13.73	0.00	-0.01
1983/07/09	713.60	54.56	713.61	54.76	0.00	0.20
1983/12/05	712.46	23.07	712.46	23.08	0.00	0.02
1984/02/25	713.19	42.53	713.20	42.54	0.00	0.01
1984/04/03	712.36	28.92	712.36	28.84	0.00	-0.08
1985/03/19	713.98	56.66	713.98	56.76	0.00	0.10
1985/12/11	712.14	19.12	712.14	19.12	0.00	0.00
1986/07/19	711.64	22.22	711.64	22.10	0.00	-0.12
1986/10/10	712.36	32.17	712.36	31.99	0.00	-0.18
1987/09/06	715.97	86.76	715.98	86.77	0.00	0.01
1988/01/01	711.80	16.28	711.80	16.30	0.00	0.02
1988/02/07	711.88	20.51	711.88	20.43	0.00	-0.07
1988/04/13	711.82	17.10	711.82	17.10	0.00	0.00
1988/10/26	712.44	24.62	712.44	24.56	0.00	-0.05
1989/08/18	712.62	26.42	712.62	26.39	0.00	-0.04
1989/09/18	712.59	30.92	712.59	30.83	0.00	-0.09
1990/03/16	712.75	35.05	712.75	35.05	0.00	0.00
1990/05/19	713.19	37.14	713.19	37.09	0.00	-0.04
1990/08/28	712.28	21.33	712.28	21.32	0.00	-0.01
1990/12/10	712.81	30.43	712.81	30.44	0.00	0.01
1991/04/23	712.30	22.26	712.30	22.27	0.00	0.01
1991/06/02	712.05	21.07	712.05	20.99	0.00	-0.08
1991/10/09	712.16	22.89	712.16	22.87	0.00	-0.02
1991/11/08	711.86	18.32	711.86	18.23	0.00	-0.09
1991/12/18	711.28	8.94	711.28	8.93	0.00	-0.02
1992/09/21	711.75	21.43	711.75	21.35	0.00	-0.07
1993/01/11	712.75	38.14	712.75	38.10	0.00	-0.04
1993/04/29	712.80	33.44	712.81	33.43	0.00	-0.01
1993/07/06	712.17	18.97	712.17	18.96	0.00	-0.01
1994/03/13	712.62	32.21	712.62	32.28	0.00	0.06
1994/07/02	712.53	27.15	712.53	27.15	0.00	0.00
1994/08/24	711.75	22.77	711.75	22.60	0.00	-0.17
1995/01/25	712.25	25.78	712.25	25.79	0.00	0.01
1995/05/06	712.04	17.42	712.04	17.39	0.00	-0.03
1995/08/24	711.87	22.57	711.87	22.47	0.00	-0.10
1995/11/18	712.35	26.54	712.36	26.54	0.00	0.00
1996/06/27	712.16	19.29	712.16	19.30	0.00	0.01
1996/08/05	714.52	72.39	714.52	72.35	0.00	-0.05
1997/03/06	714.79	78.13	714.80	78.12	0.00	-0.02
1998/03/25	711.90	15.34	711.90	15.36	0.00	0.02
1998/05/15	712.08	18.96	712.08	18.92	0.00	-0.04
1998/08/15	712.55	33.37	712.55	33.24	0.00	-0.13
1998/09/14	711.96	27.60	711.96	27.49	0.00	-0.12
1998/10/25	712.32	25.52	712.32	25.52	0.00	0.00
1999/02/09	713.01	35.41	713.01	35.46	0.00	0.06
1999/05/06	712.65	26.91	712.65	26.89	0.00	-0.02
2000/04/28	712.65	29.60	712.65	29.51	0.00	-0.09
2001/03/02	713.18	43.55	713.18	43.52	0.00	-0.03
2001/09/06	713.33	40.09	713.34	40.08	0.00	-0.01
2001/09/30	712.04	17.36	712.04	17.35	0.00	-0.01
2001/10/31	714.40	60.25	714.40	60.22	0.00	-0.03
2002/03/15	712.10	21.98	712.10	21.92	0.00	-0.06
2002/05/22	712.15	22.31	712.15	22.24	0.00	-0.07
2002/07/14	712.20	30.17	712.20	29.98	0.00	-0.19
2002/08/29	713.08	35.31	713.08	35.29	0.00	-0.02
2003/05/19	712.15	23.14	712.15	23.10	0.00	-0.04
2003/08/13	711.39	18.80	711.39	18.72	0.00	-0.07
2003/11/29	711.68	17.83	711.68	17.73	0.00	-0.10
2004/03/11	711.65	14.56	711.65	14.51	0.00	-0.05
2004/06/18	711.54	15.42	711.54	15.36	0.00	-0.06
2005/01/18	713.10	40.56	713.10	40.56	0.00	0.00
2006/03/18	711.61	12.80	711.61	12.80	0.00	0.00
2006/07/03	711.95	22.38	711.95	22.32	0.00	-0.06
2006/09/29	711.52	12.01	711.52	12.00	0.00	-0.01
2006/10/09	712.55	36.79	712.55	36.76	0.00	-0.02
2007/03/15	712.43	26.77	712.43	26.79	0.00	0.03
2007/08/31	712.61	27.26	712.61	27.23	0.00	-0.04
2008/03/09	713.30	47.94	713.31	47.95	0.00	0.00
2008/05/18	711.69	16.67	711.69	16.51	0.00	-0.17
2008/09/23	715.14	69.96	715.15	70.02	0.00	0.05

Maxiums&F	715.97	95.07	715.98	95.09
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS500c Confluec of Trib 1 (141:1411)  
 12. Branch# 141; Node ID: MCLCONF ; Station: 11694.0000

Nodes ==>	(1) sbLNGe6.FFF 1411		(2) sbLNGp4.FFF 1411		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.94	2.40	709.94	2.38	0.00	-0.01
1949/04/08	712.41	52.51	712.41	52.51	0.00	0.00
1949/06/21	713.01	77.73	713.01	77.73	0.00	0.00
1949/07/27	712.13	52.33	712.13	52.05	0.00	-0.29
1949/12/31	712.79	66.08	712.79	66.12	0.00	0.04
1950/01/31	712.46	60.30	712.46	60.20	0.00	-0.09
1950/05/03	713.19	83.25	713.19	83.31	0.00	0.06
1950/06/11	712.67	58.76	712.67	58.76	0.00	-0.01
1951/03/09	712.34	57.44	712.34	57.34	0.00	-0.10
1951/05/17	712.50	55.39	712.50	55.41	0.00	0.01
1951/07/29	712.20	44.75	712.20	44.72	0.00	-0.03
1952/01/25	712.73	70.88	712.73	70.78	0.00	-0.10
1952/03/28	712.05	42.91	712.05	42.86	0.00	-0.05
1953/03/23	712.41	60.16	712.41	59.88	0.00	-0.28
1953/06/16	712.04	46.99	712.04	46.75	0.00	-0.23
1953/07/28	712.58	65.93	712.59	66.00	0.00	0.07
1954/04/05	713.80	107.23	713.81	107.30	0.00	0.07
1954/05/08	712.82	65.56	712.83	65.57	0.00	0.01
1954/08/29	712.57	66.40	712.57	66.09	0.00	-0.30
1954/10/25	714.83	142.52	714.84	142.63	0.00	0.11
1955/03/09	712.26	54.37	712.26	54.35	0.00	-0.01
1956/05/18	712.27	47.95	712.27	47.96	0.00	0.01
1957/01/27	712.10	50.52	712.10	50.46	0.00	-0.06
1957/03/04	713.09	88.35	713.09	88.42	0.00	0.07
1957/07/28	715.36	183.25	715.36	183.50	0.01	0.25
1958/04/30	712.20	52.25	712.20	51.85	0.00	-0.39
1958/06/19	712.35	65.16	712.35	64.78	0.00	-0.38
1958/07/11	712.01	59.86	712.01	59.67	0.00	-0.18
1959/04/07	711.84	44.03	711.85	44.02	0.00	-0.01
1959/07/27	711.23	22.98	711.23	22.89	0.00	-0.09
1960/01/21	713.32	106.73	713.32	106.82	0.00	0.09
1960/04/04	712.42	73.85	712.42	73.78	0.00	-0.07
1961/08/09	711.70	41.04	711.70	41.03	0.00	-0.02
1961/10/06	713.80	111.81	713.80	111.55	0.00	-0.26
1962/04/15	711.94	46.06	711.94	46.06	0.00	0.01
1962/07/08	712.21	45.29	712.21	45.15	0.00	-0.14
1963/05/07	712.10	46.95	712.10	46.92	0.00	-0.03
1964/04/12	711.84	35.23	711.84	35.22	0.00	-0.01
1964/07/25	712.44	63.28	712.44	63.14	0.00	-0.14
1965/03/22	712.41	62.17	712.41	62.09	0.00	-0.08
1966/02/15	712.32	47.35	712.32	47.36	0.00	0.01
1966/05/18	712.83	77.25	712.83	77.29	0.00	0.05
1967/04/09	712.20	55.03	712.20	54.90	0.00	-0.13
1967/07/01	712.33	48.89	712.33	48.82	0.00	-0.07
1968/08/24	713.44	125.25	713.44	125.26	0.00	0.01
1969/04/13	711.76	38.44	711.76	38.39	0.00	-0.06
1969/06/15	712.18	44.66	712.18	44.67	0.00	0.01
1969/08/01	711.61	32.78	711.61	32.79	0.00	0.01
1969/10/25	713.50	102.51	713.50	102.46	0.00	-0.05
1970/05/20	712.09	42.97	712.09	42.97	0.00	0.00
1970/12/18	711.62	34.09	711.62	34.04	0.00	-0.04
1971/03/04	711.54	31.83	711.54	31.80	0.00	-0.03
1971/08/28	712.03	53.79	712.03	53.55	0.00	-0.24
1972/03/21	712.63	83.68	712.63	83.54	0.00	-0.14
1972/04/27	712.66	69.91	712.66	69.75	0.00	-0.16
1972/09/01	714.90	207.71	714.90	207.62	0.00	-0.09
1972/10/05	712.52	81.10	712.52	80.83	0.00	-0.27
1973/01/08	713.64	102.19	713.65	102.27	0.00	0.08
1973/05/08	712.14	54.41	712.14	54.19	0.00	-0.22
1974/02/28	712.85	76.90	712.85	76.87	0.00	-0.03
1974/04/21	711.85	50.21	711.85	49.97	0.00	-0.23
1974/05/25	711.99	40.30	711.99	40.33	0.00	0.03
1975/01/16	712.57	62.10	712.57	62.00	0.00	-0.09
1975/05/05	712.52	76.29	712.52	76.15	0.00	-0.14
1975/09/08	712.68	60.71	712.69	60.74	0.00	0.03
1976/03/21	712.52	62.51	712.52	62.42	0.00	-0.09
1977/07/05	711.87	44.39	711.87	44.12	0.00	-0.26
1977/08/13	711.92	50.44	711.92	50.24	0.00	-0.20
1977/09/07	711.50	33.74	711.50	33.74	0.00	0.00
1978/04/02	711.28	24.90	711.28	24.88	0.00	-0.02
1978/05/21	711.66	34.06	711.66	34.03	0.00	-0.03
1978/07/09	712.23	45.54	712.23	45.56	0.00	0.01
1978/09/25	712.23	45.14	712.23	44.85	0.00	-0.29
1979/04/18	714.09	117.45	714.09	117.55	0.00	0.10
1979/09/05	712.05	43.16	712.05	43.04	0.00	-0.11
1980/01/21	711.66	41.97	711.66	42.00	0.00	0.03
1980/08/26	712.11	43.82	712.11	43.68	0.00	-0.14
1980/09/26	711.98	55.12	711.98	55.12	0.00	-0.01
1981/05/03	712.31	60.81	712.32	61.20	0.01	0.39
1981/06/05	712.63	63.20	712.63	63.12	0.00	-0.09
1981/06/21	711.83	38.12	711.83	38.08	0.00	-0.04

1981/08/23	711.70	31.85	711.70	31.76	0.00	-0.08
1982/03/28	712.93	76.18	712.94	76.17	0.00	-0.01
1982/07/31	712.17	43.60	712.17	43.49	0.00	-0.12
1982/08/14	712.88	102.06	712.88	101.51	0.00	-0.55
1982/12/12	714.29	130.08	714.29	130.25	0.00	0.17
1983/01/04	712.49	60.31	712.49	60.27	0.00	-0.04
1983/04/22	712.96	72.82	712.96	72.86	0.00	0.04
1983/06/04	711.67	35.24	711.67	35.06	0.00	-0.18
1983/07/09	713.60	141.18	713.61	141.25	0.00	0.07
1983/12/05	712.46	54.35	712.46	54.30	0.00	-0.05
1984/02/25	713.19	85.58	713.20	85.65	0.00	0.07
1984/04/03	712.36	62.49	712.36	62.21	0.00	-0.29
1985/03/19	713.98	113.69	713.98	113.79	0.00	0.10
1985/12/11	712.14	45.97	712.14	45.92	0.00	-0.05
1986/07/19	711.64	42.11	711.64	42.18	0.00	0.07
1986/10/10	712.36	69.91	712.36	69.74	0.00	-0.17
1987/09/06	715.97	180.54	715.98	180.80	0.00	0.26
1988/01/01	711.80	35.40	711.80	35.35	0.00	-0.06
1988/02/07	711.88	41.81	711.88	41.83	0.00	0.02
1988/04/13	711.82	40.71	711.82	40.95	0.00	0.24
1988/10/26	712.44	55.94	712.44	55.90	0.00	-0.05
1989/08/18	712.62	63.37	712.62	63.32	0.00	-0.05
1989/09/18	712.59	74.06	712.59	73.60	0.00	-0.46
1990/03/16	712.75	75.50	712.75	75.31	0.00	-0.19
1990/05/19	713.19	84.53	713.19	84.41	0.00	-0.11
1990/08/28	712.28	51.50	712.28	51.37	0.00	-0.14
1990/12/10	712.81	73.56	712.81	73.53	0.00	-0.03
1991/04/23	712.30	54.53	712.30	54.44	0.00	-0.08
1991/06/02	712.05	46.66	712.05	46.55	0.00	-0.11
1991/10/09	712.16	44.81	712.16	44.79	0.00	-0.02
1991/11/08	711.86	38.99	711.86	38.92	0.00	-0.07
1991/12/18	711.28	23.20	711.28	23.16	0.00	-0.04
1992/09/21	711.75	46.43	711.75	46.46	0.00	0.03
1993/01/11	712.75	78.57	712.75	78.51	0.00	-0.06
1993/04/29	712.81	68.42	712.81	68.43	0.00	0.02
1993/07/06	712.17	47.09	712.17	46.93	0.00	-0.16
1994/03/13	712.62	64.10	712.62	64.10	0.00	0.01
1994/07/02	712.53	56.44	712.53	56.43	0.00	-0.01
1994/08/24	711.75	48.72	711.75	48.66	0.00	-0.06
1995/01/25	712.25	51.33	712.25	51.31	0.00	-0.02
1995/05/06	712.04	41.67	712.04	41.67	0.00	0.00
1995/08/24	711.87	48.10	711.87	47.71	0.00	-0.39
1995/11/18	712.35	52.86	712.36	52.85	0.00	0.00
1996/06/27	712.16	46.26	712.16	46.23	0.00	-0.03
1996/08/05	714.52	176.60	714.52	176.75	0.00	0.15
1997/03/06	714.79	144.58	714.80	144.71	0.00	0.13
1998/03/25	711.90	38.03	711.90	38.01	0.00	-0.01
1998/05/15	712.08	42.30	712.08	42.30	0.00	0.00
1998/08/15	712.55	70.92	712.55	70.49	0.00	-0.43
1998/09/14	711.96	59.17	711.96	58.92	0.00	-0.25
1998/10/25	712.32	52.38	712.32	52.38	0.00	0.00
1999/02/09	713.01	74.12	713.01	74.15	0.00	0.03
1999/05/06	712.65	67.14	712.65	67.10	0.00	-0.04
2000/04/28	712.65	71.06	712.65	70.57	0.00	-0.49
2001/03/02	713.18	94.85	713.18	94.71	0.00	-0.14
2001/09/06	713.33	93.19	713.34	93.17	0.00	-0.02
2001/09/30	712.04	41.58	712.04	41.51	0.00	-0.07
2001/10/31	714.40	151.56	714.40	151.47	0.00	-0.09
2002/03/15	712.10	46.13	712.10	46.13	0.00	0.00
2002/05/22	712.15	48.49	712.15	48.42	0.00	-0.07
2002/07/14	712.20	64.93	712.20	64.28	0.00	-0.65
2002/08/29	713.08	78.50	713.08	78.51	0.00	0.01
2003/05/19	712.15	47.67	712.15	47.63	0.00	-0.04
2003/08/13	711.39	36.54	711.39	36.56	0.00	0.02
2003/11/29	711.68	36.87	711.68	36.81	0.00	-0.06
2004/03/11	711.65	34.26	711.65	34.27	0.00	0.01
2004/06/18	711.54	32.42	711.54	32.40	0.00	-0.02
2005/01/18	713.10	87.22	713.10	87.27	0.00	0.05
2006/03/18	711.61	30.04	711.61	29.99	0.00	-0.05
2006/07/03	711.95	52.23	711.95	52.20	0.00	-0.03
2006/09/29	711.52	28.90	711.52	28.87	0.00	-0.03
2006/10/09	712.55	86.44	712.55	86.17	0.00	-0.27
2007/03/15	712.43	54.88	712.43	54.89	0.00	0.02
2007/08/31	712.61	66.22	712.61	66.05	0.00	-0.18
2008/03/09	713.30	96.80	713.31	96.86	0.00	0.06
2008/05/18	711.69	41.37	711.69	41.32	0.00	-0.05
2008/09/23	715.14	155.39	715.15	155.52	0.00	0.13

Maximums&F 715.97 207.71 715.98 207.62  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

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Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS\_498 USF of Crest Ave (141:1423)  
 13. Branch# 141; Node ID: CRESTAV ; Station: 11470.0000

Nodes ==>	(1) sBLNGe6.FFF 1423		(2) sBLNGp4.FFF 1423		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.94	2.20	709.94	2.20	0.00	0.00
1949/04/08	712.41	52.71	712.41	52.72	0.00	0.01
1949/06/21	713.01	77.31	713.01	77.28	0.00	-0.03
1949/07/27	712.13	51.48	712.13	51.12	0.00	-0.36
1949/12/31	712.79	65.84	712.79	65.87	0.00	0.04
1950/01/31	712.46	60.00	712.46	59.91	0.00	-0.09
1950/05/03	713.19	82.81	713.19	82.86	0.00	0.05
1950/06/11	712.67	59.20	712.67	59.19	0.00	-0.01
1951/03/09	712.34	56.75	712.34	56.68	0.00	-0.08
1951/05/17	712.50	55.60	712.50	55.62	0.00	0.01
1951/07/29	712.19	45.10	712.19	45.06	0.00	-0.04
1952/01/25	712.73	70.11	712.73	70.13	0.00	0.01
1952/03/28	712.05	42.44	712.05	42.39	0.00	-0.05
1953/03/23	712.41	59.35	712.41	59.00	0.00	-0.35
1953/06/16	712.04	46.52	712.04	46.29	0.00	-0.22
1953/07/28	712.58	65.40	712.59	65.45	0.00	0.05
1954/04/05	713.80	106.76	713.81	106.85	0.00	0.09
1954/05/08	712.82	65.76	712.82	65.79	0.00	0.02
1954/08/29	712.57	65.12	712.57	64.91	0.00	-0.21
1954/10/25	714.83	143.02	714.83	143.13	0.00	0.11
1955/03/09	712.26	53.39	712.26	53.39	0.00	0.00
1956/05/18	712.27	48.07	712.27	48.08	0.00	0.01
1957/01/27	712.10	49.88	712.10	49.82	0.00	-0.06
1957/03/04	713.09	87.21	713.09	87.26	0.00	0.05
1957/07/28	715.36	177.19	715.36	177.35	0.00	0.16
1958/04/30	712.20	51.58	712.19	51.30	0.00	-0.29
1958/06/19	712.35	63.71	712.35	63.44	0.00	-0.27
1958/07/11	712.01	57.77	712.01	57.70	0.00	-0.07
1959/04/07	711.84	42.62	711.84	42.65	0.00	0.03
1959/07/27	711.23	22.73	711.23	22.67	0.00	-0.06
1960/01/21	713.32	104.20	713.32	104.27	0.00	0.07
1960/04/04	712.42	72.09	712.42	72.02	0.00	-0.07
1961/08/09	711.70	39.87	711.70	39.87	0.00	0.01
1961/10/06	713.80	110.40	713.80	110.16	0.00	-0.24
1962/04/15	711.93	45.20	711.93	45.21	0.00	0.01
1962/07/08	712.20	45.53	712.20	45.41	0.00	-0.11
1963/05/07	712.10	46.58	712.10	46.56	0.00	-0.03
1964/04/12	711.84	35.33	711.84	35.31	0.00	-0.02
1964/07/25	712.44	61.97	712.44	61.85	0.00	-0.12
1965/03/22	712.41	60.93	712.41	60.88	0.00	-0.05
1966/02/15	712.32	47.78	712.32	47.79	0.00	0.01
1966/05/18	712.83	76.40	712.83	76.45	0.00	0.05
1967/04/09	712.20	54.05	712.20	53.97	0.00	-0.08
1967/07/01	712.33	49.08	712.33	49.00	0.00	-0.08
1968/08/24	713.44	119.89	713.44	119.91	0.00	0.02
1969/04/13	711.76	37.53	711.76	37.50	0.00	-0.03
1969/06/15	712.18	44.71	712.18	44.71	0.00	0.00
1969/08/01	711.61	31.72	711.61	31.72	0.00	0.00
1969/10/25	713.49	100.47	713.50	100.62	0.00	0.15
1970/05/20	712.09	43.02	712.09	43.03	0.00	0.01
1970/12/18	711.62	33.43	711.62	33.39	0.00	-0.04
1971/03/04	711.54	31.20	711.54	31.19	0.00	-0.02
1971/08/28	712.03	52.22	712.03	52.09	0.00	-0.13
1972/03/21	712.63	81.51	712.63	81.39	0.00	-0.11
1972/04/27	712.66	68.96	712.66	68.85	0.00	-0.10
1972/09/01	714.90	192.60	714.90	192.59	0.00	-0.01
1972/10/05	712.52	78.54	712.52	78.36	0.00	-0.18
1973/01/08	713.64	101.60	713.65	101.67	0.00	0.07
1973/05/08	712.14	52.86	712.14	52.68	0.00	-0.18
1974/02/28	712.85	76.07	712.85	76.06	0.00	-0.01
1974/04/21	711.85	48.38	711.85	48.23	0.00	-0.15
1974/05/25	711.99	39.73	711.99	39.72	0.00	-0.01
1975/01/16	712.57	60.61	712.57	60.54	0.00	-0.07
1975/05/05	712.52	74.31	712.52	74.16	0.00	-0.15
1975/09/08	712.68	60.68	712.69	60.70	0.00	0.02
1976/03/21	712.51	61.77	712.51	61.73	0.00	-0.04
1977/07/05	711.87	43.34	711.87	43.22	0.00	-0.12
1977/08/13	711.92	48.87	711.92	48.77	0.00	-0.10
1977/09/07	711.50	33.05	711.50	33.05	0.00	0.00
1978/04/02	711.28	24.53	711.28	24.52	0.00	-0.02
1978/05/21	711.66	33.09	711.66	33.10	0.00	0.01
1978/07/09	712.23	45.69	712.23	45.69	0.00	0.00
1978/09/25	712.23	44.86	712.23	44.87	0.00	0.01
1979/04/18	714.09	117.23	714.09	117.32	0.00	0.09
1979/09/05	712.05	42.47	712.05	42.35	0.00	-0.12
1980/01/21	711.66	40.88	711.66	40.94	0.00	0.06
1980/08/26	712.11	43.55	712.11	43.40	0.00	-0.15
1980/09/26	711.98	53.31	711.98	53.34	0.00	0.02
1981/05/03	712.30	59.41	712.32	59.81	0.01	0.39
1981/06/05	712.63	62.99	712.63	62.85	0.00	-0.14
1981/06/21	711.83	37.81	711.83	37.80	0.00	-0.02



1981/08/23	711.70	31.16	711.70	31.09	0.00	-0.06
1982/03/28	712.93	75.11	712.93	75.11	0.00	0.00
1982/07/31	712.17	43.71	712.17	43.65	0.00	-0.05
1982/08/14	712.88	96.87	712.88	96.79	0.00	-0.08
1982/12/12	714.29	128.55	714.29	128.71	0.00	0.16
1983/01/04	712.49	59.83	712.49	59.82	0.00	-0.02
1983/04/22	712.96	72.79	712.96	72.84	0.00	0.05
1983/06/04	711.67	34.76	711.67	34.57	0.00	-0.19
1983/07/09	713.60	130.06	713.61	130.09	0.00	0.03
1983/12/05	712.46	54.02	712.46	53.97	0.00	-0.04
1984/02/25	713.19	85.58	713.20	85.65	0.00	0.07
1984/04/03	712.36	61.15	712.36	60.89	0.00	-0.25
1985/03/19	713.98	113.80	713.98	113.90	0.00	0.10
1985/12/11	712.14	45.74	712.14	45.71	0.00	-0.03
1986/07/19	711.64	40.35	711.64	40.41	0.00	0.06
1986/10/10	712.36	67.33	712.36	67.24	0.00	-0.08
1987/09/06	715.97	180.28	715.98	180.52	0.01	0.24
1988/01/01	711.80	35.41	711.80	35.36	0.00	-0.04
1988/02/07	711.88	41.15	711.88	41.16	0.00	0.01
1988/04/13	711.82	40.01	711.82	39.97	0.00	-0.04
1988/10/26	712.44	55.73	712.44	55.70	0.00	-0.03
1989/08/18	712.62	62.93	712.62	62.97	0.00	0.04
1989/09/18	712.59	71.91	712.59	71.49	0.00	-0.42
1990/03/16	712.75	74.55	712.75	74.13	0.00	-0.42
1990/05/19	713.19	84.27	713.19	84.21	0.00	-0.05
1990/08/28	712.28	51.28	712.28	51.20	0.00	-0.08
1990/12/10	712.81	72.68	712.81	72.68	0.00	0.00
1991/04/23	712.30	53.87	712.30	53.80	0.00	-0.07
1991/06/02	712.05	46.15	712.05	46.07	0.00	-0.08
1991/10/09	712.16	44.81	712.16	44.81	0.00	0.00
1991/11/08	711.86	38.65	711.86	38.63	0.00	-0.03
1991/12/18	711.28	22.72	711.28	22.68	0.00	-0.04
1992/09/21	711.75	45.22	711.75	45.21	0.00	-0.01
1993/01/11	712.75	77.51	712.75	77.47	0.00	-0.04
1993/04/29	712.80	68.22	712.81	68.25	0.00	0.03
1993/07/06	712.17	46.37	712.17	46.27	0.00	-0.10
1994/03/13	712.62	63.87	712.62	63.88	0.00	0.00
1994/07/02	712.53	56.48	712.53	56.48	0.00	0.00
1994/08/24	711.75	47.22	711.75	47.22	0.00	0.00
1995/01/25	712.25	51.15	712.25	51.13	0.00	-0.01
1995/05/06	712.04	41.65	712.04	41.65	0.00	-0.01
1995/08/24	711.87	46.50	711.87	46.31	0.00	-0.19
1995/11/18	712.35	52.97	712.35	52.97	0.00	0.00
1996/06/27	712.16	46.12	712.16	46.10	0.00	-0.02
1996/08/05	714.52	166.84	714.52	166.99	0.00	0.15
1997/03/06	714.79	144.77	714.80	144.90	0.00	0.13
1998/03/25	711.90	37.81	711.90	37.81	0.00	-0.01
1998/05/15	712.08	42.18	712.08	42.18	0.00	0.00
1998/08/15	712.54	69.44	712.54	69.15	0.00	-0.29
1998/09/14	711.96	57.31	711.96	57.22	0.00	-0.09
1998/10/25	712.32	51.62	712.32	51.61	0.00	-0.01
1999/02/09	713.01	74.18	713.01	74.22	0.00	0.04
1999/05/06	712.65	66.33	712.65	66.29	0.00	-0.04
2000/04/28	712.64	69.42	712.65	69.17	0.00	-0.24
2001/03/02	713.18	92.15	713.18	92.03	0.00	-0.12
2001/09/06	713.33	92.32	713.34	92.31	0.00	-0.01
2001/09/30	712.04	41.55	712.04	41.49	0.00	-0.06
2001/10/31	714.40	146.61	714.40	146.59	0.00	-0.02
2002/03/15	712.10	45.61	712.10	45.61	0.00	0.00
2002/05/22	712.15	48.15	712.15	48.08	0.00	-0.08
2002/07/14	712.20	62.53	712.20	62.22	0.00	-0.31
2002/08/29	713.07	78.48	713.08	78.51	0.00	0.02
2003/05/19	712.15	47.49	712.15	47.47	0.00	-0.03
2003/08/13	711.39	35.31	711.39	35.32	0.00	0.01
2003/11/29	711.68	36.32	711.68	36.27	0.00	-0.05
2004/03/11	711.65	33.85	711.65	33.86	0.00	0.01
2004/06/18	711.54	31.55	711.54	31.54	0.00	-0.01
2005/01/18	713.10	86.64	713.10	86.69	0.00	0.05
2006/03/18	711.61	29.52	711.61	29.47	0.00	-0.05
2006/07/03	711.95	50.41	711.95	50.47	0.00	0.06
2006/09/29	711.52	28.54	711.52	28.49	0.00	-0.05
2006/10/09	712.54	83.75	712.54	83.59	0.00	-0.16
2007/03/15	712.43	55.03	712.43	55.04	0.00	0.02
2007/08/31	712.60	65.33	712.61	65.19	0.00	-0.15
2008/03/09	713.30	95.83	713.30	95.89	0.00	0.06
2008/05/18	711.68	40.20	711.68	40.14	0.00	-0.06
2008/09/23	715.14	155.59	715.15	155.72	0.00	0.13

MaximumS&F 715.97 192.60 715.98 192.59  
StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9004c DSF of Crest Ave (142:1421)  
 14. Branch# 142; Node ID: CRESTAV ; Station: 11448.0000

Nodes ==>	(1) sBLNGe6.FFF 1421		(2) sBLNGp4.FFF 1421		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.93	2.20	709.93	2.20	0.00	0.00
1949/04/08	712.27	52.71	712.28	52.72	0.00	0.01
1949/06/21	712.76	77.31	712.76	77.28	0.00	-0.03
1949/07/27	711.98	51.48	711.98	51.12	0.00	-0.36
1949/12/31	712.61	65.84	712.61	65.87	0.00	0.04
1950/01/31	712.28	60.00	712.28	59.91	0.00	-0.09
1950/05/03	712.93	82.81	712.93	82.86	0.00	0.05
1950/06/11	712.53	59.20	712.53	59.19	0.00	-0.01
1951/03/09	712.17	56.75	712.17	56.68	0.00	-0.08
1951/05/17	712.35	55.60	712.35	55.62	0.00	0.01
1951/07/29	712.08	45.10	712.08	45.06	0.00	-0.04
1952/01/25	712.51	70.11	712.51	70.13	0.00	0.01
1952/03/28	711.94	42.44	711.94	42.39	0.00	-0.05
1953/03/23	712.23	59.35	712.23	59.00	0.00	-0.35
1953/06/16	711.90	46.52	711.90	46.29	0.00	-0.22
1953/07/28	712.46	65.40	712.46	65.45	0.00	0.05
1954/04/05	713.40	106.76	713.40	106.85	0.00	0.09
1954/05/08	712.64	65.76	712.64	65.79	0.00	0.02
1954/08/29	712.38	65.12	712.38	64.91	0.00	-0.21
1954/10/25	714.12	143.02	714.12	143.13	0.00	0.11
1955/03/09	712.10	53.39	712.10	53.39	0.00	0.00
1956/05/18	712.15	48.07	712.15	48.08	0.00	0.01
1957/01/27	711.94	49.88	711.94	49.82	0.00	-0.06
1957/03/04	712.79	87.21	712.79	87.26	0.00	0.05
1957/07/28	714.21	177.19	714.22	177.35	0.00	0.16
1958/04/30	712.04	51.58	712.04	51.30	0.00	-0.29
1958/06/19	712.15	63.71	712.15	63.44	0.00	-0.27
1958/07/11	711.81	57.77	711.81	57.70	0.00	-0.07
1959/04/07	711.73	42.62	711.73	42.65	0.00	0.03
1959/07/27	711.18	22.73	711.18	22.67	0.00	-0.06
1960/01/21	712.92	104.20	712.92	104.27	0.00	0.07
1960/04/04	712.17	72.09	712.17	72.02	0.00	-0.07
1961/08/09	711.59	39.87	711.59	39.87	0.00	0.01
1961/10/06	713.38	110.40	713.38	110.16	0.00	-0.24
1962/04/15	711.81	45.20	711.81	45.21	0.00	0.01
1962/07/08	712.09	45.53	712.09	45.41	0.00	-0.11
1963/05/07	711.96	46.58	711.96	46.56	0.00	-0.03
1964/04/12	711.75	35.33	711.75	35.31	0.00	-0.02
1964/07/25	712.25	61.97	712.25	61.85	0.00	-0.12
1965/03/22	712.23	60.93	712.23	60.88	0.00	-0.05
1966/02/15	712.20	47.78	712.20	47.79	0.00	0.01
1966/05/18	712.58	76.40	712.59	76.45	0.00	0.05
1967/04/09	712.04	54.05	712.04	53.97	0.00	-0.08
1967/07/01	712.20	49.08	712.20	49.00	0.00	-0.08
1968/08/24	712.97	119.89	712.97	119.91	0.00	0.02
1969/04/13	711.66	37.53	711.66	37.50	0.00	-0.03
1969/06/15	712.06	44.71	712.07	44.71	0.00	0.00
1969/08/01	711.53	31.72	711.53	31.72	0.00	0.00
1969/10/25	713.14	100.47	713.14	100.62	0.00	0.15
1970/05/20	711.98	43.02	711.98	43.03	0.00	0.01
1970/12/18	711.54	33.43	711.54	33.39	0.00	-0.04
1971/03/04	711.45	31.20	711.45	31.19	0.00	-0.02
1971/08/28	711.86	52.22	711.86	52.09	0.00	-0.13
1972/03/21	712.38	81.51	712.38	81.39	0.00	-0.11
1972/04/27	712.45	68.96	712.45	68.85	0.00	-0.10
1972/09/01	713.79	192.60	713.79	192.59	0.00	-0.01
1972/10/05	712.27	78.54	712.27	78.36	0.00	-0.18
1973/01/08	713.29	101.60	713.29	101.67	0.00	0.07
1973/05/08	712.00	52.86	712.00	52.68	0.00	-0.18
1974/02/28	712.60	76.07	712.60	76.06	0.00	-0.01
1974/04/21	711.72	48.38	711.72	48.23	0.00	-0.15
1974/05/25	711.88	39.73	711.88	39.72	0.00	-0.01
1975/01/16	712.43	60.61	712.43	60.54	0.00	-0.07
1975/05/05	712.29	74.31	712.29	74.16	0.00	-0.15
1975/09/08	712.53	60.68	712.53	60.70	0.00	0.02
1976/03/21	712.34	61.77	712.34	61.73	0.00	-0.04
1977/07/05	711.75	43.34	711.75	43.22	0.00	-0.12
1977/08/13	711.77	48.87	711.77	48.77	0.00	-0.10
1977/09/07	711.45	33.05	711.45	33.05	0.00	0.00
1978/04/02	711.22	24.53	711.22	24.52	0.00	-0.02
1978/05/21	711.59	33.09	711.59	33.10	0.00	0.01
1978/07/09	712.11	45.69	712.11	45.69	0.00	0.00
1978/09/25	712.12	44.86	712.12	44.87	0.00	0.01
1979/04/18	713.61	117.23	713.61	117.32	0.00	0.09
1979/09/05	711.94	42.47	711.94	42.35	0.00	-0.12
1980/01/21	711.56	40.88	711.56	40.94	0.00	0.06
1980/08/26	712.01	43.55	712.01	43.40	0.00	-0.15
1980/09/26	711.81	53.31	711.81	53.34	0.00	0.02
1981/05/03	712.13	59.41	712.14	59.81	0.01	0.39
1981/06/05	712.45	62.99	712.45	62.85	0.00	-0.14
1981/06/21	711.73	37.81	711.73	37.80	0.00	-0.02

1981/08/23	711.63	31.16	711.63	31.09	0.00	-0.06
1982/03/28	712.71	75.11	712.71	75.11	0.00	0.00
1982/07/31	712.06	43.71	712.06	43.65	0.00	-0.05
1982/08/14	712.53	96.87	712.54	96.79	0.00	-0.08
1982/12/12	713.72	128.55	713.72	128.71	0.00	0.16
1983/01/04	712.32	59.83	712.32	59.82	0.00	-0.02
1983/04/22	712.74	72.79	712.74	72.84	0.00	0.05
1983/06/04	711.57	34.76	711.57	34.57	0.00	-0.19
1983/07/09	713.26	130.06	713.26	130.09	0.00	0.03
1983/12/05	712.32	54.02	712.32	53.97	0.00	-0.04
1984/02/25	712.91	85.58	712.91	85.65	0.00	0.07
1984/04/03	712.17	61.15	712.17	60.89	0.00	-0.25
1985/03/19	713.53	113.80	713.53	113.90	0.00	0.10
1985/12/11	712.01	45.74	712.02	45.71	0.00	-0.03
1986/07/19	711.55	40.35	711.55	40.41	0.00	0.06
1986/10/10	712.20	67.33	712.20	67.24	0.00	-0.08
1987/09/06	714.84	180.28	714.84	180.52	0.00	0.24
1988/01/01	711.70	35.41	711.70	35.36	0.00	-0.04
1988/02/07	711.77	41.15	711.77	41.16	0.00	0.01
1988/04/13	711.71	40.01	711.71	39.97	0.00	-0.04
1988/10/26	712.28	55.73	712.28	55.70	0.00	-0.03
1989/08/18	712.43	62.93	712.43	62.97	0.00	0.04
1989/09/18	712.37	71.91	712.37	71.49	0.00	-0.42
1990/03/16	712.57	74.55	712.57	74.13	0.00	-0.42
1990/05/19	712.92	84.27	712.92	84.21	0.00	-0.05
1990/08/28	712.13	51.28	712.13	51.20	0.00	-0.08
1990/12/10	712.59	72.68	712.59	72.68	0.00	0.00
1991/04/23	712.15	53.87	712.15	53.80	0.00	-0.07
1991/06/02	711.92	46.15	711.92	46.07	0.00	-0.08
1991/10/09	712.04	44.81	712.04	44.81	0.00	0.00
1991/11/08	711.75	38.65	711.75	38.63	0.00	-0.03
1991/12/18	711.23	22.72	711.23	22.68	0.00	-0.04
1992/09/21	711.61	45.22	711.61	45.21	0.00	-0.01
1993/01/11	712.49	77.51	712.49	77.47	0.00	-0.04
1993/04/29	712.60	68.22	712.60	68.25	0.00	0.03
1993/07/06	712.04	46.37	712.04	46.27	0.00	-0.10
1994/03/13	712.43	63.87	712.43	63.88	0.00	0.00
1994/07/02	712.38	56.48	712.38	56.48	0.00	0.00
1994/08/24	711.63	47.22	711.63	47.22	0.00	0.00
1995/01/25	712.10	51.15	712.10	51.13	0.00	-0.01
1995/05/06	711.93	41.65	711.93	41.65	0.00	-0.01
1995/08/24	711.72	46.50	711.72	46.31	0.00	-0.19
1995/11/18	712.21	52.97	712.21	52.97	0.00	0.00
1996/06/27	712.04	46.12	712.04	46.10	0.00	-0.02
1996/08/05	713.74	166.84	713.74	166.99	0.00	0.15
1997/03/06	714.07	144.77	714.07	144.90	0.00	0.13
1998/03/25	711.80	37.81	711.80	37.81	0.00	-0.01
1998/05/15	711.97	42.18	711.97	42.18	0.00	0.00
1998/08/15	712.32	69.44	712.32	69.15	0.00	-0.29
1998/09/14	711.75	57.31	711.75	57.22	0.00	-0.09
1998/10/25	712.19	51.62	712.19	51.61	0.00	-0.01
1999/02/09	712.79	74.18	712.79	74.22	0.00	0.04
1999/05/06	712.47	66.33	712.47	66.29	0.00	-0.04
2000/04/28	712.49	69.42	712.49	69.17	0.00	-0.24
2001/03/02	712.90	92.15	712.90	92.03	0.00	-0.12
2001/09/06	713.01	92.32	713.02	92.31	0.00	-0.01
2001/09/30	711.93	41.55	711.93	41.49	0.00	-0.06
2001/10/31	713.76	146.61	713.76	146.59	0.00	-0.02
2002/03/15	711.98	45.61	711.98	45.61	0.00	0.00
2002/05/22	712.01	48.15	712.01	48.08	0.00	-0.08
2002/07/14	711.98	62.53	711.99	62.22	0.00	-0.31
2002/08/29	712.83	78.48	712.83	78.51	0.00	0.02
2003/05/19	712.03	47.49	712.03	47.47	0.00	-0.03
2003/08/13	711.26	35.31	711.26	35.32	0.00	0.01
2003/11/29	711.57	36.32	711.57	36.27	0.00	-0.05
2004/03/11	711.56	33.85	711.56	33.86	0.00	0.01
2004/06/18	711.45	31.55	711.45	31.54	0.00	-0.01
2005/01/18	712.81	86.64	712.81	86.69	0.00	0.05
2006/03/18	711.54	29.52	711.54	29.47	0.00	-0.05
2006/07/03	711.80	50.41	711.80	50.47	0.00	0.06
2006/09/29	711.44	28.54	711.44	28.49	0.00	-0.05
2006/10/09	712.25	83.75	712.25	83.59	0.00	-0.16
2007/03/15	712.28	55.03	712.28	55.04	0.00	0.02
2007/08/31	712.45	65.33	712.45	65.19	0.00	-0.15
2008/03/09	712.96	95.83	712.96	95.89	0.00	0.06
2008/05/18	711.57	40.20	711.57	40.14	0.00	-0.06
2008/09/23	714.26	155.59	714.27	155.72	0.00	0.13

MaximumS&F 714.84 192.60 714.84 192.59  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

Q



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9004 65 feet DSF of Crest Ave (142:1424)  
 15. Branch# 142; Node ID: A4 ; Station: 11383.0000

