



**“Your Project is Our Priority”**

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# **PRELIMINARY DRAINAGE REPORT**

FOR

**TRESCOTT**

LOCATED IN

TOWN OF PLAINFIELD  
GUILFORD TOWNSHIP  
HENDRICKS COUNTY, INDIANA

Prepared For:

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## Preliminary Drainage Narrative for:

# Trescott

### I. INTRODUCTION

This report provides a preliminary analysis of the stormwater drainage design for the development of Trescott, a 168.9± acre, 382 lot residential subdivision located in the Town of Plainfield on the west side of South Country Road 675 East, north side of E County Road 700 South and south of East County Road 600 South in middle of section 10, Township 14N, Range 1E, in Guildford Township, Hendricks County, Indiana.

Allowable Stormwater discharge is based on requirements set forth by the Town of Plainfield. A summary of the stormwater discharge requirements can be found below in **TABLE 1**.

**TABLE 1**  
STORMWATER DISCHARGE REQUIREMENTS  
TOWN OF PLAINFIELD

$Q_{100p} \leq Q_{10e}$	Where: $Q_{10e}$ = Existing 10-year peak discharge rate $Q_{100p}$ = Developed 100-year peak discharge rate
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### II. ADJOINING LAND CONDITIONS

North: Agricultural/ Residential beyond  
South: Agricultural  
East: Agricultural  
West: Agricultural

### III. EXISTING SOIL TYPES

The Existing soils are primarily a combination of Type C and Type B with Type C being the more prevalent of the two. A more extensive list of the exact soil types and their rating can be found in the Appendix

### IV. SITE DRAINAGE ANALYSIS

#### a. Existing Site Conditions

In the existing conditions water leaves the site at four different areas. Approximately 126.9± acres (EX-1) drains north into an unnamed tributary of White Lick Creek (BNDY 1). On the east boundary of the site approximately 15.1± acres (EX-2) drains south into an existing 18" CPP Pipe (BNDY 2). Approximately 14.9± acres (EX-3) on the west boundary of the site drains southwest towards an unnamed tributary West Fork White Lick Creek (BNDY 3). On the south boundary of the site approximately 26.1± acres (EX-4)

drains west across a farm field before out letting into a culvert going under County Road 700 South (BNDY 4).

**b. Developed Site Conditions**

In the developed condition, Stormwater runoff will drain through a series of 10 wet ponds. To the north, approximately 5.0± acres (DEV-1) drains into POND-1. Approximately 34.3 acres (DEV-5) will drain into POND-5 which drains into POND 4 along with 18.5± acres (DEV-4) of onsite area and 7.8± acres (FUTURE-4) of area to be developed at a later date. POND 4 drains into POND 2 along with 9.6± acres (DEV-2) of onsite area (DEV-2). In addition, approximately 9.0± acres (DEV-3) along with 12.8± acres (FUTURE-3) of area to be developed at a later date drains to POND 3 which drains to POND 2. Both POND 1 and POND 2 along with 2.7± acres (DIR) of direct discharge drains into an unnamed tributary of White Lick Creek (BNDY 1). Approximately 22.9± acres (DEV-7) drains into POND 7 which will drain into POND 6 along with 9.5± acres (DEV-6) of onsite area before out letting to a swale towards White Lick Creek (BNDY 2). To the approximately 17.7± acres (DEV-10) drains into POND 10 which drains into POND 9 along with 18.2± acres (DEV-9) of onsite area. Pond 9 outlets into POND 8 along with 14.3± acres (DEV-8) of onsite area before out letting through a proposed storm sewer network to a ditch draining towards White Lick Creek (BNDY 4). Preliminary developed onsite discharge rates can be found in **TABLE 2** and Pond stages with offsite can be found in **TABLE 3**.

<b>TABLE 2 PRELIMINARY DEVELOPED SITE STORMWATER DISCHARGE</b>				
<b>Discharge Point</b>	<b>Developed Onsite Discharge (CFS)</b>		<b>Allowable Discharge (CFS)</b>	
<b>BNDY 1</b>	<b>Q<sub>100p</sub> = 43.5</b>	<b>≤</b>	<b>Q<sub>10e</sub> = 137.2</b>	<b>OK</b>
<b>BNDY 2</b>	<b>Q<sub>100p</sub> = 21.3</b>	<b>≤</b>	<b>Q<sub>10e</sub> = 29.1</b>	<b>OK</b>
<b>BNDY 4</b>	<b>Q<sub>100p</sub> = 18.9</b>	<b>≤</b>	<b>Q<sub>10e</sub> = 57.2</b>	<b>OK</b>

<b>TABLE 3 PRELIMINARY DEVELOPED SITE DETENTION POND STAGES</b>		
<b>Discharge Point</b>	<b>Estimated Normal Pool Elevation</b>	<b>100-year Stage Elevation</b>
<b>POND-1</b>	<b>733.1</b>	<b>734.28</b>
<b>POND-2</b>	<b>733.1</b>	<b>737.7</b>
<b>POND-3</b>	<b>735.2</b>	<b>739.5</b>
<b>POND-4</b>	<b>737.63</b>	<b>742.05</b>
<b>POND-5</b>	<b>740</b>	<b>745.27</b>
<b>POND-6</b>	<b>737.2</b>	<b>741.61</b>

<b>POND-7</b>	<b>738.8</b>	<b>742.65</b>
<b>POND-8</b>	<b>731.1</b>	<b>735.98</b>
<b>POND-9</b>	<b>734.9</b>	<b>739.04</b>
<b>POND-10</b>	<b>736.1</b>	<b>740.57</b>

Storm sewers will be analyzed in the final to provide capacity for a 10-year storm event. The rational method will be used to model the runoff rates and Manning's Equation will be used to calculate the capacity of the pipes. Emergency flood routing will be analyzed during the final design of the project.

The wet bottom detention ponds will be the primary best management practice (BMP) for stormwater quality. This provides significant storage for suspended sediment. Wet ponds will generally capture 80% or more of the total suspended solids in stormwater runoff. These calculations will be provided in the final design.

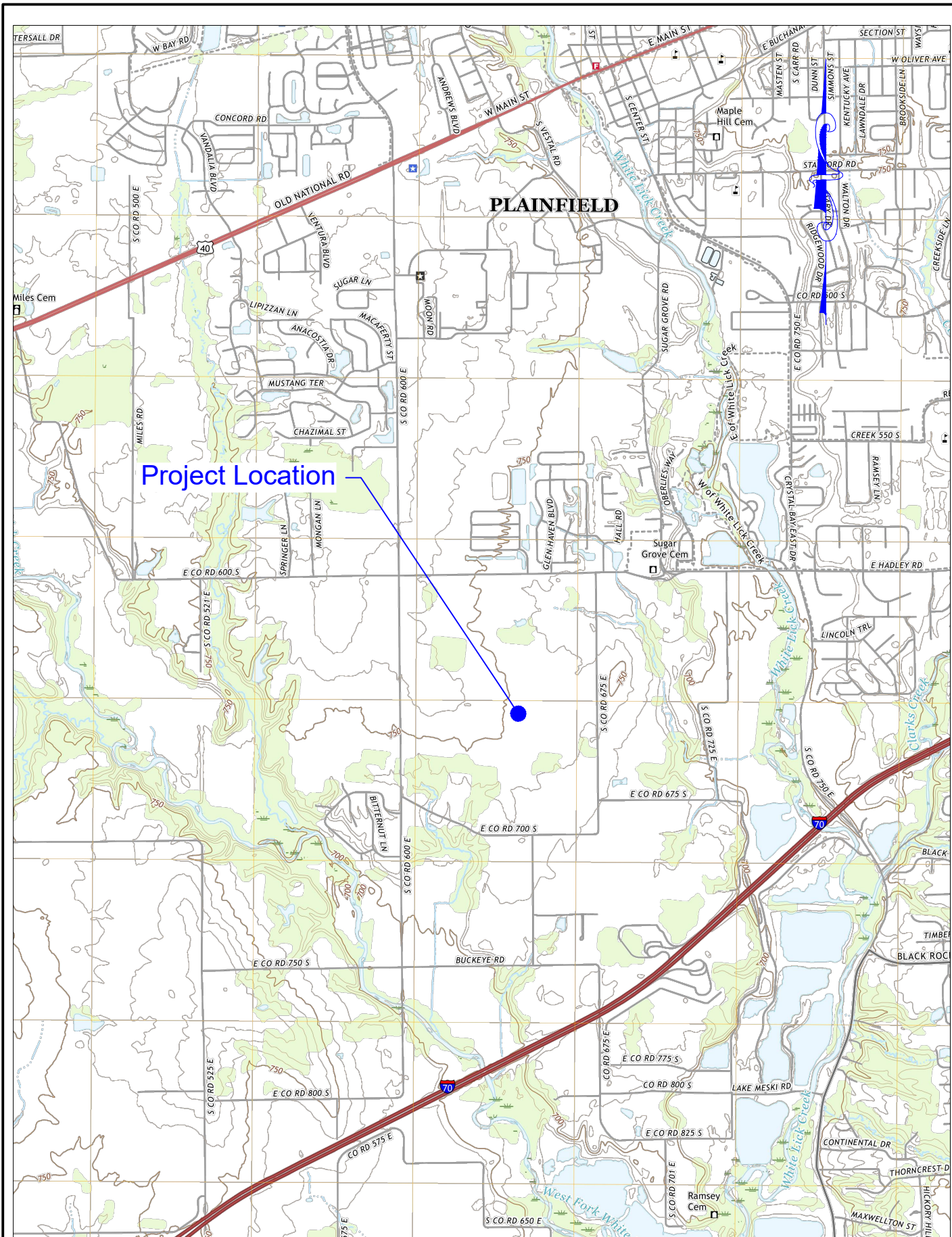
In Conclusion, based on this preliminary analysis, we believe there is adequate volume in the proposed ponds to provide detention for this project in the fully developed condition. Overall, it appears the drainage from this project in the fully developed condition would not have any adverse impacts to onsite or offsite facilities. A more detailed analysis will be provided in the final design.

