Re: W00521 - West Chester Church of the Nazarene

Teresa Barnes to: Rick Evans 11/20/2015 11:42 AM
Cc: Eric Pottenger

Rick

At this point, I have finally been able to dig my way through what you provided at the meeting and determine that we agree with the current documentation process.
Please note that we will not "approve" any of the documentation or calculations until an earth moving permit is applied for and current support documentation and calculations are submitted.
Note, when things are submitted for permit approval, it would be advantageous for the comparison chart (page 3) to be labeled as the "basin outflow" - to avoid confusion of total flow from the listed acreage.
Let me know if you have any questions.
THANKS

Teresa

Teresa Barnes, P.E., CPESC
Design Engineer
Butler County Storm Water District
1921 Fairgrove Avenue
Hamilton, Ohio 45011

513-785-4142 Office
513-867-5849 Fax

Rick Evans Teresa, I wanted to follow up to see if you had a... 11/19/2015 08:41:06 AM

From: Rick Evans <evans2013rick@gmail.com>
To: Teresa Barnes <barnest@bceo.org>,
Date: 11/19/2015 08:41 AM
Subject: W00521 - West Chester Church of the Nazarene

Teresa,

I wanted to follow up to see if you had any questions or needed any additional information and the status of review.

Thanks,
Rick

--

Richard K. Evans, P.E.
Evans CivilPro Engineers, LLC
3530 Irwin Simpson Road
Mason, OH 45040
513-256-8502

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Preliminary

STORMWATER MANAGEMENT DESIGN REPORT

FOR

WEST CHESTER CHURCH OF THE NAZARENE AND VARIOUS SUROUNDING PROPERTIES

(W00521)

WEST CHESTER TOWNSHIP
BUTLER COUNTY, OHIO

NOVEMBER 5, 2015

RECEIVED
NOV 06 2015
BY:

Evans
CivilPro
Engineers, LLC
Consulting Engineers & Surveyors

3530 IRWIN-SIMPSON ROAD
MASON, OHIO 45040
(513) 398-1728

PROJECT DESCRIPTION

The attached report has been prepared for West Chester Church of the Nazarene and various surrounding properties in West Chester Township, Butler County, Ohio.

The West Chester Church of the Nazarene (WCCN) site is located south of Tylersville Road and east of Cox Road. The parcel was the subject of an original 1986 stormwater management plan with the design of an approximate 2 acre pond. The drainage area tributary to this pond as identified in that 1986 report is 77 acres south of and including Tylersville Road and 163 acres north of Tylersville Road, the Voice of America (VOA) site.

Over the past 30 years several projects and subsequent stormwater management plans were developed and approved by Butler County Engineers Office (BCEO). The following notable stormwater management plans include the following as provided to Evans CivilPro Engineers, LLC by Butler County Engineers Office:

1986-07-04 Vision 2000 Church PUD project (now WCCN)
2002-01-03 Storm Water Drainage Analysis for Kohl's Expansion
2002-03-06 VOA Storm Water Management Report - Southeast Retention Basin
2003-05-26 VOA Storm Water Management Report - Southeast Retention Basin
(Updated to reflect as-built conditions)
2005-07-14 Retention Basin Analysis at Chesterwood Village

Currently the above noted 77 acres including Tylersville Road, a shopping center, Chesterwood Village (a retirement community) and West Chester Church of the Nazarene is 83% developed. North of Tylersville Road is the VOA site (West Chester Township Park) including the Voice of America Centre (a developed shopping center). Stormwater management is provided for this area north of Tylersville Road in a stormwater management basin in the southwest corner of the VOA site immediately east of the entrance to the VOA Centre as evidenced in the 2003 VOA report. This basin was designed for the tributary north of Tylersville Road and associated direct runoff. The release flow from this system drains through a large storm pipe and outlets to the 2 acre WCCN stormwater management pond.

Our understanding based upon the information provided in discussions with the Butler County Engineers Office the VOA stormwater management basin handles detention requirements upstream of the WCCN storm system and can be considered as a pass-through condition.

South of Tylersville Road the original 1986 report took into consideration the project site, being 68.9 acres with 26 acres determined to be paved area. The remaining area of the total 240 acre drainage shed was considered as a pass-through condition. The 2002 Kohl's expansion report addressed its approximately 20,000 ft.^{2} expansion and noted insignificant effect on the existing on-site detention as previously provided.

South and east of WCCN, Chesterwood Village was developed in 2005 and provided on-site stormwater management within its development area to work in conjunction with the WCCN pond.

Evans CivilPro Engineers, LLC
11/5/2015

Date	Project Calc Name	Ex Shed	Notes	Tc	CN	Q1	Q2	Q5	Q10	Q25	Q50	Q100
		Ac										
7/4/1986	Original Church Site	68.9	project site only	43.0	80	39.4	52.1	76.0	94.1	116.6	135.9	151.5
7/4/1986	Original Church Site & VOA	240.0	77 ac south of Tylersville & 163 from VOA site = 240 ac to Basin	81.0	80	86.7	114.6	167.3	207.1	256.7	299.1	333.7
		Developed										
		Ac										
7/4/1986	Original Church Site	68.9	project site only	42.0	86	54.8	69.5	96.4	116.2	140.5	161.0	177.6
			Only 26 ac paved									
11/5/2015		68.5	Site only - assuming no add'l detention at Chesterwood and other sites; ignoring ex detention of 9.3+1.1 ac det at ex Chesterwood	22.0	87.1	11.0	21.0	35.0	46.0	61.0	75.0	92.0
Future		68.5	Site only - assuming no add'l detention at Chesterwood and other sites; ignoring ex detention of 9.3+1.1 ac det at ex Chesterwood	22.0	91.5	18.0	30.0	45.0	56.0	72.0	86.0	103.0
		240.0	77 ac south of Tylersville & 163 from VOA site = 240 ac to Basin (tc based on 5000')	81.0	81	91.9	120.6	174.5	215.1	265.4	308.4	343.3
Future		241.8	Site only - assuming no add'l detention at Chesterwood and other sites; ignoring ex detention of 9.3+1.1 ac det at ex Chesterwood	60.0	78.3	28.0	51.0	82.0	111.0	169.0	231.0	307.0