Nodes ==>	(1) sBLNGe6.FFF 1424		(2) sBLNGp4.FFF 1424		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.93	2.20	709.93	2.19	0.00	0.00
1949/04/08	712.27	52.74	712.27	52.75	0.00	0.01
1949/06/21	712.75	77.35	712.75	77.32	0.00	-0.02
1949/07/27	711.97	51.48	711.97	51.13	0.00	-0.35
1949/12/31	712.60	65.89	712.60	65.92	0.00	0.03
1950/01/31	712.26	60.03	712.27	59.93	0.00	-0.09
1950/05/03	712.92	82.86	712.92	82.91	0.00	0.05
1950/06/11	712.53	59.24	712.53	59.23	0.00	-0.01
1951/03/09	712.16	56.76	712.17	56.69	0.00	-0.08
1951/05/17	712.34	55.63	712.34	55.65	0.00	0.01
1951/07/29	712.08	45.12	712.08	45.08	0.00	-0.04
1952/01/25	712.49	70.11	712.49	70.14	0.00	0.02
1952/03/28	711.93	42.48	711.93	42.43	0.00	-0.05
1953/03/23	712.22	59.40	712.22	59.02	0.00	-0.38
1953/06/16	711.89	46.53	711.89	46.31	0.00	-0.22
1953/07/28	712.46	65.41	712.46	65.46	0.00	0.05
1954/04/05	713.39	106.80	713.39	106.89	0.00	0.09
1954/05/08	712.63	65.80	712.64	65.82	0.00	0.02
1954/08/29	712.37	65.16	712.37	64.94	0.00	-0.21
1954/10/25	714.11	143.08	714.11	143.19	0.00	0.11
1955/03/09	712.09	53.42	712.09	53.42	0.00	0.00
1956/05/18	712.14	48.09	712.14	48.10	0.00	0.01
1957/01/27	711.93	49.88	711.93	49.82	0.00	-0.06
1957/03/04	712.78	87.22	712.78	87.27	0.00	0.05
1957/07/28	714.20	177.19	714.20	177.35	0.00	0.16
1958/04/30	712.03	51.58	712.03	51.31	0.00	-0.28
1958/06/19	712.14	63.69	712.14	63.42	0.00	-0.27
1958/07/11	711.79	57.74	711.80	57.67	0.00	-0.07
1959/04/07	711.72	42.64	711.72	42.67	0.00	0.03
1959/07/27	711.17	22.76	711.17	22.71	0.00	-0.06
1960/01/21	712.91	104.18	712.91	104.24	0.00	0.06
1960/04/04	712.15	72.04	712.15	71.96	0.00	-0.07
1961/08/09	711.58	39.86	711.58	39.87	0.00	0.01
1961/10/06	713.37	110.44	713.37	110.20	0.00	-0.24
1962/04/15	711.80	45.18	711.80	45.19	0.00	0.01
1962/07/08	712.09	45.55	712.09	45.44	0.00	-0.11
1963/05/07	711.95	46.59	711.95	46.56	0.00	-0.03
1964/04/12	711.74	35.35	711.74	35.33	0.00	-0.02
1964/07/25	712.24	62.01	712.24	61.90	0.00	-0.11
1965/03/22	712.22	60.96	712.22	60.91	0.00	-0.05
1966/02/15	712.20	47.81	712.20	47.82	0.00	0.01
1966/05/18	712.57	76.39	712.57	76.44	0.00	0.05
1967/04/09	712.03	54.07	712.03	53.99	0.00	-0.08
1967/07/01	712.19	49.12	712.19	49.03	0.00	-0.08
1968/08/24	712.95	119.81	712.95	119.83	0.00	0.02
1969/04/13	711.65	37.54	711.65	37.51	0.00	-0.03
1969/06/15	712.06	44.73	712.06	44.73	0.00	0.00
1969/08/01	711.53	31.70	711.53	31.71	0.00	0.00
1969/10/25	713.13	100.52	713.13	100.66	0.00	0.14
1970/05/20	711.97	43.04	711.97	43.04	0.00	0.01
1970/12/18	711.53	33.44	711.53	33.40	0.00	-0.04
1971/03/04	711.44	31.20	711.44	31.19	0.00	-0.02
1971/08/28	711.84	52.20	711.85	52.07	0.00	-0.13
1972/03/21	712.37	81.49	712.37	81.39	0.00	-0.10
1972/04/27	712.43	68.97	712.44	68.86	0.00	-0.10
1972/09/01	713.78	192.49	713.78	192.48	0.00	-0.01
1972/10/05	712.26	78.51	712.26	78.32	0.00	-0.18
1973/01/08	713.28	101.63	713.28	101.70	0.00	0.07
1973/05/08	711.99	52.86	711.99	52.69	0.00	-0.18
1974/02/28	712.59	76.11	712.59	76.10	0.00	-0.01
1974/04/21	711.71	48.35	711.71	48.22	0.00	-0.14
1974/05/25	711.88	39.75	711.88	39.74	0.00	-0.01
1975/01/16	712.42	60.66	712.42	60.59	0.00	-0.07
1975/05/05	712.28	74.26	712.28	74.11	0.00	-0.15
1975/09/08	712.52	60.74	712.52	60.76	0.00	0.02
1976/03/21	712.33	61.78	712.33	61.73	0.00	-0.05
1977/07/05	711.74	43.34	711.74	43.22	0.00	-0.12
1977/08/13	711.76	48.95	711.76	48.85	0.00	-0.10
1977/09/07	711.44	33.03	711.44	33.03	0.00	0.00
1978/04/02	711.21	24.53	711.21	24.51	0.00	-0.02
1978/05/21	711.59	33.11	711.59	33.12	0.00	0.01
1978/07/09	712.10	45.72	712.10	45.71	0.00	0.00
1978/09/25	712.11	44.89	712.11	44.90	0.00	0.01
1979/04/18	713.60	117.27	713.60	117.36	0.00	0.09
1979/09/05	711.93	42.49	711.93	42.36	0.00	-0.12
1980/01/21	711.55	40.85	711.55	40.91	0.00	0.05
1980/08/26	712.00	43.58	712.00	43.44	0.00	-0.15
1980/09/26	711.80	53.28	711.80	53.30	0.00	0.03
1981/05/03	712.12	59.43	712.13	59.83	0.01	0.40
1981/06/05	712.43	63.01	712.44	62.89	0.00	-0.12
1981/06/21	711.72	37.82	711.72	37.81	0.00	-0.02

1981/08/23	711.62	31.17	711.62	31.10	0.00	-0.06
1982/03/28	712.70	75.12	712.70	75.12	0.00	0.00
1982/07/31	712.05	43.73	712.05	43.68	0.00	-0.05
1982/08/14	712.53	96.81	712.53	96.73	0.00	-0.08
1982/12/12	713.71	128.62	713.71	128.78	0.00	0.16
1983/01/04	712.31	59.85	712.31	59.83	0.00	-0.02
1983/04/22	712.73	72.83	712.73	72.88	0.00	0.05
1983/06/04	711.56	34.76	711.56	34.57	0.00	-0.19
1983/07/09	713.25	130.04	713.25	130.07	0.00	0.03
1983/12/05	712.31	54.06	712.31	54.02	0.00	-0.04
1984/02/25	712.90	85.63	712.90	85.71	0.00	0.07
1984/04/03	712.16	61.15	712.16	60.90	0.00	-0.25
1985/03/19	713.52	113.84	713.52	113.95	0.00	0.11
1985/12/11	712.01	45.75	712.01	45.72	0.00	-0.02
1986/07/19	711.55	40.32	711.55	40.38	0.00	0.06
1986/10/10	712.19	67.28	712.19	67.20	0.00	-0.08
1987/09/06	714.83	180.44	714.83	180.68	0.00	0.24
1988/01/01	711.70	35.42	711.70	35.38	0.00	-0.04
1988/02/07	711.76	41.13	711.76	41.14	0.00	0.01
1988/04/13	711.70	40.01	711.70	39.98	0.00	-0.03
1988/10/26	712.27	55.76	712.28	55.73	0.00	-0.03
1989/08/18	712.42	62.96	712.43	62.99	0.00	0.04
1989/09/18	712.36	71.93	712.36	71.51	0.00	-0.42
1990/03/16	712.56	74.58	712.56	74.16	0.00	-0.42
1990/05/19	712.91	84.30	712.91	84.25	0.00	-0.05
1990/08/28	712.12	51.29	712.12	51.22	0.00	-0.08
1990/12/10	712.58	72.69	712.58	72.69	0.00	0.00
1991/04/23	712.14	53.87	712.14	53.80	0.00	-0.07
1991/06/02	711.91	46.15	711.91	46.07	0.00	-0.08
1991/10/09	712.03	44.85	712.03	44.85	0.00	0.00
1991/11/08	711.74	38.67	711.74	38.64	0.00	-0.03
1991/12/18	711.22	22.75	711.22	22.71	0.00	-0.04
1992/09/21	711.60	45.22	711.60	45.20	0.00	-0.02
1993/01/11	712.47	77.52	712.47	77.47	0.00	-0.04
1993/04/29	712.59	68.27	712.59	68.31	0.00	0.03
1993/07/06	712.03	46.41	712.03	46.30	0.00	-0.11
1994/03/13	712.42	63.90	712.42	63.91	0.00	0.00
1994/07/02	712.37	56.52	712.37	56.52	0.00	0.00
1994/08/24	711.62	47.23	711.62	47.24	0.00	0.01
1995/01/25	712.09	51.17	712.09	51.15	0.00	-0.01
1995/05/06	711.92	41.67	711.92	41.66	0.00	-0.01
1995/08/24	711.71	46.50	711.71	46.30	0.00	-0.20
1995/11/18	712.20	52.99	712.20	52.99	0.00	0.01
1996/06/27	712.03	46.14	712.03	46.12	0.00	-0.02
1996/08/05	713.72	166.88	713.72	167.04	0.00	0.16
1997/03/06	714.06	144.88	714.06	145.01	0.00	0.13
1998/03/25	711.79	37.83	711.79	37.83	0.00	0.00
1998/05/15	711.96	42.20	711.96	42.20	0.00	0.00
1998/08/15	712.30	69.43	712.30	69.14	0.00	-0.29
1998/09/14	711.74	57.30	711.74	57.21	0.00	-0.09
1998/10/25	712.18	51.63	712.18	51.63	0.00	-0.01
1999/02/09	712.79	74.22	712.79	74.26	0.00	0.04
1999/05/06	712.46	66.34	712.46	66.30	0.00	-0.04
2000/04/28	712.48	69.44	712.48	69.21	0.00	-0.23
2001/03/02	712.89	92.14	712.89	92.02	0.00	-0.12
2001/09/06	713.00	92.35	713.01	92.33	0.00	-0.02
2001/09/30	711.93	41.57	711.93	41.51	0.00	-0.06
2001/10/31	713.75	146.64	713.75	146.62	0.00	-0.02
2002/03/15	711.97	45.62	711.97	45.62	0.00	0.00
2002/05/22	712.00	48.16	712.00	48.08	0.00	-0.08
2002/07/14	711.97	62.51	711.97	62.20	0.00	-0.31
2002/08/29	712.82	78.51	712.82	78.53	0.00	0.02
2003/05/19	712.02	47.50	712.03	47.48	0.00	-0.03
2003/08/13	711.25	35.29	711.25	35.31	0.00	0.02
2003/11/29	711.56	36.32	711.56	36.27	0.00	-0.05
2004/03/11	711.55	33.85	711.55	33.86	0.00	0.01
2004/06/18	711.45	31.54	711.44	31.53	0.00	-0.01
2005/01/18	712.80	86.66	712.80	86.71	0.00	0.05
2006/03/18	711.53	29.52	711.53	29.47	0.00	-0.05
2006/07/03	711.79	50.40	711.79	50.45	0.00	0.05
2006/09/29	711.43	28.55	711.43	28.50	0.00	-0.04
2006/10/09	712.24	83.72	712.24	83.56	0.00	-0.16
2007/03/15	712.27	55.05	712.27	55.06	0.00	0.02
2007/08/31	712.44	65.33	712.44	65.18	0.00	-0.15
2008/03/09	712.95	95.85	712.95	95.91	0.00	0.06
2008/05/18	711.56	40.26	711.56	40.24	0.00	-0.02
2008/09/23	714.25	155.66	714.26	155.78	0.00	0.12

Maximums&F  
StormEvent

714.83 192.49 714.83 192.48  
1987/09/06 1972/09/01 1987/09/06 1972/09/01

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.00018)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_489 USF of Medinah Road (142:1427)  
 16. Branch# 142; Node ID: MCHMMEDI; Station: 11323.0000

Nodes ==>	(1) sblNGe6.FFF 1427		(2) sblNGp4.FFF 1427		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.93	2.19	709.93	2.19	0.00	0.00
1949/04/08	712.26	52.77	712.26	52.78	0.00	0.01
1949/06/21	712.74	77.39	712.74	77.37	0.00	-0.01
1949/07/27	711.96	51.47	711.96	51.13	0.00	-0.34
1949/12/31	712.59	65.94	712.59	65.97	0.00	0.03
1950/01/31	712.25	60.05	712.26	59.96	0.00	-0.09
1950/05/03	712.91	82.91	712.91	82.96	0.00	0.05
1950/06/11	712.52	59.28	712.52	59.27	0.00	-0.01
1951/03/09	712.16	56.77	712.16	56.70	0.00	-0.08
1951/05/17	712.33	55.66	712.33	55.67	0.00	0.01
1951/07/29	712.07	45.15	712.07	45.10	0.00	-0.04
1952/01/25	712.48	70.13	712.48	70.14	0.00	0.01
1952/03/28	711.92	42.51	711.92	42.47	0.00	-0.05
1953/03/23	712.21	59.44	712.21	59.05	0.00	-0.40
1953/06/16	711.88	46.54	711.88	46.32	0.00	-0.22
1953/07/28	712.47	65.41	712.47	65.46	0.00	0.05
1954/04/05	713.38	106.83	713.38	106.93	0.00	0.10
1954/05/08	712.63	65.83	712.63	65.86	0.00	0.03
1954/08/29	712.36	65.19	712.36	64.98	0.00	-0.21
1954/10/25	714.10	143.14	714.10	143.25	0.00	0.11
1955/03/09	712.08	53.45	712.09	53.44	0.00	0.00
1956/05/18	712.13	48.10	712.13	48.12	0.00	0.01
1957/01/27	711.92	49.88	711.92	49.83	0.00	-0.05
1957/03/04	712.77	87.23	712.77	87.28	0.00	0.05
1957/07/28	714.19	177.19	714.19	177.36	0.00	0.17
1958/04/30	712.02	51.59	712.02	51.31	0.00	-0.27
1958/06/19	712.13	63.68	712.13	63.41	0.00	-0.27
1958/07/11	711.78	57.71	711.78	57.65	0.00	-0.06
1959/04/07	711.71	42.66	711.71	42.69	0.00	0.03
1959/07/27	711.17	22.80	711.17	22.74	0.00	-0.06
1960/01/21	712.89	104.16	712.89	104.22	0.00	0.06
1960/04/04	712.14	71.99	712.14	71.92	0.00	-0.07
1961/08/09	711.57	39.85	711.57	39.86	0.00	0.01
1961/10/06	713.36	110.47	713.36	110.23	0.00	-0.24
1962/04/15	711.79	45.16	711.79	45.17	0.00	0.01
1962/07/08	712.08	45.58	712.08	45.47	0.00	-0.11
1963/05/07	711.94	46.60	711.94	46.57	0.00	-0.03
1964/04/12	711.73	35.36	711.73	35.34	0.00	-0.02
1964/07/25	712.23	62.05	712.23	61.94	0.00	-0.11
1965/03/22	712.21	60.99	712.21	60.93	0.00	-0.05
1966/02/15	712.19	47.84	712.19	47.85	0.00	0.01
1966/05/18	712.56	76.38	712.56	76.43	0.00	0.05
1967/04/09	712.02	54.08	712.02	54.01	0.00	-0.08
1967/07/01	712.18	49.15	712.18	49.06	0.00	-0.08
1968/08/24	712.94	119.74	712.94	119.77	0.00	0.03
1969/04/13	711.65	37.55	711.65	37.52	0.00	-0.03
1969/06/15	712.05	44.75	712.05	44.75	0.00	0.00
1969/08/01	711.52	31.69	711.52	31.70	0.00	0.00
1969/10/25	713.11	100.67	713.12	100.70	0.00	0.03
1970/05/20	711.96	43.05	711.96	43.06	0.00	0.01
1970/12/18	711.52	33.45	711.52	33.40	0.00	-0.04
1971/03/04	711.43	31.21	711.43	31.19	0.00	-0.02
1971/08/28	711.83	52.18	711.84	52.06	0.00	-0.12
1972/03/21	712.36	81.48	712.36	81.38	0.00	-0.09
1972/04/27	712.42	68.98	712.43	68.87	0.00	-0.10
1972/09/01	713.76	192.38	713.77	192.37	0.00	-0.01
1972/10/05	712.25	78.47	712.25	78.29	0.00	-0.18
1973/01/08	713.27	101.66	713.27	101.73	0.00	0.07
1973/05/08	711.99	52.87	711.99	52.69	0.00	-0.18
1974/02/28	712.58	76.15	712.58	76.14	0.00	-0.01
1974/04/21	711.70	48.34	711.70	48.21	0.00	-0.13
1974/05/25	711.87	39.76	711.87	39.75	0.00	-0.01
1975/01/16	712.41	60.70	712.41	60.63	0.00	-0.07
1975/05/05	712.27	74.22	712.27	74.07	0.00	-0.15
1975/09/08	712.52	60.78	712.52	60.81	0.00	0.02
1976/03/21	712.32	61.78	712.32	61.73	0.00	-0.05
1977/07/05	711.73	43.35	711.73	43.22	0.00	-0.12
1977/08/13	711.75	49.04	711.75	48.94	0.00	-0.10
1977/09/07	711.44	33.02	711.44	33.01	0.00	0.00
1978/04/02	711.21	24.53	711.21	24.51	0.00	-0.02
1978/05/21	711.58	33.13	711.58	33.14	0.00	0.01
1978/07/09	712.09	45.74	712.09	45.74	0.00	0.00
1978/09/25	712.11	44.91	712.11	44.92	0.00	0.01
1979/04/18	713.59	117.31	713.59	117.39	0.00	0.08
1979/09/05	711.92	42.50	711.93	42.38	0.00	-0.13
1980/01/21	711.54	40.83	711.54	40.88	0.00	0.05
1980/08/26	711.99	43.61	711.99	43.46	0.00	-0.15
1980/09/26	711.79	53.24	711.79	53.27	0.00	0.03
1981/05/03	712.11	59.45	712.12	59.85	0.01	0.40
1981/06/05	712.43	63.04	712.43	62.93	0.00	-0.11
1981/06/21	711.71	37.83	711.71	37.81	0.00	-0.02



1981/08/23	711.61	31.18	711.61	31.11	0.00	-0.06
1982/03/28	712.69	75.13	712.69	75.13	0.00	0.00
1982/07/31	712.05	43.76	712.05	43.71	0.00	-0.05
1982/08/14	712.52	96.76	712.53	96.68	0.00	-0.08
1982/12/12	713.70	128.69	713.70	128.85	0.00	0.16
1983/01/04	712.30	59.86	712.30	59.84	0.00	-0.02
1983/04/22	712.72	72.86	712.72	72.91	0.00	0.05
1983/06/04	711.55	34.77	711.55	34.57	0.00	-0.20
1983/07/09	713.24	130.05	713.24	130.08	0.00	0.03
1983/12/05	712.30	54.10	712.30	54.06	0.00	-0.04
1984/02/25	712.89	85.69	712.89	85.76	0.00	0.07
1984/04/03	712.15	61.16	712.15	60.91	0.00	-0.25
1985/03/19	713.51	113.89	713.51	113.99	0.00	0.10
1985/12/11	712.00	45.76	712.00	45.73	0.00	-0.02
1986/07/19	711.54	40.30	711.54	40.36	0.00	0.06
1986/10/10	712.18	67.24	712.18	67.16	0.00	-0.08
1987/09/06	714.83	180.59	714.83	180.83	0.00	0.24
1988/01/01	711.69	35.44	711.69	35.39	0.00	-0.04
1988/02/07	711.75	41.11	711.75	41.12	0.00	0.01
1988/04/13	711.69	40.02	711.69	39.99	0.00	-0.03
1988/10/26	712.27	55.79	712.27	55.75	0.00	-0.03
1989/08/18	712.41	62.98	712.42	63.02	0.00	0.03
1989/09/18	712.35	71.94	712.35	71.53	0.00	-0.42
1990/03/16	712.55	74.62	712.55	74.19	0.00	-0.43
1990/05/19	712.90	84.33	712.90	84.29	0.00	-0.04
1990/08/28	712.11	51.31	712.11	51.23	0.00	-0.07
1990/12/10	712.57	72.71	712.57	72.71	0.00	0.00
1991/04/23	712.13	53.87	712.13	53.80	0.00	-0.07
1991/06/02	711.90	46.16	711.90	46.07	0.00	-0.08
1991/10/09	712.03	44.90	712.03	44.89	0.00	0.00
1991/11/08	711.73	38.68	711.73	38.65	0.00	-0.03
1991/12/18	711.22	22.77	711.22	22.74	0.00	-0.04
1992/09/21	711.59	45.22	711.59	45.20	0.00	-0.01
1993/01/11	712.46	77.53	712.46	77.48	0.00	-0.04
1993/04/29	712.58	68.33	712.59	68.36	0.00	0.04
1993/07/06	712.03	46.46	712.03	46.32	0.00	-0.14
1994/03/13	712.41	63.93	712.41	63.93	0.00	0.00
1994/07/02	712.36	56.55	712.36	56.56	0.00	0.00
1994/08/24	711.61	47.25	711.61	47.26	0.00	0.01
1995/01/25	712.08	51.19	712.08	51.18	0.00	-0.01
1995/05/06	711.92	41.68	711.92	41.67	0.00	-0.01
1995/08/24	711.70	46.49	711.70	46.29	0.00	-0.20
1995/11/18	712.19	53.01	712.19	53.01	0.00	0.00
1996/06/27	712.02	46.15	712.02	46.13	0.00	-0.02
1996/08/05	713.71	166.92	713.71	167.07	0.00	0.15
1997/03/06	714.05	144.98	714.05	145.11	0.00	0.13
1998/03/25	711.78	37.85	711.78	37.85	0.00	0.00
1998/05/15	711.95	42.22	711.95	42.23	0.00	0.00
1998/08/15	712.29	69.44	712.29	69.14	0.00	-0.29
1998/09/14	711.73	57.29	711.73	57.20	0.00	-0.09
1998/10/25	712.17	51.65	712.17	51.64	0.00	-0.01
1999/02/09	712.78	74.25	712.78	74.29	0.00	0.04
1999/05/06	712.45	66.36	712.45	66.31	0.00	-0.04
2000/04/28	712.47	69.47	712.48	69.24	0.00	-0.23
2001/03/02	712.88	92.14	712.88	92.02	0.00	-0.12
2001/09/06	712.99	92.38	712.99	92.36	0.00	-0.02
2001/09/30	711.92	41.59	711.92	41.53	0.00	-0.05
2001/10/31	713.74	146.66	713.74	146.64	0.00	-0.02
2002/03/15	711.96	45.62	711.96	45.63	0.00	0.01
2002/05/22	711.99	48.17	711.99	48.09	0.00	-0.07
2002/07/14	711.96	62.50	711.96	62.19	0.00	-0.31
2002/08/29	712.81	78.54	712.81	78.56	0.00	0.02
2003/05/19	712.02	47.51	712.02	47.49	0.00	-0.03
2003/08/13	711.24	35.27	711.24	35.29	0.00	0.02
2003/11/29	711.55	36.32	711.55	36.27	0.00	-0.05
2004/03/11	711.54	33.85	711.54	33.85	0.00	0.01
2004/06/18	711.44	31.54	711.44	31.53	0.00	-0.01
2005/01/18	712.79	86.68	712.79	86.73	0.00	0.05
2006/03/18	711.53	29.52	711.53	29.47	0.00	-0.05
2006/07/03	711.78	50.40	711.78	50.44	0.00	0.04
2006/09/29	711.42	28.56	711.42	28.51	0.00	-0.05
2006/10/09	712.23	83.69	712.23	83.53	0.00	-0.16
2007/03/15	712.26	55.07	712.26	55.08	0.00	0.02
2007/08/31	712.43	65.32	712.44	65.18	0.00	-0.14
2008/03/09	712.94	95.87	712.94	95.93	0.00	0.06
2008/05/18	711.55	40.32	711.55	40.38	0.00	0.06
2008/09/23	714.24	155.72	714.24	155.84	0.00	0.12

Maximums&F	714.83	192.38	714.83	192.37
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS9003c DSF of Medinah Road (143:1431)  
 17. Branch# 143; Node ID: MCHMMEDI; Station: 11103.0000

Nodes ==>	(1) sblNGe6.FFF 1431		(2) sblNGp4.FFF 1431		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.93	2.19	709.93	2.19	0.00	0.00
1949/04/08	712.25	52.77	712.25	52.78	0.00	0.01
1949/06/21	712.73	77.39	712.73	77.37	0.00	-0.01
1949/07/27	711.95	51.47	711.95	51.13	0.00	-0.34
1949/12/31	712.59	65.94	712.59	65.97	0.00	0.03
1950/01/31	712.25	60.05	712.25	59.96	0.00	-0.09
1950/05/03	712.90	82.91	712.90	82.96	0.00	0.05
1950/06/11	712.52	59.28	712.52	59.27	0.00	-0.01
1951/03/09	712.15	56.77	712.15	56.70	0.00	-0.08
1951/05/17	712.33	55.66	712.33	55.67	0.00	0.01
1951/07/29	712.07	45.15	712.07	45.10	0.00	-0.04
1952/01/25	712.47	70.13	712.48	70.14	0.00	0.01
1952/03/28	711.92	42.51	711.92	42.47	0.00	-0.05
1953/03/23	712.20	59.44	712.20	59.05	0.00	-0.40
1953/06/16	711.87	46.54	711.87	46.32	0.00	-0.22
1953/07/28	712.48	65.41	712.48	65.46	0.00	0.05
1954/04/05	713.37	106.83	713.37	106.93	0.00	0.10
1954/05/08	712.62	65.83	712.62	65.86	0.00	0.03
1954/08/29	712.35	65.19	712.35	64.98	0.00	-0.21
1954/10/25	714.08	143.14	714.08	143.25	0.00	0.11
1955/03/09	712.08	53.45	712.08	53.44	0.00	0.00
1956/05/18	712.12	48.10	712.12	48.12	0.00	0.01
1957/01/27	711.91	49.88	711.92	49.83	0.00	-0.05
1957/03/04	712.75	87.23	712.75	87.28	0.00	0.05
1957/07/28	714.16	177.19	714.16	177.36	0.00	0.17
1958/04/30	712.01	51.59	712.01	51.31	0.00	-0.27
1958/06/19	712.12	63.68	712.12	63.41	0.00	-0.27
1958/07/11	711.78	57.71	711.78	57.65	0.00	-0.06
1959/04/07	711.71	42.66	711.71	42.69	0.00	0.03
1959/07/27	711.16	22.80	711.16	22.74	0.00	-0.06
1960/01/21	712.88	104.16	712.88	104.22	0.00	0.06
1960/04/04	712.13	71.99	712.13	71.92	0.00	-0.07
1961/08/09	711.57	39.85	711.57	39.86	0.00	0.01
1961/10/06	713.35	110.47	713.34	110.23	0.00	-0.24
1962/04/15	711.79	45.16	711.79	45.17	0.00	0.01
1962/07/08	712.08	45.58	712.08	45.47	0.00	-0.11
1963/05/07	711.94	46.60	711.94	46.57	0.00	-0.03
1964/04/12	711.73	35.36	711.73	35.34	0.00	-0.02
1964/07/25	712.22	62.05	712.22	61.94	0.00	-0.11
1965/03/22	712.20	60.99	712.20	60.93	0.00	-0.05
1966/02/15	712.18	47.84	712.18	47.85	0.00	0.01
1966/05/18	712.55	76.38	712.55	76.43	0.00	0.05
1967/04/09	712.01	54.08	712.01	54.01	0.00	-0.08
1967/07/01	712.18	49.15	712.18	49.06	0.00	-0.08
1968/08/24	712.92	119.74	712.92	119.77	0.00	0.03
1969/04/13	711.64	37.55	711.64	37.52	0.00	-0.03
1969/06/15	712.04	44.75	712.04	44.75	0.00	0.00
1969/08/01	711.51	31.69	711.51	31.70	0.00	0.00
1969/10/25	713.10	100.67	713.10	100.70	0.00	0.03
1970/05/20	711.96	43.05	711.96	43.06	0.00	0.01
1970/12/18	711.52	33.45	711.52	33.40	0.00	-0.04
1971/03/04	711.43	31.21	711.43	31.19	0.00	-0.02
1971/08/28	711.83	52.18	711.83	52.06	0.00	-0.12
1972/03/21	712.35	81.48	712.35	81.38	0.00	-0.09
1972/04/27	712.42	68.98	712.42	68.87	0.00	-0.10
1972/09/01	713.74	192.38	713.74	192.37	0.00	-0.01
1972/10/05	712.24	78.47	712.24	78.29	0.00	-0.18
1973/01/08	713.26	101.66	713.26	101.73	0.00	0.07
1973/05/08	711.98	52.87	711.98	52.69	0.00	-0.18
1974/02/28	712.57	76.15	712.57	76.14	0.00	-0.01
1974/04/21	711.70	48.34	711.70	48.21	0.00	-0.13
1974/05/25	711.86	39.76	711.86	39.75	0.00	-0.01
1975/01/16	712.41	60.70	712.41	60.63	0.00	-0.07
1975/05/05	712.26	74.22	712.27	74.07	0.00	-0.15
1975/09/08	712.51	60.78	712.51	60.81	0.00	0.02
1976/03/21	712.31	61.78	712.31	61.73	0.00	-0.05
1977/07/05	711.72	43.35	711.73	43.22	0.00	-0.12
1977/08/13	711.74	49.04	711.74	48.94	0.00	-0.10
1977/09/07	711.44	33.02	711.44	33.01	0.00	0.00
1978/04/02	711.20	24.53	711.20	24.51	0.00	-0.02
1978/05/21	711.58	33.13	711.58	33.14	0.00	0.01
1978/07/09	712.09	45.74	712.09	45.74	0.00	0.00
1978/09/25	712.10	44.91	712.10	44.92	0.00	0.01
1979/04/18	713.57	117.31	713.57	117.39	0.00	0.08
1979/09/05	711.92	42.50	711.92	42.38	0.00	-0.13
1980/01/21	711.54	40.83	711.54	40.88	0.00	0.05
1980/08/26	711.99	43.61	711.99	43.46	0.00	-0.15
1980/09/26	711.79	53.24	711.79	53.27	0.00	0.03
1981/05/03	712.10	59.45	712.11	59.85	0.01	0.40
1981/06/05	712.42	63.04	712.42	62.93	0.00	-0.11
1981/06/21	711.71	37.83	711.71	37.81	0.00	-0.02

1981/08/23	711.61	31.18	711.61	31.11	0.00	-0.06
1982/03/28	712.68	75.13	712.68	75.13	0.00	0.00
1982/07/31	712.04	43.76	712.04	43.71	0.00	-0.05
1982/08/14	712.52	96.76	712.52	96.68	0.00	-0.08
1982/12/12	713.68	128.69	713.68	128.85	0.00	0.16
1983/01/04	712.29	59.86	712.29	59.84	0.00	-0.02
1983/04/22	712.72	72.86	712.72	72.91	0.00	0.05
1983/06/04	711.55	34.77	711.55	34.57	0.00	-0.20
1983/07/09	713.22	130.05	713.22	130.08	0.00	0.03
1983/12/05	712.30	54.10	712.30	54.06	0.00	-0.04
1984/02/25	712.88	85.69	712.88	85.76	0.00	0.07
1984/04/03	712.14	61.16	712.14	60.91	0.00	-0.25
1985/03/19	713.49	113.89	713.49	113.99	0.00	0.10
1985/12/11	711.99	45.76	711.99	45.73	0.00	-0.02
1986/07/19	711.53	40.30	711.53	40.36	0.00	0.06
1986/10/10	712.17	67.24	712.17	67.16	0.00	-0.08
1987/09/06	714.81	180.59	714.81	180.83	0.00	0.24
1988/01/01	711.68	35.44	711.68	35.39	0.00	-0.04
1988/02/07	711.75	41.11	711.75	41.12	0.00	0.01
1988/04/13	711.69	40.02	711.69	39.99	0.00	-0.03
1988/10/26	712.26	55.79	712.26	55.75	0.00	-0.03
1989/08/18	712.41	62.98	712.41	63.02	0.00	0.03
1989/09/18	712.34	71.94	712.34	71.53	0.00	-0.42
1990/03/16	712.54	74.62	712.55	74.19	0.00	-0.43
1990/05/19	712.89	84.33	712.89	84.29	0.00	-0.04
1990/08/28	712.10	51.31	712.11	51.23	0.00	-0.07
1990/12/10	712.56	72.71	712.56	72.71	0.00	0.00
1991/04/23	712.13	53.87	712.13	53.80	0.00	-0.07
1991/06/02	711.89	46.16	711.89	46.07	0.00	-0.08
1991/10/09	712.02	44.90	712.02	44.89	0.00	0.00
1991/11/08	711.73	38.68	711.73	38.65	0.00	-0.03
1991/12/18	711.21	22.77	711.21	22.74	0.00	-0.04
1992/09/21	711.58	45.22	711.58	45.20	0.00	-0.01
1993/01/11	712.45	77.53	712.45	77.48	0.00	-0.04
1993/04/29	712.58	68.33	712.58	68.36	0.00	0.04
1993/07/06	712.02	46.46	712.02	46.32	0.00	-0.14
1994/03/13	712.40	63.93	712.40	63.93	0.00	0.00
1994/07/02	712.36	56.55	712.36	56.56	0.00	0.00
1994/08/24	711.61	47.25	711.61	47.26	0.00	0.01
1995/01/25	712.07	51.19	712.07	51.18	0.00	-0.01
1995/05/06	711.91	41.68	711.91	41.67	0.00	-0.01
1995/08/24	711.69	46.49	711.69	46.29	0.00	-0.20
1995/11/18	712.18	53.01	712.18	53.01	0.00	0.00
1996/06/27	712.01	46.15	712.01	46.13	0.00	-0.02
1996/08/05	713.69	166.92	713.69	167.07	0.00	0.15
1997/03/06	714.03	144.98	714.03	145.11	0.00	0.13
1998/03/25	711.78	37.85	711.78	37.85	0.00	0.00
1998/05/15	711.95	42.22	711.95	42.23	0.00	0.00
1998/08/15	712.28	69.44	712.28	69.14	0.00	-0.29
1998/09/14	711.72	57.29	711.72	57.20	0.00	-0.09
1998/10/25	712.17	51.65	712.17	51.64	0.00	-0.01
1999/02/09	712.77	74.25	712.77	74.29	0.00	0.04
1999/05/06	712.44	66.36	712.44	66.31	0.00	-0.04
2000/04/28	712.47	69.47	712.47	69.24	0.00	-0.23
2001/03/02	712.87	92.14	712.87	92.02	0.00	-0.12
2001/09/06	712.98	92.38	712.98	92.36	0.00	-0.02
2001/09/30	711.91	41.59	711.91	41.53	0.00	-0.05
2001/10/31	713.72	146.66	713.72	146.64	0.00	-0.02
2002/03/15	711.95	45.62	711.95	45.63	0.00	0.01
2002/05/22	711.98	48.17	711.98	48.09	0.00	-0.07
2002/07/14	711.95	62.50	711.95	62.19	0.00	-0.31
2002/08/29	712.80	78.54	712.80	78.56	0.00	0.02
2003/05/19	712.02	47.51	712.02	47.49	0.00	-0.03
2003/08/13	711.23	35.27	711.23	35.29	0.00	0.02
2003/11/29	711.55	36.32	711.55	36.27	0.00	-0.05
2004/03/11	711.54	33.85	711.54	33.85	0.00	0.01
2004/06/18	711.43	31.54	711.43	31.53	0.00	-0.01
2005/01/18	712.78	86.68	712.78	86.73	0.00	0.05
2006/03/18	711.52	29.52	711.52	29.47	0.00	-0.05
2006/07/03	711.77	50.40	711.77	50.44	0.00	0.04
2006/09/29	711.42	28.56	711.42	28.51	0.00	-0.05
2006/10/09	712.22	83.69	712.22	83.53	0.00	-0.16
2007/03/15	712.25	55.07	712.25	55.08	0.00	0.02
2007/08/31	712.43	65.32	712.43	65.18	0.00	-0.14
2008/03/09	712.92	95.87	712.92	95.93	0.00	0.06
2008/05/18	711.55	40.32	711.55	40.38	0.00	0.06
2008/09/23	714.22	155.72	714.22	155.84	0.00	0.12

MaximumS&F	714.81	192.38	714.81	192.37
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS9003 65 feet DS of Medinah Road (143:1433)  
 18. Branch# 143; Node ID: A3 ; Station: 11038.0000

Nodes ==>	(1) sblNGe6.FFF 1433		(2) sblNGp4.FFF 1433		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.93	2.18	709.93	2.18	0.00	0.00
1949/04/08	712.25	52.93	712.25	52.94	0.00	0.01
1949/06/21	712.73	77.72	712.73	77.71	0.00	-0.01
1949/07/27	711.95	51.58	711.95	51.27	0.00	-0.31
1949/12/31	712.58	66.36	712.58	66.39	0.00	0.03
1950/01/31	712.24	60.17	712.24	60.07	0.00	-0.09
1950/05/03	712.89	83.29	712.90	83.34	0.00	0.05
1950/06/11	712.51	59.54	712.51	59.53	0.00	-0.01
1951/03/09	712.14	56.90	712.15	56.82	0.00	-0.08
1951/05/17	712.32	55.86	712.32	55.88	0.00	0.01
1951/07/29	712.06	45.26	712.06	45.22	0.00	-0.04
1952/01/25	712.47	70.36	712.47	70.37	0.00	0.02
1952/03/28	711.91	42.77	711.91	42.73	0.00	-0.05
1953/03/23	712.20	59.56	712.20	59.27	0.00	-0.29
1953/06/16	711.87	46.60	711.87	46.38	0.00	-0.22
1953/07/28	712.50	65.54	712.50	65.59	0.00	0.05
1954/04/05	713.36	107.31	713.36	107.40	0.00	0.09
1954/05/08	712.62	66.21	712.62	66.23	0.00	0.03
1954/08/29	712.34	65.39	712.34	65.12	0.00	-0.26
1954/10/25	714.07	143.79	714.08	143.90	0.00	0.11
1955/03/09	712.07	53.69	712.07	53.69	0.00	0.00
1956/05/18	712.12	48.31	712.12	48.32	0.00	0.01
1957/01/27	711.91	49.90	711.91	49.85	0.00	-0.05
1957/03/04	712.75	87.39	712.75	87.44	0.00	0.05
1957/07/28	714.15	177.54	714.15	177.71	0.00	0.17
1958/04/30	712.01	51.72	712.01	51.41	0.00	-0.31
1958/06/19	712.12	63.74	712.12	63.47	0.00	-0.27
1958/07/11	711.77	57.74	711.77	57.68	0.00	-0.06
1959/04/07	711.70	42.82	711.70	42.86	0.00	0.04
1959/07/27	711.16	22.82	711.16	22.76	0.00	-0.06
1960/01/21	712.87	104.24	712.87	104.31	0.00	0.07
1960/04/04	712.13	71.94	712.13	71.87	0.00	-0.07
1961/08/09	711.56	39.91	711.56	39.92	0.00	0.01
1961/10/06	713.34	111.02	713.34	110.78	0.00	-0.24
1962/04/15	711.78	45.16	711.78	45.17	0.00	0.01
1962/07/08	712.07	45.67	712.07	45.57	0.00	-0.10
1963/05/07	711.93	46.67	711.93	46.65	0.00	-0.03
1964/04/12	711.72	35.48	711.72	35.46	0.00	-0.02
1964/07/25	712.22	62.26	712.22	62.14	0.00	-0.11
1965/03/22	712.19	61.17	712.19	61.12	0.00	-0.05
1966/02/15	712.18	47.96	712.18	47.97	0.00	0.01
1966/05/18	712.55	76.53	712.55	76.58	0.00	0.05
1967/04/09	712.01	54.23	712.01	54.16	0.00	-0.08
1967/07/01	712.17	49.30	712.17	49.22	0.00	-0.08
1968/08/24	712.92	119.78	712.92	119.80	0.00	0.02
1969/04/13	711.64	37.69	711.64	37.66	0.00	-0.03
1969/06/15	712.04	44.98	712.04	44.98	0.00	0.00
1969/08/01	711.51	31.70	711.51	31.70	0.00	0.00
1969/10/25	713.09	101.34	713.10	101.27	0.00	-0.07
1970/05/20	711.95	43.19	711.95	43.20	0.00	0.01
1970/12/18	711.51	33.54	711.51	33.50	0.00	-0.04
1971/03/04	711.42	31.28	711.42	31.26	0.00	-0.02
1971/08/28	711.82	52.23	711.82	52.10	0.00	-0.13
1972/03/21	712.35	81.57	712.35	81.44	0.00	-0.13
1972/04/27	712.41	69.22	712.41	69.12	0.00	-0.10
1972/09/01	713.73	192.38	713.73	192.37	0.00	-0.01
1972/10/05	712.24	78.64	712.24	78.45	0.00	-0.18
1973/01/08	713.25	102.08	713.25	102.15	0.00	0.07
1973/05/08	711.98	53.05	711.98	52.85	0.00	-0.19
1974/02/28	712.56	76.24	712.57	76.23	0.00	-0.01
1974/04/21	711.69	48.46	711.69	48.33	0.00	-0.13
1974/05/25	711.86	39.89	711.86	39.88	0.00	-0.01
1975/01/16	712.40	61.09	712.40	61.02	0.00	-0.07
1975/05/05	712.26	74.29	712.26	74.14	0.00	-0.15
1975/09/08	712.51	61.16	712.51	61.19	0.00	0.02
1976/03/21	712.30	62.03	712.30	61.97	0.00	-0.05
1977/07/05	711.72	43.39	711.72	43.24	0.00	-0.15
1977/08/13	711.74	49.31	711.74	49.21	0.00	-0.10
1977/09/07	711.43	33.01	711.44	33.01	0.00	0.00
1978/04/02	711.20	24.56	711.20	24.54	0.00	-0.01
1978/05/21	711.58	33.16	711.58	33.17	0.00	0.01
1978/07/09	712.09	45.95	712.09	45.94	0.00	0.00
1978/09/25	712.10	45.13	712.10	45.13	0.00	0.01
1979/04/18	713.57	117.83	713.57	117.92	0.00	0.09
1979/09/05	711.92	42.75	711.92	42.63	0.00	-0.13
1980/01/21	711.53	40.85	711.53	40.89	0.00	0.04
1980/08/26	711.98	43.87	711.98	43.72	0.00	-0.14
1980/09/26	711.78	53.27	711.78	53.30	0.00	0.03
1981/05/03	712.10	59.67	712.11	60.08	0.01	0.41
1981/06/05	712.41	63.28	712.41	63.17	0.00	-0.11
1981/06/21	711.70	37.94	711.71	37.92	0.00	-0.02