## V. REFERENCES

Design data and methods are based on the following reference materials:

1. NRCS Web Soil Survey (<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>)
2. USGS Mapping
3. FEMA Flood Mapping (<https://www.fema.gov/national-flood-hazard-layer-nfhl>)
4. Hendricks County Stormwater Technical Standards Manual
5. ICPR v4.07.04, Streamline Technologies, Inc

## A. AREA MAP

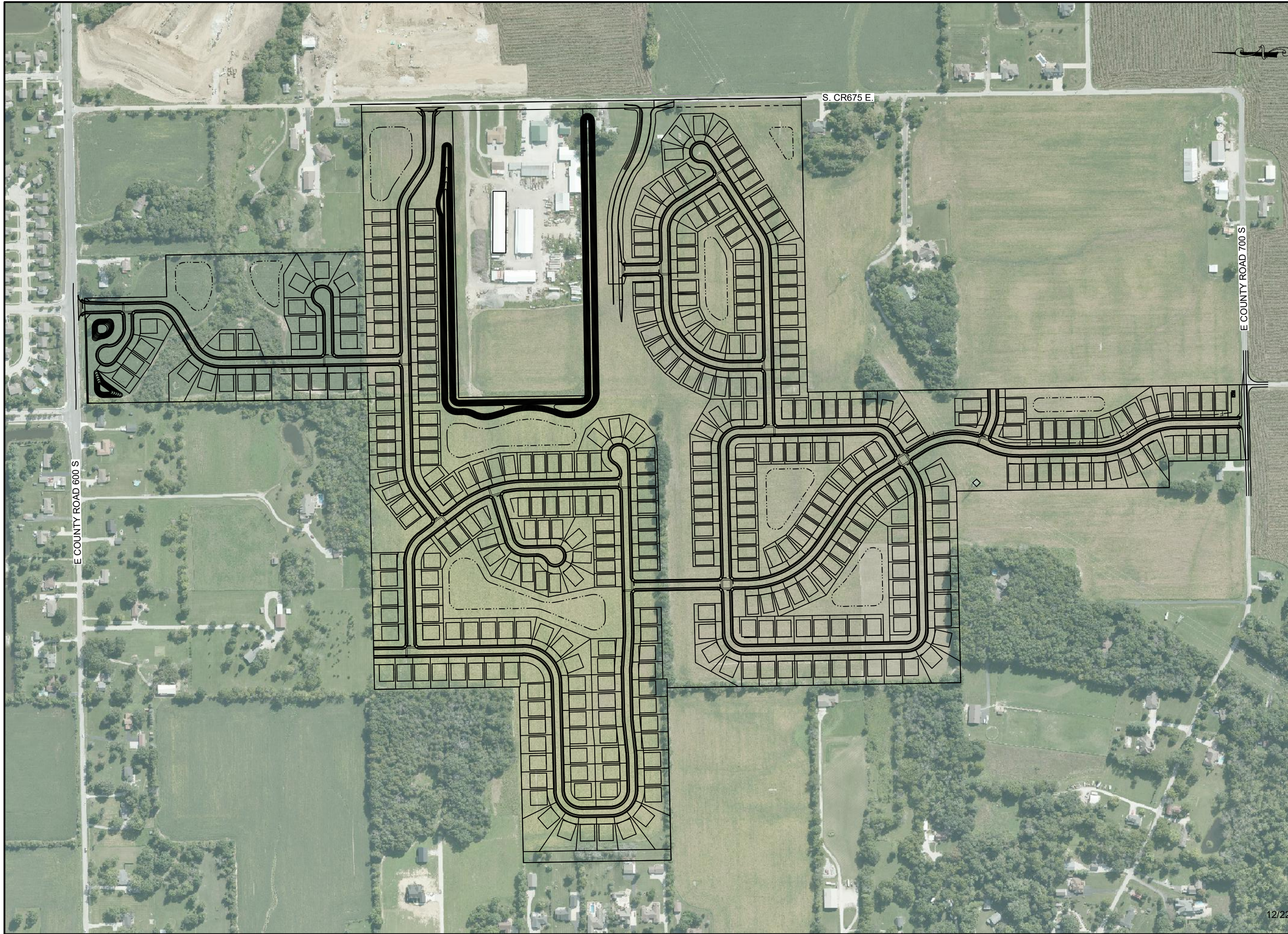


Drawn By: JET  
 Date: 12/17/2021  
 Project No.: 19274  
 Scale: NONE  
 Page: 1 of 1

**AREA MAP**  
**TRESCOTT**  
**HENDRICKS COUNTY**  
**PLAINFIELD, INDIANA**

  
 853 COLUMBIA ROAD, SUITE #101  
 PLAINFIELD, IN 46168  
 BUS: (317) 707-3700, FAX: (317) 707-3800  
 E-MAIL: [Banning@BanningEngineering.com](mailto:Banning@BanningEngineering.com)  
 WEB: [www.BanningEngineering.com](http://www.BanningEngineering.com)

**B. SITE MAP**



E COUNTY ROAD 600 S

S. CR675 E.

E COUNTY ROAD 700 S



12/22/2021

Page 1

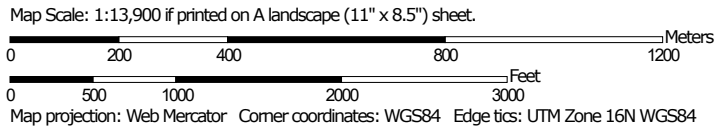
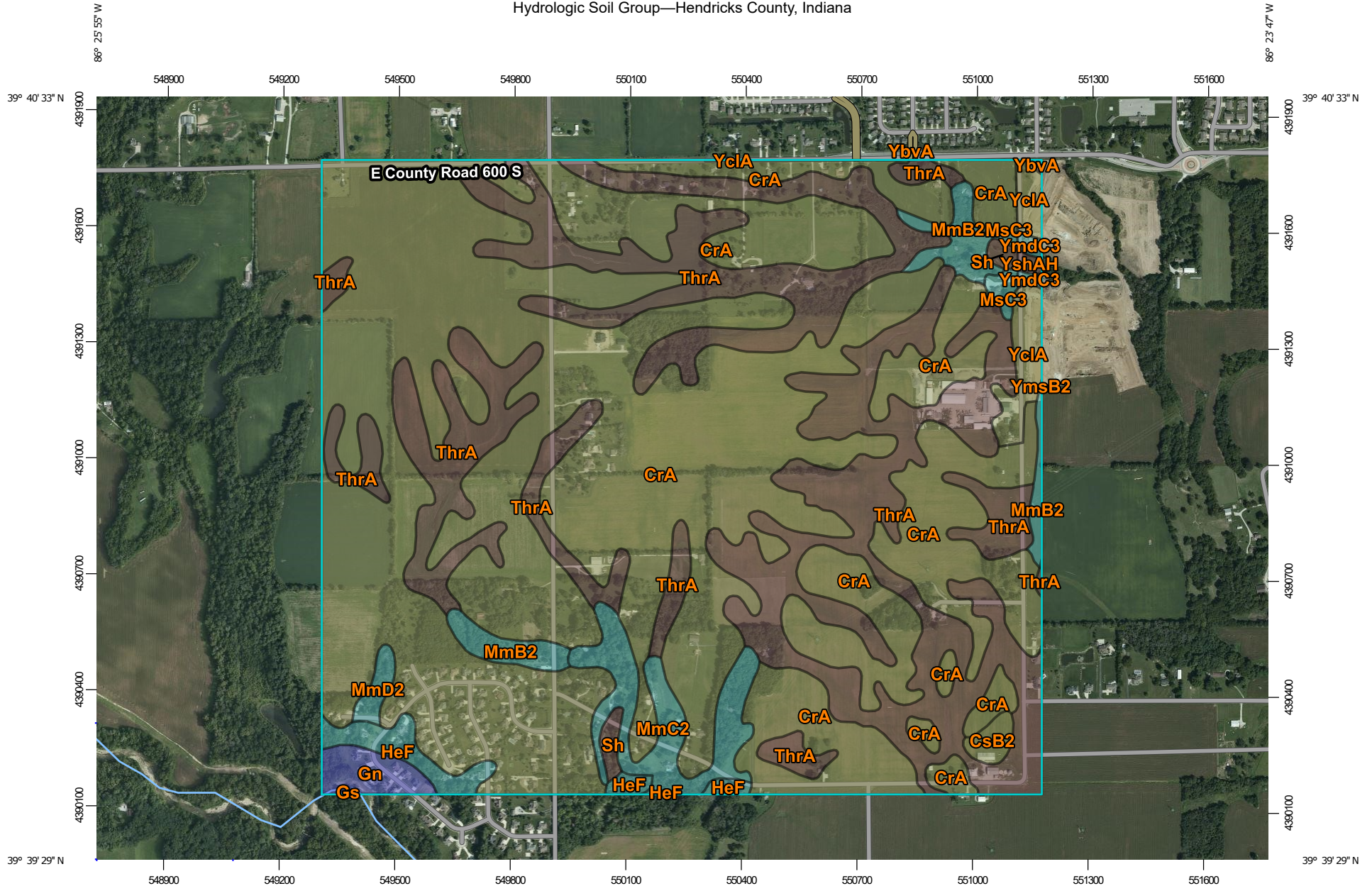
Drawn By: JET  
Date: 12/17/2021  
Project No.: 19274  
Scale: AS SHOWN  
Page: 1 of 1

SITE MAP  
TRESCOTT  
HENDRICKS COUNTY  
PLAINFIELD, INDIANA

**BANNING**  
ENGINEERING  
853 COLUMBIA ROAD, SUITE #101  
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## C. SOILS MAP