Existing less area of 879 & 880 outside Det Esmt

Contour Elevation	Contour Areas (SF)	Contour Areas (SF) Ex Pond	Contour Areas (SF) A	Contour Areas (SF) B	Contour Areas (SF) C	Contour Areas (Ac)	Average (sq ft)	Depth (ft)	Volume (cu ft)	Cumulative Volume (cu ft)
BASIN 2:	**Ex Pond Modified**									
	0									
873	**85,033**	85,033				**1.9521**				
							90,678	1.00	90,678	90,678
874	**96,322**	96,322				**2.2112**				
							103,111	1.00	103,111	193,788
875	**109,899**	109,899				**2.5229**				
							113,967	1.00	113,967	307,755
876	**118,035**	118,035				**2.7097**				
							120,771	0.72	86,955	394,710
876.72	**123,506**	123,506				**2.8353**				
							124,570	0.28	34,880	429,590
877	**125,634**	125,634				**2.8842**				
							131,121	1.00	131,121	560,711
878	**136,608**	136,608				**3.1361**				
							145,909	1.00	145,909	706,620
879	**155,210**	**155,210**				**3.5631**				
							156,942	0.36	56,499	763,119
879.36	**158,674**	**158,674**				**3.6427**				
							161,754	0.64	103,522	866,641
880	**164,833**	**164,833**				**3.7840**				
		Ex Mod	**A**	**B**	**C**				Total Volume (cf) =	**866,641**
									Ac-ft =	**19.90**

Modified Ex Pond with addition of Areas D, C4 & C4.1

Adjusted Areas	**Say ICPR Acres**	Average (sq ft)	Depth (ft)	Volume (cu ft)	Cumulative Volume (cu ft)	
78,844	**1.8100**					**872**
		80,368	0.8	64,295	64,295	
81,893	**1.8800**					**872.8**
		82,111	0.2	16,422	80,717	
82,328	**1.8900**					**873**
		103,673	1.0	103,673	184,389	
125,017	**2.8700**					**874**
		140,045	1.0	140,045	324,435	
155,074	**3.5600**					**875**
		161,608	1.0	161,608	486,042	
168,142	**3.8600**					**876**
		170,537	0.7	122,787	608,829	
172,933	**3.9700**					**876.72**
		173,804	0.3	48,665	657,495	
174,676	**4.0100**					**877**
		178,160	1.0	178,160	835,655	
181,645	**4.1700**					**878**
		184,694	1.0	184,694	1,020,349	
187,744	**4.3100**					**879**
		189,050	0.4	68,058	1,088,408	
190,357	**4.3700**					**879.36**
		192,317	0.6	123,083	1,211,491	
194,278	**4.4600**					**880**
				Total Volume (sf) =	**1,211,491**	
				Ac-ft =	**27.81**	

Water Quality Volume and flow rate for 24-hour Drain Time
(Wet Basin)
WCCN
RETENTION POND

W00521
November 5, 2015

if existing conditions of 68.5 acres w/26 imp. C could = .268326 wet pond needs .86 ac-ft (vs 2.57 ac-ft)

WQv (ac-ft)=C*0.75*A/12	C=	0.8	
	A=	68.5	
	WQv (ac-ft)=	3.43	ac-ft
		149,193	cf
Permanent Pool Vol. Required=0.75*WQv=		2.57	ac-ft
Extended Detention Vol. Required=0.75*WQv=		**2.57**	**ac-ft**
		111,895	cf
	Basin Size	1.910	ac
		83,200	sf

0.180
7,850

Depth for Extended Detention Volume Required **1.34 ft**

Diameter of WQ Orifice Required	9.0	inches
(Modify orifice to accommodate	Initital Flow Rate	**1.75 cfs**
and maintain a base flow)	Ending Flow Rate	**0.11 cfs**

High Water Elevation	873.34	ft
Invert Elevation	872.00	ft
Depth	1.34	ft

ORIFICE FORMULA
Q = CA (2gh)^1/2

SEE DRAW DOWN TABLE FOR FLOW RATE RESULTS

Per OEPA

Land Use	C=
Industrial & Commercial	0.8
Residential (>8 du/ac)	0.5
Residential (4 to 8 du/ac)	0.4
Residential (<4 du/ac)	0.3
Open Space and Rec Areas	0.2

KROGER

KOHL'S

PROPOSED PROPERTY
2.355 AC

REMOVE PIPE TO SLOPE

3:1

D

EXISTING POND

S83°59'56"E 83.13'
R=58.89
R=75.00

S84°00'30"E
59.05'

EX 48" STM

EX SAN

C4.1 N50°24'06"E 91.97'

N54°04'01"E 133.16'

EX CHESTER DRAINAGE ESMT

PROPOSED 10' DRAINAGE, MAINTENANCE & ACCESS ESMT

PROPOSED GRADING MODIFICATIONS

EX W.S. 873.0
PROPOSED W.S. 872.0

PROPOSED WQ OUTLET

C4

N05°23'36"E 223.28'

S05°23'36"W 355.99'

PROPOSED PROPERTY
2.773 AC

N84°00'30"W 360.02'

Found 5/8" iron pin

Found 3/4" iron pin

882 881 880 879 878 877 876 875 874

40 0 20 40 80 160
1" = 40'

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NON-MEMBERS MUST BE CALLED DIRECTLY

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		

POND MODIFICATIONS

DATE: 11/05/15
JOB NO.: W00521
DRAWN BY: SRT
SCALE: AS SHOWN

WEST CHESTER CHURCH OF THE NAZARENE

7951 TYLERSVILLE ROAD
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OHIO 45069

Evans CivilPro Engineers, LLC
Consulting Engineers & Surveyors
3530 Irwin-Simpson Road
Mason, Ohio 45040
(513) 398-1728

SHEET
1
OF 1

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C:\Land Projects 2007_ECP PROJECTS\W00521_W00521_IP.dwg 9/23/2015 9:49:30 AM EDT

P:\W00521\Dwg\Bid\Improvement Plan\W00521_POND MODIFICATION EXHIBIT_20151105.dwg, 40 SCALE POND, 11/5/2015 8:07:12 PM, allmpstein, 1:1