1981/08/23	711.60	31.23	711.60	31.17	0.00	-0.06
1982/03/28	712.67	75.33	712.67	75.32	0.00	0.00
1982/07/31	712.04	43.97	712.04	43.92	0.00	-0.05
1982/08/14	712.51	96.82	712.52	96.74	0.00	-0.08
1982/12/12	713.67	129.41	713.67	129.55	0.00	0.14
1983/01/04	712.28	60.08	712.28	60.06	0.00	-0.02
1983/04/22	712.71	73.26	712.71	73.31	0.00	0.05
1983/06/04	711.55	34.86	711.55	34.67	0.00	-0.20
1983/07/09	713.22	130.40	713.22	130.43	0.00	0.03
1983/12/05	712.29	54.52	712.29	54.47	0.00	-0.04
1984/02/25	712.88	85.82	712.88	85.89	0.00	0.07
1984/04/03	712.13	61.35	712.13	61.10	0.00	-0.25
1985/03/19	713.48	114.05	713.49	114.15	0.00	0.10
1985/12/11	711.99	45.94	711.99	45.93	0.00	-0.02
1986/07/19	711.53	40.28	711.53	40.33	0.00	0.06
1986/10/10	712.17	67.23	712.17	67.15	0.00	-0.08
1987/09/06	714.80	181.81	714.81	182.05	0.00	0.24
1988/01/01	711.68	35.51	711.68	35.46	0.00	-0.04
1988/02/07	711.74	41.14	711.74	41.15	0.00	0.01
1988/04/13	711.68	40.11	711.68	40.08	0.00	-0.03
1988/10/26	712.25	55.96	712.25	55.93	0.00	-0.03
1989/08/18	712.40	63.28	712.40	63.31	0.00	0.03
1989/09/18	712.33	72.28	712.33	71.86	0.00	-0.42
1990/03/16	712.54	74.71	712.54	74.36	0.00	-0.35
1990/05/19	712.89	84.63	712.89	84.61	0.00	-0.01
1990/08/28	712.10	51.49	712.10	51.40	0.00	-0.08
1990/12/10	712.56	73.03	712.56	73.03	0.00	0.00
1991/04/23	712.12	54.06	712.12	53.99	0.00	-0.07
1991/06/02	711.89	46.27	711.89	46.19	0.00	-0.08
1991/10/09	712.02	45.07	712.02	45.07	0.00	0.00
1991/11/08	711.72	38.82	711.72	38.78	0.00	-0.04
1991/12/18	711.21	22.93	711.21	22.90	0.00	-0.04
1992/09/21	711.58	45.26	711.58	45.24	0.00	-0.01
1993/01/11	712.45	77.58	712.45	77.54	0.00	-0.04
1993/04/29	712.57	68.64	712.57	68.68	0.00	0.03
1993/07/06	712.02	46.84	712.02	46.71	0.00	-0.14
1994/03/13	712.39	64.07	712.39	64.07	0.00	0.00
1994/07/02	712.35	56.81	712.35	56.82	0.00	0.01
1994/08/24	711.60	47.41	711.60	47.42	0.00	0.01
1995/01/25	712.07	51.28	712.07	51.27	0.00	-0.01
1995/05/06	711.91	41.85	711.91	41.85	0.00	-0.01
1995/08/24	711.69	46.54	711.69	46.34	0.00	-0.20
1995/11/18	712.18	53.08	712.18	53.08	0.00	0.01
1996/06/27	712.01	46.34	712.01	46.32	0.00	-0.02
1996/08/05	713.68	167.39	713.68	167.54	0.00	0.15
1997/03/06	714.02	145.54	714.02	145.67	0.00	0.13
1998/03/25	711.78	38.03	711.78	38.03	0.00	0.00
1998/05/15	711.95	42.43	711.95	42.44	0.00	0.00
1998/08/15	712.28	69.52	712.28	69.24	0.00	-0.29
1998/09/14	711.71	57.34	711.71	57.26	0.00	-0.09
1998/10/25	712.16	51.83	712.16	51.83	0.00	-0.01
1999/02/09	712.76	74.58	712.76	74.62	0.00	0.04
1999/05/06	712.44	66.66	712.44	66.62	0.00	-0.04
2000/04/28	712.47	69.65	712.47	69.47	0.00	-0.18
2001/03/02	712.86	92.47	712.86	92.35	0.00	-0.12
2001/09/06	712.97	92.76	712.97	92.74	0.00	-0.02
2001/09/30	711.91	41.76	711.91	41.70	0.00	-0.05
2001/10/31	713.71	147.24	713.71	147.22	0.00	-0.02
2002/03/15	711.95	45.73	711.95	45.74	0.00	0.01
2002/05/22	711.98	48.28	711.98	48.21	0.00	-0.08
2002/07/14	711.95	62.53	711.95	62.22	0.00	-0.31
2002/08/29	712.79	78.89	712.79	78.92	0.00	0.03
2003/05/19	712.01	47.63	712.01	47.60	0.00	-0.03
2003/08/13	711.23	35.26	711.23	35.27	0.00	0.02
2003/11/29	711.55	36.37	711.55	36.32	0.00	-0.05
2004/03/11	711.53	33.91	711.53	33.92	0.00	0.01
2004/06/18	711.43	31.56	711.43	31.54	0.00	-0.01
2005/01/18	712.77	86.79	712.77	86.84	0.00	0.05
2006/03/18	711.52	29.61	711.52	29.56	0.00	-0.05
2006/07/03	711.77	50.47	711.77	50.53	0.00	0.06
2006/09/29	711.42	28.66	711.42	28.62	0.00	-0.04
2006/10/09	712.21	83.81	712.21	83.65	0.00	-0.16
2007/03/15	712.25	55.16	712.25	55.18	0.00	0.02
2007/08/31	712.42	65.55	712.42	65.40	0.00	-0.15
2008/03/09	712.92	96.03	712.92	96.09	0.00	0.06
2008/05/18	711.54	40.63	711.54	40.69	0.00	0.07
2008/09/23	714.21	156.54	714.21	156.66	0.00	0.12

MaximumS&F	714.80	192.38	714.81	192.37
StormEvent	1987/09/06	1972/09/01	1987/09/06	1972/09/01

□

Meacham Creek FEQ Modeling (CBREL Project No. 07-0404.00018)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS\_487 315 feet DS of Medinah Road (143:1436)  
 19. Branch# 143; Node ID: ; Station: 10788.0000

Nodes ==>	(1) sBLNGe6.FFF 1436		(2) sBLNGp4.FFF 1436		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.92	2.16	709.92	2.16	0.00	0.00
1949/04/08	712.23	53.56	712.23	53.57	0.00	0.01
1949/06/21	712.70	79.08	712.71	79.08	0.00	0.00
1949/07/27	711.93	52.08	711.93	51.80	0.00	-0.28
1949/12/31	712.56	68.18	712.56	68.20	0.00	0.03
1950/01/31	712.22	60.81	712.22	60.70	0.00	-0.10
1950/05/03	712.87	85.79	712.87	85.85	0.00	0.06
1950/06/11	712.50	60.59	712.50	60.58	0.00	-0.01
1951/03/09	712.12	57.39	712.12	57.32	0.00	-0.08
1951/05/17	712.30	56.73	712.30	56.75	0.00	0.02
1951/07/29	712.05	45.76	712.05	45.72	0.00	-0.04
1952/01/25	712.44	71.24	712.45	71.25	0.00	0.01
1952/03/28	711.90	43.77	711.90	43.72	0.00	-0.05
1953/03/23	712.17	60.44	712.17	60.23	0.00	-0.21
1953/06/16	711.84	46.87	711.85	46.64	0.00	-0.23
1953/07/28	712.52	66.01	712.52	66.07	0.00	0.05
1954/04/05	713.34	109.10	713.34	109.20	0.00	0.10
1954/05/08	712.60	67.67	712.60	67.70	0.00	0.04
1954/08/29	712.32	68.64	712.32	68.31	0.00	-0.32
1954/10/25	714.05	146.64	714.05	146.75	0.00	0.11
1955/03/09	712.05	54.67	712.05	54.67	0.00	0.00
1956/05/18	712.10	49.15	712.10	49.16	0.00	0.01
1957/01/27	711.89	50.08	711.89	50.04	0.00	-0.04
1957/03/04	712.72	87.99	712.72	88.04	0.00	0.05
1957/07/28	714.12	178.74	714.12	178.90	0.00	0.16
1958/04/30	711.98	52.23	711.98	51.93	0.00	-0.30
1958/06/19	712.09	64.21	712.09	63.92	0.00	-0.29
1958/07/11	711.75	57.85	711.75	57.80	0.00	-0.05
1959/04/07	711.68	43.60	711.68	43.60	0.00	0.00
1959/07/27	711.15	22.96	711.15	22.90	0.00	-0.06
1960/01/21	712.84	104.57	712.84	104.63	0.00	0.06
1960/04/04	712.10	71.75	712.10	71.68	0.00	-0.07
1961/08/09	711.54	40.12	711.54	40.14	0.00	0.01
1961/10/06	713.32	113.05	713.32	112.81	0.00	-0.24
1962/04/15	711.76	45.16	711.76	45.17	0.00	0.02
1962/07/08	712.06	46.07	712.07	45.95	0.01	-0.12
1963/05/07	711.91	47.07	711.91	47.05	0.00	-0.03
1964/04/12	711.71	35.99	711.71	35.97	0.00	-0.02
1964/07/25	712.19	63.04	712.19	62.93	0.00	-0.11
1965/03/22	712.17	61.88	712.17	61.83	0.00	-0.05
1966/02/15	712.16	48.59	712.16	48.59	0.00	0.00
1966/05/18	712.52	77.10	712.52	77.15	0.00	0.05
1967/04/09	711.99	55.04	711.99	54.96	0.00	-0.08
1967/07/01	712.16	50.06	712.16	49.99	0.00	-0.08
1968/08/24	712.89	119.91	712.89	119.93	0.00	0.02
1969/04/13	711.62	38.39	711.62	38.37	0.00	-0.02
1969/06/15	712.02	45.86	712.02	45.86	0.00	0.00
1969/08/01	711.49	31.71	711.49	31.72	0.00	0.00
1969/10/25	713.07	105.16	713.07	105.07	0.00	-0.09
1970/05/20	711.93	43.76	711.93	43.77	0.00	0.01
1970/12/18	711.49	34.04	711.49	34.01	0.00	-0.04
1971/03/04	711.40	31.56	711.41	31.54	0.00	-0.02
1971/08/28	711.80	52.40	711.80	52.26	0.00	-0.13
1972/03/21	712.33	82.45	712.33	82.32	0.00	-0.13
1972/04/27	712.39	70.15	712.39	70.05	0.00	-0.10
1972/09/01	713.70	191.82	713.70	191.80	0.00	-0.02
1972/10/05	712.21	79.24	712.22	79.05	0.00	-0.18
1973/01/08	713.23	104.00	713.23	104.07	0.00	0.07
1973/05/08	711.96	53.84	711.96	53.65	0.00	-0.19
1974/02/28	712.54	78.27	712.54	78.23	0.00	-0.04
1974/04/21	711.67	48.91	711.67	48.80	0.00	-0.11
1974/05/25	711.84	40.42	711.84	40.41	0.00	-0.01
1975/01/16	712.38	62.57	712.39	62.50	0.00	-0.07
1975/05/05	712.23	74.55	712.23	74.41	0.00	-0.15
1975/09/08	712.49	63.14	712.49	63.17	0.00	0.03
1976/03/21	712.28	62.95	712.28	62.92	0.00	-0.03
1977/07/05	711.70	43.80	711.70	43.65	0.00	-0.15
1977/08/13	711.71	50.75	711.71	50.72	0.00	-0.03
1977/09/07	711.43	32.99	711.43	32.99	0.00	0.00
1978/04/02	711.19	24.66	711.19	24.64	0.00	-0.02
1978/05/21	711.56	33.45	711.56	33.43	0.00	-0.02
1978/07/09	712.07	46.93	712.07	46.93	0.00	0.00
1978/09/25	712.08	46.44	712.09	46.11	0.00	-0.33
1979/04/18	713.54	119.84	713.54	119.93	0.00	0.09
1979/09/05	711.90	44.34	711.90	44.25	0.00	-0.09
1980/01/21	711.52	40.88	711.52	40.93	0.00	0.05
1980/08/26	711.97	45.02	711.97	44.89	0.00	-0.13
1980/09/26	711.76	53.35	711.76	53.39	0.00	0.04
1981/05/03	712.08	60.85	712.08	61.28	0.01	0.43
1981/06/05	712.39	64.23	712.39	64.12	0.00	-0.10
1981/06/21	711.69	38.43	711.69	38.41	0.00	-0.02



1981/08/23	711.59	31.63	711.59	31.57	0.00	-0.07
1982/03/28	712.65	76.15	712.65	76.19	0.00	0.04
1982/07/31	712.02	45.48	712.02	45.26	0.00	-0.22
1982/08/14	712.50	97.04	712.50	96.96	0.00	-0.08
1982/12/12	713.65	132.04	713.65	132.19	0.00	0.15
1983/01/04	712.26	60.90	712.26	60.89	0.00	-0.02
1983/04/22	712.69	74.91	712.69	74.94	0.00	0.04
1983/06/04	711.53	35.23	711.53	35.04	0.00	-0.19
1983/07/09	713.19	132.09	713.20	132.11	0.00	0.02
1983/12/05	712.27	56.18	712.28	56.16	0.00	-0.02
1984/02/25	712.85	87.35	712.85	87.42	0.00	0.07
1984/04/03	712.11	62.06	712.11	61.81	0.00	-0.25
1985/03/19	713.46	115.75	713.46	115.85	0.00	0.10
1985/12/11	711.97	46.68	711.97	46.66	0.00	-0.02
1986/07/19	711.51	40.18	711.51	40.24	0.00	0.06
1986/10/10	712.15	67.17	712.15	67.09	0.00	-0.08
1987/09/06	714.79	186.45	714.79	186.68	0.00	0.23
1988/01/01	711.66	35.96	711.66	35.91	0.00	-0.05
1988/02/07	711.72	41.22	711.72	41.23	0.00	0.01
1988/04/13	711.67	40.69	711.67	40.70	0.00	0.01
1988/10/26	712.23	57.05	712.23	57.03	0.00	-0.03
1989/08/18	712.38	64.45	712.38	64.46	0.00	0.01
1989/09/18	712.31	73.65	712.31	73.26	0.00	-0.39
1990/03/16	712.52	75.98	712.52	75.70	0.00	-0.27
1990/05/19	712.86	86.55	712.86	86.56	0.00	0.01
1990/08/28	712.08	52.23	712.08	52.14	0.00	-0.09
1990/12/10	712.53	74.27	712.53	74.26	0.00	0.00
1991/04/23	712.10	54.85	712.10	54.77	0.00	-0.08
1991/06/02	711.87	46.83	711.87	46.73	0.00	-0.09
1991/10/09	712.00	45.86	712.00	45.85	0.00	0.00
1991/11/08	711.70	39.47	711.70	39.41	0.00	-0.05
1991/12/18	711.20	23.54	711.20	23.51	0.00	-0.03
1992/09/21	711.55	45.55	711.55	45.57	0.00	0.02
1993/01/11	712.42	78.23	712.42	78.20	0.00	-0.03
1993/04/29	712.55	69.89	712.55	69.93	0.00	0.04
1993/07/06	712.00	48.31	712.00	48.17	0.00	-0.14
1994/03/13	712.37	64.61	712.37	64.62	0.00	0.00
1994/07/02	712.34	58.48	712.34	58.48	0.00	0.00
1994/08/24	711.58	47.99	711.59	48.01	0.00	0.02
1995/01/25	712.05	51.84	712.05	51.83	0.00	-0.01
1995/05/06	711.89	42.54	711.89	42.54	0.00	0.00
1995/08/24	711.67	46.70	711.67	46.52	0.00	-0.18
1995/11/18	712.16	53.55	712.16	53.55	0.00	0.00
1996/06/27	711.99	47.13	711.99	47.10	0.00	-0.02
1996/08/05	713.65	168.77	713.65	168.92	0.00	0.15
1997/03/06	714.00	148.12	714.00	148.24	0.00	0.12
1998/03/25	711.76	38.78	711.76	38.77	0.00	-0.01
1998/05/15	711.93	43.26	711.93	43.26	0.00	0.00
1998/08/15	712.25	69.86	712.25	69.58	0.00	-0.27
1998/09/14	711.69	57.54	711.69	57.46	0.00	-0.08
1998/10/25	712.15	53.18	712.15	53.18	0.00	0.00
1999/02/09	712.74	76.72	712.74	76.77	0.00	0.05
1999/05/06	712.42	67.84	712.42	67.80	0.00	-0.04
2000/04/28	712.45	71.80	712.45	71.58	0.00	-0.22
2001/03/02	712.84	93.74	712.84	93.62	0.00	-0.12
2001/09/06	712.95	94.23	712.95	94.22	0.00	-0.01
2001/09/30	711.89	42.44	711.89	42.38	0.00	-0.06
2001/10/31	713.68	149.07	713.69	149.05	0.00	-0.02
2002/03/15	711.93	46.16	711.93	46.16	0.00	0.00
2002/05/22	711.96	48.77	711.96	48.68	0.00	-0.09
2002/07/14	711.92	62.87	711.92	62.56	0.00	-0.32
2002/08/29	712.77	80.28	712.77	80.31	0.00	0.03
2003/05/19	712.00	48.13	712.00	48.10	0.00	-0.03
2003/08/13	711.20	35.19	711.20	35.21	0.00	0.02
2003/11/29	711.53	36.54	711.53	36.50	0.00	-0.05
2004/03/11	711.52	34.19	711.52	34.19	0.00	0.00
2004/06/18	711.41	31.70	711.41	31.70	0.00	0.00
2005/01/18	712.74	87.56	712.75	87.61	0.00	0.06
2006/03/18	711.50	30.00	711.50	29.94	0.00	-0.05
2006/07/03	711.74	51.25	711.74	51.24	0.00	-0.01
2006/09/29	711.40	29.06	711.40	29.01	0.00	-0.04
2006/10/09	712.19	84.25	712.19	84.09	0.00	-0.16
2007/03/15	712.23	55.75	712.23	55.76	0.00	0.01
2007/08/31	712.41	66.42	712.41	66.26	0.00	-0.16
2008/03/09	712.89	97.15	712.89	97.20	0.00	0.05
2008/05/18	711.52	42.08	711.52	42.22	0.00	0.13
2008/09/23	714.19	159.76	714.19	159.88	0.00	0.12

Maximums&F 714.79 191.82 714.79 191.80  
 StormEvent 1987/09/06 1972/09/01 1987/09/06 1972/09/01

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS9002 500 feet DS of Medinah Road (143:1439)  
 20. Branch# 143; Node ID: A2 ; Station: 10603.0000

Nodes ==>	(1) sbLNGe6.FFF 1439		(2) sbLNGp4.FFF 1439		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.91	2.15	709.91	2.15	0.00	0.00
1949/04/08	712.20	54.30	712.20	54.31	0.00	0.01
1949/06/21	712.66	80.56	712.66	80.52	0.00	-0.04
1949/07/27	711.89	52.54	711.89	52.20	0.00	-0.35
1949/12/31	712.53	70.13	712.53	70.15	0.00	0.03
1950/01/31	712.18	61.63	712.18	61.51	0.00	-0.13
1950/05/03	712.83	87.68	712.83	87.74	0.00	0.06
1950/06/11	712.47	61.38	712.47	61.37	0.00	-0.01
1951/03/09	712.09	57.81	712.09	57.75	0.00	-0.06
1951/05/17	712.27	58.36	712.27	58.39	0.00	0.03
1951/07/29	712.03	46.19	712.03	46.15	0.01	-0.04
1952/01/25	712.40	72.48	712.40	72.46	0.00	-0.02
1952/03/28	711.86	44.72	711.86	44.68	0.00	-0.04
1953/03/23	712.13	63.10	712.13	62.83	0.00	-0.26
1953/06/16	711.81	54.12	711.81	55.31	0.00	1.19
1953/07/28	712.50	79.05	712.50	79.05	0.00	0.00
1954/04/05	713.30	110.50	713.30	110.67	0.00	0.17
1954/05/08	712.58	69.99	712.58	70.04	0.00	0.05
1954/08/29	712.28	71.61	712.28	71.29	0.00	-0.32
1954/10/25	714.03	150.07	714.03	150.22	0.00	0.15
1955/03/09	712.01	55.42	712.02	55.42	0.00	0.00
1956/05/18	712.07	49.89	712.07	49.90	0.00	0.01
1957/01/27	711.85	50.24	711.85	50.20	0.00	-0.04
1957/03/04	712.67	88.43	712.67	88.49	0.00	0.05
1957/07/28	714.09	179.46	714.10	179.63	0.00	0.17
1958/04/30	711.95	52.62	711.95	52.32	0.00	-0.30
1958/06/19	712.05	64.60	712.05	64.31	0.00	-0.29
1958/07/11	711.71	57.95	711.71	57.90	0.00	-0.05
1959/04/07	711.65	44.74	711.65	44.80	0.00	0.06
1959/07/27	711.12	23.97	711.12	23.93	0.00	-0.04
1960/01/21	712.79	104.80	712.79	104.87	0.00	0.07
1960/04/04	712.06	71.62	712.06	71.56	0.00	-0.07
1961/08/09	711.51	40.46	711.51	40.56	0.00	0.11
1961/10/06	713.28	115.31	713.28	114.87	0.00	-0.44
1962/04/15	711.73	45.16	711.73	45.17	0.00	0.02
1962/07/08	712.04	49.50	712.05	50.09	0.01	0.59
1963/05/07	711.88	47.45	711.88	47.43	0.00	-0.02
1964/04/12	711.68	36.39	711.68	36.38	0.00	-0.02
1964/07/25	712.15	64.17	712.15	64.06	0.00	-0.10
1965/03/22	712.13	62.59	712.13	62.56	0.00	-0.03
1966/02/15	712.13	50.67	712.14	50.67	0.00	0.00
1966/05/18	712.48	77.53	712.48	77.58	0.00	0.05
1967/04/09	711.95	55.92	711.95	55.85	0.00	-0.07
1967/07/01	712.14	50.85	712.14	50.75	0.00	-0.10
1968/08/24	712.84	120.00	712.84	120.03	0.00	0.03
1969/04/13	711.59	39.59	711.59	39.57	0.00	-0.02
1969/06/15	711.99	46.52	711.99	46.53	0.00	0.01
1969/08/01	711.47	32.05	711.47	32.08	0.00	0.03
1969/10/25	713.03	108.29	713.03	108.21	0.00	-0.08
1970/05/20	711.90	44.28	711.90	44.29	0.00	0.01
1970/12/18	711.47	35.01	711.47	35.01	0.00	0.00
1971/03/04	711.37	31.77	711.38	31.75	0.00	-0.02
1971/08/28	711.76	52.55	711.76	52.40	0.00	-0.15
1972/03/21	712.29	83.32	712.29	83.20	0.00	-0.12
1972/04/27	712.35	70.85	712.35	70.74	0.00	-0.10
1972/09/01	713.66	191.20	713.66	191.16	0.00	-0.04
1972/10/05	712.17	79.70	712.17	79.51	0.00	-0.18
1973/01/08	713.19	105.65	713.19	105.72	0.00	0.07
1973/05/08	711.92	54.84	711.92	54.69	0.00	-0.15
1974/02/28	712.49	80.44	712.49	80.40	0.00	-0.04
1974/04/21	711.64	49.26	711.64	49.20	0.00	-0.06
1974/05/25	711.81	41.92	711.81	41.97	0.00	0.05
1975/01/16	712.35	64.42	712.35	64.37	0.00	-0.05
1975/05/05	712.19	74.79	712.19	74.64	0.00	-0.14
1975/09/08	712.46	64.96	712.46	64.99	0.00	0.03
1976/03/21	712.25	63.64	712.25	63.64	0.00	0.00
1977/07/05	711.66	45.68	711.66	46.32	0.00	0.64
1977/08/13	711.67	52.90	711.67	52.88	0.00	-0.02
1977/09/07	711.41	32.98	711.41	32.98	0.00	0.00
1978/04/02	711.16	24.77	711.16	24.76	0.00	-0.01
1978/05/21	711.54	36.52	711.54	36.53	0.00	0.00
1978/07/09	712.04	47.68	712.04	47.68	0.00	0.00
1978/09/25	712.06	48.46	712.06	48.00	0.00	-0.45
1979/04/18	713.51	121.51	713.51	121.59	0.00	0.08
1979/09/05	711.87	50.34	711.87	49.58	0.00	-0.76
1980/01/21	711.49	40.92	711.49	40.97	0.00	0.05
1980/08/26	711.93	46.44	711.94	46.31	0.00	-0.13
1980/09/26	711.72	53.43	711.72	53.47	0.00	0.04
1981/05/03	712.04	61.92	712.05	62.35	0.01	0.42
1981/06/05	712.35	65.25	712.35	64.96	0.00	-0.29
1981/06/21	711.66	39.99	711.66	40.04	0.00	0.04

1981/08/23	711.56	32.03	711.56	32.00	0.00	-0.04
1982/03/28	712.61	77.56	712.61	77.60	0.00	0.04
1982/07/31	711.99	53.73	711.99	53.52	0.00	-0.21
1982/08/14	712.47	97.21	712.47	97.14	0.00	-0.08
1982/12/12	713.61	133.84	713.61	133.98	0.00	0.14
1983/01/04	712.22	61.52	712.22	61.50	0.00	-0.02
1983/04/22	712.65	76.22	712.65	76.26	0.00	0.04
1983/06/04	711.50	35.67	711.50	35.46	0.00	-0.20
1983/07/09	713.15	137.39	713.15	137.42	0.00	0.03
1983/12/05	712.24	57.50	712.24	57.48	0.00	-0.02
1984/02/25	712.80	90.84	712.81	90.92	0.00	0.08
1984/04/03	712.07	63.16	712.07	62.88	0.00	-0.28
1985/03/19	713.42	117.06	713.42	117.16	0.00	0.10
1985/12/11	711.93	47.24	711.94	47.22	0.00	-0.02
1986/07/19	711.48	40.12	711.48	40.18	0.00	0.06
1986/10/10	712.11	67.14	712.11	67.06	0.00	-0.08
1987/09/06	714.78	206.91	714.79	208.40	0.00	1.49
1988/01/01	711.63	37.13	711.63	37.13	0.00	-0.01
1988/02/07	711.69	41.46	711.69	41.48	0.00	0.02
1988/04/13	711.64	42.14	711.64	42.26	0.00	0.12
1988/10/26	712.20	58.31	712.20	58.29	0.00	-0.03
1989/08/18	712.34	65.32	712.34	65.31	0.00	-0.02
1989/09/18	712.27	74.82	712.27	74.44	0.00	-0.38
1990/03/16	712.49	77.67	712.49	77.37	0.00	-0.30
1990/05/19	712.82	91.07	712.83	90.97	0.00	-0.10
1990/08/28	712.04	52.87	712.04	52.82	0.00	-0.05
1990/12/10	712.49	75.35	712.49	75.32	0.00	-0.02
1991/04/23	712.07	55.61	712.07	55.53	0.00	-0.08
1991/06/02	711.84	47.32	711.84	47.23	0.00	-0.09
1991/10/09	711.97	46.65	711.97	46.64	0.00	0.00
1991/11/08	711.67	40.06	711.67	40.08	0.00	0.02
1991/12/18	711.17	24.14	711.17	24.11	0.00	-0.03
1992/09/21	711.52	45.87	711.52	45.89	0.00	0.02
1993/01/11	712.37	79.16	712.37	79.13	0.00	-0.03
1993/04/29	712.51	71.37	712.51	71.42	0.00	0.05
1993/07/06	711.96	49.39	711.96	49.26	0.00	-0.13
1994/03/13	712.33	65.14	712.33	65.14	0.00	0.00
1994/07/02	712.30	60.57	712.30	60.56	0.00	0.00
1994/08/24	711.55	48.44	711.55	48.46	0.00	0.02
1995/01/25	712.01	52.53	712.01	52.53	0.00	0.00
1995/05/06	711.86	43.12	711.86	43.11	0.00	0.00
1995/08/24	711.64	46.83	711.64	46.66	0.00	-0.17
1995/11/18	712.12	53.95	712.12	53.96	0.00	0.01
1996/06/27	711.96	48.03	711.96	48.10	0.00	0.07
1996/08/05	713.61	169.65	713.61	169.79	0.00	0.14
1997/03/06	713.97	150.83	713.97	150.87	0.00	0.04
1998/03/25	711.73	39.34	711.73	39.33	0.00	-0.01
1998/05/15	711.90	44.13	711.90	44.13	0.00	0.01
1998/08/15	712.21	70.13	712.21	69.85	0.00	-0.28
1998/09/14	711.65	57.69	711.65	57.62	0.00	-0.08
1998/10/25	712.11	54.57	712.11	54.58	0.00	0.01
1999/02/09	712.71	78.70	712.71	78.75	0.00	0.05
1999/05/06	712.38	68.71	712.38	68.67	0.00	-0.04
2000/04/28	712.41	73.64	712.41	73.41	0.00	-0.23
2001/03/02	712.80	95.59	712.80	95.50	0.00	-0.09
2001/09/06	712.90	95.31	712.91	95.31	0.00	0.00
2001/09/30	711.86	44.41	711.86	44.49	0.00	0.08
2001/10/31	713.65	151.03	713.65	151.14	0.00	0.11
2002/03/15	711.90	46.49	711.90	46.48	0.00	-0.01
2002/05/22	711.92	49.25	711.92	49.16	0.00	-0.09
2002/07/14	711.88	63.14	711.88	62.82	0.00	-0.32
2002/08/29	712.73	81.38	712.73	81.41	0.00	0.03
2003/05/19	711.97	48.59	711.97	48.57	0.00	-0.03
2003/08/13	711.17	35.14	711.17	35.16	0.00	0.02
2003/11/29	711.50	37.10	711.50	37.14	0.00	0.03
2004/03/11	711.49	34.43	711.49	34.43	0.00	0.00
2004/06/18	711.38	31.88	711.38	31.87	0.00	0.00
2005/01/18	712.70	88.24	712.70	88.30	0.00	0.06
2006/03/18	711.48	30.29	711.48	30.24	0.00	-0.05
2006/07/03	711.71	52.65	711.71	52.71	0.00	0.06
2006/09/29	711.37	29.35	711.37	29.31	0.00	-0.04
2006/10/09	712.15	84.59	712.15	84.43	0.00	-0.16
2007/03/15	712.19	57.49	712.19	57.54	0.00	0.05
2007/08/31	712.37	67.43	712.37	67.41	0.00	-0.01
2008/03/09	712.84	98.42	712.84	98.47	0.00	0.05
2008/05/18	711.49	45.30	711.49	45.43	0.00	0.13
2008/09/23	714.17	163.32	714.17	163.46	0.00	0.14

Maximums&F	714.78	206.91	714.79	208.40
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

□



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
 XS\_486 590 feet DS of Medinah Road (143:1443)  
 21. Branch# 143; Node ID: ; Station: 10513.0000

Nodes ==>	(1) sblNGe6.FFF 1443		(2) sblNGp4.FFF 1443		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.88	2.15	709.88	2.15	0.00	0.00
1949/04/08	712.16	54.69	712.16	54.70	0.00	0.01
1949/06/21	712.62	81.29	712.62	81.25	0.00	-0.04
1949/07/27	711.85	52.85	711.85	52.46	0.00	-0.38
1949/12/31	712.49	71.10	712.49	71.12	0.00	0.03
1950/01/31	712.14	62.85	712.14	62.68	0.00	-0.17
1950/05/03	712.79	88.61	712.79	88.67	0.00	0.06
1950/06/11	712.44	62.46	712.44	62.43	0.00	-0.03
1951/03/09	712.05	58.08	712.05	58.02	0.00	-0.06
1951/05/17	712.23	59.20	712.23	59.23	0.00	0.03
1951/07/29	712.01	52.51	712.02	52.77	0.01	0.26
1952/01/25	712.36	73.16	712.36	73.16	0.00	0.00
1952/03/28	711.83	45.51	711.83	45.51	0.00	0.00
1953/03/23	712.09	64.98	712.09	64.72	0.00	-0.26
1953/06/16	711.77	61.96	711.77	63.14	0.00	1.18
1953/07/28	712.46	105.47	712.46	105.47	0.00	0.00
1954/04/05	713.26	111.55	713.26	111.54	0.00	-0.01
1954/05/08	712.54	75.63	712.55	75.66	0.00	0.03
1954/08/29	712.24	74.30	712.24	77.23	0.00	2.92
1954/10/25	714.00	152.10	714.01	152.28	0.00	0.18
1955/03/09	711.97	55.79	711.97	55.79	0.00	0.00
1956/05/18	712.04	50.50	712.04	50.52	0.00	0.01
1957/01/27	711.81	50.33	711.81	50.29	0.00	-0.04
1957/03/04	712.63	88.65	712.63	88.70	0.00	0.05
1957/07/28	714.07	179.82	714.07	179.99	0.00	0.17
1958/04/30	711.91	53.69	711.91	53.78	0.00	0.09
1958/06/19	712.01	64.80	712.01	64.51	0.00	-0.29
1958/07/11	711.67	58.01	711.67	57.96	0.00	-0.05
1959/04/07	711.61	45.35	711.61	45.41	0.00	0.06
1959/07/27	711.09	24.77	711.09	24.86	0.00	0.09
1960/01/21	712.74	104.93	712.74	105.00	0.00	0.07
1960/04/04	712.01	71.57	712.01	71.50	0.00	-0.07
1961/08/09	711.47	40.79	711.47	40.92	0.00	0.13
1961/10/06	713.24	116.45	713.24	116.02	0.00	-0.43
1962/04/15	711.69	45.17	711.69	45.19	0.00	0.03
1962/07/08	712.02	62.59	712.03	63.50	0.01	0.90
1963/05/07	711.84	47.68	711.84	47.66	0.00	-0.02
1964/04/12	711.65	38.29	711.65	38.31	0.00	0.02
1964/07/25	712.11	64.87	712.11	64.76	0.00	-0.10
1965/03/22	712.09	63.41	712.09	63.38	0.00	-0.03
1966/02/15	712.10	51.72	712.10	51.72	0.00	0.00
1966/05/18	712.44	77.74	712.44	77.79	0.00	0.05
1967/04/09	711.91	56.58	711.91	56.53	0.00	-0.05
1967/07/01	712.11	51.28	712.11	51.18	0.00	-0.10
1968/08/24	712.79	120.06	712.79	120.09	0.00	0.03
1969/04/13	711.56	40.19	711.56	40.45	0.00	0.26
1969/06/15	711.96	46.88	711.96	46.89	0.00	0.01
1969/08/01	711.43	33.10	711.43	33.13	0.00	0.03
1969/10/25	712.98	109.83	712.98	109.77	0.00	-0.06
1970/05/20	711.87	44.97	711.87	44.97	0.00	0.00
1970/12/18	711.43	35.65	711.43	35.65	0.00	0.00
1971/03/04	711.34	31.87	711.34	31.85	0.00	-0.01
1971/08/28	711.72	52.64	711.72	52.47	0.00	-0.16
1972/03/21	712.25	83.77	712.25	83.65	0.00	-0.12
1972/04/27	712.30	71.19	712.31	71.09	0.00	-0.10
1972/09/01	713.62	191.07	713.62	191.03	0.00	-0.04
1972/10/05	712.13	79.94	712.13	79.75	0.00	-0.18
1973/01/08	713.15	106.48	713.15	106.54	0.00	0.06
1973/05/08	711.89	55.46	711.89	55.34	0.00	-0.12
1974/02/28	712.45	81.52	712.45	81.48	0.00	-0.04
1974/04/21	711.60	49.50	711.60	49.45	0.00	-0.05
1974/05/25	711.78	43.78	711.78	43.83	0.00	0.05
1975/01/16	712.32	65.48	712.32	65.43	0.00	-0.05
1975/05/05	712.15	74.91	712.15	74.77	0.00	-0.14
1975/09/08	712.43	70.17	712.43	70.21	0.00	0.04
1976/03/21	712.21	64.03	712.21	64.00	0.00	-0.03
1977/07/05	711.62	49.52	711.62	50.10	0.00	0.59
1977/08/13	711.63	53.97	711.63	53.94	0.00	-0.02
1977/09/07	711.38	32.98	711.39	32.98	0.00	0.00
1978/04/02	711.13	24.84	711.13	24.82	0.00	-0.01
1978/05/21	711.51	39.59	711.51	39.59	0.00	0.00
1978/07/09	712.01	48.32	712.01	48.32	0.00	0.00
1978/09/25	712.03	49.49	712.03	49.31	0.00	-0.19
1979/04/18	713.47	122.36	713.47	122.44	0.00	0.08
1979/09/05	711.83	55.37	711.83	53.77	0.00	-1.59
1980/01/21	711.45	40.96	711.45	41.00	0.00	0.05
1980/08/26	711.90	47.14	711.90	47.02	0.00	-0.12
1980/09/26	711.68	53.48	711.68	53.52	0.00	0.04
1981/05/03	712.00	62.46	712.01	62.88	0.01	0.43
1981/06/05	712.31	67.51	712.31	67.01	0.00	-0.50
1981/06/21	711.62	41.18	711.62	41.22	0.00	0.05

1981/08/23	711.53	32.94	711.53	33.02	0.00	0.08
1982/03/28	712.57	78.27	712.57	78.32	0.00	0.04
1982/07/31	711.96	57.95	711.96	57.74	0.00	-0.21
1982/08/14	712.43	97.31	712.43	97.23	0.00	-0.08
1982/12/12	713.57	134.75	713.58	134.90	0.00	0.15
1983/01/04	712.18	61.84	712.18	61.81	0.00	-0.02
1983/04/22	712.61	76.87	712.61	76.91	0.00	0.04
1983/06/04	711.46	35.92	711.46	35.71	0.00	-0.21
1983/07/09	713.11	141.93	713.11	141.97	0.00	0.04
1983/12/05	712.21	58.15	712.21	58.13	0.00	-0.02
1984/02/25	712.76	92.66	712.76	92.74	0.00	0.08
1984/04/03	712.02	63.90	712.02	63.62	0.00	-0.28
1985/03/19	713.38	117.97	713.39	118.08	0.00	0.11
1985/12/11	711.90	47.51	711.90	47.49	0.00	-0.02
1986/07/19	711.45	40.10	711.45	40.15	0.00	0.06
1986/10/10	712.08	67.13	712.08	67.05	0.00	-0.08
1987/09/06	714.77	219.61	714.78	221.01	0.00	1.40
1988/01/01	711.60	37.89	711.60	37.89	0.00	-0.01
1988/02/07	711.65	42.09	711.65	42.11	0.00	0.02
1988/04/13	711.60	42.96	711.60	43.08	0.00	0.12
1988/10/26	712.16	58.93	712.16	58.90	0.00	-0.02
1989/08/18	712.30	65.76	712.30	65.72	0.00	-0.04
1989/09/18	712.23	75.42	712.23	75.03	0.00	-0.38
1990/03/16	712.45	78.83	712.45	78.20	0.00	-0.63
1990/05/19	712.78	93.60	712.79	93.50	0.00	-0.10
1990/08/28	712.01	53.21	712.01	53.16	0.00	-0.05
1990/12/10	712.45	76.06	712.45	76.04	0.00	-0.02
1991/04/23	712.03	56.20	712.03	56.18	0.00	-0.02
1991/06/02	711.80	48.53	711.80	48.79	0.00	0.26
1991/10/09	711.93	47.03	711.93	47.03	0.00	0.00
1991/11/08	711.64	41.37	711.64	41.45	0.00	0.08
1991/12/18	711.14	24.45	711.14	24.42	0.00	-0.03
1992/09/21	711.48	46.03	711.48	46.05	0.00	0.02
1993/01/11	712.33	79.64	712.33	79.61	0.00	-0.03
1993/04/29	712.47	72.23	712.47	72.28	0.00	0.05
1993/07/06	711.93	49.93	711.93	49.80	0.00	-0.13
1994/03/13	712.29	65.58	712.29	65.58	0.00	0.00
1994/07/02	712.27	61.61	712.27	61.61	0.00	0.00
1994/08/24	711.51	48.67	711.51	48.69	0.00	0.02
1995/01/25	711.97	53.15	711.97	53.15	0.00	0.00
1995/05/06	711.82	43.40	711.82	43.40	0.00	0.00
1995/08/24	711.62	46.89	711.62	46.74	0.00	-0.15
1995/11/18	712.08	54.22	712.08	54.22	0.00	0.01
1996/06/27	711.92	50.80	711.92	50.87	0.00	0.07
1996/08/05	713.57	170.19	713.57	170.33	0.00	0.14
1997/03/06	713.94	152.92	713.94	152.98	0.00	0.06
1998/03/25	711.69	39.62	711.69	39.61	0.00	-0.01
1998/05/15	711.86	44.58	711.86	44.59	0.00	0.01
1998/08/15	712.16	70.33	712.16	70.03	0.00	-0.29
1998/09/14	711.61	57.78	711.61	57.70	0.00	-0.08
1998/10/25	712.07	55.60	712.07	55.61	0.00	0.01
1999/02/09	712.67	79.69	712.67	79.73	0.00	0.05
1999/05/06	712.34	69.13	712.34	69.11	0.00	-0.03
2000/04/28	712.38	74.54	712.38	74.32	0.00	-0.22
2001/03/02	712.76	96.68	712.76	96.58	0.00	-0.09
2001/09/06	712.86	95.84	712.86	95.85	0.00	0.01
2001/09/30	711.83	46.74	711.83	46.82	0.00	0.08
2001/10/31	713.61	152.41	713.61	152.52	0.00	0.11
2002/03/15	711.86	46.65	711.86	46.63	0.00	-0.02
2002/05/22	711.89	49.48	711.89	49.40	0.00	-0.09
2002/07/14	711.84	63.29	711.84	62.97	0.00	-0.32
2002/08/29	712.69	82.66	712.69	81.95	0.00	-0.71
2003/05/19	711.95	48.83	711.95	48.80	0.00	-0.03
2003/08/13	711.13	35.12	711.13	35.15	0.00	0.02
2003/11/29	711.47	38.06	711.47	38.10	0.00	0.04
2004/03/11	711.45	34.58	711.45	34.58	0.00	0.00
2004/06/18	711.34	31.97	711.34	31.97	0.00	0.00
2005/01/18	712.66	88.58	712.66	88.64	0.00	0.06
2006/03/18	711.45	30.44	711.45	30.39	0.00	-0.05
2006/07/03	711.67	53.37	711.67	53.47	0.00	0.10
2006/09/29	711.34	29.49	711.34	29.45	0.00	-0.04
2006/10/09	712.10	84.76	712.10	84.60	0.00	-0.16
2007/03/15	712.16	60.35	712.16	60.40	0.00	0.05
2007/08/31	712.33	69.00	712.33	68.99	0.00	-0.01
2008/03/09	712.79	99.06	712.80	99.11	0.00	0.05
2008/05/18	711.45	46.88	711.45	47.01	0.00	0.14
2008/09/23	714.14	165.77	714.14	165.91	0.00	0.14