Hydrologic Soil Group—Hendricks County, Indiana



### MAP LEGEND

**Area of Interest (AOI)**









 Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Lines**

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Points**






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hendricks County, Indiana  
 Survey Area Data: Version 25, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 1, 2018—Sep 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CrA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	C/D	474.5	62.3%
CsB2	Crosby-Miami silt loams, 2 to 4 percent slopes, eroded	C/D	2.8	0.4%
Gn	Genesee silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration	B	7.1	0.9%
Gs	Genesee sandy loam, sandy substratum	B	0.1	0.0%
HeF	Hennepin loam, 25 to 50 percent slopes	C	10.0	1.3%
MmB2	Miami silt loam, 2 to 6 percent slopes, eroded	C	14.7	1.9%
MmC2	Miami silt loam, 6 to 12 percent slopes, eroded	C	21.6	2.8%
MmD2	Miami silt loam, 12 to 18 percent slopes, eroded	C	2.7	0.4%
MsC3	Miami clay loam, 6 to 12 percent slopes, severely eroded	C	2.1	0.3%
Sh	Shoals silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	B/D	3.0	0.4%
ThrA	Treaty silty clay loam, 0 to 1 percent slopes	B/D	209.3	27.5%
YbvA	Brookston silty clay loam-Urban land complex, 0 to 2 percent slopes	B/D	0.2	0.0%
YclA	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	C/D	10.8	1.4%
YmdC3	Miami clay loam-Urban land complex, 6 to 12 percent slopes, severely eroded	C	1.3	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
YmsB2	Miami silt loam-Urban land complex, 2 to 6 percent slopes, eroded	C	0.0	0.0%
YshAH	Shoals silt loam-Urban land complex, 0 to 2 percent slopes, frequently flooded, brief duration	B/D	0.7	0.1%
<b>Totals for Area of Interest</b>			<b>761.0</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

## **D. FLOOD MAP**



**FLOOD HAZARD INFORMATION**

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

<b>SPECIAL FLOOD HAZARD AREAS</b>	Without Base Flood Elevation (BFE) Zone A, X, AE, AH, VE, AR With BFE or Depth Zone AE, AD, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes Zone X
	Area with Flood Risk due to Levee Zone D
<b>OTHER AREAS OF FLOOD HAZARD</b>	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRls
	Area of Undetermined Flood Hazard Zone D
<b>OTHER AREAS</b>	
<b>GENERAL STRUCTURES</b>	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	20.2 Cross Sections with 1% Annual Chance
	17.5 Water Surface Elevation
	Coastal Tractant
	Coastal Tractant Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
<b>OTHER FEATURES</b>	Limits of Study
	Jurisdiction Boundary

**NOTES TO USERS**

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, of the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information Exchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities showing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM data. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

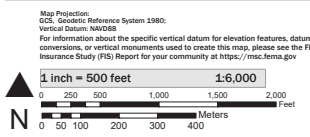
If community flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map, Orthometry, Last refreshed October, 2005.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 10/25/2021 11:17 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL, and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/115418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

**SCALE**



**NATIONAL FLOOD INSURANCE PROGRAM**  
FLOOD INSURANCE RATE MAP

PANEL 267 of 350

Panel Contains:  
COMMUNITY HENRIKSONS COUNTY TOWN OF PLANFIELD NUMBER 180415 180089 PANEL 0267 0267

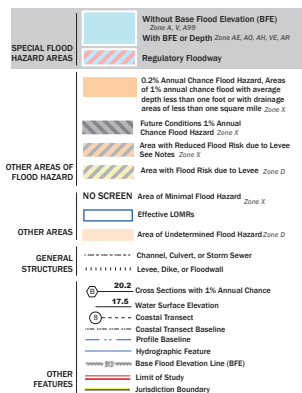
**FEMA**  
National Flood Insurance Program

12/22/2021

MAP NUMBER 180415  
EFFECTIVE DATE September 25, 2009



**FLOOD HAZARD INFORMATION**  
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT



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Communities showing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM data. These may be ordered directly from the Flood Map Service Center at the number listed above.

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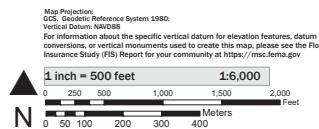
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

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**SCALE**



**NATIONAL FLOOD INSURANCE PROGRAM**  
FLOOD INSURANCE RATE MAP

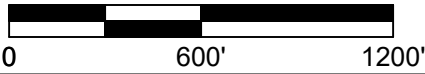
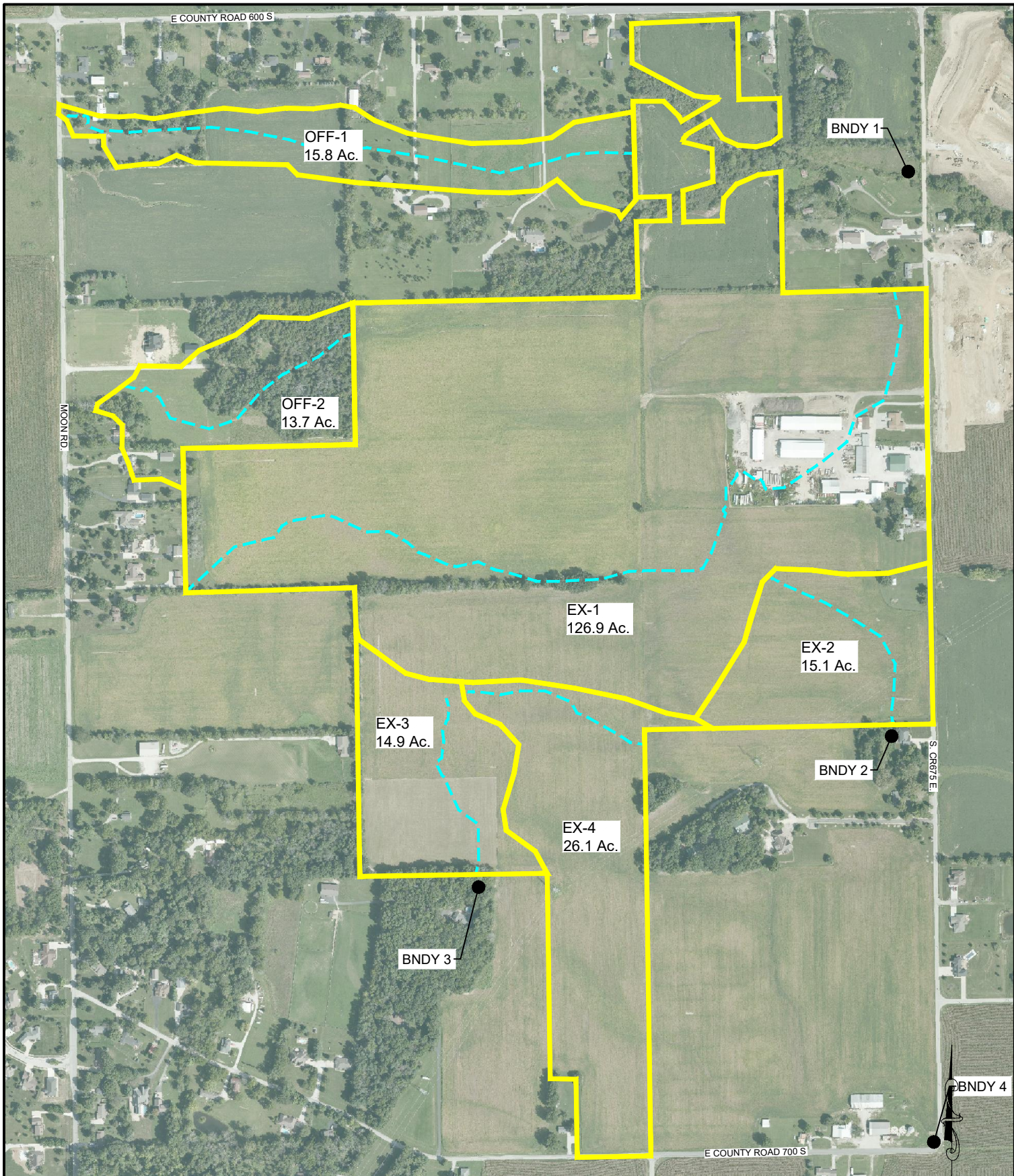
PANEL 266 of 350

Panel Contains:  
COMMUNITY HENRICKS COUNTY TOWN OF PLANFIELD  
NUMBER 180415 180089  
PANEL 0256 0256

**FEMA**  
National Flood Insurance Program

12/22/2021  
Page 46  
MAP NUMBER 1804150266  
EFFECTIVE DATE September 25, 2009

## **E. EXISTING BASIN MAP**



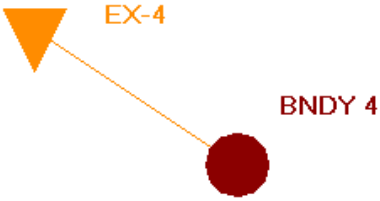
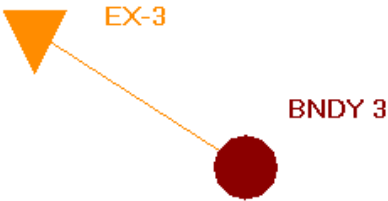
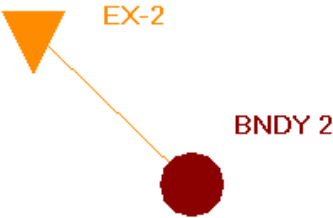
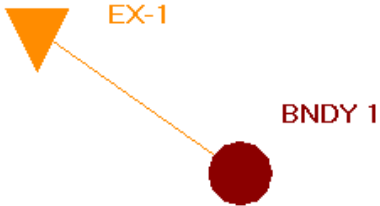
Drawn By: JET  
 Date: 12/17/2021  
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 Page: 1 of 1

**EXISTING BASIN MAP**  
**TRESCOTT**  
**HENDRICKS COUNTY**  
**PLAINFIELD, INDIANA**

  
 853 COLUMBIA ROAD, SUITE #101  
 PLAINFIELD, IN 46168  
 BUS: (317) 707-3700, FAX: (317) 707-3800  
 E-MAIL: [Banning@BanningEngineering.com](mailto:Banning@BanningEngineering.com)  
 12/22/2021 Page 18  
 WEB: [www.BanningEngineering.com](http://www.BanningEngineering.com)