P:\W00521\dwgfiles\Improvement Plan_W00521_IP.dwg, Future Areas for Development in Watershed, 11/5/2015 5:28:22 PM, sthompson, 1:1



AREA SUMMARY
SOUTH OF TYLERSVILLE

DEVELOPED LAND	51.3 AC
FUTURE DEVELOPMENT	12.0 AC
POND PARCEL	5.2 AC
TOTAL SHED	68.5 AC

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SHEET 1 OF 1

Evans CivilPro Engineers, LLC
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3530 Irwin-Simpson Road
Mason, Ohio 45040
(513) 398-1728

WEST CHESTER CHURCH OF THE NAZARENE

7951 TYLERSVILLE ROAD
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OHIO 45069

FUTURE AREAS FOR DEVELOPMENT IN WATERSHED

DATE:	JOB NO.:	DRAWN BY:	SCALE:
11/05/15	W00521	SRT	AS SHOWN

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

REVISIONS

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W00521 _ Ex Mod & D+C4-C4.1 _ OUTPUT SUMMARY - 68.5 ac Inflow - Current Dvmt 2015-11-05

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
A-011	BASE	001	0.00	872.00	872.00	0.0000	13	12.93	11	0.00	0
A-011	BASE	002	0.00	872.00	872.00	0.0000	13	12.69	21	0.00	0
A-011	BASE	005	0.00	872.00	872.00	0.0000	13	12.58	35	0.00	0
A-011	BASE	010	0.00	872.00	872.00	0.0000	13	12.55	46	0.00	0
A-011	BASE	025	0.00	872.00	872.00	0.0000	13	12.52	61	0.00	0
A-011	BASE	050	0.00	872.00	872.00	0.0000	13	12.50	75	0.00	0
A-011	BASE	100	0.00	872.00	872.00	0.0000	13	12.49	92	0.00	0
A-012	BASE	001	12.93	873.70	880.00	0.0050	112306	12.08	77	12.93	11
A-012	BASE	002	12.69	874.11	880.00	0.0050	128461	12.08	108	12.69	21
A-012	BASE	005	12.58	874.56	880.00	0.0050	142043	12.08	145	12.58	35
A-012	BASE	010	12.55	874.89	880.00	0.0050	152146	12.08	174	12.55	46
A-012	BASE	025	12.52	875.35	880.00	0.0050	159858	12.08	217	12.52	61
A-012	BASE	050	12.50	875.72	880.00	0.0050	164769	12.08	254	12.50	75
A-012	BASE	100	12.49	876.14	880.00	0.0050	169288	12.08	297	12.49	92

==== Basins ====

Name: A-012 Node: A-012 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.00
Area(ac): 68.500 Time Shift(hrs): 0.00
Curve Number: 87.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

==== Nodes ====

Name: A-011 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 872.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	872.000
999.00	872.000

Name: A-012 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 880.000
Type: Stage/Area

Stage(ft)	Area(ac)
872.000	1.8100
872.800	1.8800
873.000	1.8900
874.000	2.8700
875.000	3.5600
876.000	3.8600
876.720	3.9700
877.000	4.0100
878.000	4.1700
879.000	4.3100
879.360	4.3700
880.000	4.4600

==== Pipes ====

Name: Culvert From Node: A-012 Length(ft): 75.00

```
       Group: BASE                To Node: A-011                Count: 1
                                                      Friction Equation: Automatic
              UPSTREAM       DOWNSTREAM               Solution Algorithm: Most Restrictive
    Geometry: Horz Ellipse   Horz Ellipse                        Flow: Both
    Span(in): 81.00          81.00                  Entrance Loss Coef: 0.00
    Rise(in): 60.00          60.00                      Exit Loss Coef: 1.00
   Invert(ft): 872.800       872.420                    Bend Loss Coef: 0.00
 Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000         0.000                      Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000         0.000                   Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


================================================================================================
==== Weirs =====================================================================================
================================================================================================

        Name: A-011W1            From Node: A-012
       Group: BASE                 To Node: A-011
        Flow: Both                   Count: 1
        Type: Vertical: Mavis     Geometry: Trapezoidal

          Bottom Width(ft): 10.00
     Left Side Slope(h/v): 0.17
    Right Side Slope(h/v): 0.17
              Invert(ft): 876.730
   Control Elevation(ft): 876.730
  Struct Opening Dim(ft): 9999.00
                                    TABLE
         Bottom Clip(ft): 0.000
            Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
  Orifice Discharge Coef: 0.600


------------------------------------------------------------------------------------------------
        Name: A-011W3            From Node: A-012
       Group: BASE                 To Node: A-011
        Flow: Both                   Count: 1
        Type: Vertical: Mavis     Geometry: Circular

                  Span(in): 9.00
                  Rise(in): 9.00
                Invert(ft): 872.000
   Control Elevation(ft): 872.000
                                    TABLE
         Bottom Clip(in): 0.000
            Top Clip(in): 0.000
      Weir Discharge Coef: 3.200
  Orifice Discharge Coef: 0.600
```

==== Hydrology Simulations ====

Name: 001
Filename: P:\Car-2e\Calculations\SWM\ICPR\001.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 2.33

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 002
Filename: P:\Car-2e\Calculations\SWM\ICPR\002.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 2.86

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 005
Filename: P:\Car-2e\Calculations\SWM\ICPR\005.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 3.49

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 010
Filename: P:\Car-2e\Calculations\SWM\ICPR\010.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 3.99

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 025
Filename: P:\Car-2e\Calculations\SWM\ICPR\025.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 4.70

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------------
         Name: 050
     Filename: P:\Car-2e\Calculations\SWM\ICPR\050.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 5.32

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------------
         Name: 100
     Filename: P:\Car-2e\Calculations\SWM\ICPR\100.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 6.04

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

============================================================================================
==== Routing Simulations ===================================================================
============================================================================================