MaximumS&F	714.77	219.61	714.78	221.01
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

□

Meacham Creek FEQ Modeling (CBREL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS9001 925 feet DS of Medinah Road (143:1447)  
 22. Branch# 143; Node ID: A1 ; Station: 10178.0000

Nodes ==>	(1) sbLNGe6.FFF 1447		(2) sbLNGp4.FFF 1447		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.80	2.15	709.80	2.15	0.00	0.00
1949/04/08	712.16	56.29	712.16	56.31	0.00	0.02
1949/06/21	712.61	82.55	712.61	82.54	0.00	-0.02
1949/07/27	711.84	52.38	711.84	51.43	0.00	-0.95
1949/12/31	712.48	72.71	712.48	72.74	0.00	0.03
1950/01/31	712.12	62.43	712.12	62.32	0.00	-0.10
1950/05/03	712.78	90.20	712.79	90.27	0.00	0.07
1950/06/11	712.43	66.55	712.43	66.53	0.00	-0.02
1951/03/09	712.04	57.58	712.04	57.55	0.00	-0.04
1951/05/17	712.22	60.47	712.22	60.50	0.00	0.03
1951/07/29	712.01	55.14	712.01	55.33	0.01	0.19
1952/01/25	712.35	72.97	712.35	72.97	0.00	0.00
1952/03/28	711.81	45.70	711.81	45.72	0.00	0.01
1953/03/23	712.08	63.23	712.08	63.08	0.00	-0.15
1953/06/16	711.75	65.88	711.75	66.36	0.00	0.49
1953/07/28	712.44	168.11	712.44	168.11	0.00	0.00
1954/04/05	713.26	114.03	713.26	114.04	0.00	0.01
1954/05/08	712.54	77.24	712.54	77.30	0.00	0.06
1954/08/29	712.23	72.12	712.23	74.56	0.00	2.44
1954/10/25	714.00	157.35	714.00	157.50	0.00	0.15
1955/03/09	711.96	54.82	711.96	54.83	0.00	0.00
1956/05/18	712.03	51.83	712.03	51.84	0.00	0.01
1957/01/27	711.79	49.29	711.79	49.27	0.00	-0.02
1957/03/04	712.62	88.05	712.62	88.10	0.00	0.05
1957/07/28	714.07	179.46	714.07	179.61	0.00	0.15
1958/04/30	711.89	79.20	711.89	79.25	0.00	0.05
1958/06/19	712.00	61.57	712.00	61.37	0.00	-0.21
1958/07/11	711.65	53.15	711.65	53.10	0.00	-0.06
1959/04/07	711.59	42.84	711.59	42.89	0.00	0.05
1959/07/27	711.05	25.98	711.05	25.98	0.00	0.00
1960/01/21	712.73	101.66	712.73	101.72	0.00	0.06
1960/04/04	712.00	66.29	712.00	66.25	0.00	-0.04
1961/08/09	711.45	38.51	711.45	38.59	0.00	0.08
1961/10/06	713.24	116.82	713.23	116.42	0.00	-0.40
1962/04/15	711.67	43.50	711.67	43.51	0.00	0.01
1962/07/08	712.01	68.03	712.02	69.24	0.01	1.21
1963/05/07	711.82	47.42	711.82	47.41	0.00	-0.01
1964/04/12	711.63	38.63	711.63	38.65	0.00	0.02
1964/07/25	712.10	62.70	712.10	62.64	0.00	-0.06
1965/03/22	712.08	61.56	712.08	61.55	0.00	0.00
1966/02/15	712.09	53.43	712.09	53.43	0.00	0.00
1966/05/18	712.43	76.83	712.43	76.88	0.00	0.05
1967/04/09	711.90	54.49	711.90	54.44	0.00	-0.04
1967/07/01	712.10	60.85	712.10	60.92	0.00	0.07
1968/08/24	712.78	112.49	712.78	112.54	0.00	0.05
1969/04/13	711.53	39.06	711.54	39.74	0.00	0.68
1969/06/15	711.95	48.15	711.95	48.16	0.00	0.01
1969/08/01	711.41	32.93	711.41	32.96	0.00	0.03
1969/10/25	712.98	108.67	712.98	108.63	0.00	-0.04
1970/05/20	711.85	45.41	711.85	45.41	0.00	0.01
1970/12/18	711.41	34.98	711.41	34.98	0.00	0.01
1971/03/04	711.31	31.38	711.31	31.37	0.00	-0.01
1971/08/28	711.70	50.07	711.70	50.00	0.00	-0.08
1972/03/21	712.24	77.02	712.24	77.20	0.00	0.18
1972/04/27	712.30	76.94	712.30	76.40	0.00	-0.54
1972/09/01	713.62	176.74	713.62	176.79	0.00	0.05
1972/10/05	712.12	73.16	712.12	73.07	0.00	-0.09
1973/01/08	713.15	107.43	713.15	107.50	0.00	0.07
1973/05/08	711.87	52.99	711.87	52.90	0.00	-0.09
1974/02/28	712.44	80.01	712.44	80.00	0.00	-0.02
1974/04/21	711.58	46.29	711.58	46.21	0.00	-0.08
1974/05/25	711.76	43.75	711.77	43.79	0.00	0.04
1975/01/16	712.31	64.52	712.31	64.51	0.00	-0.01
1975/05/05	712.14	70.33	712.14	70.24	0.00	-0.10
1975/09/08	712.43	71.08	712.43	71.13	0.00	0.05
1976/03/21	712.20	63.72	712.20	63.69	0.00	-0.02
1977/07/05	711.60	48.57	711.60	49.13	0.00	0.56
1977/08/13	711.61	50.57	711.61	50.54	0.00	-0.03
1977/09/07	711.36	32.50	711.36	32.51	0.00	0.01
1978/04/02	711.09	24.37	711.09	24.36	0.00	-0.01
1978/05/21	711.49	40.01	711.49	40.01	0.00	0.00
1978/07/09	711.99	49.56	711.99	49.57	0.00	0.01
1978/09/25	712.02	64.39	712.02	64.37	0.00	-0.02
1979/04/18	713.47	124.61	713.47	124.69	0.00	0.08
1979/09/05	711.82	54.03	711.82	52.34	0.00	-1.68
1980/01/21	711.43	38.54	711.43	38.54	0.00	0.00
1980/08/26	711.89	51.91	711.89	52.07	0.00	0.16
1980/09/26	711.66	50.01	711.66	50.01	0.00	0.01
1981/05/03	711.99	59.97	711.99	60.37	0.01	0.40
1981/06/05	712.30	68.99	712.30	68.55	0.00	-0.44
1981/06/21	711.60	40.38	711.60	40.43	0.00	0.06



1981/08/23	711.51	33.23	711.51	33.23	0.00	0.00
1982/03/28	712.56	79.46	712.56	79.50	0.00	0.04
1982/07/31	711.95	56.39	711.95	56.25	0.00	-0.15
1982/08/14	712.43	89.21	712.43	89.24	0.00	0.04
1982/12/12	713.57	135.96	713.58	136.12	0.00	0.16
1983/01/04	712.17	62.06	712.17	62.05	0.00	-0.01
1983/04/22	712.61	78.72	712.61	78.76	0.00	0.04
1983/06/04	711.44	36.07	711.44	36.13	0.00	0.06
1983/07/09	713.11	135.53	713.11	135.57	0.00	0.04
1983/12/05	712.20	59.40	712.20	59.39	0.00	-0.01
1984/02/25	712.76	93.60	712.76	93.68	0.00	0.08
1984/04/03	712.01	61.36	712.01	61.18	0.00	-0.18
1985/03/19	713.38	121.55	713.38	121.67	0.00	0.12
1985/12/11	711.89	47.98	711.89	47.98	0.00	0.00
1986/07/19	711.42	37.41	711.42	37.45	0.00	0.04
1986/10/10	712.06	60.61	712.06	60.54	0.00	-0.07
1987/09/06	714.77	223.65	714.77	224.73	0.00	1.08
1988/01/01	711.58	38.12	711.58	38.12	0.00	0.00
1988/02/07	711.63	41.71	711.63	41.73	0.00	0.03
1988/04/13	711.58	41.35	711.58	41.50	0.00	0.15
1988/10/26	712.15	59.84	712.15	59.83	0.00	-0.01
1989/08/18	712.29	66.62	712.29	66.61	0.00	-0.01
1989/09/18	712.22	79.42	712.22	79.41	0.00	0.00
1990/03/16	712.44	76.87	712.44	76.57	0.00	-0.30
1990/05/19	712.78	93.39	712.78	93.31	0.00	-0.08
1990/08/28	712.01	62.27	712.01	62.45	0.00	0.17
1990/12/10	712.45	75.63	712.45	75.62	0.00	0.00
1991/04/23	712.02	55.10	712.02	55.06	0.00	-0.04
1991/06/02	711.78	47.66	711.78	47.90	0.00	0.23
1991/10/09	711.92	48.09	711.92	48.09	0.00	0.00
1991/11/08	711.62	41.05	711.62	41.12	0.00	0.08
1991/12/18	711.10	24.35	711.10	24.33	0.00	-0.02
1992/09/21	711.45	42.93	711.45	42.96	0.00	0.03
1993/01/11	712.32	76.94	712.32	76.94	0.00	-0.01
1993/04/29	712.47	73.64	712.47	73.69	0.00	0.05
1993/07/06	711.91	50.15	711.91	50.07	0.00	-0.08
1994/03/13	712.28	66.37	712.28	66.38	0.00	0.01
1994/07/02	712.26	62.92	712.26	62.92	0.00	0.01
1994/08/24	711.49	45.13	711.49	45.14	0.00	0.01
1995/01/25	711.96	52.97	711.96	52.98	0.00	0.01
1995/05/06	711.81	44.14	711.81	44.14	0.00	0.00
1995/08/24	711.60	44.59	711.60	44.47	0.00	-0.12
1995/11/18	712.07	55.10	712.07	55.11	0.00	0.01
1996/06/27	711.91	48.81	711.91	48.88	0.00	0.07
1996/08/05	713.57	160.45	713.57	160.56	0.00	0.11
1997/03/06	713.94	157.51	713.94	157.55	0.00	0.04
1998/03/25	711.67	40.18	711.67	40.18	0.00	0.00
1998/05/15	711.85	45.36	711.85	45.37	0.00	0.01
1998/08/15	712.15	68.07	712.15	67.89	0.00	-0.18
1998/09/14	711.59	52.84	711.59	52.76	0.00	-0.08
1998/10/25	712.06	56.07	712.06	56.09	0.00	0.02
1999/02/09	712.66	81.83	712.66	81.88	0.00	0.04
1999/05/06	712.33	68.99	712.33	68.99	0.00	-0.01
2000/04/28	712.37	72.84	712.37	72.69	0.00	-0.15
2001/03/02	712.76	93.14	712.76	93.09	0.00	-0.05
2001/09/06	712.86	96.86	712.86	96.89	0.00	0.03
2001/09/30	711.82	46.45	711.82	46.51	0.00	0.06
2001/10/31	713.61	147.61	713.61	147.80	0.00	0.19
2002/03/15	711.85	46.71	711.85	46.66	0.00	-0.06
2002/05/22	711.87	49.28	711.87	49.23	0.00	-0.06
2002/07/14	711.82	58.86	711.82	58.65	0.00	-0.21
2002/08/29	712.68	83.78	712.69	83.79	0.00	0.01
2003/05/19	711.93	48.94	711.93	48.93	0.00	-0.01
2003/08/13	711.08	33.25	711.08	33.28	0.00	0.04
2003/11/29	711.44	37.25	711.45	37.29	0.00	0.03
2004/03/11	711.42	34.03	711.43	34.03	0.00	0.00
2004/06/18	711.31	47.74	711.31	47.63	0.00	-0.11
2005/01/18	712.66	88.15	712.66	88.20	0.00	0.06
2006/03/18	711.42	31.10	711.42	31.11	0.00	0.01
2006/07/03	711.65	50.14	711.65	50.23	0.00	0.08
2006/09/29	711.31	32.18	711.31	32.30	0.00	0.11
2006/10/09	712.09	76.25	712.09	76.16	0.00	-0.10
2007/03/15	712.15	60.16	712.15	60.20	0.00	0.05
2007/08/31	712.33	69.17	712.33	69.16	0.00	0.00
2008/03/09	712.79	97.99	712.79	98.04	0.00	0.06
2008/05/18	711.42	45.39	711.42	45.49	0.00	0.10
2008/09/23	714.14	171.06	714.14	171.20	0.00	0.14

Maximums&F 714.77 223.65 714.77 224.73  
 StormEvent 1987/09/06 1987/09/06 1987/09/06 1987/09/06

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_484 1095 feet DS of Medinah Road (143:1450)  
 23. Branch# 143; Node ID: ; Station: 10008.0000

Nodes ==>	(1) sblNGe6.FFF 1450		(2) sblNGp4.FFF 1450		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.78	2.14	709.78	2.14	0.00	0.00
1949/04/08	712.16	57.15	712.16	57.16	0.00	0.01
1949/06/21	712.61	82.52	712.61	82.52	0.00	0.00
1949/07/27	711.83	51.14	711.84	51.76	0.00	0.62
1949/12/31	712.48	72.63	712.48	72.66	0.00	0.03
1950/01/31	712.12	61.01	712.12	60.98	0.00	-0.03
1950/05/03	712.78	90.30	712.79	90.36	0.00	0.07
1950/06/11	712.43	66.22	712.43	66.22	0.00	0.00
1951/03/09	712.04	56.73	712.04	56.71	0.00	-0.01
1951/05/17	712.22	60.60	712.22	60.63	0.00	0.02
1951/07/29	712.01	48.85	712.01	48.83	0.00	-0.02
1952/01/25	712.35	71.76	712.35	71.78	0.00	0.02
1952/03/28	711.81	45.28	711.81	45.27	0.00	-0.01
1953/03/23	712.08	59.56	712.08	59.52	0.00	-0.04
1953/06/16	711.75	51.95	711.75	52.29	0.00	0.34
1953/07/28	712.44	157.79	712.44	157.78	0.00	-0.01
1954/04/05	713.26	113.63	713.26	113.76	0.00	0.13
1954/05/08	712.54	73.08	712.54	73.12	0.00	0.04
1954/08/29	712.23	67.25	712.23	67.17	0.00	-0.08
1954/10/25	714.00	159.03	714.00	159.17	0.00	0.14
1955/03/09	711.96	53.60	711.96	53.61	0.00	0.01
1956/05/18	712.03	52.17	712.03	52.19	0.00	0.02
1957/01/27	711.79	48.23	711.79	48.22	0.00	-0.01
1957/03/04	712.62	87.09	712.62	87.15	0.00	0.05
1957/07/28	714.06	178.39	714.07	178.55	0.00	0.16
1958/04/30	711.89	64.09	711.89	64.15	0.00	0.06
1958/06/19	712.00	58.49	712.00	58.40	0.00	-0.09
1958/07/11	711.65	48.29	711.65	48.31	0.00	0.02
1959/04/07	711.59	39.78	711.59	39.78	0.00	0.01
1959/07/27	711.05	23.41	711.05	23.39	0.00	-0.02
1960/01/21	712.73	98.59	712.73	98.65	0.00	0.06
1960/04/04	712.00	61.94	712.00	61.94	0.00	-0.01
1961/08/09	711.45	35.67	711.45	35.67	0.00	0.00
1961/10/06	713.24	115.30	713.23	115.05	0.00	-0.25
1962/04/15	711.67	42.57	711.67	42.58	0.00	0.01
1962/07/08	712.01	49.20	712.02	49.11	0.01	-0.09
1963/05/07	711.82	47.00	711.82	46.99	0.00	0.00
1964/04/12	711.63	37.82	711.63	37.82	0.00	-0.01
1964/07/25	712.10	60.74	712.10	60.72	0.00	-0.02
1965/03/22	712.08	59.97	712.08	59.96	0.00	0.00
1966/02/15	712.09	53.47	712.09	53.47	0.00	0.00
1966/05/18	712.43	75.68	712.43	75.72	0.00	0.04
1967/04/09	711.90	52.17	711.90	52.16	0.00	-0.02
1967/07/01	712.10	59.92	712.10	59.94	0.00	0.02
1968/08/24	712.78	105.49	712.78	105.56	0.00	0.07
1969/04/13	711.53	36.81	711.53	36.80	0.00	0.00
1969/06/15	711.95	48.75	711.95	48.76	0.00	0.01
1969/08/01	711.41	31.26	711.41	31.25	0.00	-0.01
1969/10/25	712.98	105.55	712.98	105.52	0.00	-0.03
1970/05/20	711.85	45.82	711.85	45.83	0.00	0.01
1970/12/18	711.41	33.09	711.41	33.08	0.00	-0.01
1971/03/04	711.31	30.67	711.31	30.66	0.00	-0.01
1971/08/28	711.70	55.93	711.70	55.84	0.00	-0.09
1972/03/21	712.24	71.56	712.24	71.53	0.00	-0.02
1972/04/27	712.30	69.45	712.30	69.43	0.00	-0.02
1972/09/01	713.62	163.94	713.62	164.04	0.00	0.10
1972/10/05	712.12	67.10	712.12	67.06	0.00	-0.04
1973/01/08	713.15	107.20	713.15	107.27	0.00	0.07
1973/05/08	711.87	50.39	711.87	50.33	0.00	-0.06
1974/02/28	712.44	77.68	712.44	77.70	0.00	0.02
1974/04/21	711.58	42.53	711.58	42.50	0.00	-0.04
1974/05/25	711.76	42.43	711.76	42.43	0.00	0.00
1975/01/16	712.31	63.45	712.31	63.47	0.00	0.02
1975/05/05	712.14	66.30	712.14	66.26	0.00	-0.04
1975/09/08	712.43	68.36	712.43	68.40	0.00	0.03
1976/03/21	712.20	63.01	712.20	63.00	0.00	-0.01
1977/07/05	711.60	41.49	711.60	41.44	0.00	-0.06
1977/08/13	711.61	45.22	711.61	45.23	0.00	0.01
1977/09/07	711.36	29.86	711.36	29.87	0.00	0.01
1978/04/02	711.09	23.76	711.09	23.76	0.00	-0.01
1978/05/21	711.49	34.39	711.49	34.39	0.00	0.00
1978/07/09	711.99	50.31	711.99	50.32	0.00	0.01
1978/09/25	712.02	49.94	712.02	49.95	0.00	0.01
1979/04/18	713.47	125.38	713.47	125.46	0.00	0.08
1979/09/05	711.82	45.74	711.82	45.71	0.00	-0.03
1980/01/21	711.43	36.07	711.43	36.08	0.00	0.01
1980/08/26	711.89	47.48	711.89	47.43	0.00	-0.05
1980/09/26	711.66	46.64	711.66	46.65	0.00	0.01
1981/05/03	711.99	56.95	711.99	57.33	0.01	0.38
1981/06/05	712.30	66.81	712.30	66.82	0.00	0.01
1981/06/21	711.60	38.64	711.60	38.65	0.00	0.01

1981/08/23	711.51	34.97	711.51	35.08	0.00	0.11
1982/03/28	712.56	79.42	712.56	79.46	0.00	0.04
1982/07/31	711.95	48.40	711.95	48.31	0.00	-0.09
1982/08/14	712.43	82.30	712.43	82.43	0.00	0.13
1982/12/12	713.57	135.50	713.58	135.69	0.00	0.19
1983/01/04	712.17	61.83	712.17	61.82	0.00	-0.01
1983/04/22	712.60	79.39	712.61	79.44	0.00	0.04
1983/06/04	711.44	39.38	711.44	39.41	0.00	0.03
1983/07/09	713.11	121.06	713.11	121.13	0.00	0.07
1983/12/05	712.20	59.58	712.20	59.59	0.00	0.01
1984/02/25	712.76	91.41	712.76	91.49	0.00	0.08
1984/04/03	712.01	58.89	712.01	58.81	0.00	-0.08
1985/03/19	713.38	120.66	713.38	120.77	0.00	0.11
1985/12/11	711.89	48.04	711.89	48.04	0.00	0.00
1986/07/19	711.42	34.38	711.42	34.41	0.00	0.03
1986/10/10	712.06	56.47	712.06	56.44	0.00	-0.03
1987/09/06	714.77	204.20	714.77	204.37	0.00	0.17
1988/01/01	711.57	37.35	711.58	37.35	0.00	0.00
1988/02/07	711.63	40.39	711.63	40.39	0.00	-0.01
1988/04/13	711.58	38.66	711.58	38.66	0.00	0.00
1988/10/26	712.15	59.72	712.15	59.73	0.00	0.01
1989/08/18	712.29	66.75	712.29	66.78	0.00	0.03
1989/09/18	712.22	81.90	712.22	81.90	0.00	0.00
1990/03/16	712.44	74.03	712.44	73.78	0.00	-0.25
1990/05/19	712.78	89.97	712.78	90.04	0.00	0.07
1990/08/28	712.01	53.55	712.01	53.55	0.00	0.00
1990/12/10	712.45	74.67	712.45	74.70	0.00	0.03
1991/04/23	712.02	54.19	712.02	54.19	0.00	0.00
1991/06/02	711.78	45.93	711.78	45.90	0.00	-0.03
1991/10/09	711.92	48.46	711.92	48.47	0.00	0.01
1991/11/08	711.62	39.51	711.62	39.50	0.00	0.00
1991/12/18	711.10	23.56	711.10	23.54	0.00	-0.02
1992/09/21	711.45	39.33	711.45	39.33	0.00	0.01
1993/01/11	712.32	74.07	712.32	74.08	0.00	0.01
1993/04/29	712.46	73.56	712.47	73.61	0.00	0.05
1993/07/06	711.91	49.65	711.91	49.61	0.00	-0.04
1994/03/13	712.28	66.28	712.28	66.30	0.00	0.02
1994/07/02	712.26	62.50	712.26	62.51	0.00	0.01
1994/08/24	711.49	40.53	711.49	40.53	0.00	0.00
1995/01/25	711.96	52.49	711.96	52.50	0.00	0.01
1995/05/06	711.81	44.38	711.81	44.39	0.00	0.01
1995/08/24	711.60	42.18	711.60	42.11	0.00	-0.07
1995/11/18	712.07	55.36	712.07	55.37	0.00	0.01
1996/06/27	711.91	48.68	711.91	48.67	0.00	0.00
1996/08/05	713.57	150.76	713.57	150.88	0.00	0.12
1997/03/06	713.94	158.03	713.94	158.00	0.00	-0.03
1998/03/25	711.67	40.29	711.67	40.29	0.00	0.00
1998/05/15	711.85	45.39	711.85	45.40	0.00	0.01
1998/08/15	712.15	65.95	712.15	65.87	0.00	-0.08
1998/09/14	711.59	47.46	711.59	47.46	0.00	0.00
1998/10/25	712.06	54.97	712.06	54.99	0.00	0.02
1999/02/09	712.66	82.20	712.66	82.25	0.00	0.04
1999/05/06	712.33	68.18	712.33	68.19	0.00	0.01
2000/04/28	712.37	70.03	712.37	69.81	0.00	-0.22
2001/03/02	712.76	89.15	712.76	89.19	0.00	0.04
2001/09/06	712.86	96.94	712.86	96.99	0.00	0.05
2001/09/30	711.81	44.61	711.82	44.59	0.00	-0.02
2001/10/31	713.61	143.19	713.61	143.36	0.00	0.17
2002/03/15	711.85	46.41	711.85	46.44	0.00	0.03
2002/05/22	711.87	48.82	711.87	48.80	0.00	-0.02
2002/07/14	711.82	54.61	711.82	54.51	0.00	-0.10
2002/08/29	712.68	84.63	712.69	84.68	0.00	0.05
2003/05/19	711.93	48.70	711.93	48.70	0.00	0.00
2003/08/13	711.08	30.63	711.08	30.72	0.00	0.09
2003/11/29	711.44	34.94	711.44	34.93	0.00	-0.01
2004/03/11	711.42	33.42	711.42	33.43	0.00	0.01
2004/06/18	711.31	53.90	711.31	54.09	0.00	0.19
2005/01/18	712.66	87.17	712.66	87.22	0.00	0.06
2006/03/18	711.42	31.06	711.42	31.07	0.00	0.01
2006/07/03	711.65	45.79	711.65	45.80	0.00	0.00
2006/09/29	711.31	37.27	711.31	37.31	0.00	0.04
2006/10/09	712.09	68.52	712.09	68.48	0.00	-0.04
2007/03/15	712.15	58.24	712.15	58.26	0.00	0.02
2007/08/31	712.33	66.89	712.33	66.90	0.00	0.00
2008/03/09	712.79	95.99	712.79	96.06	0.00	0.07
2008/05/18	711.42	39.70	711.42	39.96	0.00	0.26
2008/09/23	714.14	171.53	714.14	171.67	0.00	0.14

Maximums&F	714.77	204.20	714.77	204.37
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

0



Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)

at  
XS\_985 USF of Thorndale Road (143:1458)  
24. Branch# 143; Node ID: THRDLE ; Station: 8976.0000

Nodes ==>	(1) sblNGe6.FFF 1458		(2) sblNGp4.FFF 1458		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.73	2.05	709.73	2.05	0.00	0.00
1949/04/08	712.15	62.31	712.15	62.34	0.00	0.03
1949/06/21	712.61	86.46	712.61	86.53	0.00	0.07
1949/07/27	711.83	48.30	711.83	48.34	0.00	0.04
1949/12/31	712.48	78.72	712.48	78.76	0.00	0.04
1950/01/31	712.12	61.17	712.12	61.22	0.00	0.05
1950/05/03	712.78	95.52	712.78	95.59	0.00	0.07
1950/06/11	712.43	77.76	712.43	77.80	0.00	0.04
1951/03/09	712.03	56.88	712.03	56.91	0.00	0.03
1951/05/17	712.22	65.56	712.22	65.59	0.00	0.02
1951/07/29	712.00	56.77	712.01	56.76	0.01	-0.01
1952/01/25	712.34	72.20	712.34	72.25	0.00	0.04
1952/03/28	711.81	47.29	711.81	47.32	0.00	0.03
1953/03/23	712.07	58.95	712.07	59.00	0.00	0.05
1953/06/16	711.74	44.97	711.75	45.01	0.00	0.04
1953/07/28	712.44	88.27	712.44	88.29	0.00	0.02
1954/04/05	713.25	119.26	713.25	119.36	0.00	0.10
1954/05/08	712.53	82.77	712.54	82.82	0.00	0.05
1954/08/29	712.22	66.14	712.22	66.19	0.00	0.05
1954/10/25	714.00	173.53	714.00	173.65	0.00	0.12
1955/03/09	711.96	53.38	711.96	53.40	0.00	0.03
1956/05/18	712.02	56.54	712.02	56.56	0.00	0.02
1957/01/27	711.78	46.29	711.78	46.32	0.00	0.03
1957/03/04	712.61	86.40	712.61	86.45	0.00	0.05
1957/07/28	714.06	178.51	714.06	178.67	0.00	0.16
1958/04/30	711.89	54.06	711.89	54.14	0.00	0.08
1958/06/19	711.99	54.72	711.99	54.76	0.00	0.04
1958/07/11	711.65	41.18	711.65	41.20	0.00	0.02
1959/04/07	711.59	39.07	711.59	39.09	0.00	0.02
1959/07/27	711.05	22.79	711.05	22.79	0.00	0.00
1960/01/21	712.73	93.13	712.73	93.17	0.00	0.04
1960/04/04	711.99	54.85	712.00	54.88	0.00	0.03
1961/08/09	711.44	33.94	711.44	33.76	0.00	-0.18
1961/10/06	713.23	118.04	713.23	117.93	0.00	-0.11
1962/04/15	711.66	42.00	711.66	42.02	0.00	0.02
1962/07/08	712.01	56.73	712.01	57.56	0.01	0.83
1963/05/07	711.82	47.21	711.82	47.23	0.00	0.02
1964/04/12	711.62	40.47	711.63	40.51	0.00	0.04
1964/07/25	712.09	59.25	712.09	59.28	0.00	0.03
1965/03/22	712.08	58.94	712.08	58.97	0.00	0.03
1966/02/15	712.09	59.67	712.09	59.69	0.00	0.02
1966/05/18	712.43	75.27	712.43	75.32	0.00	0.04
1967/04/09	711.89	50.67	711.89	50.69	0.00	0.03
1967/07/01	712.09	60.95	712.10	61.08	0.00	0.13
1968/08/24	712.78	95.13	712.78	95.20	0.00	0.07
1969/04/13	711.53	37.09	711.53	37.10	0.00	0.01
1969/06/15	711.94	52.67	711.94	52.69	0.00	0.02
1969/08/01	711.40	32.56	711.40	32.59	0.00	0.03
1969/10/25	712.97	104.93	712.97	104.98	0.00	0.05
1970/05/20	711.85	48.53	711.85	48.54	0.00	0.01
1970/12/18	711.40	32.70	711.40	32.71	0.00	0.01
1971/03/04	711.30	29.62	711.30	29.63	0.00	0.01
1971/08/28	711.69	43.20	711.69	43.27	0.00	0.07
1972/03/21	712.23	66.21	712.24	66.23	0.00	0.02
1972/04/27	712.29	69.38	712.29	69.45	0.00	0.07
1972/09/01	713.61	144.12	713.61	144.27	0.00	0.15
1972/10/05	712.12	60.67	712.12	60.70	0.00	0.03
1973/01/08	713.14	112.13	713.14	112.19	0.00	0.06
1973/05/08	711.87	49.39	711.87	49.41	0.00	0.02
1974/02/28	712.44	76.74	712.44	76.79	0.00	0.05
1974/04/21	711.58	38.70	711.58	38.71	0.00	0.01
1974/05/25	711.76	45.17	711.76	45.19	0.00	0.02
1975/01/16	712.30	70.27	712.30	70.30	0.00	0.03
1975/05/05	712.14	61.48	712.14	61.50	0.00	0.02
1975/09/08	712.42	77.03	712.42	77.08	0.00	0.05
1976/03/21	712.19	64.20	712.19	64.23	0.00	0.02
1977/07/05	711.60	39.71	711.60	39.73	0.00	0.02
1977/08/13	711.60	39.98	711.61	40.01	0.00	0.03
1977/09/07	711.36	31.94	711.36	31.95	0.00	0.01
1978/04/02	711.09	23.71	711.09	23.70	0.00	0.00
1978/05/21	711.49	35.74	711.49	35.74	0.00	0.00
1978/07/09	711.99	55.14	711.99	55.18	0.00	0.03
1978/09/25	712.01	56.36	712.01	56.39	0.00	0.03
1979/04/18	713.46	132.55	713.47	132.64	0.00	0.09
1979/09/05	711.81	47.56	711.82	47.59	0.00	0.03
1980/01/21	711.42	33.61	711.42	33.62	0.00	0.01
1980/08/26	711.88	50.78	711.88	50.73	0.00	-0.06
1980/09/26	711.66	41.70	711.66	41.72	0.00	0.02
1981/05/03	711.98	54.76	711.99	55.09	0.01	0.33
1981/06/05	712.30	70.51	712.30	70.35	0.00	-0.16
1981/06/21	711.59	39.33	711.59	39.35	0.00	0.02

1981/08/23	711.51	36.92	711.51	37.25	0.00	0.33
1982/03/28	712.56	83.35	712.56	83.39	0.00	0.04
1982/07/31	711.94	53.43	711.95	53.51	0.00	0.08
1982/08/14	712.42	77.06	712.42	77.17	0.00	0.11
1982/12/12	713.57	140.15	713.57	140.28	0.00	0.13
1983/01/04	712.17	63.32	712.17	63.33	0.00	0.01
1983/04/22	712.60	85.28	712.60	85.32	0.00	0.05
1983/06/04	711.43	34.09	711.43	34.10	0.00	0.01
1983/07/09	713.10	113.28	713.10	113.41	0.00	0.13
1983/12/05	712.19	64.52	712.19	64.55	0.00	0.03
1984/02/25	712.75	94.51	712.75	94.58	0.00	0.08
1984/04/03	712.00	55.81	712.01	55.86	0.00	0.05
1985/03/19	713.38	126.90	713.38	126.99	0.00	0.09
1985/12/11	711.88	50.02	711.88	50.04	0.00	0.02
1986/07/19	711.42	33.24	711.42	33.26	0.00	0.02
1986/10/10	712.06	58.00	712.06	58.02	0.00	0.03
1987/09/06	714.77	230.71	714.77	230.86	0.00	0.15
1988/01/01	711.57	38.68	711.57	38.71	0.00	0.03
1988/02/07	711.63	40.60	711.63	40.62	0.00	0.02
1988/04/13	711.57	38.40	711.57	38.42	0.00	0.01
1988/10/26	712.14	64.61	712.14	65.15	0.00	0.54
1989/08/18	712.29	72.88	712.29	73.02	0.00	0.13
1989/09/18	712.21	65.45	712.21	65.49	0.00	0.04
1990/03/16	712.44	76.41	712.44	76.44	0.00	0.03
1990/05/19	712.78	94.91	712.78	94.98	0.00	0.08
1990/08/28	712.00	62.13	712.00	62.28	0.00	0.14
1990/12/10	712.44	76.31	712.44	76.36	0.00	0.05
1991/04/23	712.01	55.50	712.01	55.52	0.00	0.02
1991/06/02	711.78	45.80	711.78	45.82	0.00	0.02
1991/10/09	711.92	51.82	711.92	51.85	0.00	0.03
1991/11/08	711.61	39.98	711.61	39.99	0.00	0.01
1991/12/18	711.09	23.87	711.09	23.87	0.00	0.00
1992/09/21	711.45	34.15	711.45	34.17	0.00	0.02
1993/01/11	712.31	70.60	712.31	70.64	0.00	0.05
1993/04/29	712.46	78.04	712.46	78.09	0.00	0.05
1993/07/06	711.91	51.56	711.91	51.58	0.00	0.03
1994/03/13	712.27	68.48	712.28	68.52	0.00	0.04
1994/07/02	712.25	67.45	712.25	67.48	0.00	0.03
1994/08/24	711.48	35.27	711.48	35.28	0.00	0.02
1995/01/25	711.95	53.31	711.95	53.35	0.00	0.04
1995/05/06	711.80	46.84	711.80	46.86	0.00	0.02
1995/08/24	711.60	39.92	711.60	39.92	0.00	0.00
1995/11/18	712.07	57.87	712.07	57.90	0.00	0.03
1996/06/27	711.90	50.93	711.90	50.95	0.00	0.02
1996/08/05	713.56	138.86	713.56	138.98	0.00	0.12
1997/03/06	713.94	168.79	713.94	168.94	0.00	0.15
1998/03/25	711.67	42.21	711.67	42.23	0.00	0.02
1998/05/15	711.84	48.33	711.85	48.35	0.00	0.01
1998/08/15	712.15	62.08	712.15	62.14	0.00	0.06
1998/09/14	711.58	38.89	711.58	38.91	0.00	0.02
1998/10/25	712.06	58.04	712.06	58.06	0.00	0.03
1999/02/09	712.66	89.11	712.66	89.16	0.00	0.04
1999/05/06	712.33	70.87	712.33	70.90	0.00	0.04
2000/04/28	712.37	73.44	712.37	73.49	0.00	0.04
2001/03/02	712.75	94.16	712.75	94.22	0.00	0.06
2001/09/06	712.85	101.69	712.85	101.09	0.00	-0.60
2001/09/30	711.81	47.61	711.81	47.63	0.00	0.02
2001/10/31	713.61	143.10	713.61	143.23	0.00	0.13
2002/03/15	711.84	48.53	711.84	48.56	0.00	0.03
2002/05/22	711.87	49.37	711.87	49.39	0.00	0.02
2002/07/14	711.81	47.64	711.82	47.68	0.00	0.04
2002/08/29	712.68	90.44	712.68	90.50	0.00	0.06
2003/05/19	711.93	52.17	711.93	52.18	0.00	0.01
2003/08/13	711.07	23.17	711.07	23.16	0.00	0.00
2003/11/29	711.44	33.92	711.44	33.93	0.00	0.01
2004/03/11	711.42	33.13	711.42	33.14	0.00	0.01
2004/06/18	711.31	29.89	711.31	29.87	0.00	-0.02
2005/01/18	712.65	88.52	712.65	88.58	0.00	0.06
2006/03/18	711.42	33.44	711.42	33.46	0.00	0.01
2006/07/03	711.64	40.97	711.64	40.99	0.00	0.03
2006/09/29	711.30	29.74	711.30	29.75	0.00	0.01
2006/10/09	712.09	59.06	712.09	59.09	0.00	0.03
2007/03/15	712.14	61.92	712.14	61.95	0.00	0.03
2007/08/31	712.32	70.88	712.32	70.90	0.00	0.02
2008/03/09	712.78	95.86	712.79	95.93	0.00	0.07
2008/05/18	711.42	33.28	711.42	33.30	0.00	0.01
2008/09/23	714.14	183.10	714.14	183.22	0.00	0.12

Maximums&F	714.77	230.71	714.77	230.86
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_470 DSF of Thorndale Road (144:1441)  
 25. Branch# 144; Node ID: THRNDE ; Station: 8842.0000

Nodes ==>	(1) sblNGe6.FFF 1441		(2) sblNGp4.FFF 1441		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.70	2.05	709.70	2.05	0.00	0.00
1949/04/08	711.96	62.31	711.96	62.34	0.00	0.03
1949/06/21	712.36	86.46	712.36	86.53	0.00	0.07
1949/07/27	711.67	48.30	711.67	48.34	0.00	0.04
1949/12/31	712.25	78.72	712.25	78.76	0.00	0.04
1950/01/31	711.93	61.17	711.93	61.22	0.00	0.05
1950/05/03	712.51	95.52	712.51	95.59	0.00	0.07
1950/06/11	712.20	77.76	712.20	77.80	0.00	0.04
1951/03/09	711.86	56.88	711.86	56.91	0.00	0.03
1951/05/17	712.02	65.56	712.02	65.59	0.00	0.02
1951/07/29	711.82	56.77	711.83	56.76	0.00	-0.01
1952/01/25	712.13	72.20	712.13	72.25	0.00	0.04
1952/03/28	711.65	47.29	711.65	47.32	0.00	0.03
1953/03/23	711.89	58.95	711.89	59.00	0.00	0.05
1953/06/16	711.60	44.97	711.60	45.01	0.00	0.04
1953/07/28	712.12	88.27	712.13	88.29	0.00	0.02
1954/04/05	712.93	119.26	712.93	119.36	0.00	0.10
1954/05/08	712.29	82.77	712.29	82.82	0.00	0.05
1954/08/29	712.02	66.14	712.03	66.19	0.00	0.05
1954/10/25	713.46	173.53	713.46	173.65	0.00	0.12
1955/03/09	711.79	53.38	711.79	53.40	0.00	0.03
1956/05/18	711.85	56.54	711.85	56.56	0.00	0.02
1957/01/27	711.63	46.29	711.63	46.32	0.00	0.03
1957/03/04	712.36	86.40	712.37	86.45	0.00	0.05
1957/07/28	713.58	178.51	713.59	178.67	0.00	0.16
1958/04/30	711.72	54.06	711.72	54.14	0.00	0.08
1958/06/19	711.83	54.72	711.83	54.76	0.00	0.04
1958/07/11	711.51	41.18	711.51	41.20	0.00	0.02
1959/04/07	711.45	39.07	711.45	39.09	0.00	0.02
1959/07/27	710.94	22.79	710.94	22.79	0.00	0.00
1960/01/21	712.46	93.13	712.46	93.17	0.00	0.04
1960/04/04	711.83	54.85	711.83	54.88	0.00	0.03
1961/08/09	711.32	33.94	711.32	33.76	0.00	-0.18
1961/10/06	712.91	118.04	712.91	117.93	0.00	-0.11
1962/04/15	711.52	42.00	711.52	42.02	0.00	0.02
1962/07/08	711.82	56.73	711.83	57.56	0.00	0.83
1963/05/07	711.67	47.21	711.67	47.23	0.00	0.02
1964/04/12	711.49	40.47	711.49	40.51	0.00	0.04
1964/07/25	711.91	59.25	711.91	59.28	0.00	0.03
1965/03/22	711.89	58.94	711.89	58.97	0.00	0.03
1966/02/15	711.91	59.67	711.91	59.69	0.00	0.02
1966/05/18	712.21	75.27	712.21	75.32	0.00	0.04
1967/04/09	711.73	50.67	711.73	50.69	0.00	0.03
1967/07/01	711.90	60.95	711.90	61.08	0.00	0.13
1968/08/24	712.51	95.13	712.51	95.20	0.00	0.07
1969/04/13	711.40	37.09	711.40	37.10	0.00	0.01
1969/06/15	711.77	52.67	711.78	52.69	0.00	0.02
1969/08/01	711.28	32.56	711.28	32.59	0.00	0.03
1969/10/25	712.69	104.93	712.69	104.98	0.00	0.05
1970/05/20	711.70	48.53	711.70	48.54	0.00	0.01
1970/12/18	711.27	32.70	711.28	32.71	0.00	0.01
1971/03/04	711.18	29.62	711.18	29.63	0.00	0.01
1971/08/28	711.54	43.20	711.54	43.27	0.00	0.07
1972/03/21	712.05	66.21	712.05	66.23	0.00	0.02
1972/04/27	712.08	69.38	712.09	69.45	0.00	0.07
1972/09/01	713.20	144.12	713.20	144.27	0.00	0.15
1972/10/05	711.93	60.67	711.93	60.70	0.00	0.03
1973/01/08	712.84	112.13	712.84	112.19	0.00	0.06
1973/05/08	711.71	49.39	711.71	49.41	0.00	0.02
1974/02/28	712.21	76.74	712.21	76.79	0.00	0.05
1974/04/21	711.44	38.70	711.44	38.71	0.00	0.01
1974/05/25	711.61	45.17	711.61	45.19	0.00	0.02
1975/01/16	712.09	70.27	712.09	70.30	0.00	0.03
1975/05/05	711.95	61.48	711.95	61.50	0.00	0.02
1975/09/08	712.20	77.03	712.20	77.08	0.00	0.05
1976/03/21	712.00	64.20	712.00	64.23	0.00	0.02
1977/07/05	711.46	39.71	711.46	39.73	0.00	0.02
1977/08/13	711.47	39.98	711.47	40.01	0.00	0.03
1977/09/07	711.23	31.94	711.23	31.95	0.00	0.01
1978/04/02	710.98	23.71	710.98	23.70	0.00	0.00
1978/05/21	711.36	35.74	711.36	35.74	0.00	0.00
1978/07/09	711.82	55.14	711.82	55.18	0.00	0.03
1978/09/25	711.83	56.36	711.83	56.39	0.00	0.03
1979/04/18	713.09	132.55	713.10	132.64	0.00	0.09
1979/09/05	711.66	47.56	711.66	47.59	0.00	0.03
1980/01/21	711.29	33.61	711.29	33.62	0.00	0.01
1980/08/26	711.72	50.78	711.72	50.73	0.00	-0.06
1980/09/26	711.52	41.70	711.52	41.72	0.00	0.02
1981/05/03	711.81	54.76	711.82	55.09	0.01	0.33
1981/06/05	712.09	70.51	712.09	70.35	0.00	-0.16
1981/06/21	711.46	39.33	711.46	39.35	0.00	0.02