## **F. EXISTING CALCULATIONS**

# EXISTING NODE DIAGRAM



## Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
BNDY 1	002yr 024hr	730.10	730.00	0.0000	76.83	0.00	0
BNDY 1	010yr 024hr	730.10	730.00	0.0000	137.23	0.00	0
BNDY 1	100yr 024hr	730.10	730.00	0.0000	239.77	0.00	0
BNDY 2	002yr 024hr	736.10	736.00	0.0000	16.15	0.00	0
BNDY 2	010yr 024hr	736.10	736.00	0.0000	29.07	0.00	0
BNDY 2	100yr 024hr	736.10	736.00	0.0000	51.01	0.00	0
BNDY 3	002yr 024hr	724.10	724.00	0.0000	18.00	0.00	0
BNDY 3	010yr 024hr	724.10	724.00	0.0000	32.80	0.00	0
BNDY 3	100yr 024hr	724.10	724.00	0.0000	58.09	0.00	0
BNDY 4	002yr 024hr	727.10	727.00	0.0000	32.37	0.00	0
BNDY 4	010yr 024hr	727.10	727.00	0.0000	57.17	0.00	0
BNDY 4	100yr 024hr	727.10	727.00	0.0000	98.85	0.00	0

TR-55  
 -COMPOSITE CN-VALUES & TIME OF CONCENTRATION-

PROJECT: <a href="#">Trescott</a> JOB #: <a href="#">19274</a> DATE: 12/15/21 COMPUTED BY: <a href="#">JET</a>
---

BASINS					
BASIN	Composite CN	Area (ft <sup>2</sup> )	Area (acres)	Area (miles)	Tc
<a href="#">EX-1</a>	<a href="#">82.00</a>	<a href="#">5527764</a>	126.90	0.20	77.1
<a href="#">EX-2</a>	<a href="#">81.00</a>	<a href="#">657756</a>	15.10	0.02	31.6
<a href="#">EX-3</a>	<a href="#">80.00</a>	<a href="#">649044</a>	14.90	0.02	23.7
<a href="#">EX-4</a>	<a href="#">82.00</a>	<a href="#">1136916</a>	26.10	0.04	27.1

Basin	Cover Description	Soil Group	Area (Acres)	CN	CN * Acres
EX-1	Paved parking lots, roofs, driveways	C	3.3	98	323.4
EX-1	Good condition; grass cover > 75%	B	2	61	122
EX-1	Good condition; grass cover > 75%	C	3.3	74	244.2
EX-1	Woods - grass combination GOOD	B	1.4	58	81.2
EX-1	Woods - grass combination GOOD	C	1.1	72	79.2
EX-1	Row Crop Straight row (SR) GOOD	B	43	78	3354
EX-1	Row Crop Straight row (SR) GOOD	C	67	85	5695
EX-1	Gravel (w/ right-of-way)	B	3.2	85	272
EX-1	Gravel (w/ right-of-way)	C	2.6	89	231.4
EX-2	Paved parking lots, roofs, driveways	C	0.2	98	19.6
EX-2	Good condition; grass cover > 75%	C	0.9	74	66.6
EX-2	Row Crop Straight row (SR) GOOD	B	6.7	78	522.6
EX-2	Row Crop Straight row (SR) GOOD	C	7.3	85	620.5
EX-3	Woods - grass combination GOOD	B	0.5	58	29
EX-3	Woods - grass combination GOOD	C	0.4	72	28.8
EX-3	Row Crop Straight row (SR) GOOD	B	8.2	78	639.6
EX-3	Row Crop Straight row (SR) GOOD	C	5.8	85	493
EX-4	Paved parking lots, roofs, driveways	C	0.1	98	9.8
EX-4	Good condition; grass cover > 75%	B	0.3	61	18.3
EX-4	Good condition; grass cover > 75%	C	0.1	74	7.4
EX-4	Row Crop Straight row (SR) GOOD	B	10.3	78	803.4
EX-4	Row Crop Straight row (SR) GOOD	C	15.3	85	1300.5

Time of Concentration Worksheet Based on TR-55										PROJECT: Trescott JOB #: 19274														
Typical values for Manning's n																								
Overland Flow					Channel Flow																			
short grass	0.15	grass	0.03							2 year, 24 hour rainfall =		3.02 inches												
dense grass	0.24	concrete	0.02							minimum T <sub>c</sub> =		5 minutes												
pavement	0.011	rip-rap	0.04																					
woods light	0.4																							
cultivated > 20%	0.17																							
Basin name	Overland flow				Shallow Concentrated Flow (1)				Shallow Concentrated Flow (2)				Channel Flow				T <sub>c</sub> (min)							
	Length (ft)	S %	n	T <sub>t</sub> (min)	Length (ft)	S %	Paved/Un (P or U)	Vel. (ft/s)	T <sub>t</sub> (min)	Length (ft)	S %	Paved/Un (P or U)	Vel. (ft/s)	T <sub>t</sub> (min)	Length (ft)	a (s.f.)		Pw (ft)	r (ft)	S %	n	Vel. (ft/s)	T <sub>t</sub> (min)	
EX-1	100	0.6	0.17	0	4432	0.6	U	1.2	59	0					0								0	77
EX-2	100	0.5	0.17	19	912	0.6	U	1.2	12	0					0								0	32
EX-3	100	1.7	0.17	12	811	0.5	U	1.1	12	0					0								0	24
EX-4	100	0.9	0.17	15	803	0.5	U	1.1	12	0					0								0	27
				0					0	0					0								0	
				0					0	0					0								0	

## Simple Basin: EX-1

Scenario: Scenario1  
Node: BNDY 1  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 77.1000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 126.9000 ac  
Curve Number: 82.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: EX-2

Scenario: Scenario1  
Node: BNDY 2  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 31.6000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 15.1000 ac  
Curve Number: 81.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: EX-3

Scenario: Scenario1  
Node: BNDY 3  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 23.7000 min  
Max Allowable Q: 99999.00 cfs

Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 14.9000 ac  
 Curve Number: 80.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Simple Basin: EX-4

Scenario: Scenario1  
 Node: BNDY 4  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 27.1000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 26.1000 ac  
 Curve Number: 82.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Node: BNDY 1

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 730.00 ft  
 Warning Stage: 730.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	730.00
0	0	0	30.0000	730.00

Comment:

**Node: BNDY 2**

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 736.00 ft  
 Warning Stage: 736.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	736.00
0	0	0	30.0000	736.00

Comment:

**Node: BNDY 3**

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 724.00 ft  
 Warning Stage: 724.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	724.00
0	0	0	30.0000	724.00

Comment:

**Node: BNDY 4**

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 727.00 ft  
 Warning Stage: 727.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	727.00
0	0	0	30.0000	727.00

Comment:

Simulation: 002yr 024hr

Scenario: Scenario1  
 Run Date/Time: 12/15/2021 11:53:51 AM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:

Tolerances & Options

Time Marching: SAOR  
 Max Iterations: 6  
 Over-Relax Weight: 0.5 dec  
 Fact:  
 dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr  
  
  
 Smp/Man Basin Rain: Global

Max dZ: 1.0000 ft  
 Link Optimizer Tol: 0.0001 ft  
 Edge Length Option: Automatic

Opt:  
 Rainfall Name: ~SCSII-24  
 Rainfall Amount: 3.02 in  
 Storm Duration: 24.0000 hr  
 Dflt Damping (1D): 0.0050 ft  
 Min Node Srf Area (1D): 100 ft2  
 Energy Switch (1D): Energy

Comment:

Simulation: 010yr 024hr

Scenario: Scenario1  
 Run Date/Time: 12/15/2021 11:54:00 AM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources	Lookup Tables
Rainfall Folder:	Boundary Stage Set:
Unit Hydrograph Folder:	Extern Hydrograph Set:
	Curve Number Set:
	Green-Ampt Set:
	Vertical Layers Set:
	Impervious Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	
Over-Relax Weight 0.5 dec	
Fact:	
dZ Tolerance: 0.0010 ft	Smp/Man Basin Rain Global
	Opt:
Max dZ: 1.0000 ft	Rainfall Name: ~SCSII-24
Link Optimizer Tol: 0.0001 ft	Rainfall Amount: 4.28 in
Edge Length Option: Automatic	Storm Duration: 24.0000 hr
	Dflt Damping (1D): 0.0050 ft
	Min Node Srf Area 100 ft2
	(1D):
	Energy Switch (1D): Energy

Comment:

Simulation: 100yr 024hr

Scenario: Scenario1  
 Run Date/Time: 12/15/2021 11:54:09 AM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
Extern Hydrograph Set:  
Curve Number Set:  
  
Green-Ampt Set:  
Vertical Layers Set:  
Impervious Set:

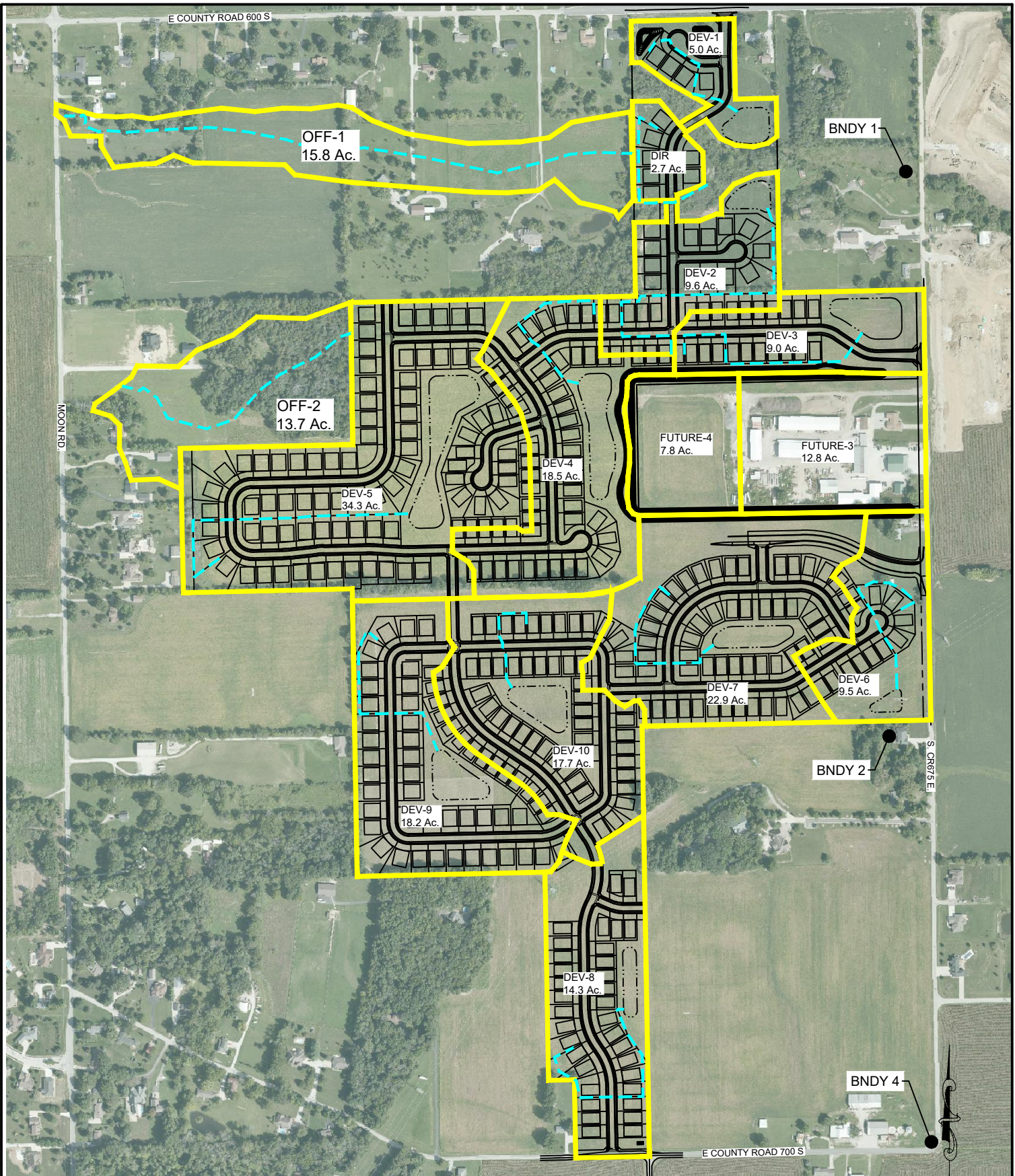
Tolerances & Options

Time Marching: SAOR  
Max Iterations: 6  
Over-Relax Weight Fact: 0.5 dec  
dZ Tolerance: 0.0010 ft  
  
Max dZ: 1.0000 ft  
Link Optimizer Tol: 0.0001 ft  
  
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr  
  
Smp/Man Basin Rain Opt: Global  
  
Rainfall Name: ~SCSII-24  
Rainfall Amount: 6.30 in  
Storm Duration: 24.0000 hr  
  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area (1D): 100 ft2  
Energy Switch (1D): Energy

Comment:

## **G. DEVELOPED BASIN MAP**



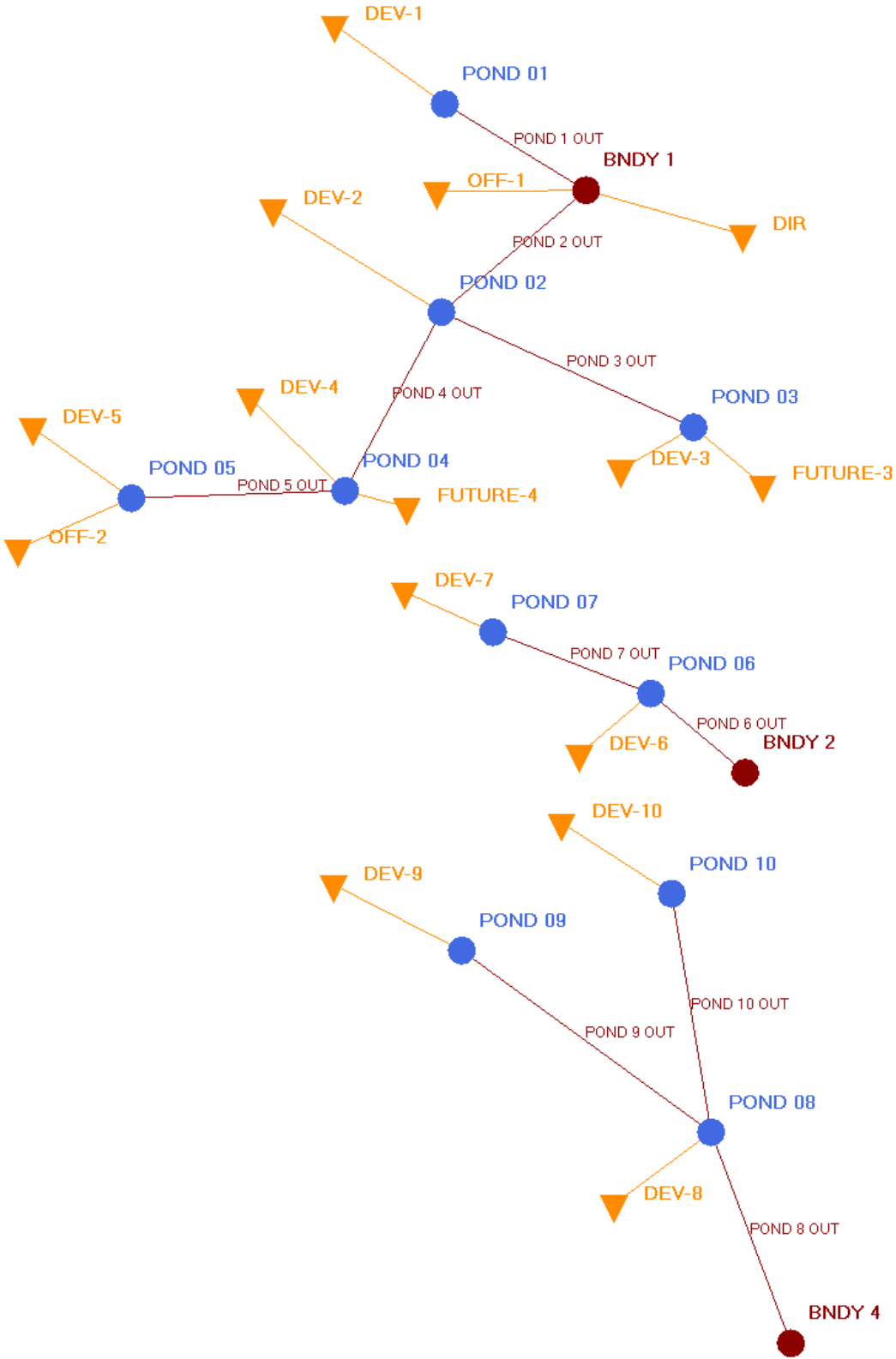
Drawn By: JET  
 Date: 12/17/2021  
 Project No.: 19274  
 Scale: AS SHOWN  
 Page: 1 of 1

DEVELOPED BASIN MAP  
 TRESSCOTT  
 HENDRICKS COUNTY  
 PLAINFIELD, INDIANA

  
 853 COLUMBIA ROAD, SUITE #101  
 PLAINFIELD, IN 46168  
 BUS: (317) 707-3700, FAX: (317) 707-3800  
 E-MAIL: [Banning@BanningEngineering.com](mailto:Banning@BanningEngineering.com)  
 12/22/2021 Page 4  
 WEB: [www.BanningEngineering.com](http://www.BanningEngineering.com)

## **H. DEVELOPED CALCULATIONS**

# DEVELOPED NODE DIAGRAM



## Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
BNDY 1	010yr 024hr	730.10	730.00	0.0000	29.10	0.00	0
BNDY 1	100yr 024hr	730.10	730.00	0.0000	43.47	0.00	0
BNDY 2	010yr 024hr	736.10	736.00	0.0000	15.18	0.00	0
BNDY 2	100yr 024hr	736.10	736.00	0.0000	21.31	0.00	0
BNDY 4	010yr 024hr	727.10	727.00	0.0000	16.49	0.00	0
BNDY 4	100yr 024hr	727.10	727.00	0.0000	18.93	0.00	0
POND 01	010yr 024hr	737.10	733.80	0.0003	12.40	1.64	31089
POND 01	100yr 024hr	737.10	734.28	0.0003	21.89	4.36	32103
POND 02	010yr 024hr	737.10	736.37	0.0010	44.53	25.42	20711
POND 02	100yr 024hr	737.10	737.70	0.0010	61.94	30.78	22919
POND 03	010yr 024hr	739.20	737.89	-0.0010	80.42	9.99	57043
POND 03	100yr 024hr	739.20	739.50	-0.0010	124.47	11.28	61701
POND 04	010yr 024hr	741.63	740.30	0.0009	99.56	11.33	75291
POND 04	100yr 024hr	741.63	742.00	-0.0010	155.84	12.45	82437
POND 05	010yr 024hr	744.00	742.67	-0.0010	103.98	5.52	106349
POND 05	100yr 024hr	744.00	744.41	0.0010	163.89	6.13	116317
POND 06	010yr 024hr	741.20	740.14	0.0010	34.39	15.18	14945
POND 06	100yr 024hr	741.20	741.61	-0.0010	53.26	21.31	16970
POND 07	010yr 024hr	742.80	741.01	-0.0009	45.80	5.36	38767
POND 07	100yr 024hr	742.80	742.65	-0.0010	76.66	6.83	43279
POND 08	010yr 024hr	735.10	734.18	0.0010	49.11	16.49	26750
POND 08	100yr 024hr	735.10	735.98	-0.0010	76.96	18.93	30950
POND 09	010yr 024hr	738.90	737.10	-0.0007	47.76	1.96	46692
POND 09	100yr 024hr	738.90	739.04	0.0008	84.04	2.32	51777
POND 10	010yr 024hr	740.10	738.88	-0.0010	68.68	3.20	48881
POND 10	100yr 024hr	740.10	740.57	0.0010	108.57	4.59	53181

## Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
BNDY 1	010yr 024hr	730.10	730.00	0.0000	46.94	0.00	0
BNDY 1	100yr 024hr	730.10	730.00	0.0000	73.11	0.00	0
BNDY 2	010yr 024hr	736.10	736.00	0.0000	15.18	0.00	0
BNDY 2	100yr 024hr	736.10	736.00	0.0000	21.31	0.00	0
BNDY 4	010yr 024hr	727.10	727.00	0.0000	16.49	0.00	0
BNDY 4	100yr 024hr	727.10	727.00	0.0000	18.93	0.00	0
POND 01	010yr 024hr	737.10	733.80	0.0003	12.40	1.64	31089
POND 01	100yr 024hr	737.10	734.28	0.0003	21.89	4.36	32103
POND 02	010yr 024hr	737.10	736.37	0.0010	44.54	25.42	20712
POND 02	100yr 024hr	737.10	737.70	0.0010	61.95	30.78	22922
POND 03	010yr 024hr	739.20	737.89	-0.0010	80.42	9.99	57043
POND 03	100yr 024hr	739.20	739.50	-0.0010	124.47	11.27	61702
POND 04	010yr 024hr	741.63	740.32	0.0009	99.68	11.38	75364
POND 04	100yr 024hr	741.63	742.05	-0.0010	155.98	12.58	82664
POND 05	010yr 024hr	744.00	743.08	0.0010	112.47	5.89	108717
POND 05	100yr 024hr	744.00	745.27	0.0010	183.27	6.72	121294
POND 06	010yr 024hr	741.20	740.14	0.0010	34.39	15.18	14945
POND 06	100yr 024hr	741.20	741.61	0.0010	53.26	21.31	16970
POND 07	010yr 024hr	742.80	741.01	-0.0009	45.80	5.36	38767
POND 07	100yr 024hr	742.80	742.65	-0.0010	76.66	6.83	43279
POND 08	010yr 024hr	735.10	734.18	0.0010	49.11	16.49	26750
POND 08	100yr 024hr	735.10	735.98	-0.0010	76.96	18.93	30950
POND 09	010yr 024hr	738.90	737.10	-0.0007	47.76	1.96	46692
POND 09	100yr 024hr	738.90	739.04	0.0008	84.03	2.32	51777
POND 10	010yr 024hr	740.10	738.88	0.0010	68.68	3.20	48881
POND 10	100yr 024hr	740.10	740.57	0.0010	108.56	4.59	53181

TR-55  
-COMPOSITE CN-VALUES & TIME OF CONCENTRATION-

PROJECT: <a href="#">Trescott</a> JOB #: <a href="#">19274</a> DATE: 12/15/21 COMPUTED BY: <a href="#">JET</a>
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BASINS

BASIN	Composite CN	Area (ft <sup>2</sup> )	Area (acres)	Area (miles)	Tc
<a href="#">DEV-1</a>	<a href="#">80.00</a>	<a href="#">217800</a>	<a href="#">5.00</a>	<a href="#">0.01</a>	<a href="#">18.8</a>
<a href="#">DEV-2</a>	<a href="#">84.00</a>	<a href="#">418176</a>	<a href="#">9.60</a>	<a href="#">0.02</a>	<a href="#">23.9</a>
<a href="#">DEV-3</a>	<a href="#">89.00</a>	<a href="#">392040</a>	<a href="#">9.00</a>	<a href="#">0.01</a>	<a href="#">20.6</a>
<a href="#">DEV-4</a>	<a href="#">88.00</a>	<a href="#">805860</a>	<a href="#">18.50</a>	<a href="#">0.03</a>	<a href="#">15.5</a>
<a href="#">DEV-5</a>	<a href="#">90.00</a>	<a href="#">1494108</a>	<a href="#">34.30</a>	<a href="#">0.05</a>	<a href="#">23.3</a>
<a href="#">DEV-6</a>	<a href="#">88.00</a>	<a href="#">413820</a>	<a href="#">9.50</a>	<a href="#">0.01</a>	<a href="#">17.4</a>
<a href="#">DEV-7</a>	<a href="#">84.00</a>	<a href="#">657756</a>	<a href="#">15.10</a>	<a href="#">0.02</a>	<a href="#">16.1</a>
<a href="#">DEV-8</a>	<a href="#">88.00</a>	<a href="#">640332</a>	<a href="#">14.70</a>	<a href="#">0.02</a>	<a href="#">20.9</a>
<a href="#">DEV-9</a>	<a href="#">80.00</a>	<a href="#">792792</a>	<a href="#">18.20</a>	<a href="#">0.03</a>	<a href="#">16.6</a>
<a href="#">DEV-10</a>	<a href="#">89.00</a>	<a href="#">771012</a>	<a href="#">17.70</a>	<a href="#">0.03</a>	<a href="#">11.6</a>
<a href="#">DIR</a>	<a href="#">88.00</a>	<a href="#">117612</a>	<a href="#">2.70</a>	<a href="#">0.00</a>	<a href="#">18.9</a>
<a href="#">OFF-1</a>	<a href="#">76.00</a>	<a href="#">688248</a>	<a href="#">15.80</a>	<a href="#">0.02</a>	<a href="#">51.5</a>
<a href="#">OFF-2</a>	<a href="#">69.00</a>	<a href="#">583704</a>	<a href="#">13.40</a>	<a href="#">0.02</a>	<a href="#">41.2</a>
<a href="#">FUTURE-3</a>	<a href="#">93.00</a>	<a href="#">557568</a>	<a href="#">12.80</a>	<a href="#">0.02</a>	<a href="#">10.0</a>
<a href="#">FUTURE-4</a>	<a href="#">93.00</a>	<a href="#">339768</a>	<a href="#">7.80</a>	<a href="#">0.01</a>	<a href="#">10.0</a>

Basin	Cover Description	Soil Group	Area (Acres)	CN	CN * Acres
DEV-1	Paved parking lots, roofs, driveways	C	1.8	98	176.4
DEV-1	1/4 acre 38% impervious	B	1.3	75	97.5
DEV-1	Good condition; grass cover > 75%	B	1.2	61	73.2
DEV-1	Good condition; grass cover > 75%	C	0.7	74	51.8
DEV-2	Paved parking lots, roofs, driveways	C	0.3	98	29.4
DEV-2	1/8 acre (town houses) 65% impervious	B	1.1	85	93.5
DEV-2	1/8 acre (town houses) 65% impervious	C	2	90	180
DEV-2	1/4 acre 38% impervious	B	1.4	75	105
DEV-2	1/4 acre 38% impervious	C	4.8	83	398.4
DEV-3	Paved parking lots, roofs, driveways	C	1.1	98	107.8
DEV-3	1/8 acre (town houses) 65% impervious	B	3.7	85	314.5
DEV-3	1/8 acre (town houses) 65% impervious	C	4.2	90	378
DEV-4	Paved parking lots, roofs, driveways	C	1.5	98	147
DEV-4	1/8 acre (town houses) 65% impervious	B	8.8	85	748
DEV-4	1/8 acre (town houses) 65% impervious	C	8.2	90	738
DEV-5	Paved parking lots, roofs, driveways	C	2.1	98	205.8
DEV-5	1/8 acre (town houses) 65% impervious	B	5.2	85	442
DEV-5	1/8 acre (town houses) 65% impervious	C	27	90	2430
DEV-6	Paved parking lots, roofs, driveways	C	0.2	98	19.6
DEV-6	1/8 acre (town houses) 65% impervious	B	4.3	85	365.5
DEV-6	1/8 acre (town houses) 65% impervious	C	5	90	450
DEV-7	Paved parking lots, roofs, driveways	C	0.8	98	78.4
DEV-7	1/8 acre (town houses) 65% impervious	B	0.2	85	17
DEV-7	1/8 acre (town houses) 65% impervious	C	9.9	90	891
DEV-7	Good condition; grass cover > 75%	B	2.4	61	146.4
DEV-7	Good condition; grass cover > 75%	C	1.8	74	133.2
DEV-8	Paved parking lots, roofs, driveways	C	0.4	98	39.2
DEV-8	1/8 acre (town houses) 65% impervious	B	5.3	85	450.5
DEV-8	1/8 acre (town houses) 65% impervious	C	9	90	810
DEV-9	Paved parking lots, roofs, driveways	C	0.9	98	88.2
DEV-9	1/8 acre (town houses) 65% impervious	B	0.9	85	76.5
DEV-9	1/8 acre (town houses) 65% impervious	C	1.2	90	108
DEV-9	1/4 acre 38% impervious	B	9	75	675
DEV-9	1/4 acre 38% impervious	C	6.2	83	514.6
DEV-10	Paved parking lots, roofs, driveways	C	1	98	98
DEV-10	1/8 acre (town houses) 65% impervious	B	6.7	85	569.5
DEV-10	1/8 acre (town houses) 65% impervious	C	10	90	900
DIR	1/8 acre (town houses) 65% impervious	B	1	85	85
DIR	1/8 acre (town houses) 65% impervious	C	1.7	90	153
OFF-1	Paved parking lots, roofs, driveways	C	0.3	98	29.4
OFF-1	Good condition; grass cover > 75%	B	3.2	61	195.2
OFF-1	Good condition; grass cover > 75%	C	2.7	74	199.8
OFF-1	Row Crop Straight row (SR) GOOD	B	5.3	78	413.4
OFF-1	Row Crop Straight row (SR) GOOD	C	4.3	85	365.5
OFF-2	Paved parking lots, roofs, driveways	C	0.4	98	39.2
OFF-2	Woods - grass combination GOOD	B	5	58	290
OFF-2	Woods - grass combination GOOD	C	3.4	72	244.8
OFF-2	Row Crop Straight row (SR) GOOD	C	0.6	85	51
OFF-2	Good condition; grass cover > 75%	C	4	74	296
FUTURE-3	Commercial & business	B	8	92	736
FUTURE-3	Commercial & business	C	4.8	94	451.2
FUTURE-4	Commercial & business	B	4.1	92	377.2
FUTURE-4	Commercial & business	C	3.7	94	347.8