         Name: 001                Hydrology Sim: 001
     Filename: P:\Car-2e\Calculations\SWM\ICPR\001.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                     End Time(hrs): 24.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: 002 Hydrology Sim: 002
Filename: P:\Car-2e\Calculations\SWM\ICPR\002.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 005 Hydrology Sim: 005
Filename: P:\Car-2e\Calculations\SWM\ICPR\005.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 010 Hydrology Sim: 010
Filename: P:\Car-2e\Calculations\SWM\ICPR\010.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000

```
       Start Time(hrs): 0.000                End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000            Max Calc Time(sec): 60.0000
       Boundary Stages:                      Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
BASE            Yes

-------------------------------------------------------------------------------------------------------
        Name: 025                Hydrology Sim: 025
    Filename: P:\Car-2e\Calculations\SWM\ICPR\025.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000            Max Calc Time(sec): 60.0000
       Boundary Stages:                      Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
BASE            Yes

-------------------------------------------------------------------------------------------------------
        Name: 050                Hydrology Sim: 050
    Filename: P:\Car-2e\Calculations\SWM\ICPR\050.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000            Max Calc Time(sec): 60.0000
       Boundary Stages:                      Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: 100 Hydrology Sim: 100
Filename: P:\Car-2e\Calculations\SWM\ICPR\100.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
001	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.52	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.75	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	12.00	872.00	872.00	13	1	0	0.0	0.0
001	A-011	BASE	12.25	872.00	872.00	152	5	0	0.1	0.0
001	A-011	BASE	12.50	872.00	872.00	182	10	0	0.2	0.0
001	A-011	BASE	12.76	872.00	872.00	187	11	0	0.5	0.0
001	A-011	BASE	13.01	872.00	872.00	187	11	0	0.7	0.0
001	A-011	BASE	13.26	872.00	872.00	186	11	0	0.9	0.0
001	A-011	BASE	13.51	872.00	872.00	184	11	0	1.2	0.0
001	A-011	BASE	13.76	872.00	872.00	181	10	0	1.4	0.0
001	A-011	BASE	14.01	872.00	872.00	179	9	0	1.6	0.0
001	A-011	BASE	14.26	872.00	872.00	176	9	0	1.7	0.0
001	A-011	BASE	14.51	872.00	872.00	172	8	0	1.9	0.0
001	A-011	BASE	14.76	872.00	872.00	169	8	0	2.1	0.0
001	A-011	BASE	15.01	872.00	872.00	166	7	0	2.2	0.0
001	A-011	BASE	15.26	872.00	872.00	163	7	0	2.4	0.0
001	A-011	BASE	15.51	872.00	872.00	160	6	0	2.5	0.0
001	A-011	BASE	15.76	872.00	872.00	156	6	0	2.6	0.0
001	A-012	BASE	10.02	872.02	880.00	78933	1	0	0.0	0.0
001	A-012	BASE	10.27	872.03	880.00	78966	1	0	0.1	0.0
001	A-012	BASE	10.52	872.04	880.00	79011	1	0	0.1	0.0
001	A-012	BASE	10.77	872.06	880.00	79071	2	0	0.1	0.0
001	A-012	BASE	11.02	872.08	880.00	79161	2	0	0.1	0.0
001	A-012	BASE	11.27	872.11	880.00	79285	3	0	0.2	0.0
001	A-012	BASE	11.52	872.16	880.00	79450	5	0	0.3	0.0
001	A-012	BASE	11.75	872.25	880.00	79800	15	0	0.5	0.0
001	A-012	BASE	12.00	872.61	880.00	81188	60	1	1.3	0.0
001	A-012	BASE	12.25	873.34	880.00	97088	62	5	2.5	0.1
001	A-012	BASE	12.50	873.63	880.00	109287	25	10	3.4	0.2
001	A-012	BASE	12.76	873.69	880.00	111987	14	11	3.8	0.5
001	A-012	BASE	13.01	873.70	880.00	112229	10	11	4.1	0.7
001	A-012	BASE	13.26	873.68	880.00	111490	8	11	4.3	0.9
001	A-012	BASE	13.51	873.65	880.00	110400	7	11	4.4	1.2
001	A-012	BASE	13.76	873.62	880.00	109064	6	10	4.6	1.4
001	A-012	BASE	14.01	873.59	880.00	107684	5	9	4.7	1.6
001	A-012	BASE	14.26	873.56	880.00	106278	5	9	4.8	1.7
001	A-012	BASE	14.51	873.52	880.00	104827	4	8	4.9	1.9
001	A-012	BASE	14.76	873.49	880.00	103413	4	8	5.0	2.1
001	A-012	BASE	15.01	873.46	880.00	102006	4	7	5.0	2.2
001	A-012	BASE	15.26	873.43	880.00	100767	4	7	5.1	2.4
001	A-012	BASE	15.51	873.40	880.00	99628	3	6	5.2	2.5
001	A-012	BASE	15.76	873.37	880.00	98476	3	6	5.3	2.6
002	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.51	872.00	872.00	13	0	0	0.0	0.0

RELEASE DATA

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
002	A-011	BASE	11.75	872.00	872.00	13	1	0	0.0	0.0
002	A-011	BASE	12.00	872.00	872.00	87	2	0	0.0	0.0
002	A-011	BASE	12.25	872.00	872.00	194	14	0	0.2	0.0
002	A-011	BASE	12.50	872.00	872.00	209	20	0	0.6	0.0
002	A-011	BASE	12.75	872.00	872.00	210	21	0	1.0	0.0
002	A-011	BASE	13.00	872.00	872.00	209	20	0	1.4	0.0
002	A-011	BASE	13.26	872.00	872.00	206	19	0	1.8	0.0
002	A-011	BASE	13.51	872.00	872.00	203	17	0	2.2	0.0
002	A-011	BASE	13.75	872.00	872.00	200	16	0	2.5	0.0
002	A-011	BASE	14.00	872.00	872.00	197	15	0	2.8	0.0