1981/08/23	711.37	36.92	711.37	37.25	0.00	0.33
1982/03/28	712.32	83.35	712.32	83.39	0.00	0.04
1982/07/31	711.78	53.43	711.78	53.51	0.00	0.08
1982/08/14	712.19	77.06	712.20	77.17	0.00	0.11
1982/12/12	713.17	140.15	713.17	140.28	0.00	0.13
1983/01/04	711.98	63.32	711.98	63.33	0.00	0.01
1983/04/22	712.36	85.28	712.36	85.32	0.00	0.05
1983/06/04	711.30	34.09	711.30	34.10	0.00	0.01
1983/07/09	712.80	113.28	712.80	113.41	0.00	0.13
1983/12/05	712.00	64.52	712.00	64.55	0.00	0.03
1984/02/25	712.48	94.51	712.48	94.58	0.00	0.08
1984/04/03	711.83	55.81	711.83	55.86	0.00	0.05
1985/03/19	713.03	126.90	713.03	126.99	0.00	0.09
1985/12/11	711.72	50.02	711.72	50.04	0.00	0.02
1986/07/19	711.29	33.24	711.29	33.26	0.00	0.02
1986/10/10	711.88	58.00	711.88	58.02	0.00	0.03
1987/09/06	713.94	230.71	713.94	230.86	0.00	0.15
1988/01/01	711.43	38.68	711.43	38.71	0.00	0.03
1988/02/07	711.48	40.60	711.49	40.62	0.00	0.02
1988/04/13	711.44	38.40	711.44	38.42	0.00	0.01
1988/10/26	711.95	64.61	711.95	65.15	0.00	0.54
1989/08/18	712.08	72.88	712.08	73.02	0.00	0.13
1989/09/18	712.01	65.45	712.02	65.49	0.00	0.04
1990/03/16	712.21	76.41	712.22	76.44	0.00	0.03
1990/05/19	712.51	94.91	712.51	94.98	0.00	0.08
1990/08/28	711.81	62.13	711.81	62.28	0.00	0.14
1990/12/10	712.22	76.31	712.22	76.36	0.00	0.05
1991/04/23	711.84	55.50	711.84	55.52	0.00	0.02
1991/06/02	711.63	45.80	711.63	45.82	0.00	0.02
1991/10/09	711.75	51.82	711.75	51.85	0.00	0.03
1991/11/08	711.47	39.98	711.47	39.99	0.00	0.01
1991/12/18	710.99	23.87	710.99	23.87	0.00	0.00
1992/09/21	711.32	34.15	711.32	34.17	0.00	0.02
1993/01/11	712.10	70.60	712.10	70.64	0.00	0.05
1993/04/29	712.23	78.04	712.23	78.09	0.00	0.05
1993/07/06	711.74	51.56	711.74	51.58	0.00	0.03
1994/03/13	712.07	68.48	712.07	68.52	0.00	0.04
1994/07/02	712.05	67.45	712.05	67.48	0.00	0.03
1994/08/24	711.35	35.27	711.35	35.28	0.00	0.02
1995/01/25	711.78	53.31	711.78	53.35	0.00	0.04
1995/05/06	711.65	46.84	711.65	46.86	0.00	0.02
1995/08/24	711.45	39.92	711.45	39.92	0.00	0.00
1995/11/18	711.89	57.87	711.89	57.90	0.00	0.03
1996/06/27	711.74	50.93	711.74	50.95	0.00	0.02
1996/08/05	713.17	138.86	713.17	138.98	0.00	0.12
1997/03/06	713.42	168.79	713.42	168.94	0.00	0.15
1998/03/25	711.53	42.21	711.53	42.23	0.00	0.02
1998/05/15	711.69	48.33	711.69	48.35	0.00	0.01
1998/08/15	711.96	62.08	711.96	62.14	0.00	0.06
1998/09/14	711.45	38.89	711.45	38.91	0.00	0.02
1998/10/25	711.88	58.04	711.88	58.06	0.00	0.03
1999/02/09	712.40	89.11	712.40	89.16	0.00	0.04
1999/05/06	712.12	70.87	712.12	70.90	0.00	0.04
2000/04/28	712.15	73.44	712.15	73.49	0.00	0.04
2001/03/02	712.49	94.16	712.49	94.22	0.00	0.06
2001/09/06	712.57	101.69	712.57	101.09	0.00	-0.60
2001/09/30	711.65	47.61	711.65	47.63	0.00	0.02
2001/10/31	713.20	143.10	713.20	143.23	0.00	0.13
2002/03/15	711.69	48.53	711.69	48.56	0.00	0.03
2002/05/22	711.71	49.37	711.71	49.39	0.00	0.02
2002/07/14	711.66	47.64	711.66	47.68	0.00	0.04
2002/08/29	712.42	90.44	712.42	90.50	0.00	0.06
2003/05/19	711.77	52.17	711.77	52.18	0.00	0.01
2003/08/13	710.97	23.17	710.97	23.16	0.00	0.00
2003/11/29	711.31	33.92	711.31	33.93	0.00	0.01
2004/03/11	711.29	33.13	711.30	33.14	0.00	0.01
2004/06/18	711.19	29.89	711.19	29.87	0.00	-0.02
2005/01/18	712.40	88.52	712.40	88.58	0.00	0.06
2006/03/18	711.29	33.44	711.29	33.46	0.00	0.01
2006/07/03	711.50	40.97	711.50	40.99	0.00	0.03
2006/09/29	711.18	29.74	711.18	29.75	0.00	0.01
2006/10/09	711.91	59.06	711.91	59.09	0.00	0.03
2007/03/15	711.95	61.92	711.95	61.95	0.00	0.03
2007/08/31	712.11	70.88	712.11	70.90	0.00	0.02
2008/03/09	712.52	95.86	712.52	95.93	0.00	0.07
2008/05/18	711.29	33.28	711.29	33.30	0.00	0.01
2008/09/23	713.55	183.10	713.55	183.22	0.00	0.12

Maximums&F	713.94	230.71	713.94	230.86
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

□

Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_994 459 feet DS of Thorndale Road (144:1445)  
 26. Branch# 144; Node ID: ; Station: 8383.0000

Nodes ==>	(1) sblNGe6.FFF 1445		(2) sblNGp4.FFF 1445		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.61	2.05	709.61	2.05	0.00	0.00
1949/04/08	711.80	62.82	711.80	62.85	0.00	0.03
1949/06/21	712.21	86.66	712.21	86.73	0.00	0.07
1949/07/27	711.50	48.38	711.50	48.42	0.00	0.04
1949/12/31	712.10	79.28	712.10	79.32	0.00	0.04
1950/01/31	711.76	61.35	711.76	61.40	0.00	0.05
1950/05/03	712.37	96.15	712.37	96.22	0.00	0.07
1950/06/11	712.04	76.72	712.04	76.76	0.00	0.04
1951/03/09	711.69	57.26	711.69	57.29	0.00	0.02
1951/05/17	711.86	66.09	711.86	66.12	0.00	0.02
1951/07/29	711.65	56.00	711.65	56.21	0.00	0.21
1952/01/25	711.97	72.36	711.97	72.41	0.00	0.05
1952/03/28	711.48	47.46	711.48	47.49	0.00	0.03
1953/03/23	711.72	59.17	711.72	59.22	0.00	0.05
1953/06/16	711.42	45.20	711.43	45.24	0.00	0.05
1953/07/28	711.96	75.71	711.96	75.72	0.00	0.01
1954/04/05	712.81	119.77	712.81	119.87	0.00	0.10
1954/05/08	712.14	82.51	712.14	82.56	0.00	0.05
1954/08/29	711.86	66.44	711.86	66.50	0.00	0.06
1954/10/25	713.36	174.55	713.36	174.67	0.00	0.12
1955/03/09	711.61	53.72	711.62	53.74	0.00	0.02
1956/05/18	711.67	56.81	711.67	56.83	0.00	0.02
1957/01/27	711.46	46.63	711.46	46.65	0.00	0.02
1957/03/04	712.22	86.89	712.22	86.94	0.00	0.05
1957/07/28	713.52	179.31	713.52	179.46	0.00	0.15
1958/04/30	711.55	50.63	711.55	50.69	0.00	0.06
1958/06/19	711.66	55.40	711.66	55.44	0.00	0.04
1958/07/11	711.34	41.56	711.34	41.58	0.00	0.02
1959/04/07	711.28	39.40	711.28	39.42	0.00	0.02
1959/07/27	710.78	22.81	710.78	22.81	0.00	0.00
1960/01/21	712.32	93.42	712.32	93.47	0.00	0.05
1960/04/04	711.66	55.48	711.66	55.51	0.00	0.03
1961/08/09	711.16	34.24	711.16	34.26	0.00	0.02
1961/10/06	712.79	118.67	712.79	118.56	0.00	-0.11
1962/04/15	711.35	42.22	711.35	42.23	0.00	0.02
1962/07/08	711.65	56.11	711.65	56.44	0.01	0.33
1963/05/07	711.50	47.81	711.50	47.83	0.00	0.02
1964/04/12	711.32	40.75	711.32	40.78	0.00	0.03
1964/07/25	711.75	60.00	711.75	60.03	0.00	0.03
1965/03/22	711.72	59.25	711.72	59.28	0.00	0.03
1966/02/15	711.74	59.91	711.74	59.93	0.00	0.02
1966/05/18	712.06	76.33	712.06	76.37	0.00	0.04
1967/04/09	711.56	50.96	711.56	50.98	0.00	0.03
1967/07/01	711.73	60.18	711.73	60.32	0.00	0.14
1968/08/24	712.37	95.99	712.37	96.06	0.00	0.07
1969/04/13	711.23	37.44	711.23	37.45	0.00	0.01
1969/06/15	711.60	53.03	711.60	53.06	0.00	0.03
1969/08/01	711.12	32.98	711.12	33.01	0.00	0.02
1969/10/25	712.56	105.67	712.56	105.72	0.00	0.05
1970/05/20	711.53	49.06	711.53	49.08	0.00	0.01
1970/12/18	711.11	32.94	711.11	32.96	0.00	0.01
1971/03/04	711.03	29.78	711.03	29.79	0.00	0.01
1971/08/28	711.37	43.23	711.37	43.30	0.00	0.08
1972/03/21	711.90	66.82	711.90	66.83	0.00	0.01
1972/04/27	711.92	69.73	711.93	69.79	0.00	0.06
1972/09/01	713.09	144.71	713.09	144.87	0.00	0.16
1972/10/05	711.77	61.16	711.77	61.19	0.00	0.03
1973/01/08	712.72	113.33	712.72	113.39	0.00	0.06
1973/05/08	711.54	49.84	711.54	49.87	0.00	0.02
1974/02/28	712.06	77.05	712.06	77.10	0.00	0.06
1974/04/21	711.27	39.00	711.27	39.01	0.00	0.01
1974/05/25	711.44	45.66	711.44	45.68	0.00	0.02
1975/01/16	711.93	70.35	711.93	70.38	0.00	0.03
1975/05/05	711.79	62.14	711.79	62.16	0.00	0.02
1975/09/08	712.04	76.39	712.04	76.44	0.00	0.05
1976/03/21	711.84	64.82	711.84	64.85	0.00	0.02
1977/07/05	711.29	39.83	711.29	39.84	0.00	0.02
1977/08/13	711.30	40.11	711.30	40.13	0.00	0.03
1977/09/07	711.07	31.58	711.07	31.59	0.00	0.01
1978/04/02	710.83	23.92	710.83	23.92	0.00	0.00
1978/05/21	711.20	36.00	711.20	36.01	0.00	0.00
1978/07/09	711.65	55.28	711.65	55.32	0.00	0.03
1978/09/25	711.66	56.33	711.66	56.36	0.00	0.03
1979/04/18	712.98	133.92	712.98	134.01	0.00	0.09
1979/09/05	711.49	47.76	711.49	47.79	0.00	0.03
1980/01/21	711.13	33.69	711.13	33.71	0.00	0.02
1980/08/26	711.54	50.55	711.54	50.60	0.00	0.05
1980/09/26	711.35	42.01	711.35	42.03	0.00	0.02
1981/05/03	711.64	54.96	711.64	55.29	0.01	0.34
1981/06/05	711.92	70.15	711.93	70.25	0.00	0.09
1981/06/21	711.29	39.69	711.29	39.71	0.00	0.02

1981/08/23	711.21	36.68	711.21	36.71	0.00	0.03
1982/03/28	712.16	83.69	712.16	83.73	0.00	0.04
1982/07/31	711.60	53.23	711.60	53.28	0.00	0.05
1982/08/14	712.04	76.38	712.04	76.49	0.00	0.11
1982/12/12	713.06	141.44	713.06	141.56	0.00	0.12
1983/01/04	711.81	63.74	711.81	63.75	0.00	0.01
1983/04/22	712.21	86.06	712.21	86.11	0.00	0.05
1983/06/04	711.14	34.08	711.14	34.10	0.00	0.01
1983/07/09	712.67	112.02	712.67	112.11	0.00	0.09
1983/12/05	711.83	64.85	711.83	64.88	0.00	0.03
1984/02/25	712.34	94.64	712.34	94.71	0.00	0.07
1984/04/03	711.66	55.95	711.66	56.01	0.00	0.05
1985/03/19	712.91	127.77	712.91	127.86	0.00	0.09
1985/12/11	711.55	50.43	711.55	50.46	0.00	0.03
1986/07/19	711.13	33.57	711.13	33.59	0.00	0.02
1986/10/10	711.71	58.48	711.71	58.51	0.00	0.03
1987/09/06	713.87	228.69	713.87	228.82	0.00	0.13
1988/01/01	711.27	38.84	711.27	38.88	0.00	0.03
1988/02/07	711.32	40.83	711.32	40.85	0.00	0.02
1988/04/13	711.28	38.94	711.28	38.95	0.00	0.02
1988/10/26	711.78	62.52	711.78	62.57	0.00	0.05
1989/08/18	711.92	69.67	711.92	69.73	0.00	0.06
1989/09/18	711.85	65.81	711.85	65.85	0.00	0.04
1990/03/16	712.06	76.97	712.06	77.00	0.00	0.03
1990/05/19	712.37	95.81	712.37	95.89	0.00	0.08
1990/08/28	711.64	56.60	711.64	56.74	0.00	0.14
1990/12/10	712.07	77.15	712.07	77.21	0.00	0.05
1991/04/23	711.67	56.21	711.67	56.23	0.00	0.02
1991/06/02	711.46	46.31	711.46	46.33	0.00	0.02
1991/10/09	711.58	51.99	711.58	52.03	0.00	0.04
1991/11/08	711.31	40.35	711.31	40.37	0.00	0.01
1991/12/18	710.83	24.05	710.83	24.05	0.00	0.00
1992/09/21	711.16	34.54	711.16	34.56	0.00	0.02
1993/01/11	711.94	70.86	711.94	70.90	0.00	0.05
1993/04/29	712.08	78.35	712.08	78.40	0.00	0.05
1993/07/06	711.57	51.70	711.57	51.72	0.00	0.03
1994/03/13	711.91	68.87	711.92	68.92	0.00	0.05
1994/07/02	711.89	67.86	711.89	67.88	0.00	0.02
1994/08/24	711.19	35.71	711.19	35.72	0.00	0.02
1995/01/25	711.61	53.55	711.61	53.59	0.00	0.04
1995/05/06	711.48	47.31	711.48	47.32	0.00	0.02
1995/08/24	711.29	39.81	711.29	39.81	0.00	0.00
1995/11/18	711.73	58.76	711.73	58.79	0.00	0.03
1996/06/27	711.57	51.38	711.57	51.40	0.00	0.02
1996/08/05	713.07	140.91	713.07	141.03	0.00	0.12
1997/03/06	713.32	170.01	713.32	170.07	0.00	0.06
1998/03/25	711.36	42.44	711.36	42.45	0.00	0.01
1998/05/15	711.52	48.89	711.52	48.91	0.00	0.02
1998/08/15	711.79	62.57	711.79	62.64	0.00	0.06
1998/09/14	711.28	39.22	711.28	39.24	0.00	0.02
1998/10/25	711.72	58.42	711.72	58.45	0.00	0.03
1999/02/09	712.26	89.41	712.26	89.45	0.00	0.04
1999/05/06	711.96	71.49	711.96	71.53	0.00	0.04
2000/04/28	712.00	73.43	712.00	73.46	0.00	0.03
2001/03/02	712.35	94.63	712.35	94.68	0.00	0.06
2001/09/06	712.43	100.19	712.43	100.30	0.00	0.11
2001/09/30	711.48	47.64	711.48	47.66	0.00	0.02
2001/10/31	713.09	144.25	713.09	144.38	0.00	0.13
2002/03/15	711.51	48.79	711.52	48.81	0.00	0.03
2002/05/22	711.54	49.86	711.54	49.88	0.00	0.02
2002/07/14	711.49	47.76	711.49	47.80	0.00	0.04
2002/08/29	712.27	90.73	712.27	90.79	0.00	0.06
2003/05/19	711.59	52.54	711.59	52.55	0.00	0.01
2003/08/13	710.82	23.46	710.82	23.46	0.00	0.00
2003/11/29	711.15	34.26	711.15	34.27	0.00	0.01
2004/03/11	711.14	33.58	711.14	33.59	0.00	0.01
2004/06/18	711.03	30.02	711.03	30.00	0.00	-0.02
2005/01/18	712.25	89.04	712.25	89.09	0.00	0.06
2006/03/18	711.13	33.61	711.13	33.62	0.00	0.01
2006/07/03	711.34	41.38	711.34	41.40	0.00	0.03
2006/09/29	711.03	29.81	711.03	29.82	0.00	0.01
2006/10/09	711.74	59.70	711.74	59.73	0.00	0.03
2007/03/15	711.79	62.40	711.79	62.42	0.00	0.03
2007/08/31	711.95	71.16	711.95	71.19	0.00	0.03
2008/03/09	712.38	96.41	712.38	96.48	0.00	0.07
2008/05/18	711.13	33.56	711.13	33.57	0.00	0.01
2008/09/23	713.46	184.98	713.47	185.10	0.00	0.12

Maximums&F	713.87	228.69	713.87	228.82
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

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Meacham Creek FEQ Modeling (CBBEL Project No. 07-0404.0001B)  
 Comparison of Peak Water Surface Elevations (S) and Flow Rates (F)  
 at  
 XS\_460 USF of Maple Ave (144:1451)  
 27. Branch# 144; Node ID: MAPLEAV ; Station: 7781.0000

Nodes ==>	(1) sblNGe6.FFF 1451		(2) sblNGp4.FFF 1451		2-1	2-1
	(S)	(F)	(S)	(F)	(S)	(F)
1925/01/02	709.40	2.05	709.40	2.05	0.00	0.00
1949/04/08	711.51	63.53	711.51	63.56	0.00	0.02
1949/06/21	711.90	86.98	711.91	87.05	0.00	0.07
1949/07/27	711.23	48.49	711.23	48.53	0.00	0.04
1949/12/31	711.80	80.02	711.80	80.06	0.00	0.04
1950/01/31	711.48	61.59	711.48	61.65	0.00	0.06
1950/05/03	712.05	97.07	712.05	97.14	0.00	0.07
1950/06/11	711.74	76.40	711.75	76.44	0.00	0.04
1951/03/09	711.41	57.77	711.41	57.79	0.00	0.03
1951/05/17	711.57	66.82	711.57	66.84	0.00	0.02
1951/07/29	711.37	55.76	711.37	55.92	0.00	0.16
1952/01/25	711.68	72.59	711.68	72.64	0.00	0.05
1952/03/28	711.22	47.82	711.22	47.84	0.00	0.02
1953/03/23	711.44	59.46	711.44	59.51	0.00	0.06
1953/06/16	711.16	45.50	711.16	45.55	0.00	0.05
1953/07/28	711.66	71.99	711.66	72.03	0.00	0.04
1954/04/05	712.39	120.50	712.39	120.60	0.00	0.10
1954/05/08	711.84	82.83	711.84	82.88	0.00	0.05
1954/08/29	711.57	66.85	711.57	66.91	0.00	0.06
1954/10/25	713.08	176.40	713.09	176.52	0.00	0.12
1955/03/09	711.34	54.17	711.34	54.20	0.00	0.03
1956/05/18	711.40	57.19	711.40	57.21	0.00	0.02
1957/01/27	711.20	47.08	711.20	47.10	0.00	0.02
1957/03/04	711.91	87.58	711.91	87.63	0.00	0.05
1957/07/28	713.32	190.39	713.32	190.53	0.00	0.14
1958/04/30	711.28	50.74	711.28	50.80	0.00	0.07
1958/06/19	711.38	56.31	711.38	56.35	0.00	0.04
1958/07/11	711.07	42.07	711.07	42.09	0.00	0.02
1959/04/07	711.02	39.85	711.02	39.86	0.00	0.02
1959/07/27	710.51	22.84	710.51	22.84	0.00	0.00
1960/01/21	712.06	94.17	712.06	94.17	0.00	0.01
1960/04/04	711.38	56.33	711.38	56.36	0.00	0.03
1961/08/09	710.90	34.97	710.90	34.99	0.00	0.01
1961/10/06	712.38	119.56	712.38	119.46	0.00	-0.10
1962/04/15	711.08	42.56	711.09	42.57	0.00	0.01
1962/07/08	711.37	55.72	711.37	55.98	0.01	0.26
1963/05/07	711.24	48.62	711.24	48.65	0.00	0.02
1964/04/12	711.05	41.26	711.05	41.29	0.00	0.03
1964/07/25	711.47	61.00	711.47	61.03	0.00	0.04
1965/03/22	711.44	59.67	711.44	59.70	0.00	0.03
1966/02/15	711.45	60.30	711.45	60.32	0.00	0.02
1966/05/18	711.77	77.73	711.77	77.77	0.00	0.04
1967/04/09	711.29	51.35	711.29	51.37	0.00	0.03
1967/07/01	711.45	59.99	711.45	60.13	0.00	0.14
1968/08/24	712.06	97.16	712.06	97.24	0.00	0.08
1969/04/13	710.97	37.90	710.97	37.91	0.00	0.01
1969/06/15	711.33	53.52	711.33	53.54	0.00	0.03
1969/08/01	710.86	33.60	710.86	33.63	0.00	0.02
1969/10/25	712.20	106.73	712.20	106.78	0.00	0.05
1970/05/20	711.26	49.77	711.26	49.78	0.00	0.01
1970/12/18	710.85	33.27	710.85	33.28	0.00	0.01
1971/03/04	710.78	30.29	710.78	30.29	0.00	0.01
1971/08/28	711.10	43.29	711.10	43.36	0.00	0.08
1972/03/21	711.61	68.90	711.61	68.92	0.00	0.02
1972/04/27	711.63	70.21	711.63	70.27	0.00	0.06
1972/09/01	712.89	145.62	712.89	145.78	0.00	0.16
1972/10/05	711.48	61.83	711.48	61.86	0.00	0.03
1973/01/08	712.32	114.92	712.32	114.99	0.00	0.07
1973/05/08	711.27	50.45	711.27	50.47	0.00	0.02
1974/02/28	711.76	77.46	711.76	77.52	0.00	0.06
1974/04/21	711.01	39.39	711.01	39.41	0.00	0.02
1974/05/25	711.18	46.31	711.18	46.33	0.00	0.02
1975/01/16	711.64	70.70	711.64	70.73	0.00	0.03
1975/05/05	711.50	63.01	711.50	63.04	0.00	0.02
1975/09/08	711.75	76.62	711.75	76.67	0.00	0.05
1976/03/21	711.55	65.64	711.55	65.66	0.00	0.02
1977/07/05	711.02	39.98	711.02	40.00	0.00	0.02
1977/08/13	711.03	40.29	711.03	40.32	0.00	0.03
1977/09/07	710.81	31.74	710.82	31.75	0.00	0.01
1978/04/02	710.56	24.19	710.56	24.19	0.00	0.00
1978/05/21	710.93	36.38	710.93	36.38	0.00	0.00
1978/07/09	711.37	55.72	711.37	55.75	0.00	0.03
1978/09/25	711.38	56.33	711.38	56.36	0.00	0.03
1979/04/18	712.60	135.76	712.60	135.85	0.00	0.09
1979/09/05	711.22	48.09	711.22	48.12	0.00	0.03
1980/01/21	710.87	33.90	710.87	33.91	0.00	0.01
1980/08/26	711.28	50.54	711.28	50.58	0.00	0.04
1980/09/26	711.08	42.43	711.08	42.45	0.00	0.02
1981/05/03	711.36	55.23	711.37	55.56	0.01	0.33
1981/06/05	711.63	70.19	711.63	70.29	0.00	0.10
1981/06/21	711.03	40.17	711.03	40.19	0.00	0.02

1981/08/23	710.94	36.68	710.94	36.69	0.00	0.01
1982/03/28	711.86	84.19	711.86	84.23	0.00	0.04
1982/07/31	711.33	53.35	711.33	53.41	0.00	0.06
1982/08/14	711.74	76.36	711.75	76.47	0.00	0.11
1982/12/12	712.70	143.16	712.70	143.28	0.00	0.12
1983/01/04	711.53	64.29	711.53	64.31	0.00	0.02
1983/04/22	711.91	87.13	711.91	87.18	0.00	0.05
1983/06/04	710.87	34.10	710.87	34.11	0.00	0.01
1983/07/09	712.28	112.29	712.28	112.38	0.00	0.09
1983/12/05	711.54	65.30	711.54	65.32	0.00	0.02
1984/02/25	712.03	95.16	712.03	95.23	0.00	0.07
1984/04/03	711.38	56.16	711.38	56.21	0.00	0.05
1985/03/19	712.51	128.94	712.51	129.04	0.00	0.10
1985/12/11	711.28	50.98	711.28	51.00	0.00	0.03
1986/07/19	710.87	34.01	710.87	34.03	0.00	0.02
1986/10/10	711.43	59.12	711.43	59.14	0.00	0.03
1987/09/06	713.68	231.21	713.68	231.35	0.00	0.14
1988/01/01	711.00	39.06	711.00	39.10	0.00	0.03
1988/02/07	711.05	41.14	711.05	41.16	0.00	0.02
1988/04/13	711.01	39.64	711.01	39.66	0.00	0.02
1988/10/26	711.49	62.55	711.49	62.60	0.00	0.05
1989/08/18	711.62	69.67	711.62	69.73	0.00	0.06
1989/09/18	711.56	66.30	711.56	66.34	0.00	0.04
1990/03/16	711.77	77.95	711.77	77.99	0.00	0.05
1990/05/19	712.05	97.04	712.05	97.12	0.00	0.08
1990/08/28	711.36	55.25	711.36	55.30	0.00	0.05
1990/12/10	711.77	78.27	711.77	78.32	0.00	0.05
1991/04/23	711.40	57.16	711.40	57.18	0.00	0.02
1991/06/02	711.20	46.99	711.20	47.02	0.00	0.02
1991/10/09	711.31	52.29	711.31	52.34	0.00	0.05
1991/11/08	711.04	40.85	711.04	40.86	0.00	0.01
1991/12/18	710.56	24.30	710.56	24.29	0.00	0.00
1992/09/21	710.90	35.05	710.90	35.08	0.00	0.02
1993/01/11	711.65	71.22	711.65	71.27	0.00	0.05
1993/04/29	711.78	78.76	711.78	78.81	0.00	0.05
1993/07/06	711.30	51.89	711.30	51.91	0.00	0.03
1994/03/13	711.63	69.79	711.63	69.85	0.00	0.05
1994/07/02	711.60	68.44	711.60	68.46	0.00	0.03
1994/08/24	710.93	36.29	710.93	36.31	0.00	0.02
1995/01/25	711.34	53.88	711.34	53.92	0.00	0.04
1995/05/06	711.22	47.92	711.22	47.93	0.00	0.02
1995/08/24	711.02	39.90	711.02	39.89	0.00	0.00
1995/11/18	711.45	59.97	711.45	60.00	0.00	0.03
1996/06/27	711.30	51.98	711.30	52.00	0.00	0.02
1996/08/05	712.71	143.81	712.71	143.98	0.00	0.17
1997/03/06	713.03	171.96	713.03	172.07	0.00	0.11
1998/03/25	711.09	42.74	711.09	42.76	0.00	0.02
1998/05/15	711.26	49.64	711.26	49.66	0.00	0.02
1998/08/15	711.51	63.24	711.51	63.31	0.00	0.06
1998/09/14	711.01	39.66	711.01	39.68	0.00	0.02
1998/10/25	711.44	59.39	711.44	59.42	0.00	0.03
1999/02/09	711.95	90.10	711.95	90.14	0.00	0.04
1999/05/06	711.67	72.33	711.67	72.37	0.00	0.04
2000/04/28	711.70	74.15	711.71	74.18	0.00	0.03
2001/03/02	712.05	96.52	712.05	96.56	0.00	0.04
2001/09/06	712.10	100.21	712.10	100.31	0.00	0.10
2001/09/30	711.21	47.68	711.21	47.70	0.00	0.02
2001/10/31	712.74	145.87	712.74	145.99	0.00	0.12
2002/03/15	711.25	49.13	711.25	49.16	0.00	0.03
2002/05/22	711.27	50.51	711.28	50.53	0.00	0.02
2002/07/14	711.22	47.93	711.22	47.97	0.00	0.04
2002/08/29	711.97	91.31	711.97	91.38	0.00	0.07
2003/05/19	711.32	53.07	711.32	53.08	0.00	0.01
2003/08/13	710.54	23.86	710.54	23.86	0.00	0.00
2003/11/29	710.89	34.71	710.89	34.72	0.00	0.01
2004/03/11	710.88	34.17	710.88	34.18	0.00	0.01
2004/06/18	710.78	30.19	710.78	30.18	0.00	-0.02
2005/01/18	711.95	89.76	711.95	89.81	0.00	0.05
2006/03/18	710.87	33.91	710.87	33.92	0.00	0.01
2006/07/03	711.07	41.99	711.07	42.00	0.00	0.01
2006/09/29	710.77	29.90	710.77	29.91	0.00	0.01
2006/10/09	711.46	60.53	711.46	60.56	0.00	0.04
2007/03/15	711.50	63.03	711.50	63.06	0.00	0.03
2007/08/31	711.66	71.76	711.66	71.79	0.00	0.03
2008/03/09	712.06	97.68	712.06	97.75	0.00	0.07
2008/05/18	710.87	33.93	710.87	33.94	0.00	0.01
2008/09/23	713.21	187.59	713.21	187.71	0.00	0.12

Maximums&F	713.68	231.21	713.68	231.35
StormEvent	1987/09/06	1987/09/06	1987/09/06	1987/09/06

□

**TAB 12**



## **SECTION 12**

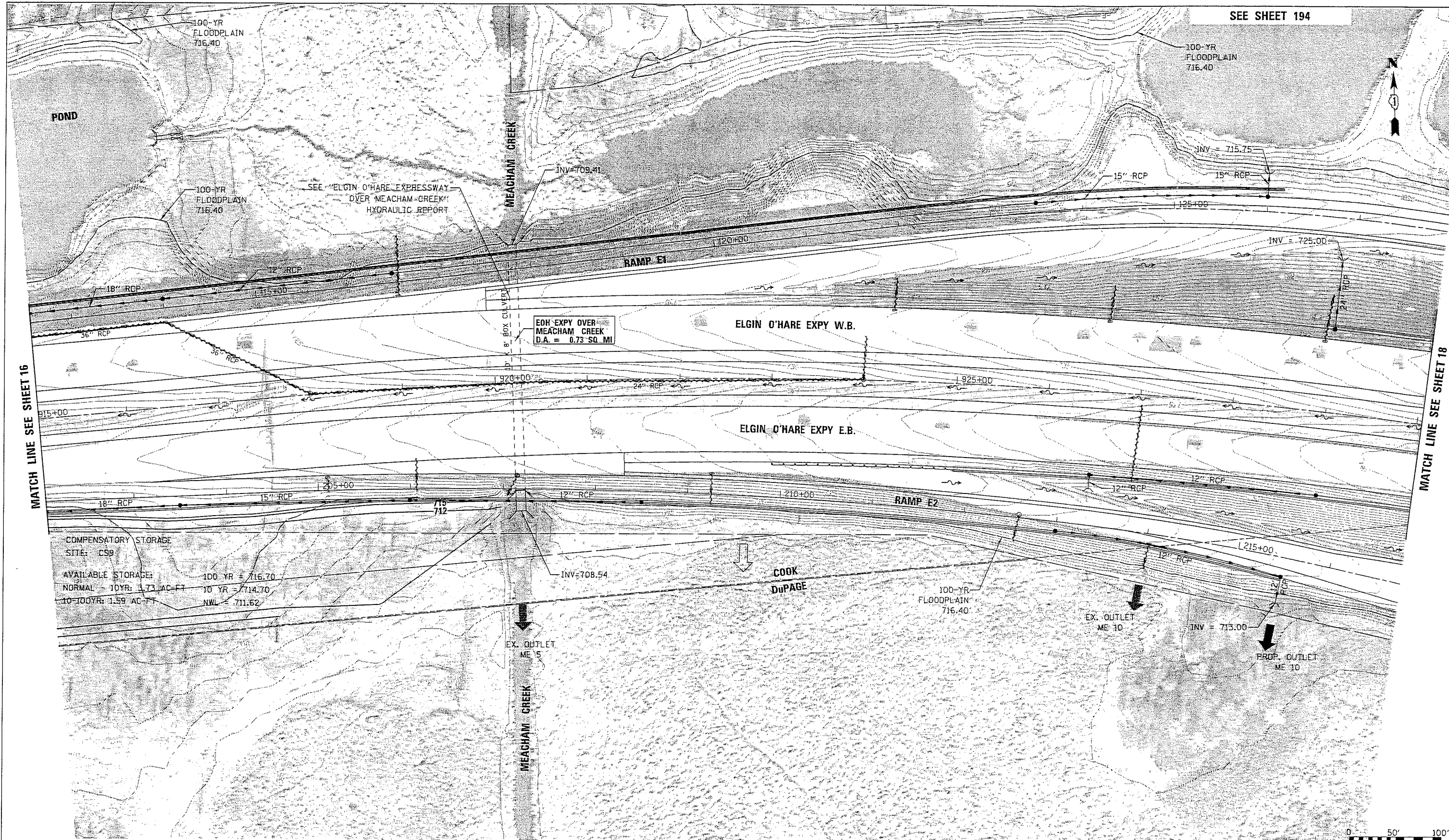
### **IDNR-OWR FLOODWAY PERMIT SUMMARY AND COMPENSATORY STORAGE SUMMARY**





3/11/25 PM

Y:\36180 - Elgin O'Hare - West Bypass\INTER-TWO HY-CAD Models\Geometric\Full Build\sheet\pr-dr\dr-01n-EDP16\_FullBuild.dgn

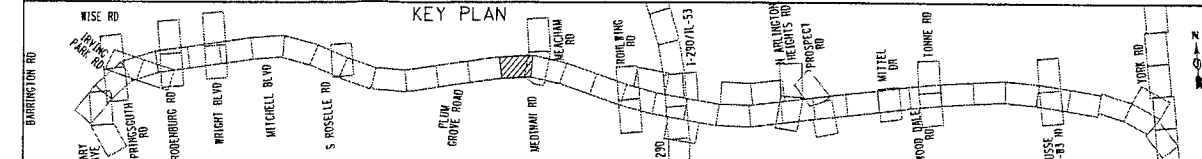


LEGEND:

BOUNDARY LINES/SYMBOLS	EXISTING	PROPOSED	SWALE	DITCH	DITCH SUMMIT	CULVERT SIZE/TYPE	2 X 2 BOX	2 X 2 BOX	OVERFLOW	EXISTING	PROPOSED
REFERENCE LINE/CENTERLINE AND STATIONING	---	---	---	---	---	---	---	---	---	---	---
RIGHT OF WAY LINE	---	---	---	---	---	---	---	---	---	---	---
COUNTY LINE	---	---	---	---	---	---	---	---	---	---	---
DRAINAGE DIVIDE (HYDROLOGIC ATLAS)	---	---	---	---	---	---	---	---	---	---	---
TEMPORARY EASEMENT	---	---	---	---	---	---	---	---	---	---	---
PERMANENT EASEMENT	---	---	---	---	---	---	---	---	---	---	---
STORM SEWER REMOVAL	---	---	---	---	---	---	---	---	---	---	---

DRAINAGE PROPOSAL

- MAINTAIN EXISTING STORM SEWERS AND EXISTING DITCHES UNLESS NOTED TO CONTRARY.
- CONSTRUCT COMPENSATORY STORAGE BASIN(S).
- CONSTRUCT PROPOSED DRAINAGE SYSTEM INCLUDING STORM SEWERS, DITCHES AND PIPE CULVERTS AS SHOWN.