Time of Concentration Worksheet Based on TR-55										PROJECT: Trescott JOB #: 19274															
Typical values for Manning's n																									
Overland Flow					Channel Flow																				
short grass	0.15	grass	0.03							2 year, 24 hour rainfall = 3.02 inches															
dense grass	0.24	concrete	0.02							minimum T <sub>c</sub> = 10 minutes															
pavement	0.011	rip-rap	0.04																						
woods light	0.4																								
cultivated > 20%	0.17																								
Basin name	Overland flow				Shallow Concentrated Flow (1)				Shallow Concentrated Flow (2)				Channel Flow				T <sub>c</sub> (min)								
	Length (ft)	S %	n	T <sub>t</sub> (min)	Length (ft)	S %	Paved/Un (P or U)	Vel. (ft/s)	T <sub>t</sub> (min)	Length (ft)	S %	Paved/Un (P or U)	Vel. (ft/s)	T <sub>t</sub> (min)	Length (ft)	a (s.f.)		Pw (ft)	r (ft)	S %	n	Vel. (ft/s)	T <sub>t</sub> (min)		
DEV-1	100	2	0.24	0	200	1	P	2	2	0					367							2.50	2	19	
DEV-2	86	2	0.24	13	227	1	U	1.6	2	0					1286							2.50	9	24	
DEV-3	89	2	0.24	13	190	1	P	2	2	0					843							2.50	6	21	
DEV-4	64	2.5	0.24	9	228	1	U	1.6	2	0					560							2.50	4	15	
DEV-5	100	2.5	0.24	13	312	1	U	1.6	3	0					996							2.50	7	23	
DEV-6	76	2.5	0.24	11	305	1	U	1.6	3	0					513							2.50	3	17	
DEV-7	68	2.5	0.24	10	240	1	U	1.6	2	0					565							2.50	4	16	
DEV-8	99	2.5	0.24	13	240	1	U	1.6	2	0					758							2.50	5	21	
DEV-9	63	2.5	0.24	9	395	1	U	1.6	4	0					480							2.50	3	17	
DEV-10	51	2.5	0.24	8	129	1	U	1.6	1	0					358							2.50	2	12	
DIR	100	2.5	0.24	13	140	1	U	1.6	1	0					598							2.50	4	19	
OFF-1	100	0.81	0.24	21	2630	0.8	U	1.4	30	0													0	51	
OFF-2	100	0.6	0.24	24	1193	0.5	U	1.1	17	0													0	41	
FUTURE-3				0						0														0	10
FUTURE-4				0						0														0	10
				0						0														0	
				0						0														0	

## Simple Basin: DEV-1

Scenario: Scenario1  
Node: POND 01  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 18.8000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 5.0000 ac  
Curve Number: 80.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: DEV-10

Scenario: Scenario1  
Node: POND 10  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 11.6000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 17.7000 ac  
Curve Number: 89.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: DEV-2

Scenario: Scenario1  
Node: POND 02  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 23.9000 min  
Max Allowable Q: 99999.00 cfs

Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 9.6000 ac  
 Curve Number: 84.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

#### Simple Basin: DEV-3

Scenario: Scenario1  
 Node: POND 03  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 20.6000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 9.0000 ac  
 Curve Number: 89.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

#### Simple Basin: DEV-4

Scenario: Scenario1  
 Node: POND 04  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 15.5000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 18.5000 ac  
 Curve Number: 88.0  
 % Impervious: 0.00  
 % DCIA: 0.00

% Direct: 0.00  
Rainfall Name:

Comment:

Simple Basin: DEV-5

Scenario: Scenario1  
Node: POND 05  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 23.3000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 34.3000 ac  
Curve Number: 90.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

Simple Basin: DEV-6

Scenario: Scenario1  
Node: POND 06  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 17.4000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 9.5000 ac  
Curve Number: 88.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: DEV-7

Scenario: Scenario1  
Node: POND 07  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 16.1000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 15.1000 ac  
Curve Number: 84.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: DEV-8

Scenario: Scenario1  
Node: POND 08  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 20.9000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 14.7000 ac  
Curve Number: 88.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: DEV-9

Scenario: Scenario1  
Node: POND 09  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 16.6000 min  
Max Allowable Q: 99999.00 cfs

Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 18.2000 ac  
 Curve Number: 80.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

#### Simple Basin: DIR

Scenario: Scenario1  
 Node: BNDY 1  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 18.9000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 2.7000 ac  
 Curve Number: 88.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

#### Simple Basin: FUTURE-3

Scenario: Scenario1  
 Node: POND 03  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 10.0000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 12.8000 ac  
 Curve Number: 93.0  
 % Impervious: 0.00  
 % DCIA: 0.00

% Direct: 0.00  
Rainfall Name:

Comment:

Simple Basin: FUTURE-4

Scenario: Scenario1  
Node: POND 04  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 10.0000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 7.8000 ac  
Curve Number: 93.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

Simple Basin: OFF-1

Scenario: Scenario1  
Node: BNDY 1  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 51.5000 min  
Max Allowable Q: 99999.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH484  
Peaking Factor: 484.0  
Area: 15.8000 ac  
Curve Number: 76.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

Simple Basin: OFF-2

Scenario: Scenario1  
 Node: POND 05  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 41.2000 min  
 Max Allowable Q: 99999.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 13.4000 ac  
 Curve Number: 69.0  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Node: BNDY 1

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 730.00 ft  
 Warning Stage: 730.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	730.00
0	0	0	30.0000	730.00

Comment:

Node: BNDY 2

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 736.00 ft  
 Warning Stage: 736.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	736.00
0	0	0	30.0000	736.00

Comment:

**Node: BNDY 4**

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 727.00 ft  
 Warning Stage: 727.10 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	727.00
0	0	0	30.0000	727.00

Comment:

**Node: POND 01**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 733.10 ft  
 Warning Stage: 737.10 ft

Stage [ft]	Area [ac]	Area [ft2]
733.10	0.6800	29621
739.10	0.9700	42253

Comment:

**Node: POND 02**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 733.10 ft  
 Warning Stage: 737.10 ft

Stage [ft]	Area [ac]	Area [ft2]
733.10	0.3500	15246
739.10	0.5800	25265

Comment:

**Node: POND 03**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 735.20 ft  
 Warning Stage: 739.20 ft

Stage [ft]	Area [ac]	Area [ft2]
735.20	1.1300	49223
741.20	1.5300	66647

Comment:

**Node: POND 04**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 737.63 ft  
 Warning Stage: 741.63 ft

Stage [ft]	Area [ac]	Area [ft2]
737.63	1.4700	64033
743.63	2.0500	89298

Comment:

**Node: POND 05**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 740.00 ft  
 Warning Stage: 744.00 ft

Stage [ft]	Area [ac]	Area [ft2]
740.00	2.0900	91040
746.00	2.8800	125453

Comment:

**Node: POND 06**

Scenario: Scenario1  
 Type: Stage/Area

Base Flow: 0.00 cfs  
 Initial Stage: 737.20 ft  
 Warning Stage: 741.20 ft

Stage [ft]	Area [ac]	Area [ft2]
737.20	0.2500	10890
743.20	0.4400	19166

Comment:

**Node: POND 07**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 738.80 ft  
 Warning Stage: 742.80 ft

Stage [ft]	Area [ac]	Area [ft2]
738.80	0.7500	32670
744.80	1.1300	49223

Comment:

**Node: POND 08**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 731.10 ft  
 Warning Stage: 735.10 ft

Stage [ft]	Area [ac]	Area [ft2]
731.10	0.4500	19602
737.10	0.7700	33541

Comment:

**Node: POND 09**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 734.90 ft  
 Warning Stage: 738.90 ft

Stage [ft]	Area [ac]	Area [ft2]
734.90	0.9400	40946
740.90	1.3000	56628

Comment:

**Node: POND 10**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 736.10 ft  
 Warning Stage: 740.10 ft

Stage [ft]	Area [ac]	Area [ft2]
736.10	0.9600	41818
742.10	1.3100	57064

Comment:

Drop Structure Link: POND 1 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 733.10 ft	Invert: 731.00 ft
From Node:	POND 01	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	BNDY 1	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 2.00 ft	Max Depth: 2.00 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	100.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location:	0.00 dec		
Energy Switch:	Energy		

Pipe Comment:

Weir Component	
Weir:	Bottom Clip
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
	Top Clip

Geometry Type: Circular  
 Invert: 733.10 ft  
 Control Elevation: 733.10 ft  
 Max Depth: 2.00 ft

**Bottom Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Discharge Coefficients**

Weir Default: 3.200  
 Weir Table:  
 Orifice Default: 0.600  
 Orifice Table:

Weir Comment:

Drop Structure Comment:

**Drop Structure Link: POND 10 OUT      Upstream Pipe      Downstream Pipe**

Scenario: Scenario1  
 From Node: POND 10  
 To Node: POND 08  
 Link Count: 1  
 Flow Direction: Both  
 Solution: Combine  
 Increments: 0  
 Pipe Count: 1  
 Damping: 0.0000 ft  
 Length: 1774.00 ft  
 FHWA Code: 0  
 Entr Loss Coef: 0.50  
 Exit Loss Coef: 0.50  
 Bend Loss Coef: 0.00  
 Bend Location: 0.00 dec  
 Energy Switch: Energy

Invert: 736.10 ft  
 Manning's N: 0.0130  
 Geometry: Circular  
 Max Depth: 1.50 ft  
 Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

**Top Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

Invert: 734.90 ft  
 Manning's N: 0.0130  
 Geometry: Circular  
 Max Depth: 1.50 ft  
 Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

**Bottom Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

Pipe Comment:

**Weir Component**

Weir: 1  
 Weir Count: 1  
 Weir Flow Direction: Both  
 Damping: 0.0000 ft  
 Weir Type: Sharp Crested Vertical  
 Geometry Type: Circular  
 Invert: 736.10 ft  
 Control Elevation: 736.10 ft  
 Max Depth: 1.50 ft

**Bottom Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Top Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Discharge Coefficients**

Weir Default: 3.200  
 Weir Table:  
 Orifice Default: 0.600  
 Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 2 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 733.10 ft	Invert: 731.00 ft
From Node:	POND 02	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	BNDY 1	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 2.50 ft	Max Depth: 2.50 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	88.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location:	0.00 dec		
Energy Switch:	Energy		