002	A-011	BASE	14.26	872.00	872.00	193	13	0	3.1	0.0
002	A-011	BASE	14.51	872.00	872.00	190	12	0	3.4	0.0
002	A-011	BASE	14.75	872.00	872.00	186	11	0	3.6	0.0
002	A-011	BASE	15.01	872.00	872.00	182	10	0	3.9	0.0
002	A-011	BASE	15.26	872.00	872.00	179	9	0	4.1	0.0
002	A-011	BASE	15.51	872.00	872.00	176	9	0	4.3	0.0
002	A-011	BASE	15.76	872.00	872.00	172	8	0	4.4	0.0
002	A-012	BASE	10.02	872.07	880.00	79116	1	0	0.1	0.0
002	A-012	BASE	10.27	872.09	880.00	79185	2	0	0.2	0.0
002	A-012	BASE	10.52	872.11	880.00	79271	2	0	0.2	0.0
002	A-012	BASE	10.77	872.14	880.00	79381	3	0	0.3	0.0
002	A-012	BASE	11.02	872.18	880.00	79537	4	0	0.3	0.0
002	A-012	BASE	11.27	872.23	880.00	79742	5	0	0.4	0.0
002	A-012	BASE	11.51	872.30	880.00	79992	7	0	0.6	0.0
002	A-012	BASE	11.75	872.44	880.00	80544	23	1	0.9	0.0
002	A-012	BASE	12.00	872.96	880.00	82325	85	2	2.0	0.0
002	A-012	BASE	12.25	873.80	880.00	116788	85	14	3.7	0.2
002	A-012	BASE	12.50	874.08	880.00	127592	34	20	5.0	0.6
002	A-012	BASE	12.75	874.11	880.00	128409	19	21	5.5	1.0
002	A-012	BASE	13.00	874.07	880.00	127429	13	20	5.8	1.4
002	A-012	BASE	13.26	874.02	880.00	125791	11	19	6.1	1.8
002	A-012	BASE	13.51	873.96	880.00	123524	9	17	6.3	2.2
002	A-012	BASE	13.75	873.90	880.00	121061	8	16	6.5	2.5
002	A-012	BASE	14.00	873.84	880.00	118568	7	15	6.6	2.8
002	A-012	BASE	14.26	873.79	880.00	116183	6	13	6.8	3.1
002	A-012	BASE	14.51	873.73	880.00	113859	6	12	6.9	3.4
002	A-012	BASE	14.75	873.69	880.00	111789	5	11	7.0	3.6
002	A-012	BASE	15.01	873.64	880.00	109639	5	10	7.1	3.9
002	A-012	BASE	15.26	873.59	880.00	107847	5	9	7.2	4.1
002	A-012	BASE	15.51	873.56	880.00	106227	4	9	7.3	4.3
002	A-012	BASE	15.76	873.52	880.00	104642	4	8	7.4	4.4
005	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.26	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.51	872.00	872.00	13	1	0	0.0	0.0
005	A-011	BASE	11.75	872.00	872.00	13	1	0	0.1	0.0
005	A-011	BASE	12.00	872.00	872.00	156	6	0	0.1	0.0
005	A-011	BASE	12.25	872.00	872.00	217	26	0	0.5	0.0
005	A-011	BASE	12.50	872.00	872.00	226	34	0	1.1	0.0
005	A-011	BASE	12.75	872.00	872.00	226	34	0	1.8	0.0
005	A-011	BASE	13.01	872.00	872.00	226	31	0	2.5	0.0
005	A-011	BASE	13.26	872.00	872.00	220	28	0	3.1	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
005	A-011	BASE	13.50	872.00	872.00	217	26	0	3.6	0.0
005	A-011	BASE	13.76	872.00	872.00	213	23	0	4.2	0.0
005	A-011	BASE	14.00	872.00	872.00	210	21	0	4.6	0.0
005	A-011	BASE	14.26	872.00	872.00	206	19	0	5.0	0.0
005	A-011	BASE	14.50	872.00	872.00	202	17	0	5.4	0.0
005	A-011	BASE	14.76	872.00	872.00	198	15	0	5.7	0.0
005	A-011	BASE	15.01	872.00	872.00	195	14	0	6.0	0.0
005	A-011	BASE	15.25	872.00	872.00	191	13	0	6.3	0.0
005	A-011	BASE	15.51	872.00	872.00	188	12	0	6.5	0.0
005	A-011	BASE	15.76	872.00	872.00	184	11	0	6.8	0.0
005	A-012	BASE	10.02	872.16	880.00	79447	3	0	0.3	0.0
005	A-012	BASE	10.27	872.19	880.00	79562	3	0	0.3	0.0
005	A-012	BASE	10.52	872.22	880.00	79702	4	0	0.4	0.0
005	A-012	BASE	10.77	872.27	880.00	79875	5	0	0.5	0.0
005	A-012	BASE	11.02	872.33	880.00	80114	7	0	0.6	0.0
005	A-012	BASE	11.26	872.41	880.00	80416	8	0	0.8	0.0
005	A-012	BASE	11.51	872.51	880.00	80781	11	1	1.0	0.0
005	A-012	BASE	11.75	872.71	880.00	81550	33	1	1.4	0.1
005	A-012	BASE	12.00	873.37	880.00	98382	115	6	3.0	0.1
005	A-012	BASE	12.25	874.28	880.00	133556	113	26	5.3	0.5
005	A-012	BASE	12.50	874.55	880.00	141772	44	34	6.9	1.1
005	A-012	BASE	12.75	874.53	880.00	141319	25	34	7.7	1.8
005	A-012	BASE	13.01	874.46	880.00	138942	17	31	8.1	2.5
005	A-012	BASE	13.26	874.36	880.00	136118	14	28	8.4	3.1
005	A-012	BASE	13.50	874.27	880.00	133339	12	26	8.7	3.6
005	A-012	BASE	13.76	874.18	880.00	130512	10	23	8.9	4.2
005	A-012	BASE	14.00	874.09	880.00	128016	9	21	9.1	4.6
005	A-012	BASE	14.26	874.01	880.00	125609	8	19	9.3	5.0
005	A-012	BASE	14.50	873.94	880.00	122674	7	17	9.4	5.4
005	A-012	BASE	14.76	873.87	880.00	119699	6	15	9.6	5.7
005	A-012	BASE	15.01	873.81	880.00	117019	6	14	9.7	6.0
005	A-012	BASE	15.25	873.75	880.00	114685	6	13	9.8	6.3
005	A-012	BASE	15.51	873.70	880.00	112563	5	12	10.0	6.5
005	A-012	BASE	15.76	873.66	880.00	110520	5	11	10.1	6.8
010	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	11.01	872.00	872.00	13	1	0	0.0	0.0
010	A-011	BASE	11.26	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	11.51	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	11.75	872.00	872.00	82	2	0	0.1	0.0
010	A-011	BASE	12.00	872.00	872.00	185	11	0	0.2	0.0
010	A-011	BASE	12.25	872.00	872.00	228	37	0	0.7	0.0
010	A-011	BASE	12.50	872.00	872.00	240	46	0	1.6	0.0
010	A-011	BASE	12.76	872.00	872.00	240	44	0	2.5	0.0
010	A-011	BASE	13.00	872.00	872.00	237	41	0	3.4	0.0
010	A-011	BASE	13.25	872.00	872.00	228	37	0	4.2	0.0
010	A-011	BASE	13.51	872.00	872.00	225	32	0	4.9	0.0
010	A-011	BASE	13.75	872.00	872.00	221	29	0	5.5	0.0
010	A-011	BASE	14.00	872.00	872.00	217	26	0	6.1	0.0
010	A-011	BASE	14.26	872.00	872.00	213	23	0	6.6	0.0