FILE NAME =	USER NAME = eanderson	DESIGNED MA	REVISED -			ELGIN O'HARE WEST BYPASS	communities. opportunities. solutions.		PROPOSED DRAINAGE PLAN MEACHAM CREEK WATERSHED ELGIN O'HARE EXPRESSWAY	SCALE: 1"=50'	SHEET NO. OF SHEETS STA. TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DIEOWB-shr-pr-drain-EDP16_FullBuild.dgn	DRAWN MYG	REVISED -	230														17
PLOT SCALE = 100'	CHECKED CW	REVISED -	CONTRACT NO.														
PLOT DATE = 4/23/2012	DATE -	REVISED -	ILLINOIS FED. AID PROJECT														



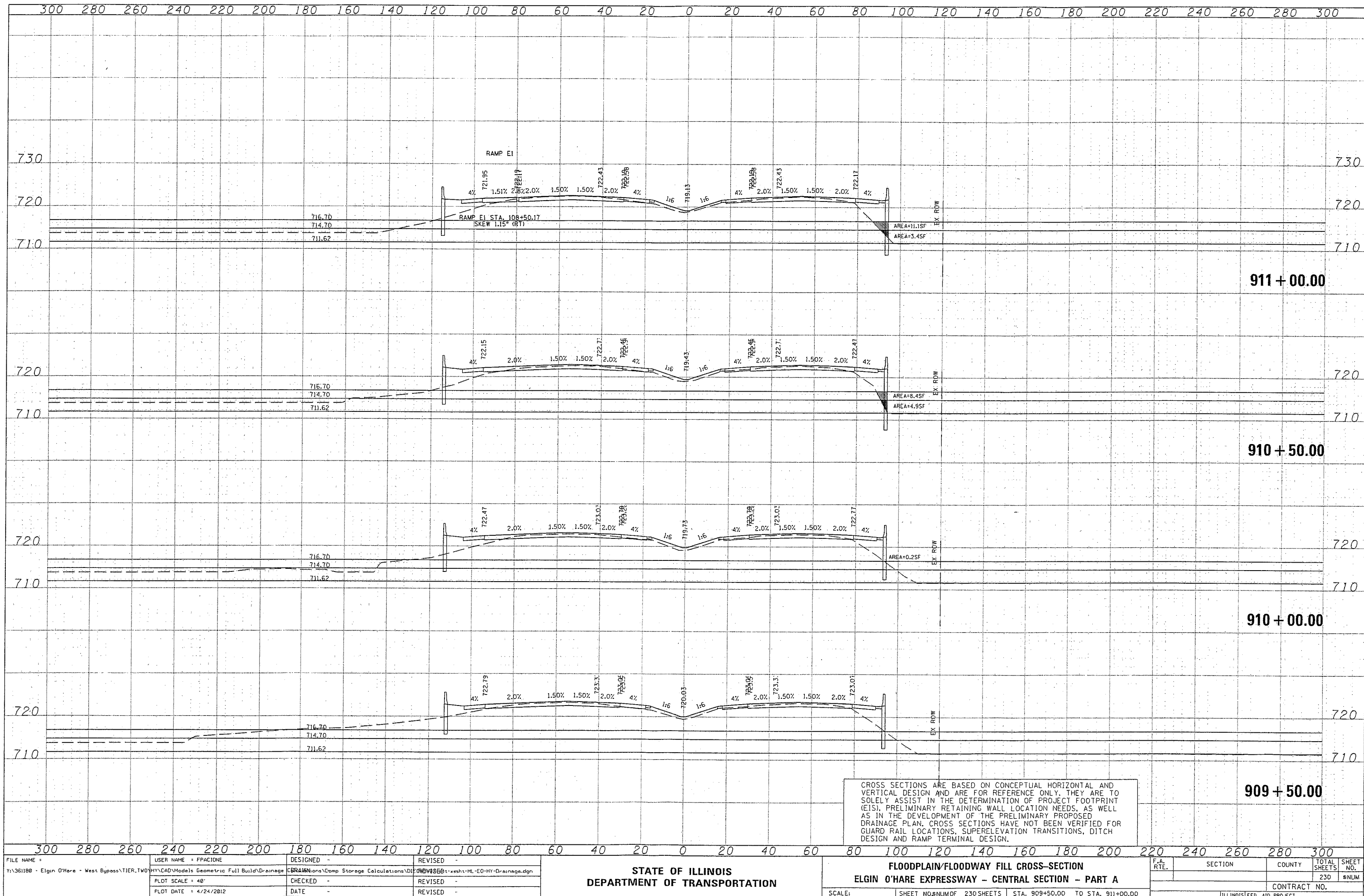
Elgin O'Hare Expressway (STA. 909+50 TO STA. 931+50)

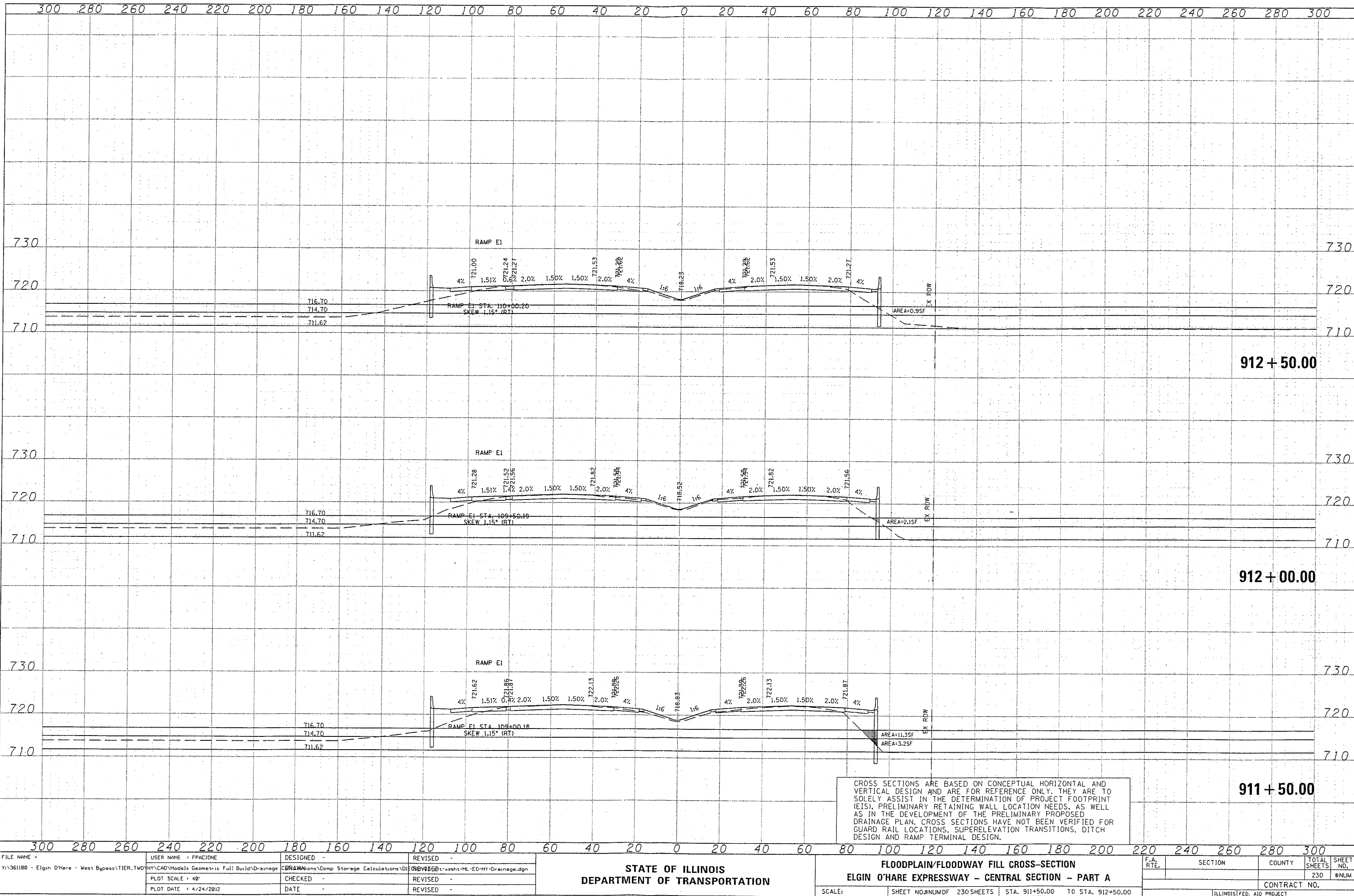
Normal Elevation 711.62 ft  
10-Year Elevation 714.70 ft  
100-Year Elevation 716.70 ft

	Normal - 10 YR (SF)	10YR - 100YR (SF)	Normal - 10YR (AC-FT)	10YR - 100YR (AC-FT)
909+50	0	0	0.00	0.00
910+00	0	0.21	0.00	0.00
910+50	4.89	8.42	0.00	0.01
911+00	3.35	11.14	0.00	0.01
911+50	3.22	11.29	0.00	0.01
912+00	0	2.21	0.00	0.00
912+50	0	0.91	0.00	0.00
913+00	0	0.81	0.00	0.00
913+50	0	1.51	0.00	0.00
914+00	0	3.89	0.00	0.00
914+50	0	3.18	0.00	0.00
915+00	0	2.63	0.00	0.00
915+50	0	0	0.00	0.00
918+00	0	0	0.00	0.00
918+50	0	2	0.00	0.00
919+00	0	1.44	0.00	0.00
919+50	0	0.8	0.00	0.01
920+00	0.73	11.2	0.00	0.01
920+50	0.21	6.53	0.00	0.00
921+00	0	0	0.00	0.00
927+50	0	0	0.00	0.00
928+00	0	0	0.00	0.00
928+50	0	0	0.00	0.01
929+00	5.81	13.2	0.01	0.02
929+50	12.81	17.78	0.01	0.02
930+00	3.9	18.02	0.01	0.02
930+50	7.24	16.7	0.02	0.02
931+00	24.41	12.22	0.01	0.01
931+50	0	0		
TOTAL:			0.08	0.17

1 TOTAL SURVEY NOTE BOOK	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
NO.	AREAS CHECKED	

DATE _____	SURVEYED _____	_____
	PLOTTED _____	_____
	TEMPLATE _____	_____
	AREAS _____	_____
AREAS CHECKED _____		_____



[illegible]

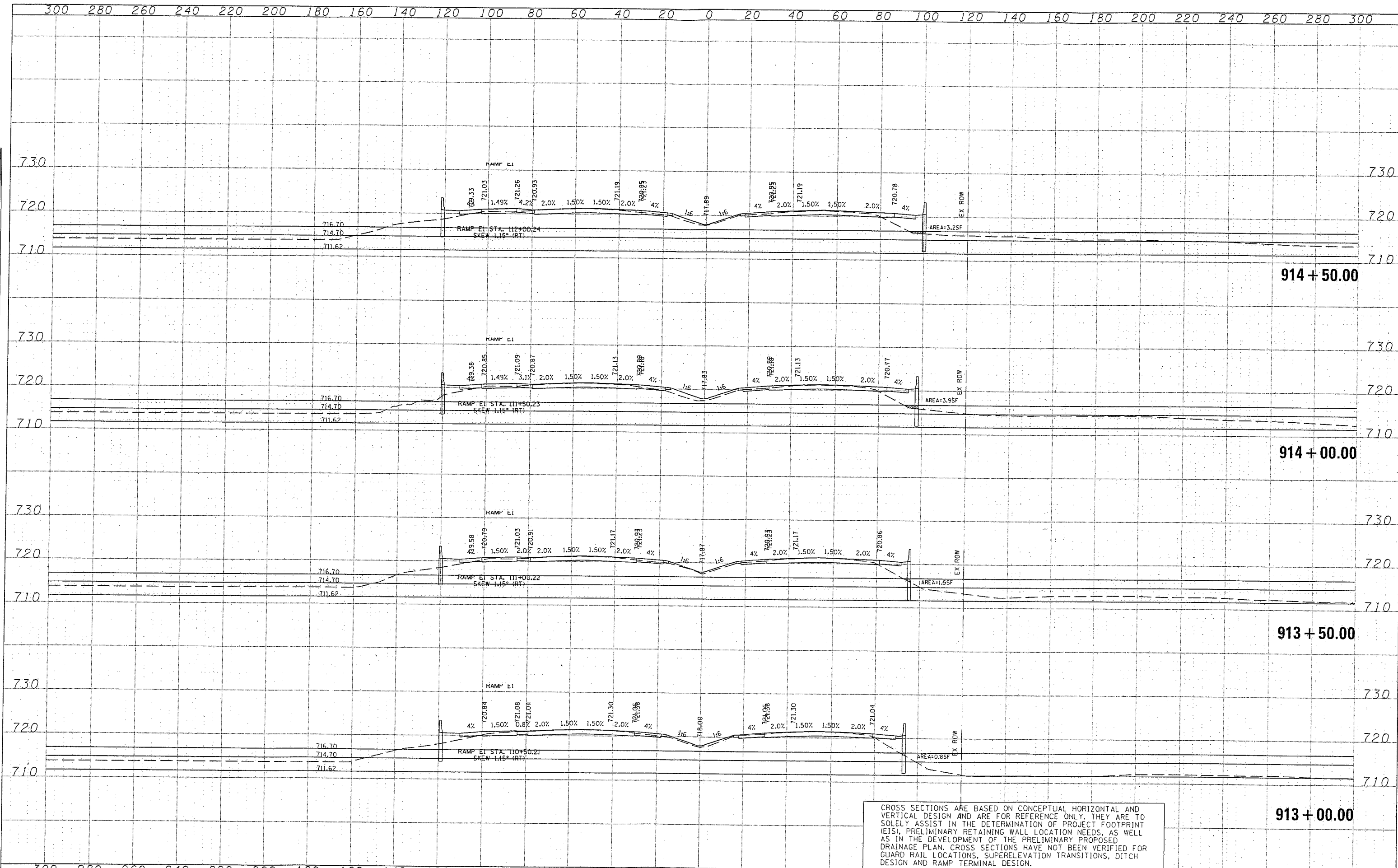
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	PLOTTED _____	_____
	TEMPLATE _____	_____
	AREAS _____	_____
	AREAS CHECKED _____	_____

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300															DESIGN AND RAMP TERMINAL DESIGN.														
FILE NAME = Y:\361180 - Elgin O'Hare - West Bypass\TIER TWO\HY\CAD\Drawings\Comp Storage Calculations\Drawings\SSHT-ML-ED-HY-Drainage.dgn		USER NAME = FPACTIONE		DESIGNED -		REVISED -		<div>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</div> <div>FLOODPLAIN/FLOODWAY FILL CROSS-SECTION ELGIN O'HARE EXPRESSWAY - CENTRAL SECTION - PART A</div>															F.A. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 40'		CHECKED -		REVISED -		230	\$NUM																						
PLOT DATE = 4/24/2012		DATE -		REVISED -		CONTRACT NO.																							
SCALE:		SHEET NO.		NUM OF 230 SHEETS	STA. 911+50.00 TO STA. 912+50.00		ILLINOIS FED. AID PROJECT																						



SURVEYED	NO.
PLOTTED	NO.
TEMPLATE	NO.
AREAS	NO.
CHECKED	NO.

SURVEYED	NO.
PLOTTED	NO.
TEMPLATE	NO.
AREAS	NO.
CHECKED	NO.

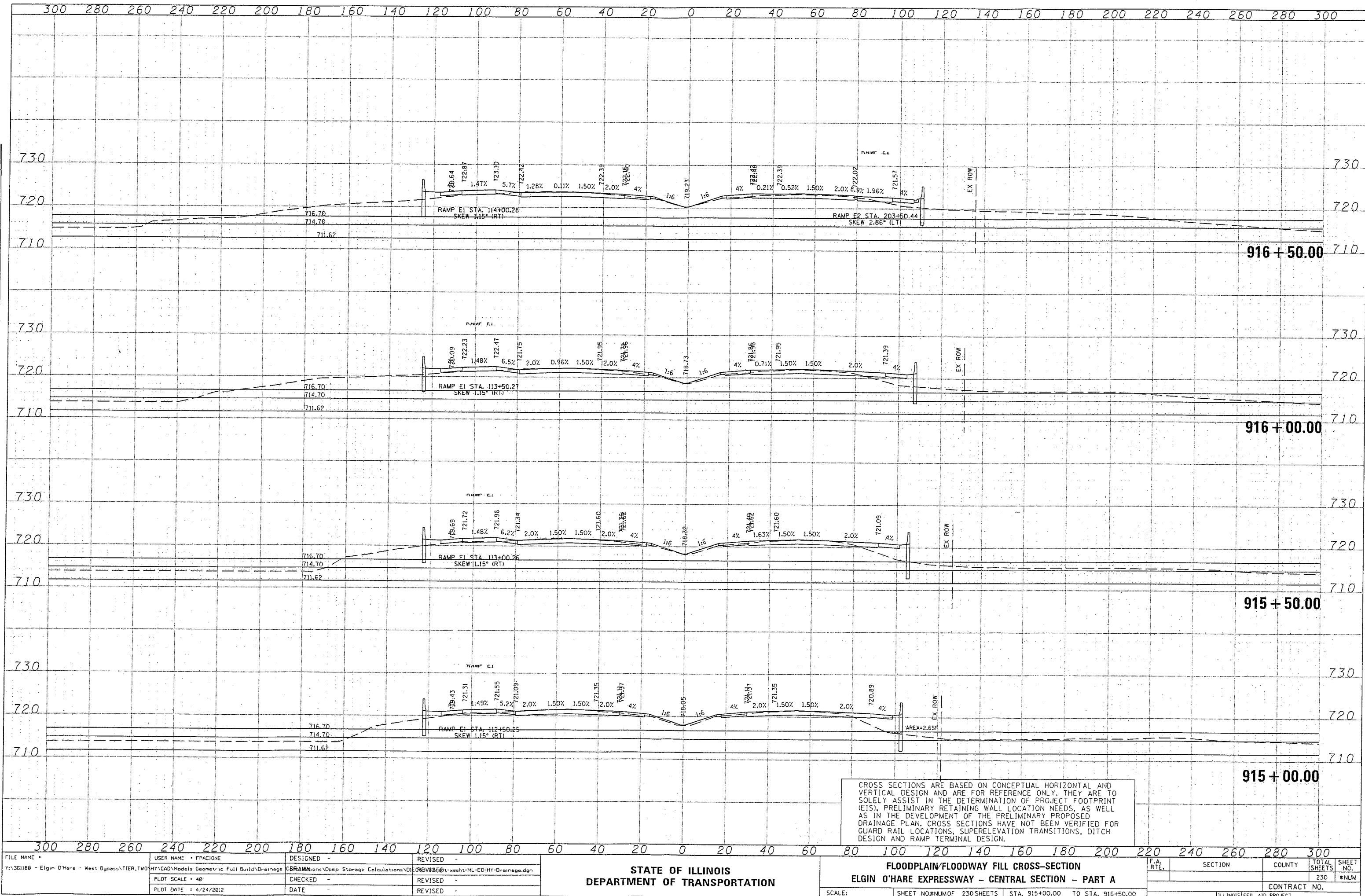


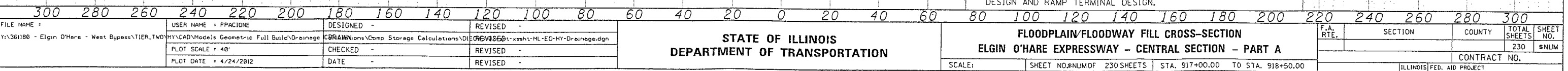
CROSS SECTIONS ARE BASED ON CONCEPTUAL HORIZONTAL AND VERTICAL DESIGN AND ARE FOR REFERENCE ONLY. THEY ARE TO SOLELY ASSIST IN THE DETERMINATION OF PROJECT FOOTPRINT (EIS), PRELIMINARY RETAINING WALL LOCATION NEEDS, AS WELL AS IN THE DEVELOPMENT OF THE PRELIMINARY PROPOSED DRAINAGE PLAN. CROSS SECTIONS HAVE NOT BEEN VERIFIED FOR GUARD RAIL LOCATIONS, SUPERELEVATION TRANSITIONS, DITCH DESIGN AND RAMP TERMINAL DESIGN.

FILE NAME =	USER NAME = FPACIONE	DESIGNED -	REVISED -	STATE OF ILLINOIS	FLOODPLAIN/FLOODWAY FILL CROSS-SECTION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Y:\361188 - Elgin O'Hare - West Bypass\TIER TWO\HYCAD\Drawings\Geometric Full Build\Drainage\Drawings\Comp Storage Calculations\REVISED -	Y:\361188 - Elgin O'Hare - West Bypass\TIER TWO\HYCAD\Drawings\Geometric Full Build\Drainage\Drawings\Comp Storage Calculations\REVISED -	Y:\361188 - Elgin O'Hare - West Bypass\TIER TWO\HYCAD\Drawings\Geometric Full Build\Drainage\Drawings\Comp Storage Calculations\REVISED -	Y:\361188 - Elgin O'Hare - West Bypass\TIER TWO\HYCAD\Drawings\Geometric Full Build\Drainage\Drawings\Comp Storage Calculations\REVISED -	DEPARTMENT OF TRANSPORTATION	ELGIN O'HARE EXPRESSWAY - CENTRAL SECTION - PART A				230	230
PLOT SCALE = 40'	CHECKED -	REVISOR -	REVISOR -		SCALE:	SHEET NO. 230	NUM OF 230 SHEETS	STA. 913+00.00	TO STA. 914+50.00	CONTRACT NO.
PLOT DATE = 4/24/2012	DATE -	REVISOR -	REVISOR -							ILLINOIS FED. AID PROJECT

SURVEYED	PLOTTED	NOTE BOOK	AREAS CHECKED
NO.	NO.	NO.	NO.

SURVEYED	PLOTTED	NOTE BOOK	AREAS CHECKED
NO.	NO.	NO.	NO.

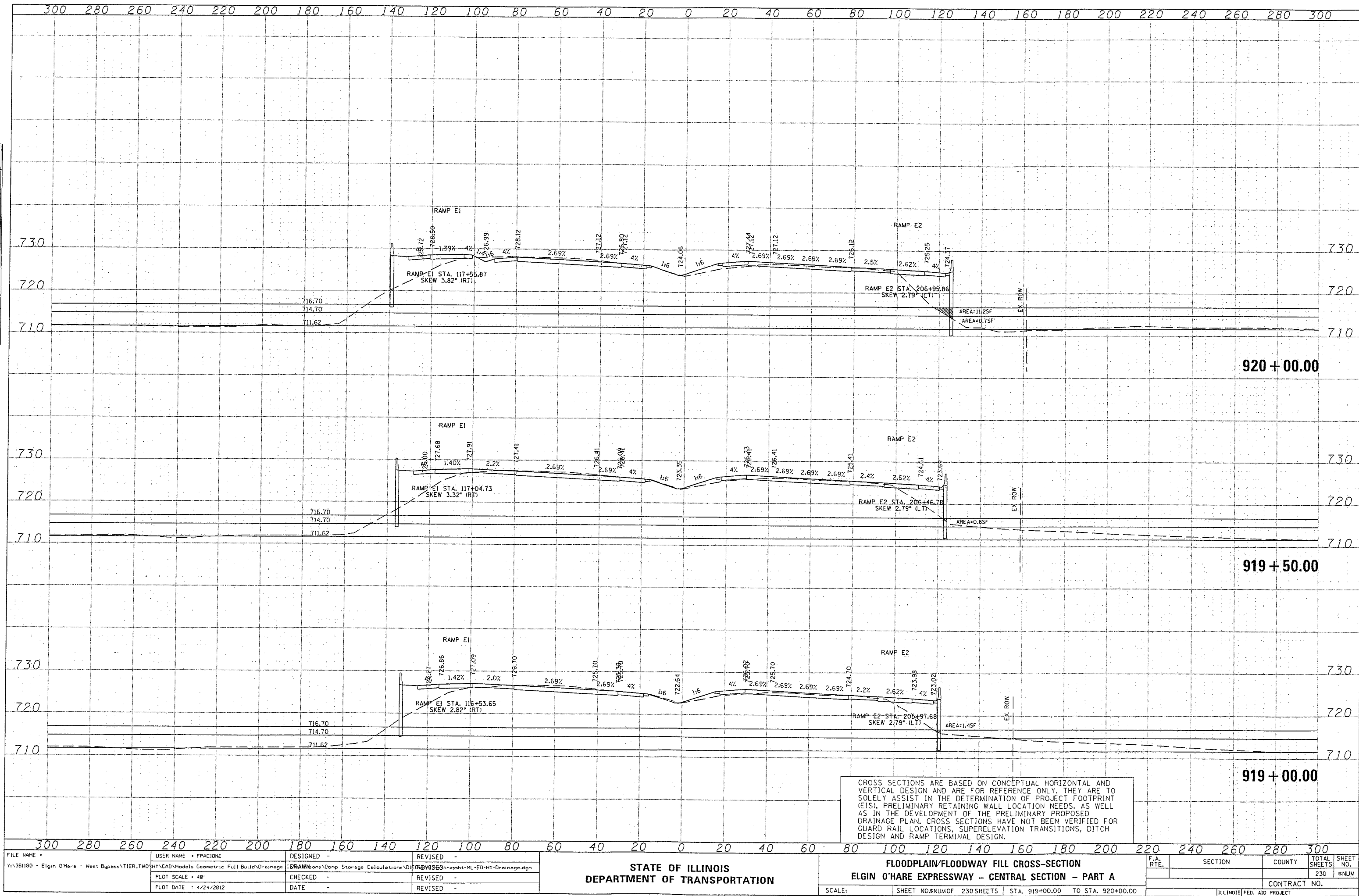




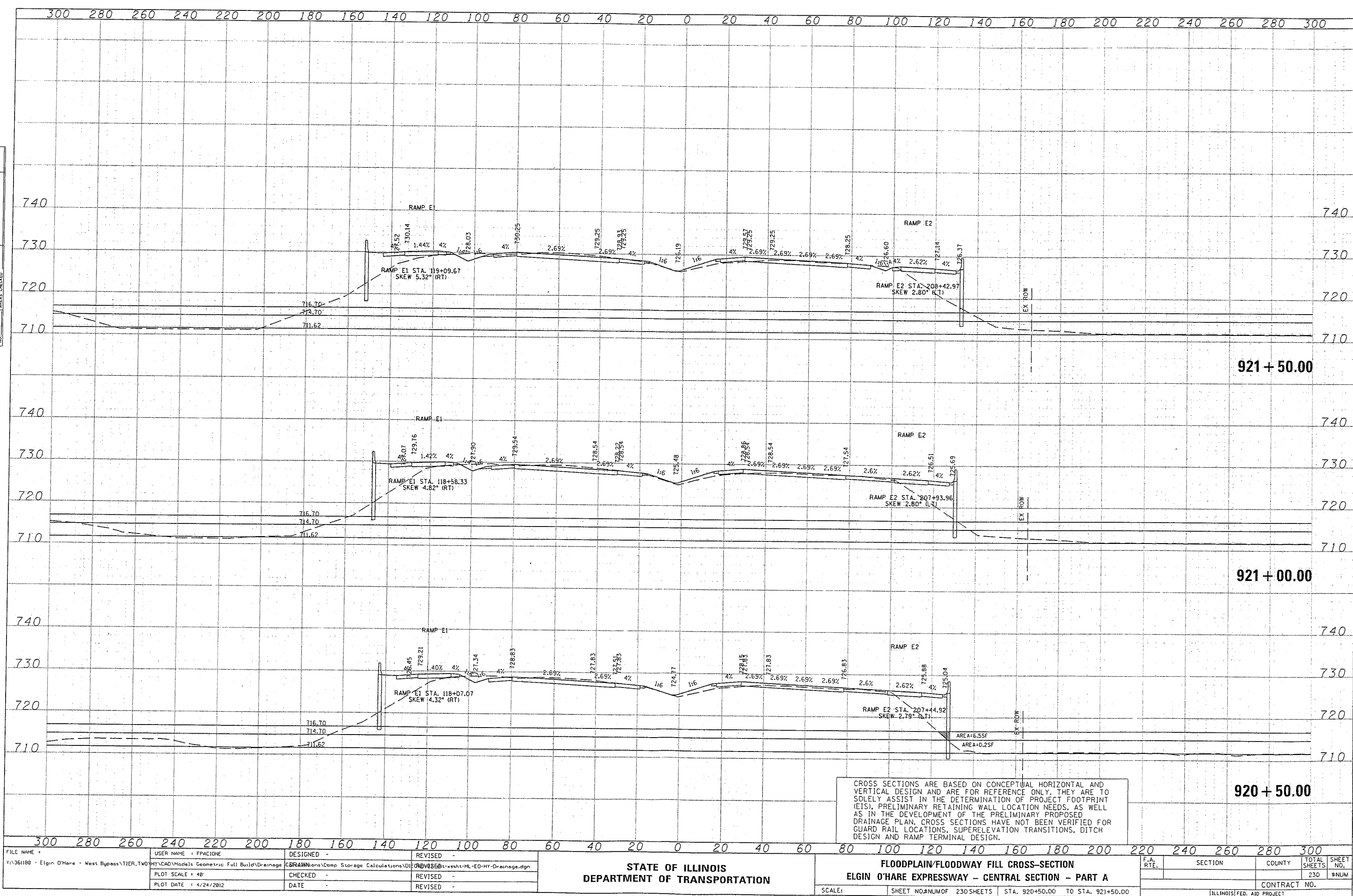
CROSS SECTIONS ARE BASED ON CONCEPTUAL HORIZONTAL AND VERTICAL DESIGN AND ARE FOR REFERENCE ONLY. THEY ARE TO SOLELY ASSIST IN THE DETERMINATION OF PROJECT FOOTPRINT (EIS), PRELIMINARY RETAINING WALL LOCATION NEEDS, AS WELL AS IN THE DEVELOPMENT OF THE PRELIMINARY PROPOSED DRAINAGE PLAN. CROSS SECTIONS HAVE NOT BEEN VERIFIED FOR GUARD RAIL LOCATIONS, SUPERELEVATION TRANSITIONS, DITCH DESIGN AND RAMP TERMINAL DESIGN.



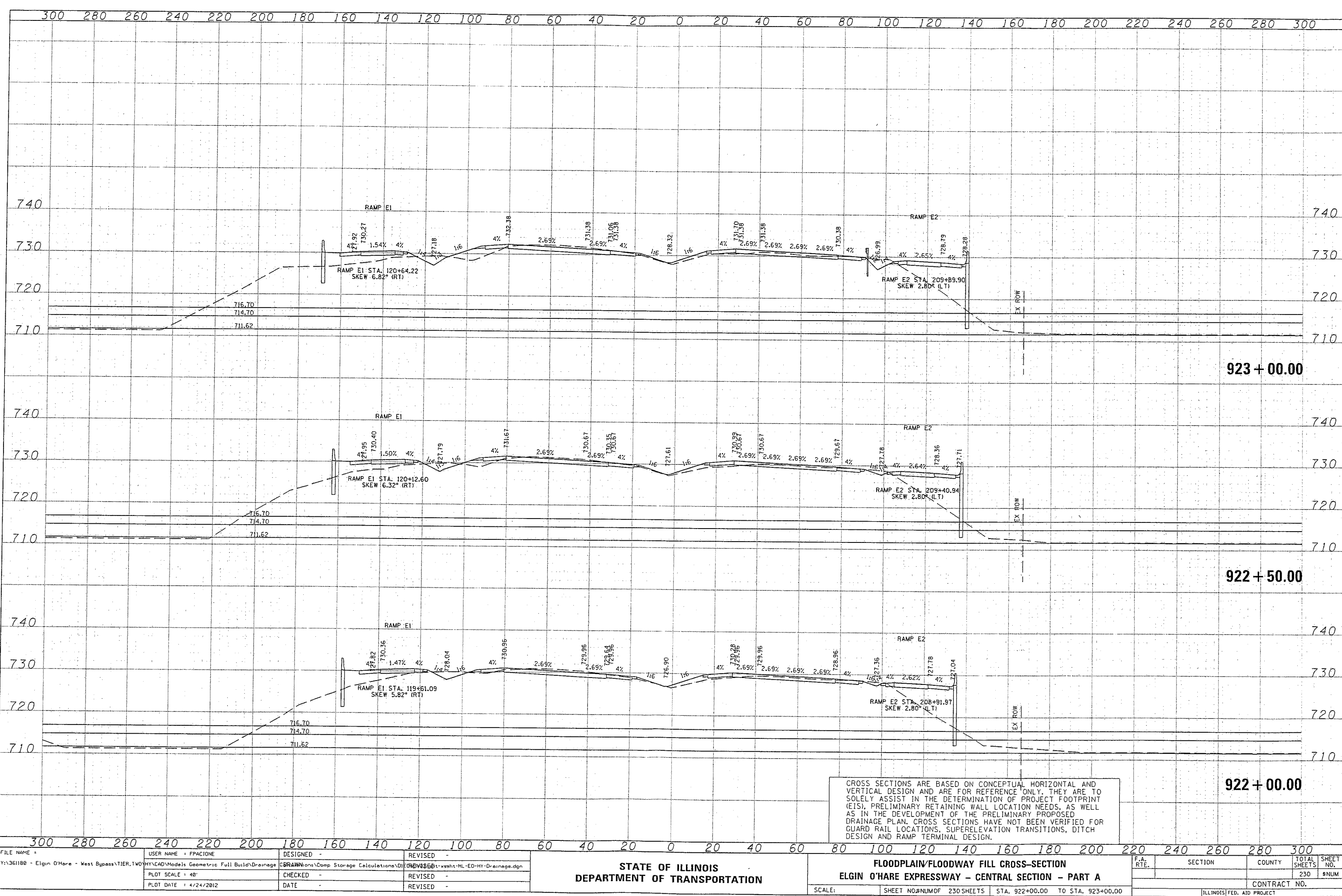
SURVEY NOTE BOOK NO. _____	SURVEYED	
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NO.	SURVEY	SURVEYED
	NOTE BOOK	PLOTTED
		TEMPLATE
		AREAS
		AREAS CHECKED

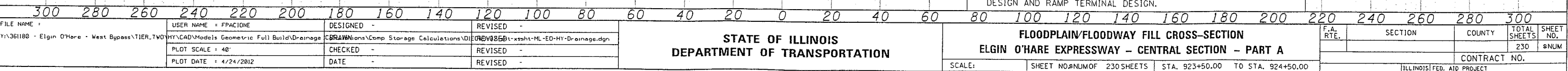


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	NOTE BOOK	
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	AREAS CHECKED	



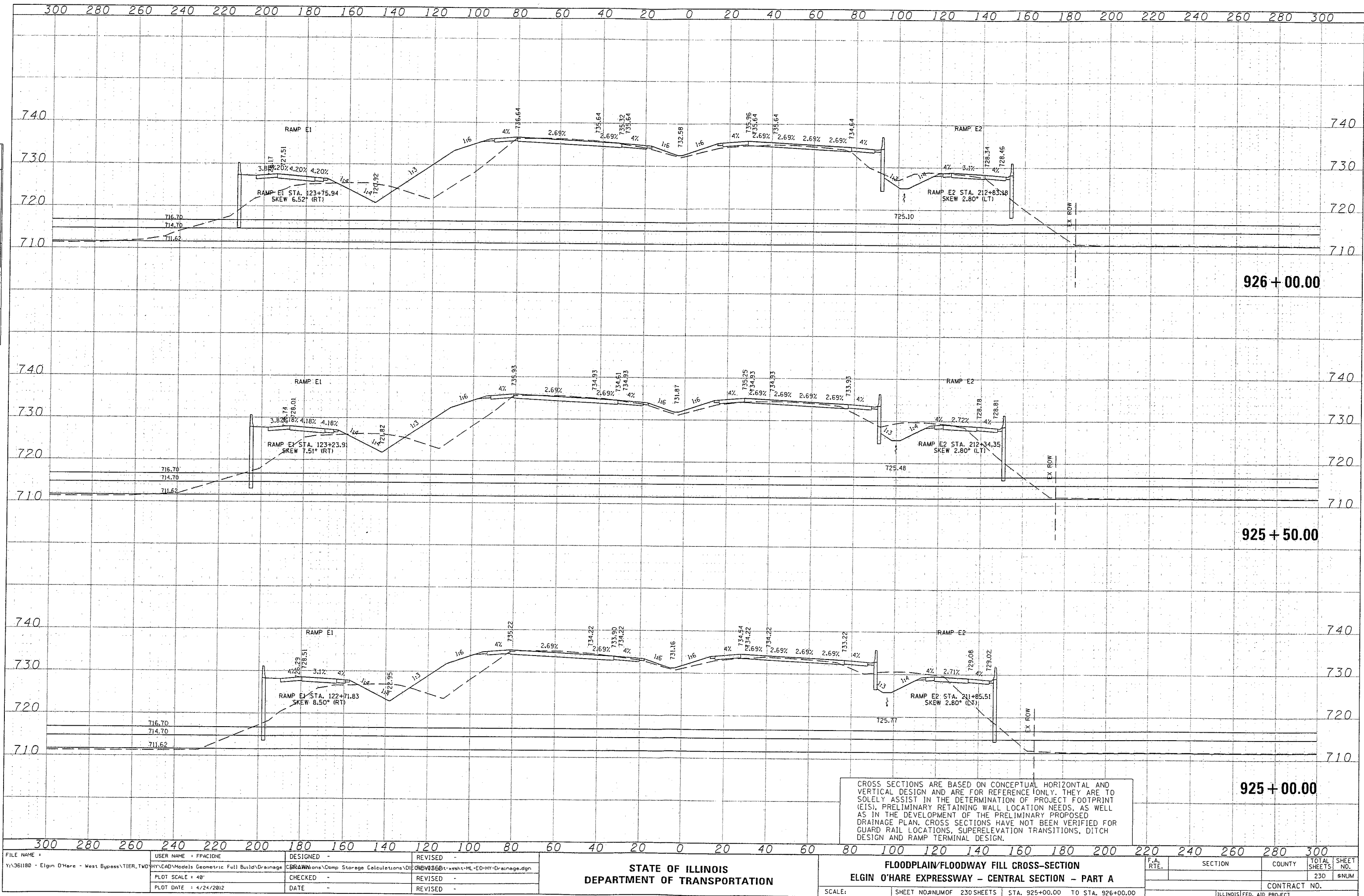
CROSS SECTIONS ARE BASED ON CONCEPTUAL HORIZONTAL AND VERTICAL DESIGN AND ARE FOR REFERENCE ONLY. THEY ARE TO SOLELY ASSIST IN THE DETERMINATION OF PROJECT FOOTPRINT (EIS), PRELIMINARY RETAINING WALL LOCATION NEEDS, AS WELL AS IN THE DEVELOPMENT OF THE PRELIMINARY PROPOSED DRAINAGE PLAN. CROSS SECTIONS HAVE NOT BEEN VERIFIED FOR GUARD RAIL LOCATIONS, SUPERELEVATION TRANSITIONS, DITCH DESIGN AND RAMP TERMINAL DESIGN.





DATE	
NO.	
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AREAS	
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DATE	
NO.	
SURVEYED	
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FILE NAME =	USER NAME =	DESIGNED =	REVISED =
Y:\361180 - Elgin O'Hare - West Bypass\TIER TWO	HY\CAD\Drawings\Comp Storage Calculations\DI	REVISIONS	REVISIONS
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PLOT DATE = 4/24/2012	DATE =	REVISIONS	REVISIONS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

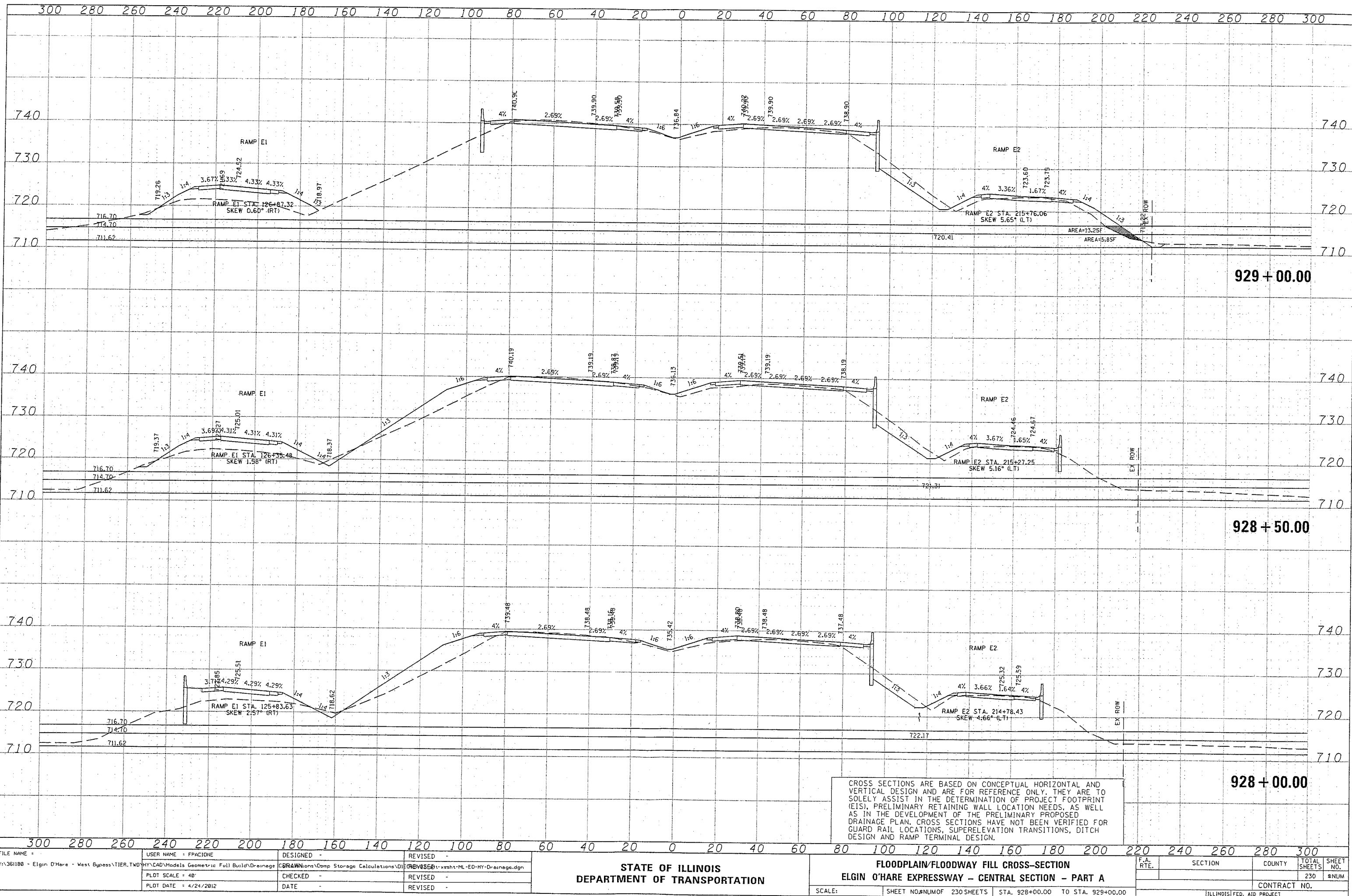
FLOODPLAIN/FLOODWAY FILL CROSS-SECTION  
ELGIN O'HARE EXPRESSWAY - CENTRAL SECTION - PART A

SCALE: SHEET NO. 230 OF 230 SHEETS STA. 925+00.00 TO STA. 926+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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				CONTRACT NO.
				ILLINOIS FED. AID PROJECT