Pipe Comment:

Weir Component		
Weir:	1	Bottom Clip
Weir Count:	1	Default: 0.00 ft
Weir Flow Direction:	Both	Op Table:
Damping:	0.0000 ft	Ref Node:
Weir Type:	Sharp Crested Vertical	Top Clip
Geometry Type:	Circular	Default: 0.00 ft
Invert:	733.10 ft	Op Table:
Control Elevation:	733.10 ft	Ref Node:
Max Depth:	2.50 ft	Discharge Coefficients
		Weir Default: 3.200
		Weir Table:
		Orifice Default: 0.600
		Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 3 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 735.20 ft	Invert: 733.10 ft
From Node:	POND 03	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	POND 02	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 2.00 ft	Max Depth: 2.00 ft

Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	700.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location:	0.00 dec		
Energy Switch:	Energy		

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default: 0.00 ft	
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Sharp Crested Vertical	Top Clip	
Geometry Type:	Circular	Default: 0.00 ft	
Invert:	735.20 ft	Op Table:	
Control Elevation:	735.20 ft	Ref Node:	
Max Depth:	2.00 ft	Discharge Coefficients	
		Weir Default: 3.200	
		Weir Table:	
		Orifice Default: 0.600	
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 4 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 737.63 ft	Invert: 733.10 ft
From Node:	POND 04	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	POND 02	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 2.00 ft	Max Depth: 2.00 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	1500.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000

Bend Location: 0.00 dec  
 Energy Switch: Energy

Pipe Comment:

Weir Component	
Weir: 1	Bottom Clip
Weir Count: 1	Default: 0.00 ft
Weir Flow Direction: Both	Op Table:
Damping: 0.0000 ft	Ref Node:
Weir Type: Sharp Crested Vertical	Top Clip
Geometry Type: Circular	Default: 0.00 ft
Invert: 737.63 ft	Op Table:
Control Elevation: 737.63 ft	Ref Node:
Max Depth: 2.00 ft	Discharge Coefficients
	Weir Default: 3.200
	Weir Table:
	Orifice Default: 0.600
	Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 5 OUT	Upstream Pipe	Downstream Pipe
Scenario: Scenario1	Invert: 740.00 ft	Invert: 737.63 ft
From Node: POND 05	Manning's N: 0.0130	Manning's N: 0.0130
To Node: POND 04	Geometry: Circular	Geometry: Circular
Link Count: 1	Max Depth: 1.50 ft	Max Depth: 1.50 ft
Flow Direction: Both	Bottom Clip	
Solution: Combine	Default: 0.00 ft	Default: 0.00 ft
Increments: 0	Op Table:	Op Table:
Pipe Count: 1	Ref Node:	Ref Node:
Damping: 0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length: 800.00 ft	Top Clip	
FHWA Code: 0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef: 0.50	Op Table:	Op Table:
Exit Loss Coef: 0.50	Ref Node:	Ref Node:
Bend Loss Coef: 0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location: 0.00 dec		
Energy Switch: Energy		

Pipe Comment:

Weir Component	
Weir: 1	Bottom Clip
Weir Count: 1	Default: 0.00 ft
Weir Flow Direction: Both	Op Table:
Damping: 0.0000 ft	Ref Node:
Weir Type: Sharp Crested Vertical	Top Clip

Geometry Type: Circular  
 Invert: 740.00 ft  
 Control Elevation: 740.00 ft  
 Max Depth: 1.50 ft

**Bottom Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Discharge Coefficients**

Weir Default: 3.200  
 Weir Table:  
 Orifice Default: 0.600  
 Orifice Table:

Weir Comment:

Drop Structure Comment:

**Drop Structure Link: POND 6 OUT      Upstream Pipe      Downstream Pipe**

Scenario: Scenario1  
 From Node: POND 06  
 To Node: BNDY 2  
 Link Count: 1  
 Flow Direction: Both  
 Solution: Combine  
 Increments: 0  
 Pipe Count: 1  
 Damping: 0.0000 ft  
 Length: 60.00 ft  
 FHWA Code: 0  
 Entr Loss Coef: 0.50  
 Exit Loss Coef: 0.50  
 Bend Loss Coef: 0.00  
 Bend Location: 0.00 dec  
 Energy Switch: Energy

Invert: 737.20 ft  
 Manning's N: 0.0130  
 Geometry: Circular  
 Max Depth: 2.50 ft  
 Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

Invert: 737.00 ft  
 Manning's N: 0.0130  
 Geometry: Circular  
 Max Depth: 2.50 ft  
 Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

**Bottom Clip**

**Top Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:  
 Manning's N: 0.0000

Pipe Comment:

**Weir Component**

Weir: 1  
 Weir Count: 1  
 Weir Flow Direction: Both  
 Damping: 0.0000 ft  
 Weir Type: Sharp Crested Vertical  
 Geometry Type: Circular  
 Invert: 737.20 ft  
 Control Elevation: 737.20 ft  
 Max Depth: 2.00 ft

**Bottom Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Top Clip**

Default: 0.00 ft  
 Op Table:  
 Ref Node:

**Discharge Coefficients**

Weir Default: 3.200  
 Weir Table:  
 Orifice Default: 0.600  
 Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 7 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 738.80 ft	Invert: 737.20 ft
From Node:	POND 07	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	POND 06	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 1.50 ft	Max Depth: 1.50 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	525.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location:	0.00 dec		
Energy Switch:	Energy		

Pipe Comment:

Weir Component		
Weir:	1	Bottom Clip
Weir Count:	1	Default: 0.00 ft
Weir Flow Direction:	Both	Op Table:
Damping:	0.0000 ft	Ref Node:
Weir Type:	Sharp Crested Vertical	Top Clip
Geometry Type:	Circular	Default: 0.00 ft
Invert:	738.80 ft	Op Table:
Control Elevation:	738.80 ft	Ref Node:
Max Depth:	1.50 ft	Discharge Coefficients
		Weir Default: 3.200
		Weir Table:
		Orifice Default: 0.600
		Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 8 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 731.10 ft	Invert: 727.00 ft
From Node:	POND 08	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	BNDY 4	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 2.50 ft	Max Depth: 2.50 ft

Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	2025.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location:	0.00 dec		
Energy Switch:	Energy		

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default: 0.00 ft	
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Sharp Crested Vertical	Top Clip	
Geometry Type:	Circular	Default: 0.00 ft	
Invert:	731.10 ft	Op Table:	
Control Elevation:	731.10 ft	Ref Node:	
Max Depth:	2.50 ft	Discharge Coefficients	
		Weir Default: 3.200	
		Weir Table:	
		Orifice Default: 0.600	
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: POND 9 OUT		Upstream Pipe	Downstream Pipe
Scenario:	Scenario1	Invert: 734.90 ft	Invert: 731.10 ft
From Node:	POND 09	Manning's N: 0.0130	Manning's N: 0.0130
To Node:	POND 08	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 1.00 ft	Max Depth: 1.00 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Combine	Default: 0.00 ft	Default: 0.00 ft
Increments:	0	Op Table:	Op Table:
Pipe Count:	1	Ref Node:	Ref Node:
Damping:	0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length:	1356.00 ft	Top Clip	
FHWA Code:	0	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef:	0.50	Op Table:	Op Table:
Exit Loss Coef:	0.50	Ref Node:	Ref Node:
Bend Loss Coef:	0.00	Manning's N: 0.0000	Manning's N: 0.0000

Bend Location: 0.00 dec  
 Energy Switch: Energy

Pipe Comment:

Weir Component	
Weir: 1	Bottom Clip
Weir Count: 1	Default: 0.00 ft
Weir Flow Direction: Both	Op Table:
Damping: 0.0000 ft	Ref Node:
Weir Type: Sharp Crested Vertical	Top Clip
Geometry Type: Circular	Default: 0.00 ft
Invert: 734.90 ft	Op Table:
Control Elevation: 734.90 ft	Ref Node:
Max Depth: 1.00 ft	Discharge Coefficients
	Weir Default: 3.200
	Weir Table:
	Orifice Default: 0.600
	Orifice Table:

Weir Comment:

Drop Structure Comment:

Simulation: 010yr 024hr

Scenario: Scenario1  
 Run Date/Time: 12/15/2021 11:58:51 AM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File  
Save Restart: False

Resources & Lookup Tables

Resources  
Rainfall Folder:  
  
Unit Hydrograph Folder:

Lookup Tables  
Boundary Stage Set:  
Extern Hydrograph Set:  
Curve Number Set:  
  
Green-Ampt Set:  
Vertical Layers Set:  
Impervious Set:

Tolerances & Options

Time Marching: SAOR  
Max Iterations: 6  
Over-Relax Weight: 0.5 dec  
Fact:  
dZ Tolerance: 0.0010 ft  
  
Max dZ: 1.0000 ft  
Link Optimizer Tol: 0.0001 ft  
  
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr  
  
Smp/Man Basin Rain Global  
Opt:  
  
Rainfall Name: ~SCSII-24  
Rainfall Amount: 4.28 in  
Storm Duration: 24.0000 hr  
  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area 100 ft2  
(1D):  
Energy Switch (1D): Energy

Comment:

Simulation: 100yr 024hr  
Scenario: Scenario1  
Run Date/Time: 12/15/2021 11:59:06 AM  
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

Year	Month	Day	Hour [hr]
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Start Time: 0 0 0 0.0000  
 End Time: 0 0 0 24.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.1000
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	
Over-Relax Weight 0.5 dec	
Fact:	
dZ Tolerance: 0.0010 ft	Smp/Man Basin Rain Global
	Opt:
Max dZ: 1.0000 ft	Rainfall Name: ~SCSII-24
Link Optimizer Tol: 0.0001 ft	Rainfall Amount: 6.30 in
	Storm Duration: 24.0000 hr
Edge Length Option: Automatic	Dflt Damping (1D): 0.0050 ft
	Min Node Srf Area 100 ft2
	(1D):

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Energy Switch (1D): Energy

Comment:
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