010	A-011	BASE	14.51	872.00	872.00	209	20	0	7.0	0.0
010	A-011	BASE	14.75	872.00	872.00	205	18	0	7.4	0.0
010	A-011	BASE	15.00	872.00	872.00	202	16	0	7.8	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
010	A-011	BASE	15.26	872.00	872.00	198	15	0	8.1	0.0
010	A-011	BASE	15.51	872.00	872.00	194	14	0	8.4	0.0
010	A-011	BASE	15.76	872.00	872.00	191	12	0	8.7	0.0
010	A-012	BASE	10.02	872.24	880.00	79778	4	0	0.4	0.0
010	A-012	BASE	10.27	872.28	880.00	79931	4	0	0.5	0.0
010	A-012	BASE	10.52	872.33	880.00	80113	5	0	0.6	0.0
010	A-012	BASE	10.77	872.39	880.00	80338	7	0	0.7	0.0
010	A-012	BASE	11.01	872.47	880.00	80629	9	1	0.9	0.0
010	A-012	BASE	11.26	872.57	880.00	81014	11	1	1.1	0.1
010	A-012	BASE	11.51	872.69	880.00	81483	14	1	1.3	0.1
010	A-012	BASE	11.75	872.94	880.00	82279	41	2	1.9	0.1
010	A-012	BASE	12.00	873.66	880.00	110785	140	11	3.8	0.2
010	A-012	BASE	12.25	874.62	880.00	143886	135	37	6.6	0.7
010	A-012	BASE	12.50	874.89	880.00	152028	52	46	8.6	1.6
010	A-012	BASE	12.76	874.85	880.00	150759	29	44	9.4	2.5
010	A-012	BASE	13.00	874.74	880.00	147519	20	41	9.9	3.4
010	A-012	BASE	13.25	874.61	880.00	143724	17	37	10.3	4.2
010	A-012	BASE	13.51	874.49	880.00	139954	14	32	10.6	4.9
010	A-012	BASE	13.75	874.37	880.00	136486	12	29	10.9	5.5
010	A-012	BASE	14.00	874.27	880.00	133341	11	26	11.1	6.1
010	A-012	BASE	14.26	874.17	880.00	130378	9	23	11.3	6.6
010	A-012	BASE	14.51	874.08	880.00	127719	8	20	11.5	7.0
010	A-012	BASE	14.75	874.00	880.00	125310	7	18	11.7	7.4
010	A-012	BASE	15.00	873.93	880.00	122109	7	16	11.8	7.8
010	A-012	BASE	15.26	873.86	880.00	119301	7	15	12.0	8.1
010	A-012	BASE	15.51	873.80	880.00	116893	6	14	12.1	8.4
010	A-012	BASE	15.76	873.75	880.00	114545	6	12	12.3	8.7
025	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	10.27	872.00	872.00	13	1	0	0.0	0.0
025	A-011	BASE	10.52	872.00	872.00	13	1	0	0.0	0.0
025	A-011	BASE	10.76	872.00	872.00	13	1	0	0.1	0.0
025	A-011	BASE	11.00	872.00	872.00	13	1	0	0.1	0.0
025	A-011	BASE	11.25	872.00	872.00	3	1	0	0.1	0.0
025	A-011	BASE	11.50	872.00	872.00	89	2	0	0.1	0.0
025	A-011	BASE	11.75	872.00	872.00	142	4	0	0.2	0.0
025	A-011	BASE	12.00	872.00	872.00	207	19	0	0.4	0.0
025	A-011	BASE	12.25	872.00	872.00	243	51	0	1.2	0.0
025	A-011	BASE	12.50	872.00	872.00	247	61	0	2.3	0.0
025	A-011	BASE	12.75	872.00	872.00	246	58	0	3.6	0.0
025	A-011	BASE	13.00	872.00	872.00	251	54	0	4.8	0.0
025	A-011	BASE	13.25	872.00	872.00	242	48	0	5.8	0.0
025	A-011	BASE	13.50	872.00	872.00	239	43	0	6.7	0.0
025	A-011	BASE	13.76	872.00	872.00	229	38	0	7.6	0.0
025	A-011	BASE	14.00	872.00	872.00	225	33	0	8.3	0.0
025	A-011	BASE	14.25	872.00	872.00	221	29	0	8.9	0.0
025	A-011	BASE	14.51	872.00	872.00	217	26	0	9.5	0.0
025	A-011	BASE	14.75	872.00	872.00	213	23	0	10.0	0.0
025	A-011	BASE	15.01	872.00	872.00	209	20	0	10.5	0.0
025	A-011	BASE	15.25	872.00	872.00	206	18	0	10.9	0.0
025	A-011	BASE	15.51	872.00	872.00	202	17	0	11.2	0.0
025	A-011	BASE	15.76	872.00	872.00	199	15	0	11.6	0.0
025	A-012	BASE	10.02	872.39	880.00	80324	5	0	0.7	0.0
025	A-012	BASE	10.27	872.44	880.00	80530	6	1	0.8	0.0
025	A-012	BASE	10.52	872.50	880.00	80773	7	1	1.0	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
025	A-012	BASE	10.76	872.58	880.00	81064	9	1	1.1	0.1
025	A-012	BASE	11.00	872.68	880.00	81444	12	1	1.3	0.1
025	A-012	BASE	11.25	872.81	880.00	81919	14	1	1.6	0.1
025	A-012	BASE	11.50	872.97	880.00	82348	18	2	1.9	0.1
025	A-012	BASE	11.75	873.26	880.00	93745	54	4	2.7	0.2
025	A-012	BASE	12.00	874.03	880.00	126057	175	19	5.0	0.4
025	A-012	BASE	12.25	875.07	880.00	156193	167	51	8.6	1.2
025	A-012	BASE	12.50	875.35	880.00	159850	64	61	11.0	2.3
025	A-012	BASE	12.75	875.27	880.00	158866	36	58	12.0	3.6
025	A-012	BASE	13.00	875.12	880.00	156893	25	54	12.6	4.8
025	A-012	BASE	13.25	874.96	880.00	154055	20	48	13.1	5.8
025	A-012	BASE	13.50	874.80	880.00	149254	17	43	13.5	6.7
025	A-012	BASE	13.76	874.65	880.00	144653	14	38	13.8	7.6
025	A-012	BASE	14.00	874.51	880.00	140620	13	33	14.1	8.3
025	A-012	BASE	14.25	874.39	880.00	136895	11	29	14.3	8.9
025	A-012	BASE	14.51	874.27	880.00	133493	10	26	14.6	9.5
025	A-012	BASE	14.75	874.18	880.00	130529	9	23	14.8	10.0
025	A-012	BASE	15.01	874.08	880.00	127727	8	20	14.9	10.5
025	A-012	BASE	15.25	874.01	880.00	125425	9	18	15.1	10.9
025	A-012	BASE	15.51	873.94	880.00	122547	8	17	15.3	11.2
025	A-012	BASE	15.76	873.87	880.00	119864	7	15	15.4	11.6
050	A-011	BASE	10.02	872.00	872.00	13	1	0	0.1	0.0
050	A-011	BASE	10.27	872.00	872.00	13	1	0	0.1	0.0
050	A-011	BASE	10.51	872.00	872.00	13	1	0	0.1	0.0
050	A-011	BASE	10.75	872.00	872.00	13	1	0	0.1	0.0
050	A-011	BASE	11.01	872.00	872.00	63	2	0	0.1	0.0
050	A-011	BASE	11.25	872.00	872.00	104	2	0	0.2	0.0
050	A-011	BASE	11.50	872.00	872.00	134	4	0	0.2	0.0
050	A-011	BASE	11.75	872.00	872.00	171	8	0	0.4	0.0
050	A-011	BASE	12.00	872.00	872.00	218	27	0	0.7	0.0
050	A-011	BASE	12.25	872.00	872.00	248	64	0	1.7	0.0