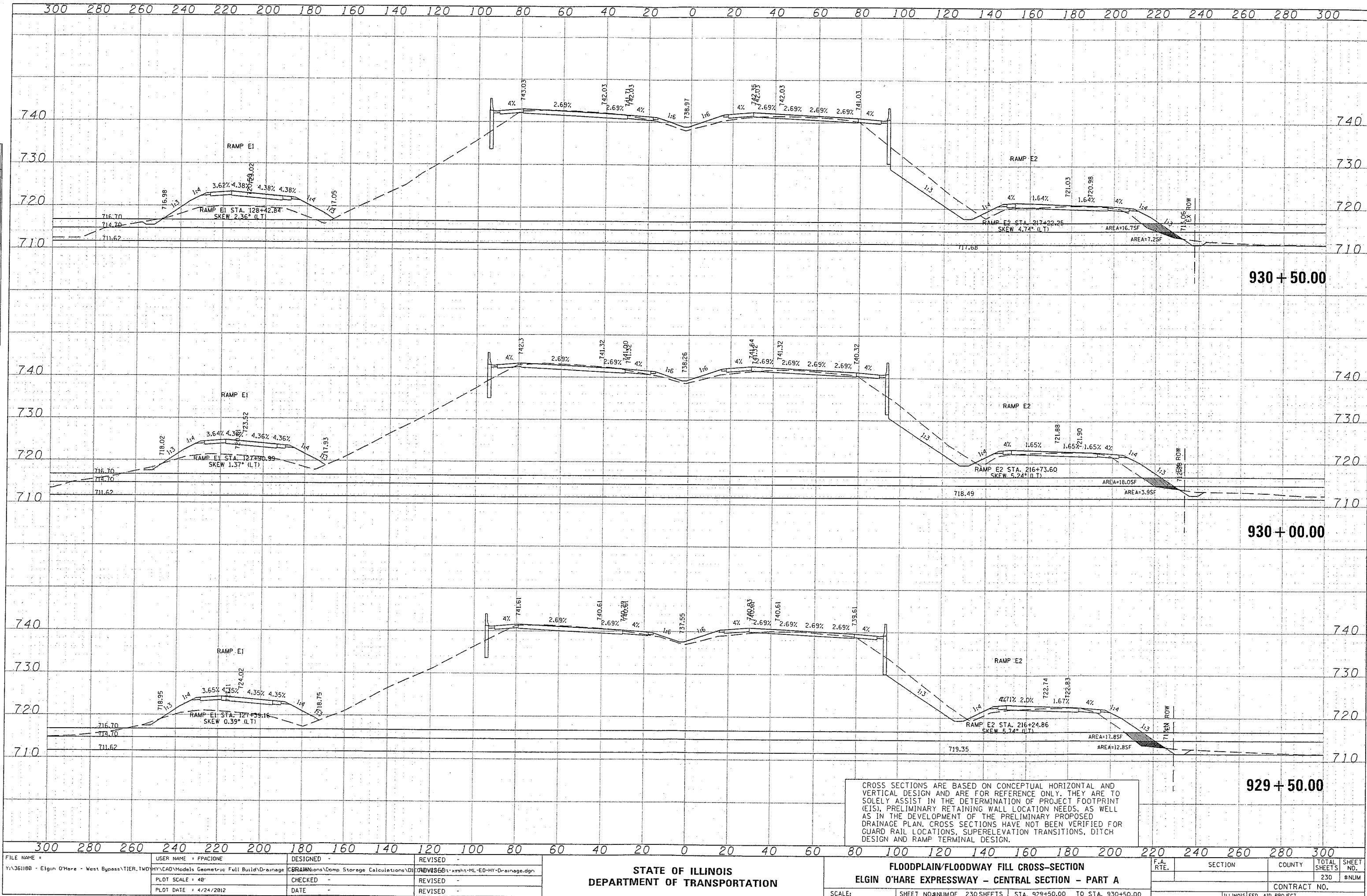






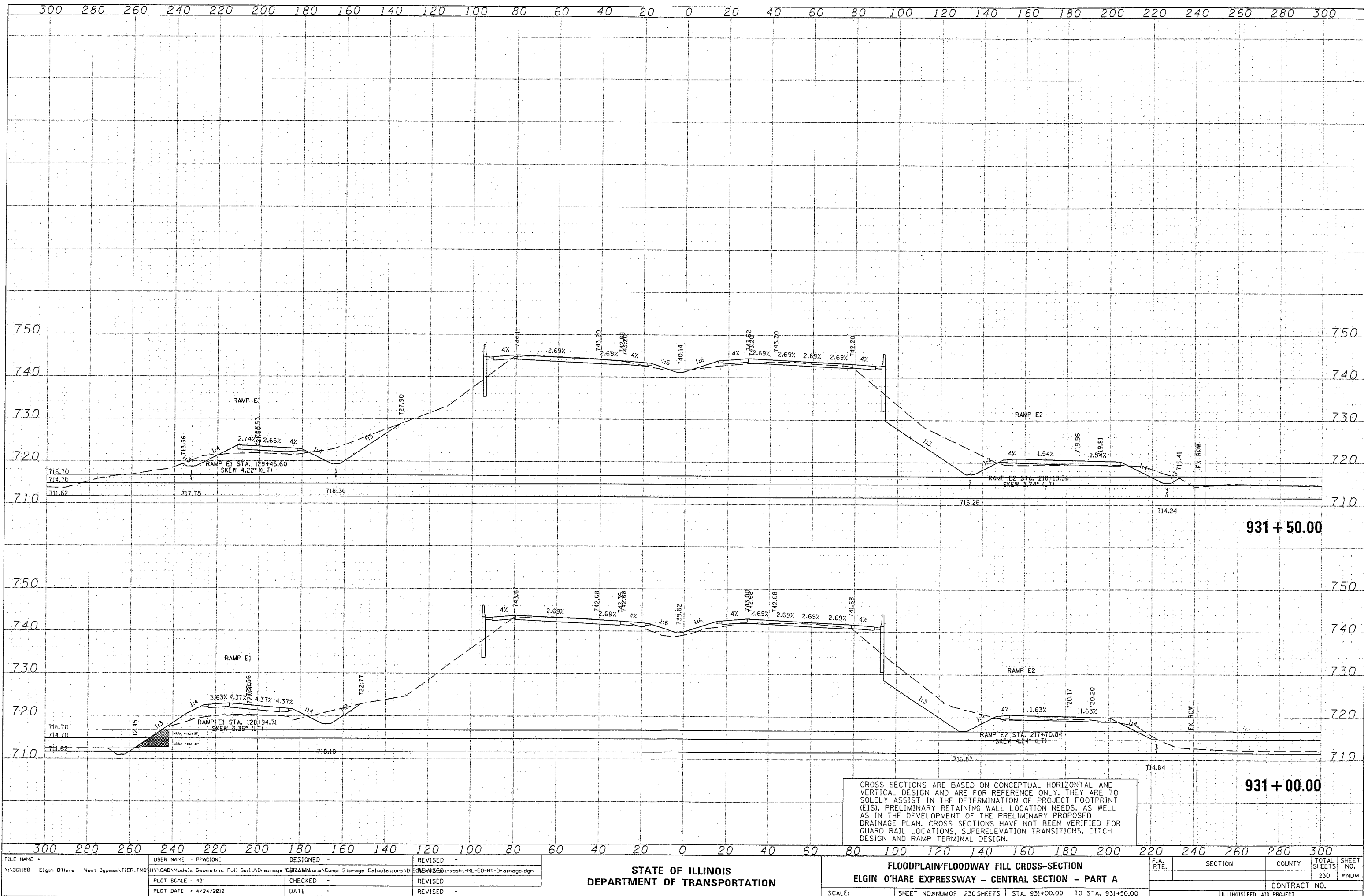
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NOTE BOOK	NO.
PLOTTED	NO.
TEMPLATE	NO.
AREAS	NO.
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NOTE BOOK	NO.
PLOTTED	NO.
TEMPLATE	NO.
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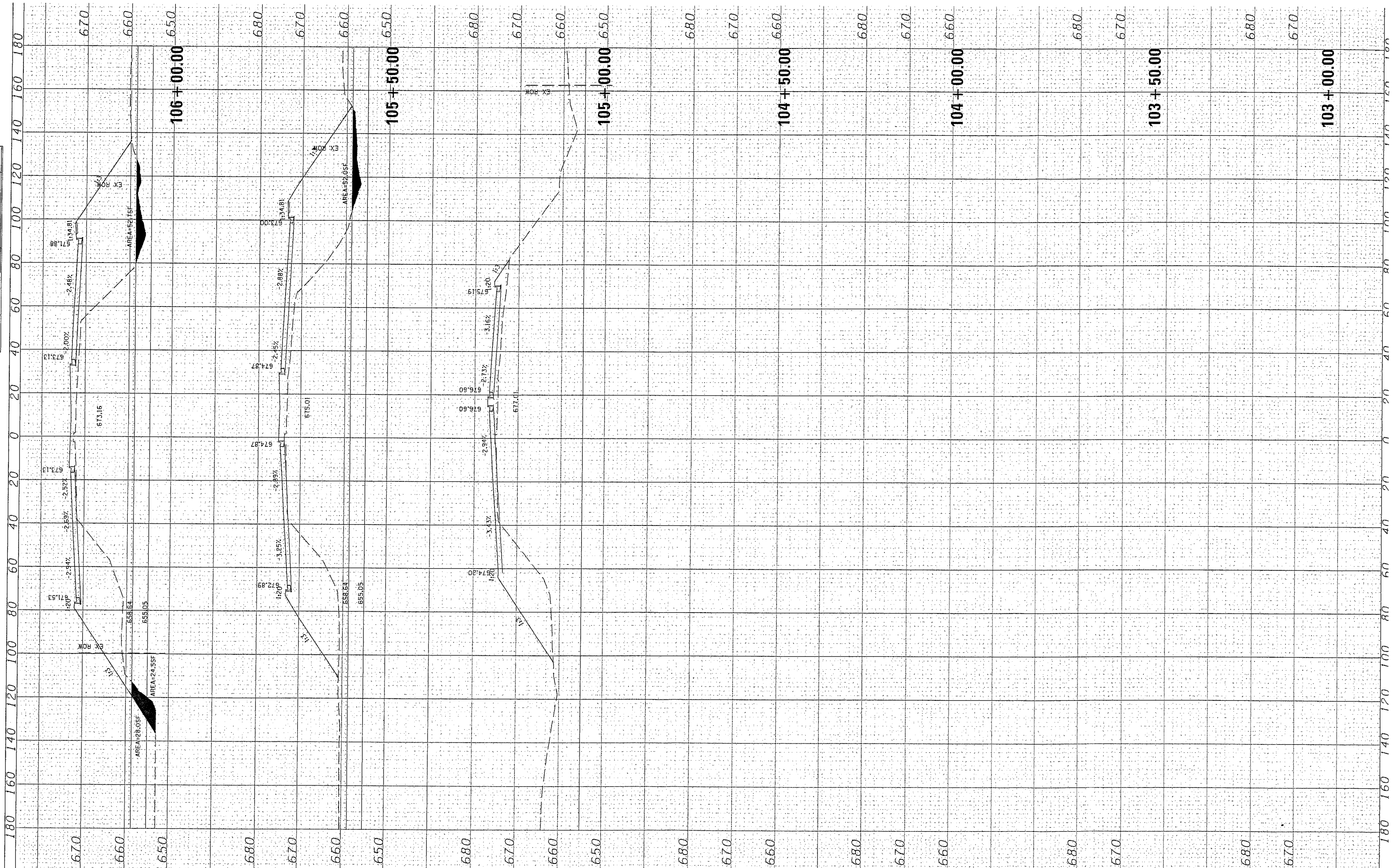
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Y:\351180 - Elgin O'Hare - West Bypass\TIER TWO\HY\CAD\Drawings\Comp Storage Calculations\REVISED\Drawings\Elgin O'Hare Expressway - Central Section - Part A.dgn									230	\$NUM
PLOT SCALE = 48"		CHECKED =	REVISED =		SCALE:					
PLOT DATE = 4/24/2012		DATE =	REVISED =		SHEET NO.#NUMOF	230 SHEETS	STA. 929+50.00	TO STA. 930+50.00		CONTRACT NO.
										ILLINOIS FED. AID PROJECT

SURVEY NO. _____	SURVEYED	_____
	PLOTTED	_____
	TEMPLATE	_____
	AREAS	_____
	AREAS CHECKED	_____





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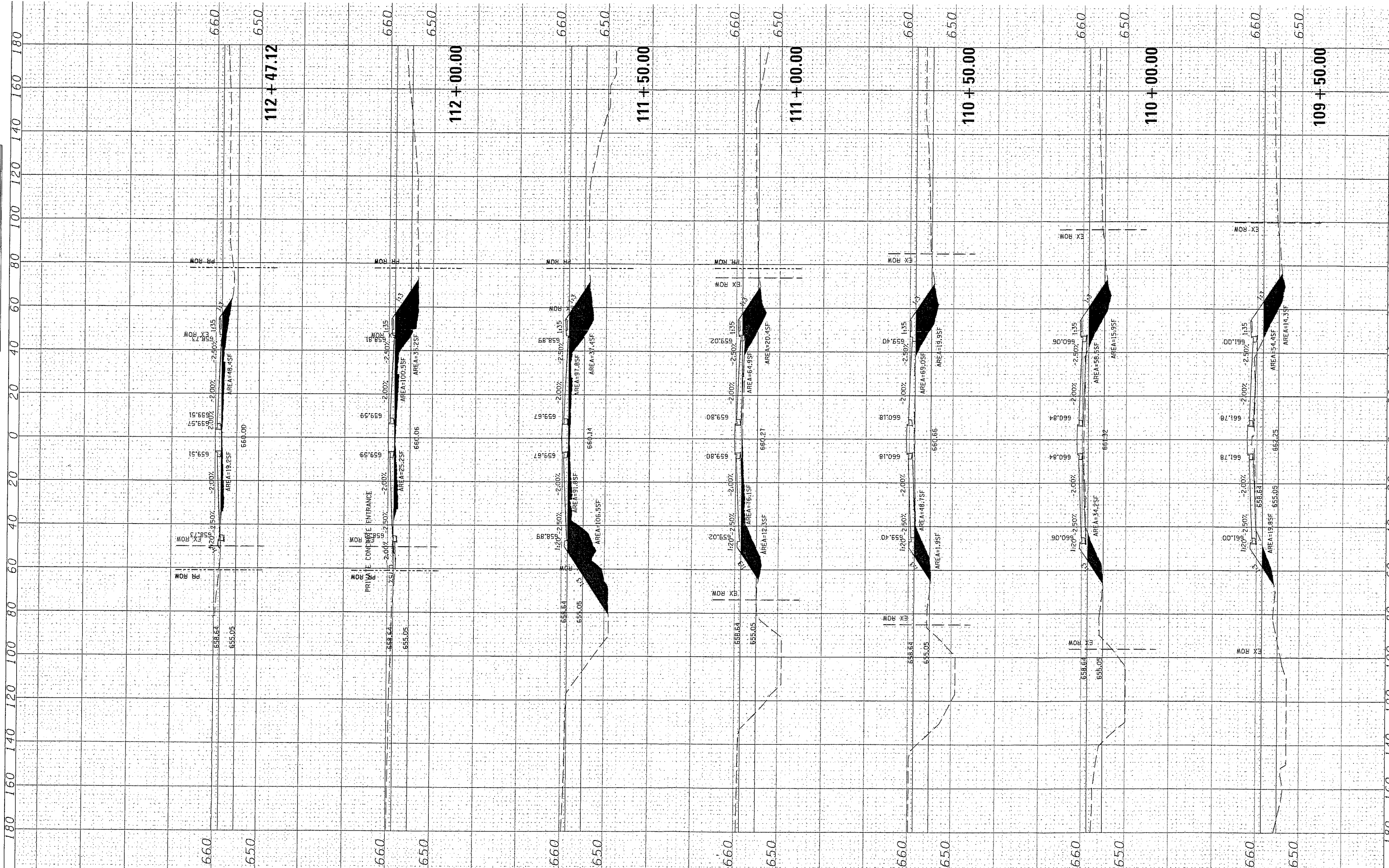


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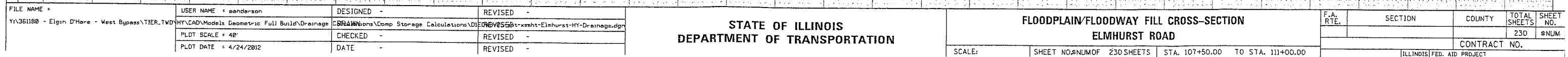
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FLOODPLAIN/FLOODWAY FILL CROSS-SECTION ELMHURST ROAD			
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			230	#NUM
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



FINAL SURVEY	SURVEYED BY		DATE
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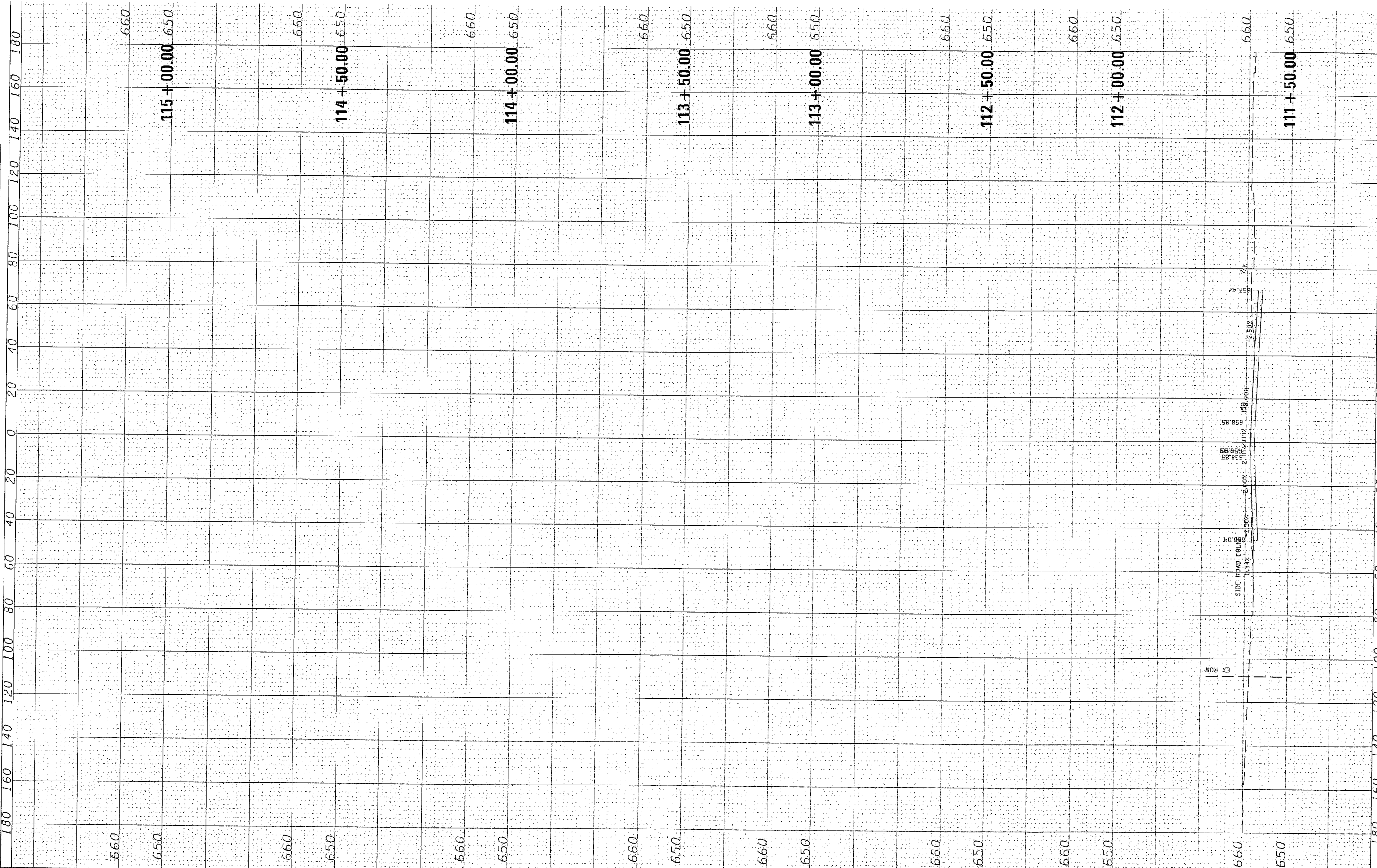


**FLOODPLAIN/FLOODWAY FILL CROSS-SECTION  
ELMHURST ROAD**

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		CONTRACT NO.		
ILLINOIS		FED. AID PROJECT		

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PLOT DATE = 4/24/2012			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FLOODPLAIN/FLOODWAY FILL CROSS-SECTION ELMHURST ROAD			
SCALE:	SHEET NO. 230 OF 230 SHEETS	STA. 111+50.00	TO STA. 115+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			230	#NUM
CONTRACT NO.				ILLINOIS FED. AID PROJECT

**Available Compensatory Storage Volume**  
**ELEVATION-STORAGE RELATIONSHIP**

**POND:** Compensatory Storage Area 9 (CS9) - Meacham Creek  
**JOB NO.** 07-0404  
**PROJECT:** Elgin O'Hare - West Bypass  
**FILE:** Y:\361180 - Elgin O'Hare - West Bypass\TIER\_TWO\HY\CAD\Models Geometric Full Build\Drainage Calculations\Available storage volume\02 Comp STORAGE VOL 0312.xls\CS9  
**DATE:** 13-Apr-12  
**SIDE SLOPES:** 3:1 (H:V)

ELEVATION (ft)	AREA		AVERAGE AREA (ac)	Δ ELEVATION (ft)	INCREMENTAL STORAGE (ac-ft)	CUMULATIVE STORAGE (ac-ft)
	(s.f.)	(ac)				
711.00	0	0.000				0.00
711.62 * NWL	0	0.000	0.000	0.62	0.000	0.00
712.00	56,903	1.306	0.653	0.38	0.248	0.25
713.00	60,795	1.396	1.351	1.00	1.351	1.60
714.70 * 10-yr	48,435	1.112	1.254	1.70	2.131	3.73
715.00	46,254	1.062	1.087	0.30	0.326	4.06
716.70 100-yr	18,600	0.427	0.744	1.70	1.266	5.32
717.00	13,720	0.315	0.371	0.30	0.111	5.43

0 to 10-year storage = **3.73**  
10 to 100-year storage = **1.59**



**TAB 13**

## **SECTION 13**

### **CORRESPONDENCE AND NOTES**

Disposition of Review Comments Dated July 8, 2011: **Meacham Creek**

**Comment 1:** The sensitive flood receptor portion of the narrative is too vague. Sensitive flood receptors should be verified and are normally based on surveyed elevations.

**Response 1:** There are no sensitive flood receptors within the Elgin O'Hare Expressway backwater. Pick-up survey has been requested.

**Comment 2:** In the narrative landmarks such as Jensen Park pond are discussed but this location is not readily identifiable to the reader. An overall cross-section location map which includes features such as this pond should be included in the report. Sensitive flood receptors, if any, could also be shown on this exhibit.

**Response 2:** The requested landmarks are added to the cross-section map.

**Comment 3:** In various tables the model sections are listed as reference points, however, these do not correlate to the survey locations shown on the aerial portion of the streambed profile plot. It would be helpful to add another column showing the equivalent cross-section shown on the plan view exhibit.

**Response 3:** The requested information has been added to Tables 1 through 6 of the narrative for clarification.

**Comment 4:** On page 17 of the narrative the last paragraph prior to the proposed conditions discussion describes the necessity of obtaining easements if the crossings at Crest and Medinah are enlarged. It is unclear where this requirement derives from and why it would be necessary for this project. Since Crest and Medinah are local routes the County ordinance may be more applicable so it would be more helpful to justify this potential requirement more clearly in the narrative.

**Response 4:** If the DuPage County Countywide Stormwater and Flood Plain Ordinance was to be applied to the Meacham Creek improvements the following sections would need to be addressed:

**Sec. 15-131. Special Management Areas.**

2. Any development in the regulatory flood plain shall comply with the requirements of Section 15-133 of this Ordinance in addition to the requirements of Article 9 of this Ordinance.



**Sec. 15-133. Requirements for Development within the Regulatory Flood Plain.**

1. Development shall preserve effective floodway conveyance such that there will be no increases in flood elevations, flows, or floodway velocity, unless any such increases are contained in a public flood easement and a watershed benefit is provided.

This includes increases in flood elevations, flows, or velocity downstream of the development.

Since there are no proposed changes to either the Crest Avenue or Medinah Road crossings of Meacham Creek this item is no longer an issue.

**Comment 5: Identify if any of the structures are a source of flood damage when discussing the IDNR/OWR permitting requirements.**

Response 5: Since the proposed improvements are limited to the structure conveying Medinah Creek under Thorndale Avenue there are no structures identified as a source of flood damage.

**Comment 6: The IDOT website has a WIT more applicable to culverts. Please use this version.**

Response 6: The WIT tables were updated as requested.

**Comment 7: The datum should be stated on all plans, HR data sheets, and the WIT because of the mixed use in the calculations. Preferably the entire report would present data in the highway datum so elevations could readily be compared to the plans. Also check the WIT because there is no difference between the model results and the values on the WIT which implies they are on the same datum. Include supporting calculations for the WIT on sheets behind each WIT in the report. Note the datum conversion formula on the WIT. The WIT needs a station of the low grade.**

Response 7: The datum has been described on all plans, HR data sheets and WIT. The WIT's supportive calculations have been provided in NAVD 1988 behind each WIT. Also, the datum conversion formula is provided on each WIT.

**Comment 8: On the HR Data sheets: List the Structure Number (SN) of the structure if there is one, #12 – verify sensitive flood receptors**

**upstream, #14 – Medinah Road only – Not a Public Body of Water, #23 – Label the Structures, #25 – Verify the datum of all structure elevation information, #28 – Is there other record HWL information such as from 2008?**

Response 8: The HRD was updated as requested. There is no additional record HWL information.

**Comment 9: On the HR Outline list the SN and PTB#.**

Response 9: The PTB# is now included on all of the Hydraulic Report Data Sheets. The structure numbers are included when available.

**Comment 10: The streambed profile sheets only describe the invert of the stream channel. Please refer to the Drainage Manual for an example but generally it should show normal water levels and date of survey through the study reach. Also, depict the structures and top of road elevations as shown in the drainage manual.**

Response 10: The plans have been revised as requested.

**Comment 11: Include cross section plots of each upstream and downstream face for each structure. The actual inverts including any silt should be plotted.**

Response 11: The plans have been revised as requested.

**Comment 12: On the cross sections include the 'n'-values and cover descriptions on the plots.**

Response 12: The plans have been revised as requested.

**Comment 13: The hydraulic model printout should be in the report.**

Response 13: Due to the immense size of the FEQ model output, the input and output files of all FEQ hydraulic models are provided on a CDROM included in Section 15. Each of the model runs would require hundreds of pages of output each.

**Comment 14: Include any meeting minutes that document flooding and provide background regarding coordination with outside parties such as Itasca and DuPage County. The internal discussion minutes from the 10/20/2010 meeting do not need to be included.**

Response 14: The information has been included as requested.

**Comment 15: The HRO should be placed towards the front of the report preferably behind the table of contents.**

Response 15: The HRO has been relocated as requested.

**Comment 16: Include plans of the existing culverts.**

Response 16: The existing culverts are included on the supplied plans.

**Comment 17: The surveyed inverts on the culvert sections do not match the inverts used in the hydraulic model. Surveyed data must be input into the model. Explain in the report how specifically the model is modeled to incorporate the surveyed data.**

Response 17: The FEQUTL files for the surveyed culverts and cross sections were updated to reflect the survey information. The FEQUTL program was run and the associated results applied in the FEQ modeling.



## MINUTES OF MEETING

MEETING SUBJECT: Elgin O'Hare-West Bypass  
Revised to Reflect Comments: November 16, 2010

Preparation Date: 10/20/2010

An Elgin O'Hare-West Bypass Coordination Meeting between IDOT and CBBEL was held on October 12, 2010 at CBBEL's office, beginning at approximately 9:00 am and ending at approximately 4:00 pm. The following is a summary of topics and issues discussed at the meeting.

---

FROM: Gerald Robinson, PE, CFM

**SUBJECT: *Elgin O'Hare-West Bypass – Meacham Creek***

The process DuPage County uses to model stream systems was discussed. The hydrologic model used in DuPage County floodplain studies is the Hydrologic System Program – FORTRAN (HSPF) model. The HSPF model simulates a continuous set of hydrologic parameters for a period of record from 1949-2008. The HSPF model is calibrated by comparing stream flows at USGS gages wherever they exist in DuPage County. The results of the HSPF simulation are then input into the FEQ unsteady flow hydraulic model. The FEQ model is also calibrated by using high water elevations and gage data (where available) to show that the hydraulic model is accurately simulating the stream system. The final component used to develop the 100-year recurrence interval floodplain (and all other recurrence intervals) elevations and flows is the PVSTATS statistical model that uses the storm volume and peak elevation and flow rate to determine the desired recurrence interval floodplain.

The Meacham Creek model is part of the larger Spring Brook FEQ unsteady flow model. Work on this model is being completed by Hey and Associates and AECOM, which are both under contract to DuPage County to complete the modeling effort. The Meacham Creek model was already extended up to the existing culvert crossing at the Elgin-O'Hare Expressway. The survey completed by IDOT will be inserted into the FEQUTL program and used for the modeling effort. This will require that the datum used in the survey be converted from NAVD 88 to NGVD29. The FEQ model uses NGVD 29 for all of its information and it would be very time consuming to convert the entire model to NAVD 88, so the IDOT data will be converted. The results of this updated model will be compared to the results of the original DuPage County modeling.

An exhibit was prepared that depicts the limits of the 100-year recurrence interval floodplain obtained from running the PVSTATS program. The data from the FEQ unsteady flow hydraulic model will be used to generate the waterway information tables for the Elgin-O'Hare Expressway and the Medinah Road crossings. The new crossing that was recently completed for IL Route 19 should also be included in the information for Meacham Creek. (P.S. IDOT provided a set of the bridge T.S. and L. on October 20, 2010) There is an existing private crossing of Meacham Creek located immediately upstream of Medinah Road. The private crossing and the Medinah Road crossing will be removed one at a time to determine the amount of backwater generated by each crossing. The report will address the effect of leaving these crossings in place or removing them as part of the overall project.



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## MINUTES OF MEETING

The natural profile for the area will require that the storage located north of the expressway will be removed from the FEQ unsteady flow hydraulic model because it was constructed as part of the overall expressway development. An exhibit will be prepared to depict the limit of where 640 acres (1 square mile) of tributary area are located within the Meacham Creek Watershed. A floodway will be required to be determined below this point in the watershed and a comparison between the storage and conveyance floodway will be completed.

A DI will be completed for the subdivision located along Poplar Avenue and Hawthorne Lane (located east of Plum Grove Road). IDOT recommended that a field investigation of the subdivision should be completed to identify the location(s) of problem areas within the area. Once these areas are identified, additional modeling may be required to determine what remedial measures may be required for the subdivision.

---

FROM: Gerald Robinson, PE, CFM

***SUBJECT: Elgin O'Hare-West Bypass –Devon Avenue Tributary***

Devon Avenue Tributary is also located primarily in DuPage County and is currently being prepared for floodplain mapping for DuPage County by Montgomery Watson Harza (MWH). The same procedure previously discussed in the Meacham Creek portion of the memorandum is used for the Devon Avenue Tributary (HSPF hydrology, FEQ hydraulics and PVSTATS statistical analysis). The FEQ unsteady flow hydraulic model was obtained from MWH and once again, the hydraulic structure sizes and cross-sections used in the FEQ unsteady flow hydraulic model agreed with the survey completed for the EOWB. The survey completed by IDOT will be inserted into the FEQUTL program and used for the modeling effort. This will require that the datum used in the survey be converted from NAVD 88 to NGVD 29. The FEQ model uses NGVD 29 for all of its information and it would be very time consuming to convert the entire model to NAVD 88, so the IDOT data will be converted. The results of this updated model will be compared to the results of the original DuPage County modeling.

An exhibit was prepared that depicts the limits of the 100-year recurrence interval floodplain obtained from running the PVSTATS program. The data from the FEQ unsteady flow hydraulic model will be used to generate the waterway information tables for the Thorndale Avenue and Interstate 290 crossings. An exhibit will be prepared to depict the limit of where 640 acres (1 square mile) of tributary area are located within the Devon Avenue Tributary Watershed. A floodway will be required to be determined below this point in the watershed and a comparison between the storage and conveyance floodway will be completed.

There are a series of cross-road culverts located within the watershed study area that will be included in the report. The culverts will be removed to generate the natural profile for Devon Avenue Tributary and each culvert will be added from an upstream to downstream direction to determine the backwater effects of each of the crossings.



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## MINUTES OF MEETING

IDOT would also like to include the new culvert under Rohlwing Road as part of the report for the Devon Avenue Tributary reports. IDOT will send us information on the crossing to use in the analysis.

A DI will be completed for the subdivision bounded by Thorndale Avenue on the north side and I-290 on the east side. Modeling will be used to determine created heads caused by the existing culvert under Thorndale Avenue. Evaluation of impacts due to created heads and remedial measures for subdivision will be included in the hydraulic report.

---

FROM: Gerald Robinson, PE, CFM

**SUBJECT: *Elgin O'Hare-West Bypass – Salt Creek***

The existing bridge at Thorndale Avenue and Salt Creek was discussed during the meeting. The bridge has recently been replaced by DuDOT and the Salt Creek FEQ unsteady flow hydraulic model was used to permit the replacement structure. IDOT would like to include the new crossing in the report, so CBBEL will compare the data received from DuDOT to the survey completed as part of the Elgin O'Hare West Bypass study. The survey completed by IDOT will be inserted into the FEQUTL program and used for the modeling effort. This will require that the datum used in the survey be converted from NAVD 88 to NGVD 29. The FEQ model uses NGVD 29 for all of its information and it would be very time consuming to convert the entire model to NAVD 88, so the IDOT data will be converted. The results of this updated model will be compared to the results of the original DuPage County modeling.

The results from the FEQ unsteady flow hydraulic model will be used to provide a hydraulic report for this crossing as long as the DuDOT and current survey data are in substantial agreement. Any substantial changes will be input into the FEQUTL model and the FEQ hydraulic model will be re-run using the updated information.

---

FROM: Jeana Gowin, PE, CFM

**SUBJECT: *Elgin O'Hare-West Bypass - Willow Creek under Thorndale Avenue and York Road***

The effective flow rates published in the FIS were superseded in the late 1980s (approximately 1988). A new hydrologic model, including enhanced subbasins, was completed and calibrated to the 1987 storm event. These flow rates upstream of York Road have been used since this time. This hydrologic model was again revised to reflect the construction of Structure 140 and the flows downstream of this structure have been certified by IDNR-OWR.

The effective HEC-2 hydraulic model for the South Unnamed Tributary of Willow Creek upstream of York Road does not include the numerous projects that have taken place along this watercourse. CBBEL developed a HEC-RAS model for the South Tributary of Willow



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## MINUTES OF MEETING

Creek that reflects all of the projects to date, including the Thorndale Avenue and York Road crossing improvements. This model was approved for the York Road and Thorndale Ave improvements by both DuPage County and IDNR-OWR.

A HEC-RAS model for Willow Creek from the upstream face of the C & NW Railroad to the confluence with the Des Plaines River is being used for Completion Phase (Phase 2) permitting purposes within the O'Hare Airport.

The effective HEC-2 hydraulic model for the North Unnamed Tributary of Willow Creek has been revised and reviewed by DuPage County and IDNR-OWR for various construction activities along the watercourse.

CBBEL will use the O'Hare Completion Phase (Phase 2) hydraulic model that extends from the confluence with the Des Plaines River upstream to the upstream side of the C&NW Railroad. Upstream of York Road, CBBEL will append the CBBEL developed HEC-RAS model for the South Unnamed Tributary to the O'Hare model. CBBEL will convert the HEC-2 hydraulic model for the North Unnamed Tributary to a HEC-RAS and append upstream of the O'Hare model. Flow rates used in the hydraulic modeling will be consistent with the previously developed TR-20 hydrologic model.

IDOT will contact Gary Jereb and Bill Boyd at IDNR-OWR to discuss this approach and the permitting procedure for this watercourse. If required, a meeting with IDOT, IDNR-OWR and CBBEL will be set up to discuss the project, modeling procedure and permitting.

**Post-Meeting Note:** IDOT met with IDNR-OWR on October 27, 2010. The use of this modeling was discussed and it was decided that since the current regulatory mapping does not reflect this modeling, the modeling should be submitted to IDNR-OWR for concurrence prior to use for evaluating proposed conditions.

---

FROM: Emily Anderson, EI, CFM

**SUBJECT:** *Elgin O'Hare-West Bypass - Addison Creek under I-294/Northwest Avenue and County Line Road*

1. Addison Creek Regulatory Model to be used
  - a. June 2005 FEMA Effective Model
  - b. HEC-2: Addfinal.dat. It is important to note that the HEC-2 model is in NGVD 29 while the survey was completed in NAVD 88. All models and elevation comparisons will be in NGVD29. All information tables and survey will be in NAVD 88.
2. Baseline Model
  - a. Truncated Regulatory HEC-2 model upstream of CH& NW Railroad to just upstream of Cemetery crossing #1
  - b. 10-, 50-, 100-, and 500-year profiles match regulatory model results
3. Corrected Baseline Model
  - a. Correct errors in regulatory model
  - b. Cemetery crossing #1 bridge points added to complete geometry. County Line Rd bridge points added to complete geometry. Distance between I-294



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## MINUTES OF MEETING

and County Line Road changed from 80 feet to actual 53 feet. Size of I-294 culvert corrected to match survey

- c. This model does not match the regulatory model results with the smaller culvert opening at I-294
- 4. Existing Conditions Model
  - a. Additional CONSPAN crossing to be added to model between County Line Road and the dam
  - b. Waiting on supplemental CONSPAN and dam survey to complete.
  - c. Available cross sections were entered into the model with proposed CONSPAN dimensions
  - d. Does not match regulatory model
- 5. Natural Conditions Model
  - a. It was decided that if the project extents do not include County Line Road at Addison Creek, and that the crossing will not need to be analyzed for proposed conditions
  - b. I-294 natural conditions will be analyzed with and without the County Line Road structure to see upstream effects of County Line Road
- 6. Proposed Conditions Model
  - a. I-294 only will be analyzed when functional geometry is available
  - b. This is not expected to close the 53 ft gap between I-294 and County Line Road

**Post-Meeting Note:** IDOT met with IDNR/OWR on October 27, 2010. Cases such as the corrected baseline model above that reflects obviously shortfalls with the FIS model were discussed. Since the analysis corrects obvious errors in the FIS (such as the culvert size), this corrected model is acceptable for permitting purposes.

### **Results of the I-290 Flow Diversion Discussion**

- 1. A discussion outline, DVD, and set of exhibits was provided to IDOT for review
- 2. Actions to be taken:
  - a. IDOT to find and provide the hydraulic report for Roosevelt Rd to CBBEL
  - b. CBBEL to update unsteady HEC-RAS model with correct bridge low chord
  - c. No additional survey is planned at this time

**Post-Meeting Note:** IDOT provided the desired information and the modeling was updated. It still shows overflow for the 50 year event. Since the July 24, 2010 storm is the only event with a history of overtopping IDOT questions the 50-year overtopping conclusion.



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## MINUTES OF MEETING

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FROM: Donald C. Oliphant, PE, CFM

**SUBJECT:** *Elgin O'Hare-West Bypass - Silver Creek under I-294 and Franklin Park Industrial Complex*

IDOT was informed about the status of the I-294 Industrial Park Drainage Investigation (DI). The DI was going through internal review and would be submitted when the report is finalized. CBBEL mentioned that XP-SWMM modeling of the industrial park would likely be needed to determine the most efficient location for storage and potential pump sizing for the watershed.

CBBEL was waiting on IDOT to provide the regulatory hydraulic model for Silver Creek. Perry said he was still looking for it. Until the regulatory model is provided, CBBEL was directed to construct a new HEC-RAS model using the 1 ft. topography completed as part of this study. Regulatory flow rates would be used for this new hydraulic model. CBBEL was also directed to notify Peter if supplemental survey information would be needed to complete the hydraulic model.

IDOT would contact Cook County to obtain permission for the EOWB project to utilize the 1ft. topography available to the MWRD Lower Des Plaines River Subwatershed study.

---

FROM: Dave Vogel, PE

**SUBJECT:** *Elgin O'Hare-West Bypass – North Avenue Flooding @ I-290 & I-294*

- Attendees met at the CBBEL Rosemont office to discuss progress of the flooding study at the North Ave underpass of I-290/I-294;
- Darren gave a brief synopsis of existing drainage conditions at the North Ave underpass:
  - There are two low points along North Ave within the flooding area, one is located just west of I-290 and one is at I-294. There is a saddle point in between the two low points. The low point west of I-290 will overflow into the eastern low point that is under I-294 if it fills above the saddle point.
  - There are two storm systems that drain North Avenue into Doyle Reservoir. The reservoir is owned/operated by MWRD and is manually pump evacuated to the Lake Street storm sewer system after storm events. The pumps are meant only for dewatering and do not keep up with inflow to the reservoir during storm events. The pump capacity is approximately 9 cfs.
  - The capacity of both North Ave storm sewer systems would be affected by the water elevation in Doyle Reservoir. Higher water elevations would create a tailwater effect on the sewer systems.
  - The western portion of North Avenue (under I-290) is drained by a system that outlets into Doyle Reservoir.



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## MINUTES OF MEETING

- This system was studied by CDM in 2005. A review of the CDM report reveals that portions of the pipe are back-pitched or elliptical in shape. The far western portion of the system that drains the low point west of I-290 is a 10-inch diameter storm sewer.
- Based on aerial 2-foot topographic mapping, stormwater runoff from an additional 175 acres within the City of Elmhurst that is not picked up in the City's storm sewer likely flows overland to the North Avenue low point west of I-290.
- Runoff from approximately 114 acres within the City of Elmhurst drains to the western North Avenue storm sewer system through a 42-inch pipe.
- A review of the Lower Elmhurst Reservoir plans shows that there is a structure located in East End Park with a sluice gate that diverts a portion of the stormwater runoff from the City of Elmhurst away from the western North Avenue storm sewer system and into the Lower Elmhurst Reservoir. The Lower Elmhurst Reservoir is located between I-290 and I-294 at St. Charles Road. Low flows to the diversion structure are bypassed around the sluice gate and into the western North Ave system through an 8-inch diameter pipe. High flows are designed to backup into the Lower Elmhurst Reservoir. The sluice gate was field verified to be closed per the design drawings.
- Pump Station #34 located at I-290 & Emroy Ave pumps into the western North Ave storm sewer system from the northwest at a maximum rate of 25 cfs.
- Based on review of I-294 design plans, portions of I-294 south of North Ave appear to drain to the western North Ave storm sewer system. This was confirmed by a recent CBBEL field visit.
- CBBEL field visits indicate that several inlets along the western storm sewer system are in poor condition.
- The eastern portion of North Avenue (under I-294) is drained by a storm sewer system that also outlets into Doyle Reservoir.
  - Based on review of I-294 design plans, portions of I-294 north of North Avenue appear to drain to the eastern North Avenue storm sewer system.
  - The overflow elevation of Doyle Reservoir ( $\pm 658$  ft) is above the low point on North Avenue under I-294 ( $\pm 654$  ft). If Doyle Reservoir filled to this elevation, there would be several feet of standing water on North Avenue under I-294.
- There was some discussion regarding the drainage investigation report prepared by CDM in December 2005. Darren explained that pipes in the system are back-pitched by about 0.5 feet and there are several elliptical sections of pipe. It was not clear why there were sections of elliptical pipe. IDOT noted that the plots in the



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## MINUTES OF MEETING

CDM report may have been developed for modeling purposes. Inspection and cleaning of the pipe revealed that there is actually a siphon condition. Rick Wojcik is more familiar with the history of this and should be consulted.

- Darren noted that the pipe sizes and configurations in the CDM study do not match the design plans for Doyle Reservoir, Lower Elmhurst Reservoir, or I-294 plans. The need for additional survey of the drainage system was discussed.
- It was agreed that CBBEL should eventually design a storm sewer system for the low point on North Avenue west of I-290 as if the existing sewer system did not exist. It would then be clear which portions of the existing system can be salvaged as part of the new design.
- Perry said that flooding of North Avenue occurs frequently. Flooding from smaller events is as much a concern as from larger events such as July 2010. He recommended we check with Rick Wojcik regarding what events are of most concern to IDOT.
- Perry said that Rick Wojcik with IDOT should be consulted regarding the findings to date. It was agreed that a meeting would be scheduled.
- IDOT was provided with the CBBEL tributary area map and storm sewer/topo map that were discussed during the meeting.