050	A-011	BASE	12.50	872.00	872.00	249	75	0	3.1	0.0
050	A-011	BASE	12.75	872.00	872.00	249	71	0	4.6	0.0
050	A-011	BASE	13.00	872.00	872.00	248	64	0	6.0	0.0
050	A-011	BASE	13.25	872.00	872.00	246	57	0	7.3	0.0
050	A-011	BASE	13.50	872.00	872.00	243	51	0	8.4	0.0
050	A-011	BASE	13.75	872.00	872.00	240	45	0	9.4	0.0
050	A-011	BASE	14.00	872.00	872.00	237	40	0	10.3	0.0
050	A-011	BASE	14.25	872.00	872.00	227	35	0	11.0	0.0
050	A-011	BASE	14.50	872.00	872.00	225	31	0	11.7	0.0
050	A-011	BASE	14.76	872.00	872.00	219	27	0	12.3	0.0
050	A-011	BASE	15.00	872.00	872.00	215	24	0	12.8	0.0
050	A-011	BASE	15.25	872.00	872.00	211	22	0	13.3	0.0
050	A-011	BASE	15.51	872.00	872.00	207	19	0	13.7	0.0
050	A-011	BASE	15.76	872.00	872.00	204	18	0	14.1	0.0
050	A-012	BASE	10.02	872.52	880.00	80854	6	1	1.0	0.1
050	A-012	BASE	10.27	872.59	880.00	81105	7	1	1.2	0.1
050	A-012	BASE	10.51	872.67	880.00	81392	9	1	1.3	0.1
050	A-012	BASE	10.75	872.76	880.00	81736	11	1	1.5	0.1
050	A-012	BASE	11.01	872.88	880.00	82138	15	2	1.8	0.1
050	A-012	BASE	11.25	873.03	880.00	83894	17	2	2.1	0.2
050	A-012	BASE	11.50	873.20	880.00	91177	23	4	2.5	0.2
050	A-012	BASE	11.75	873.51	880.00	104110	64	8	3.4	0.4
050	A-012	BASE	12.00	874.31	880.00	134553	206	27	6.2	0.7
050	A-012	BASE	12.25	875.43	880.00	160958	194	64	10.3	1.7

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
050	A-012	BASE	12.50	875.72	880.00	164769	75	75	13.1	3.1
050	A-012	BASE	12.75	875.61	880.00	163355	41	71	14.3	4.6
050	A-012	BASE	13.00	875.43	880.00	160944	29	64	15.1	6.0
050	A-012	BASE	13.25	875.23	880.00	158393	23	57	15.6	7.3
050	A-012	BASE	13.50	875.05	880.00	155921	19	51	16.0	8.4
050	A-012	BASE	13.75	874.87	880.00	151420	17	45	16.4	9.4
050	A-012	BASE	14.00	874.71	880.00	146592	15	40	16.7	10.3
050	A-012	BASE	14.25	874.56	880.00	142211	13	35	17.0	11.0
050	A-012	BASE	14.50	874.43	880.00	138326	12	31	17.3	11.7
050	A-012	BASE	14.76	874.32	880.00	134733	10	27	17.5	12.3
050	A-012	BASE	15.00	874.21	880.00	131602	10	24	17.7	12.8
050	A-012	BASE	15.25	874.12	880.00	128930	10	22	17.9	13.3
050	A-012	BASE	15.51	874.04	880.00	126556	9	19	18.1	13.7
050	A-012	BASE	15.76	873.97	880.00	124038	8	18	18.3	14.1
100	A-011	BASE	10.00	872.00	872.00	13	1	0	0.1	0.0
100	A-011	BASE	10.26	872.00	872.00	13	1	0	0.1	0.0
100	A-011	BASE	10.51	872.00	872.00	57	2	0	0.2	0.0
100	A-011	BASE	10.75	872.00	872.00	91	2	0	0.2	0.0
100	A-011	BASE	11.00	872.00	872.00	120	3	0	0.2	0.0
100	A-011	BASE	11.25	872.00	872.00	143	5	0	0.3	0.0
100	A-011	BASE	11.50	872.00	872.00	164	7	0	0.4	0.0
100	A-011	BASE	11.75	872.00	872.00	191	12	0	0.6	0.0
100	A-011	BASE	12.00	872.00	872.00	228	36	0	1.1	0.0
100	A-011	BASE	12.25	872.00	872.00	250	80	0	2.3	0.0
100	A-011	BASE	12.50	872.00	872.00	249	92	0	4.1	0.0
100	A-011	BASE	12.75	872.00	872.00	250	86	0	6.0	0.0
100	A-011	BASE	13.00	872.00	872.00	249	77	0	7.6	0.0
100	A-011	BASE	13.25	872.00	872.00	249	68	0	9.1	0.0
100	A-011	BASE	13.50	872.00	872.00	246	60	0	10.5	0.0
100	A-011	BASE	13.75	872.00	872.00	252	53	0	11.6	0.0
100	A-011	BASE	14.00	872.00	872.00	241	47	0	12.7	0.0
100	A-011	BASE	14.25	872.00	872.00	238	41	0	13.6	0.0
100	A-011	BASE	14.50	872.00	872.00	228	36	0	14.4	0.0
100	A-011	BASE	14.75	872.00	872.00	225	32	0	15.1	0.0
100	A-011	BASE	15.00	872.00	872.00	220	28	0	15.7	0.0
100	A-011	BASE	15.25	872.00	872.00	216	25	0	16.3	0.0
100	A-011	BASE	15.51	872.00	872.00	213	22	0	16.7	0.0
100	A-011	BASE	15.75	872.00	872.00	209	20	0	17.2	0.0
100	A-012	BASE	10.00	872.69	880.00	81499	8	1	1.4	0.1
100	A-012	BASE	10.26	872.77	880.00	81807	9	1	1.6	0.1
100	A-012	BASE	10.51	872.87	880.00	82099	11	2	1.8	0.2
100	A-012	BASE	10.75	872.97	880.00	82368	13	2	2.0	0.2
100	A-012	BASE	11.00	873.12	880.00	87456	18	3	2.3	0.2
100	A-012	BASE	11.25	873.27	880.00	94107	21	5	2.7	0.3
100	A-012	BASE	11.50	873.44	880.00	101294	27	7	3.2	0.4
100	A-012	BASE	11.75	873.75	880.00	114598	78	12	4.3	0.6
100	A-012	BASE	12.00	874.61	880.00	143441	243	36	7.6	1.1
100	A-012	BASE	12.25	875.83	880.00	166205	226	80	12.5	2.3
100	A-012	BASE	12.50	876.13	880.00	169283	87	92	15.7	4.1
100	A-012	BASE	12.75	875.99	880.00	168285	48	86	17.1	6.0
100	A-012	BASE	13.00	875.77	880.00	165377	33	77	17.9	7.6
100	A-012	BASE	13.25	875.53	880.00	162243	27	68	18.5	9.1
100	A-012	BASE	13.50	875.31	880.00	159384	22	60	19.0	10.5
100	A-012	BASE	13.75	875.11	880.00	156723	19	53	19.5	11.6
100	A-012	BASE	14.00	874.93	880.00	153083	17	47	19.8	12.7

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100	A-012	BASE	14.25	874.76	880.00	148043	15	41	20.2	13.6
100	A-012	BASE	14.50	874.61	880.00	143467	14	36	20.5	14.4
100	A-012	BASE	14.75	874.47	880.00	139419	12	32	20.7	15.1
100	A-012	BASE	15.00	874.35	880.00	135734	11	28	21.0	15.7
100	A-012	BASE	15.25	874.25	880.00	132657	11	25	21.2	16.3
100	A-012	BASE	15.51	874.16	880.00	130009	10	22	21.4	16.7
100	A-012	BASE	15.75	874.08	880.00	127581	10	20	21.6	17.2