---

ATTENDEES: Perry Masouridis – IDOT  
Santos Batista – IDOT  
Jerry Robinson - CBBEL  
Donald R. Dressel – CBBEL  
Chin Wang – CBBEL  
Peter Procaccio – CBBEL  
Donald Oliphant – CBBEL  
Darren Olson – CBBEL  
Dave Vogel – CBBEL  
Jeana Gowin – CBBEL  
Emily Anderson – CBBEL

N:\Idot\070404\Drain\Docs\Meeting Minutes\MM.IDOT Meeting\_Revised\_113010.doc



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Vertical Datum Shift at Tribshed Centroid:  
(NGVD29 Z) - (NAVD88 Z) = Vert\_Datum\_Z\_Diff

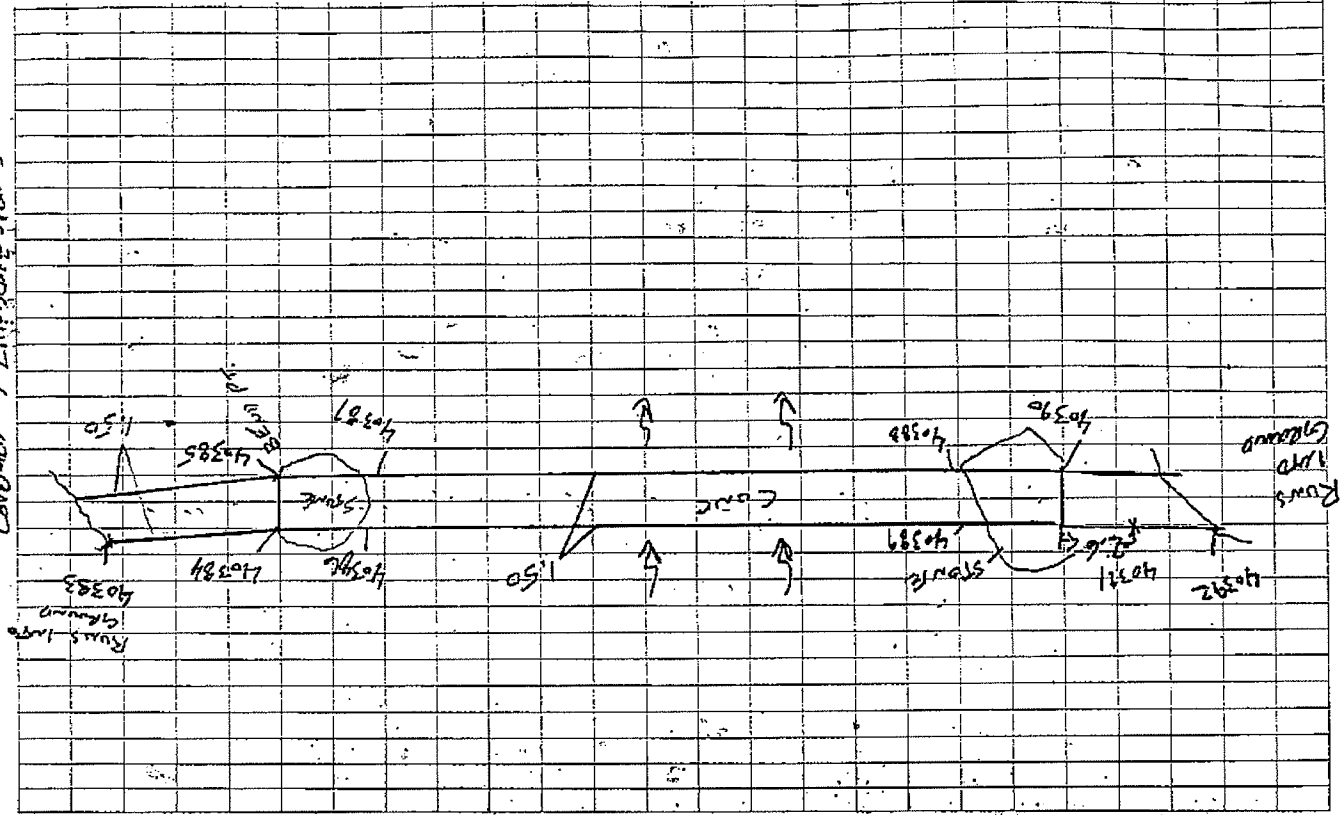
Tribshed	Centroid_X	Centroid_Y	Vert_Datum_Z_Diff
DPAC	1090851.805	1915917.988	0.284
DPBD	1090300.408	1928251.631	0.289
DPBP	1069526.246	1834401.078	0.273
DPCT	1095138.663	1933742.369	0.297
DPDP	1086075.951	1836308.959	0.281
DPFC	1092186.933	1862169.450	0.273
DPWL	1087693.122	1935775.362	0.290
DULC	1068557.762	1844102.949	0.269
DUSG	1024560.823	1846891.871	0.260
EBAR	1054307.337	1912078.738	0.265
EBAT	1063079.858	1918498.724	0.271
EBCR	1063409.687	1850057.241	0.269
EBE1	1064848.564	1908545.753	0.274
EBE2	1056600.283	1905924.860	0.266
EBE3	1067754.554	1889224.245	0.274
EBE6	1049763.550	1858655.226	0.266
EBE7	1050951.260	1852487.637	0.266
EBEB	1057861.023	1878313.365	0.269
EBGL	1056727.717	1890149.084	0.267
EBGP	1068420.299	1882803.828	0.271
EBLA	1069166.542	1877016.345	0.270
EBPR	1067217.160	1857896.209	0.269
EBRC	1042528.535	1874506.900	0.263
EBSJ	1071053.387	1867231.853	0.268
EBSM	1062134.451	1921591.295	0.271
EBTS	1068312.705	1886187.964	0.273
EBWI	1050210.931	1882005.809	0.266
FRBC	1012948.509	1932703.573	0.260
FRIC	1006861.549	1867709.057	0.238
FRNC	1010296.442	1920800.567	0.250
FRWA	1012353.067	1853795.526	0.244
SCBW	1086620.100	1874905.185	0.269
SCDA	1069824.327	1939096.404	0.282
SCGC	1081124.119	1882900.764	0.273
SCOB	1083032.901	1888401.164	0.278
SCSB	1058010.472	1933660.642	0.280
SCSC	1083902.855	1908499.038	0.282
SCSU	1077616.404	1893610.873	0.276
SCWC	1070755.062	1916608.760	0.277
SWSW	1083447.228	1846508.809	0.268
SWWD	1074386.588	1847435.676	0.266
WBCC	1034367.472	1867556.844	0.263
WBFE	1014752.456	1876081.139	0.252
WBFX	1037056.063	1845059.989	0.267
WBKC	1040926.759	1912276.937	0.260
WBKR	1010353.705	1900888.881	0.245
WBSP	1040160.456	1887762.853	0.257
WBSR	1041615.540	1862408.865	0.266
WBW1	1040852.583	1928887.384	0.269
WBW2	1028202.170	1938439.343	0.262
WBW3	1022203.395	1909294.269	0.256
WBW4	1031770.194	1914696.360	0.262
WBW5	1026104.116	1900851.136	0.256
WBW6	1043797.510	1856220.038	0.266
WBW7	1044498.398	1853424.223	0.265
WBW8	1035709.627	1840964.889	0.269
WBWB	1032468.229	1902535.180	0.258
WBWF	1043025.773	1898112.419	0.256
WBWG	1034722.953	1849634.602	0.268

**TAB 14**

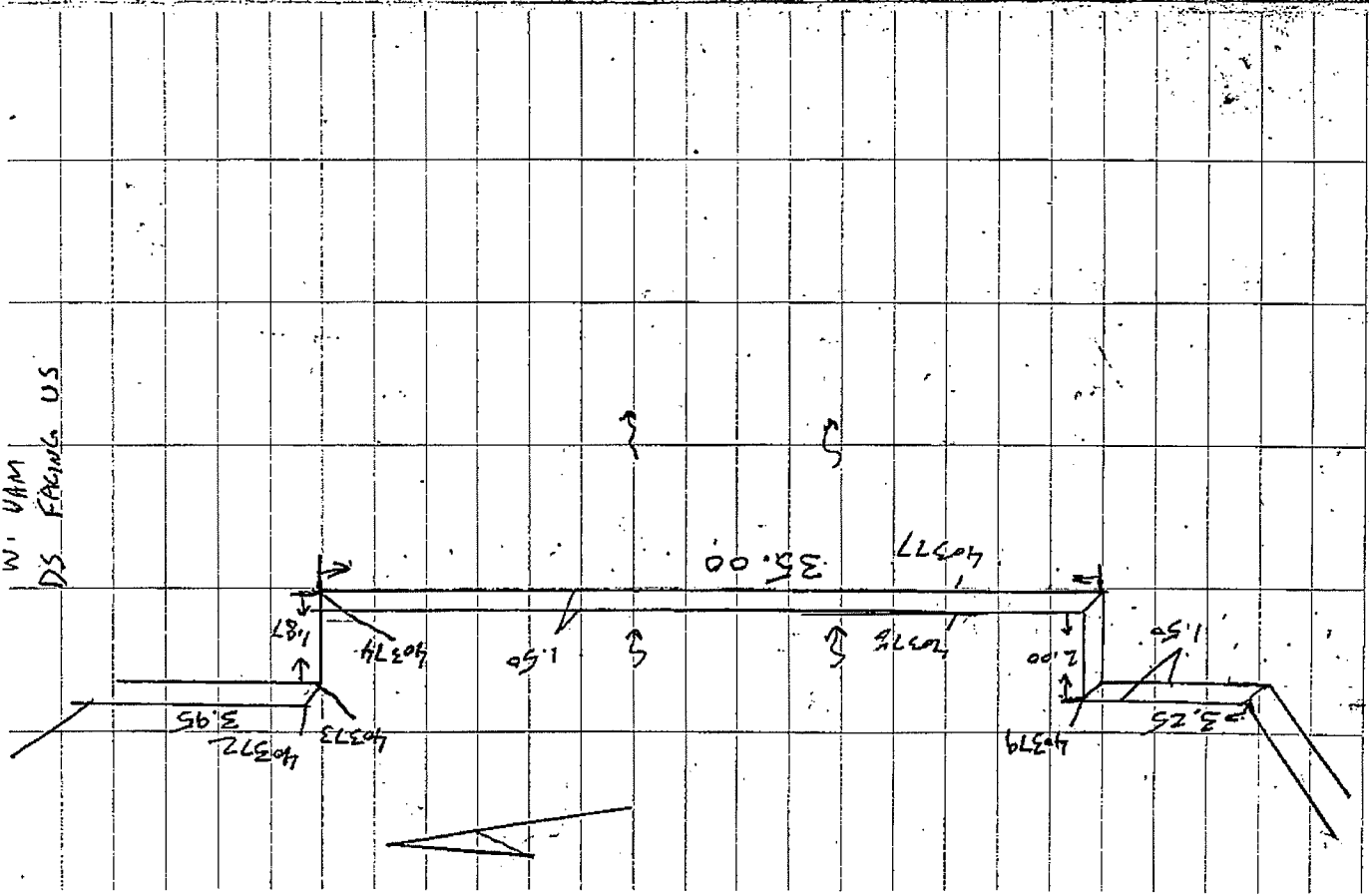
## **SECTION 14**

### **SURVEY NOTES**

COVERED W/ LANDSCAPE STONES

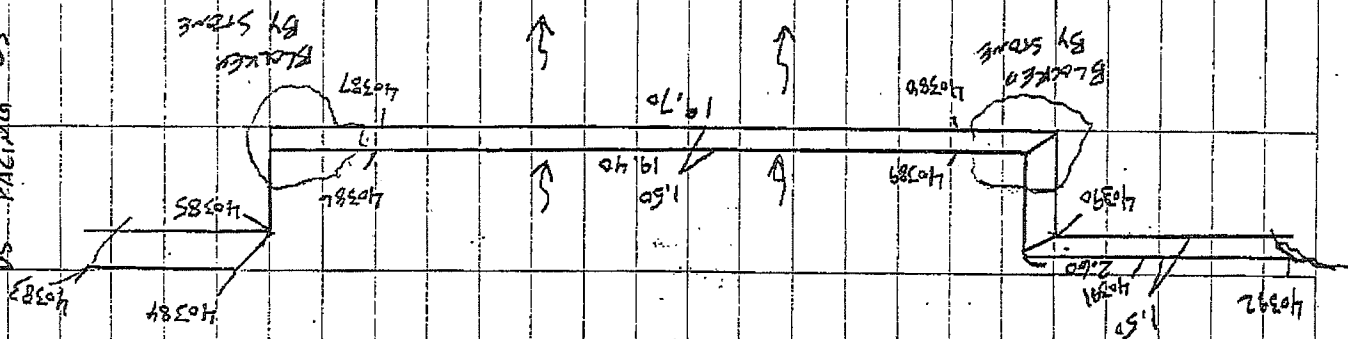


W: UAM  
DS FACING US

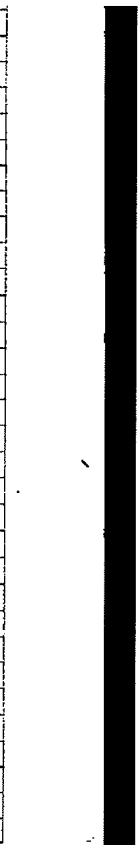


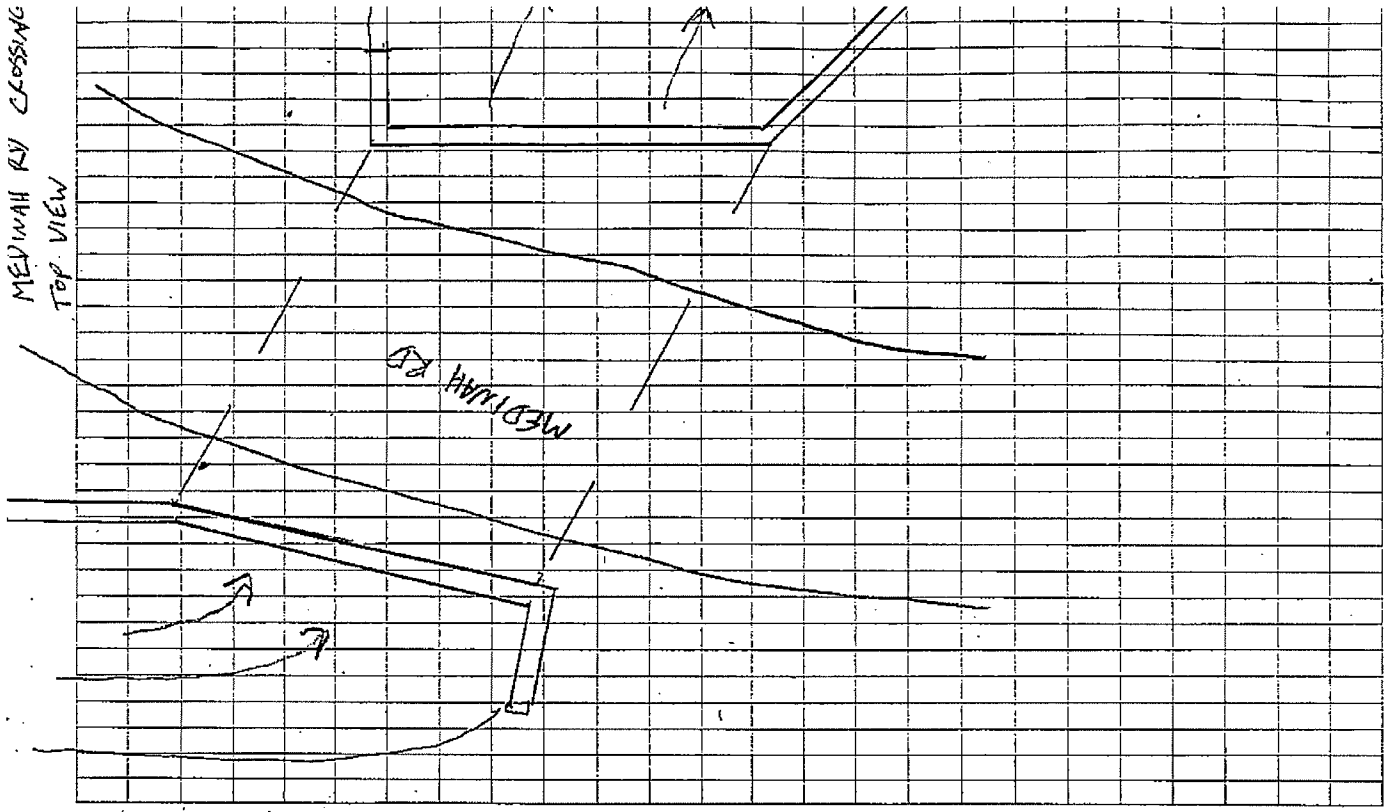


E. DAM  
DS FACING US



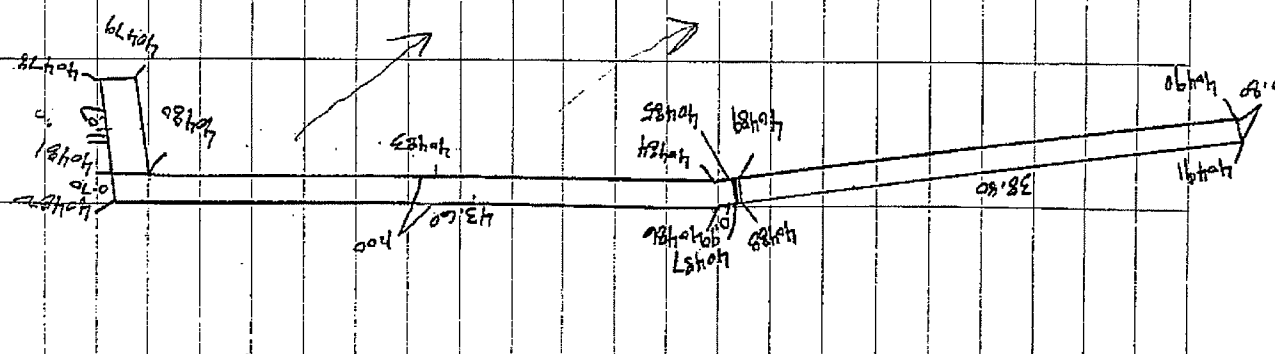
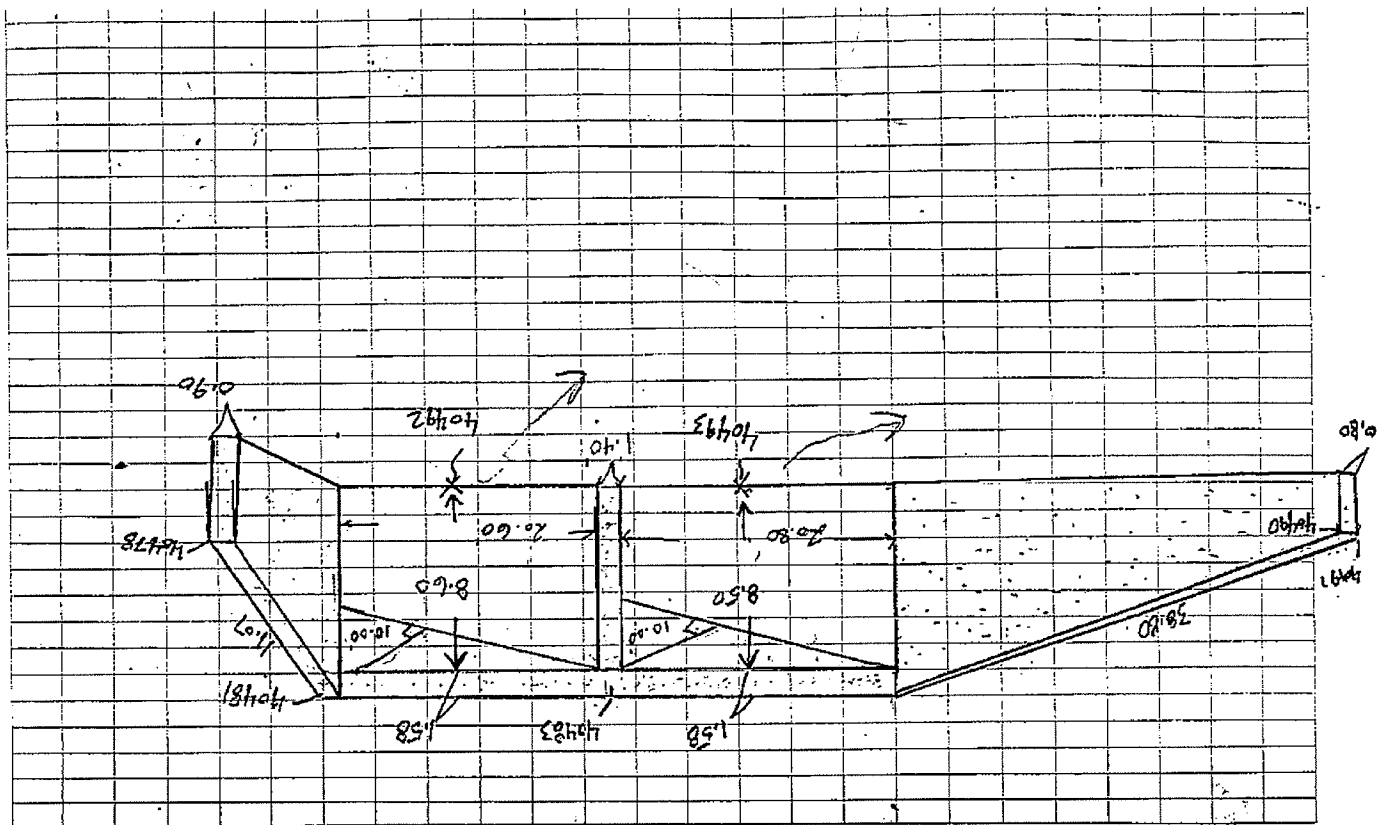
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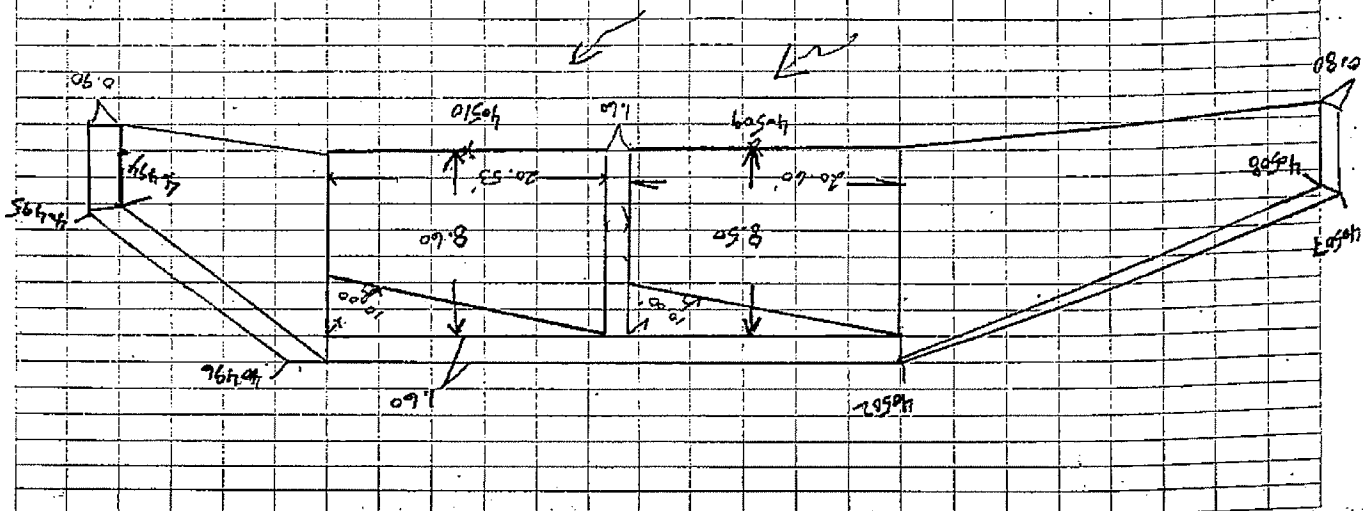
40475	WP-CC	N. of MEDINAH CROSSING	
40476	WP-CC	SW of " "	LABOR 502
40477	WP-ILS	@ 500' DS XS	
40478-40491	CONC. WINGWALL	DS STRUCTURE DETAIL	
40492-40493	WV- X 8.50	BOX CLV	
40494-40500	CONC. WINGWALL	US STRUCTURE DETAIL	
40501-40510	WV- X 8.50	BOX CLV	
40511	✓ @ 40397	AV= 0.014	AV= 10.55

DS STRUCTURE

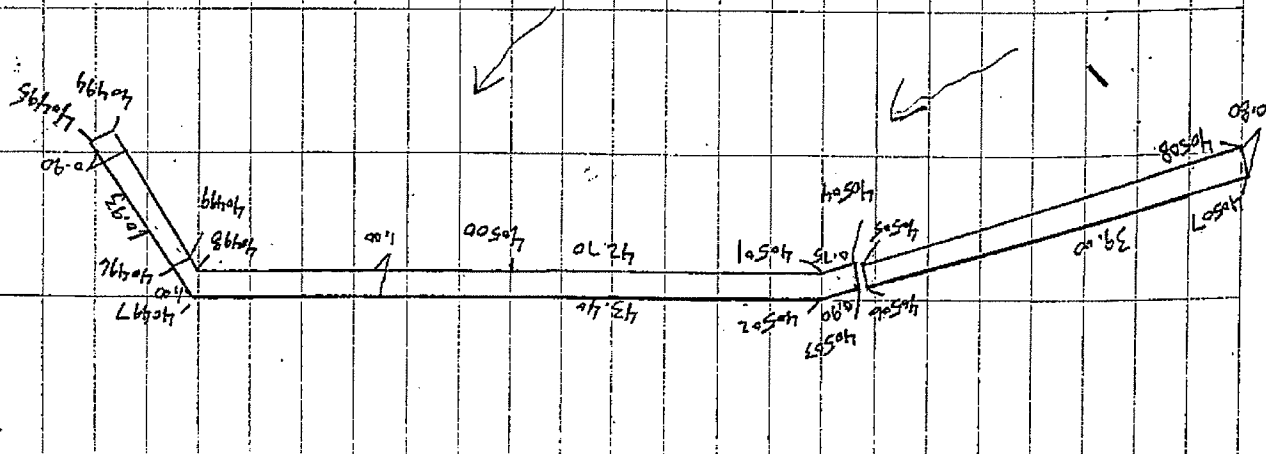




Box Culvert with wing walls



STRUCTURE TOP VIEW

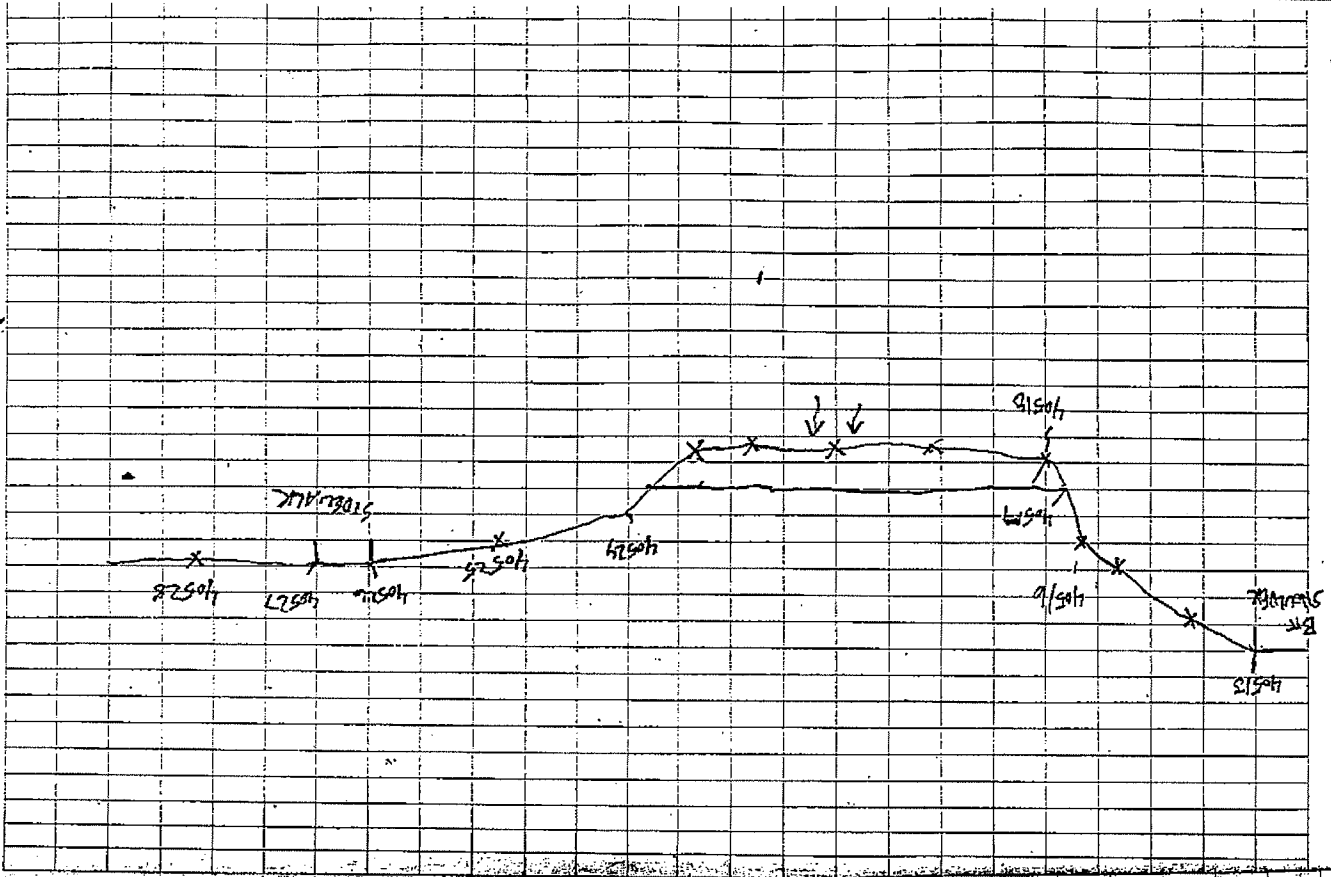


3-11-10  
CMB/SAS

MEDIAN RD CROSSING

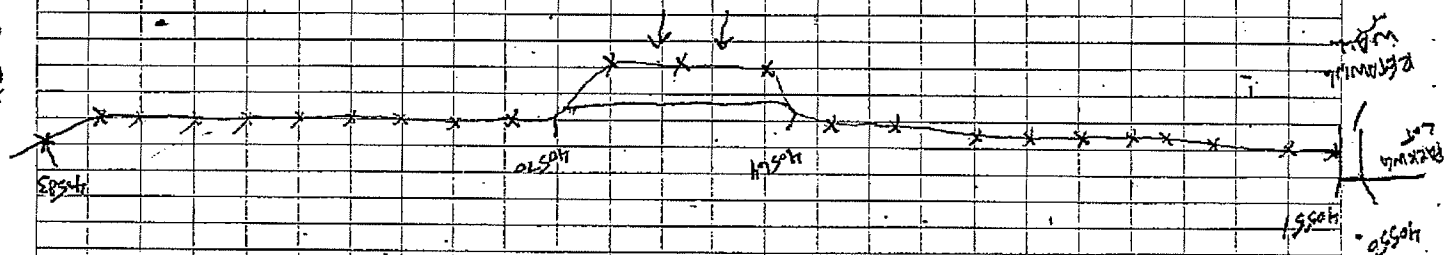
US XS FACING DS

STA	#	N	E	ELV
✓@ 40517	40517	-0.055	0.0049	10.089
40513-40520	XS @ US FACE			
40520-40548	XS @ DS FACE			
	XS 500' DS			
	✓@ 40477	HI: 5.00	BS 40397	
✓@ 40597	ΔH: 0.001	ΔV: 0.038	40549	
40550-40583	XS 500' DS	40564 = BUL (L)	40570 BUL (R)	
40584	✓@ 40397	ΔH: 2.033	ΔV: 10.08	
	SWITCH TO GPS	LEVER 12.00 @ 6.562		
40585	WP-NAIL @ 1000' DS XS			
	SWITCH BACK TO CONVENTIONAL			
40586	WP-NAIL			
40587	✓@ 40397	ΔH: 0.043	ΔV: 0.054	

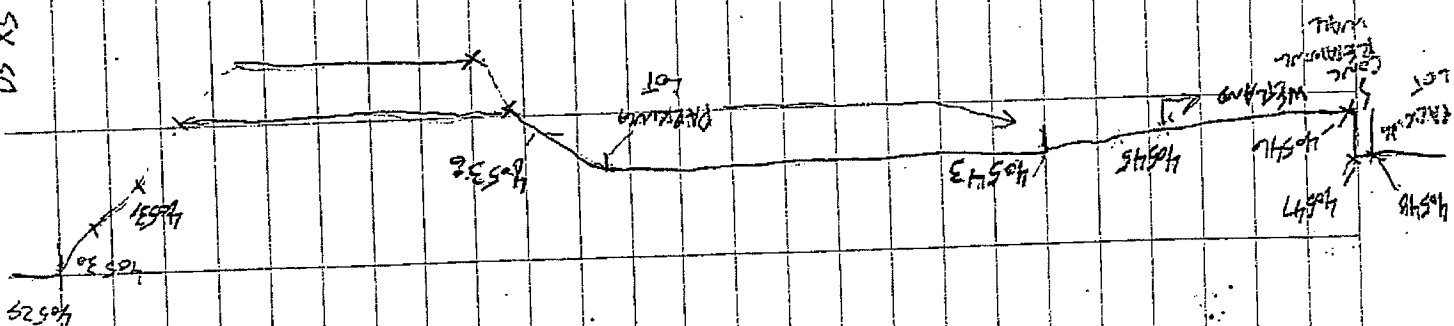


50

XS 500' DS FACING US



DS XS FACING DS

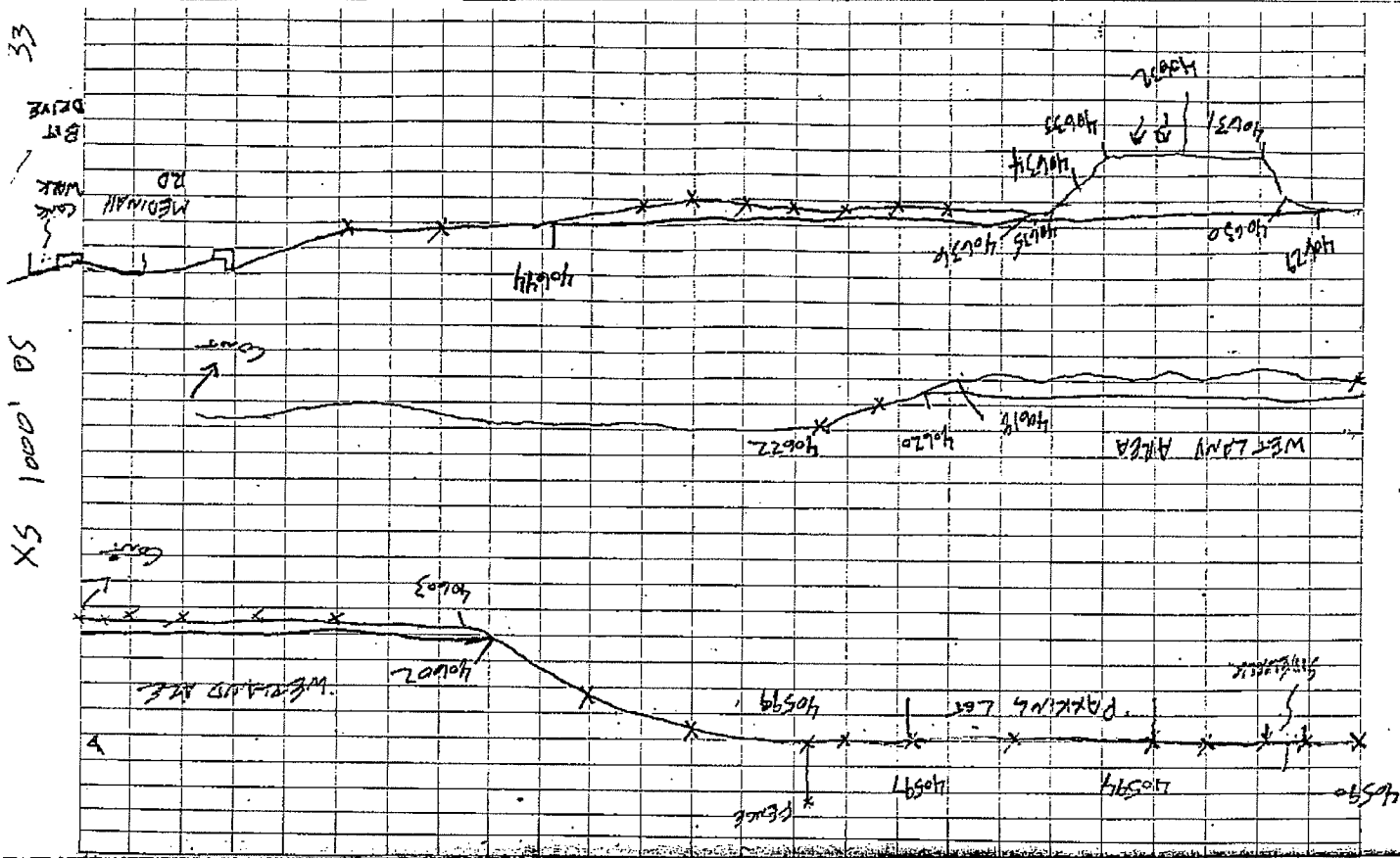


3-21-10  
SK/abw

50.

SD, 10001 SX

33



STA	#	N	E	ELEV
✓ @ 40397	40588	-0.075	-0.014	40.656
40589	WP-CC	W. SIDE OF MEDIAN		
± 7:50 AM	ENCOUNTERED	IRAKI HOMEOWNER		
		ON MEDIAN RD. 1ST HOUSE N. OF		
		MEDIAN INTERMEDIATE SLOPE ON THE		
		WEST SIDE OF MEDIAN RD. TOLL IS		
		HE ALWAYS PHOTOGRAPHED BOTH SIDES		
		OF THE ROAD, HE GRABBED JOHN'S ARM		
		AND TOLD US TO LEAVE NO RES. #		
		ON HIS HOUSE.		
		XS 1000' DS		
40590 - 40618	XS @ 1000' DS			
		SWITCH TO CONVENTIONAL		
		T @ 40585 HI = 4.50	BS 40586	
✓ @ 40586	ΔH = 0.074	ΔV = 0.098	40619	
40620 - 40657	XS 1600' DS	CONT.		
✓ @ 40586	ΔH = 0.052	ΔV = 0.099	40658	
	GPS			
✓ @ 132	N = 0.003	E = 0.047	Elev = 0.008	40659



MEACHAM CREEK

FILE NAME: MEACHAM 111009 UY

Sheet: CP# 610

N: 1939603.730

E: 1062228.731

Elev: 721.142

Sheet: CP# 610

N: 1939603.727

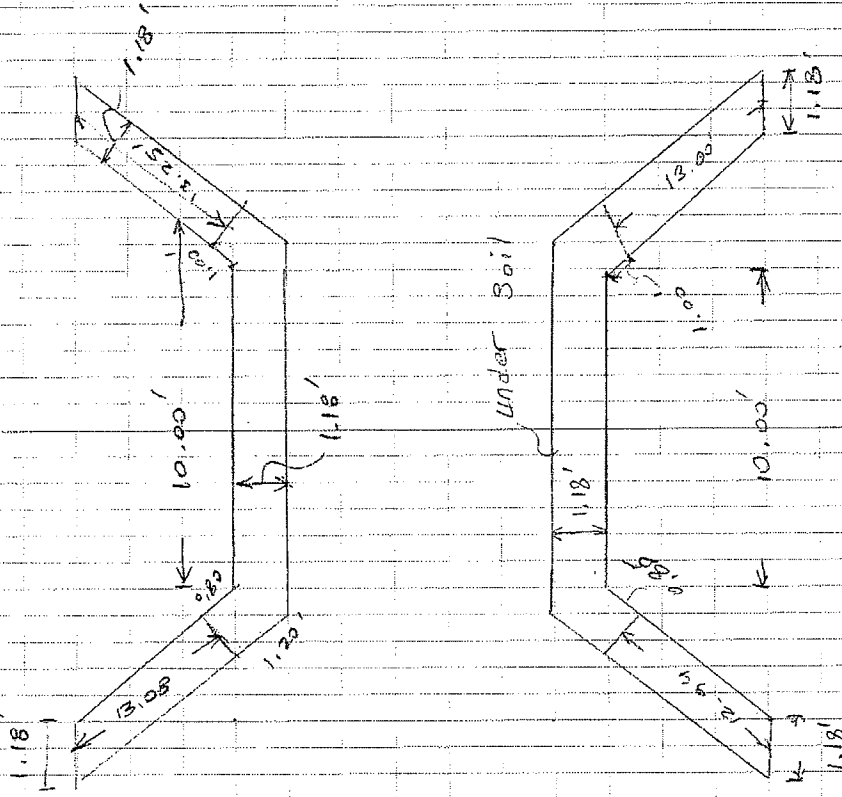
E: 1062228.730

Elev: 721.156

UY, RC

11-11-2009

N



MEACHAM CREEK  
X-SECTIONS

FILE NAME: MEACHAM 111209414

5505 Check CP# 609

N: 1939159.127

E: 1061997.323

Elev: 721.196

5570 Check CP# 609

N: 1939159.176

E: 1061997.317

Elev: 721.205

5669 Check CP# 609

N: 1939159.188

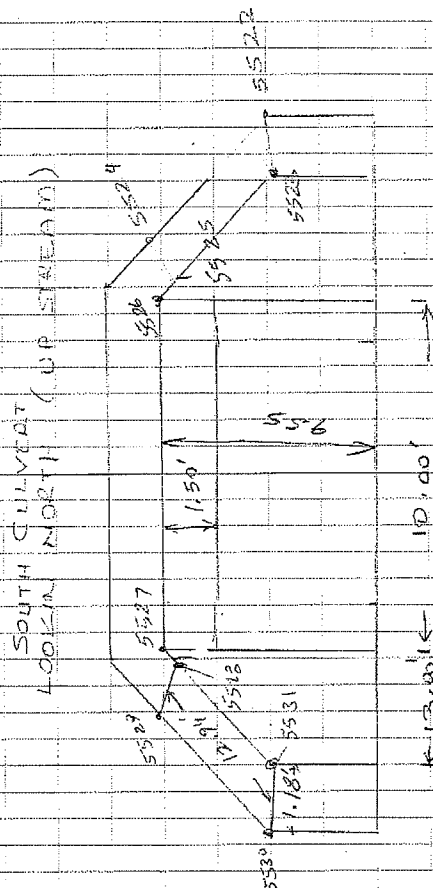
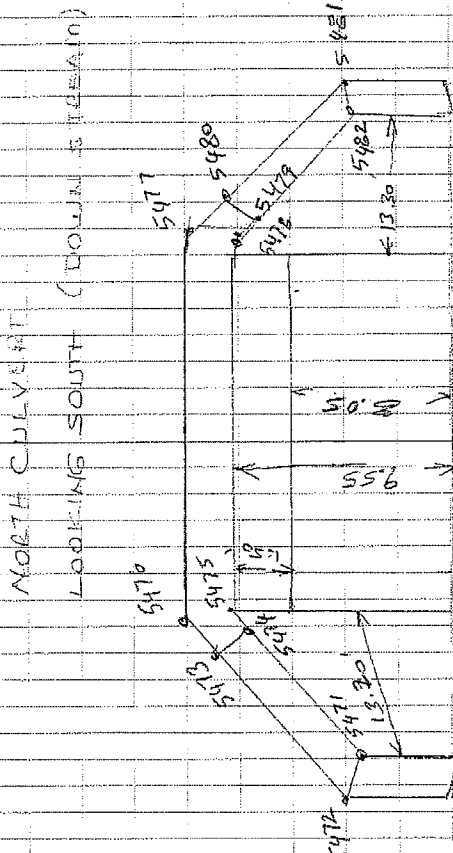
E: 1061997.308

Elev: 721.195

70' -  
SUNNY

WY, RC

11-12-09



**TAB 15**

## **SECTION 15**

**CD (MODELING AND SURVEY DATA)**