```
       Group: BASE                To Node: A-011                Count: 1
                                                      Friction Equation: Automatic
              UPSTREAM       DOWNSTREAM               Solution Algorithm: Most Restrictive
    Geometry: Horz Ellipse   Horz Ellipse                        Flow: Both
    Span(in): 81.00          81.00                  Entrance Loss Coef: 0.00
    Rise(in): 60.00          60.00                      Exit Loss Coef: 1.00
   Invert(ft): 872.800       872.420                    Bend Loss Coef: 0.00
 Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000          0.000                   Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


==========================================================================================
==== Weirs ===============================================================================
==========================================================================================

        Name: A-011W1            From Node: A-012
       Group: BASE                 To Node: A-011
        Flow: Both                    Count: 1
        Type: Vertical: Mavis     Geometry: Trapezoidal

          Bottom Width(ft): 10.00
     Left Side Slope(h/v): 0.17
    Right Side Slope(h/v): 0.17
               Invert(ft): 876.730
    Control Elevation(ft): 876.730
   Struct Opening Dim(ft): 9999.00
                                    TABLE
          Bottom Clip(ft): 0.000
             Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
   Orifice Discharge Coef: 0.600


------------------------------------------------------------------------------------------
        Name: A-011W3            From Node: A-012
       Group: BASE                 To Node: A-011
        Flow: Both                    Count: 1
        Type: Vertical: Mavis     Geometry: Circular

                  Span(in): 9.00
                  Rise(in): 9.00
                Invert(ft): 872.000
    Control Elevation(ft): 872.000
                                    TABLE
          Bottom Clip(in): 0.000
             Top Clip(in): 0.000
      Weir Discharge Coef: 3.200
   Orifice Discharge Coef: 0.600
```

```
================================================================================
==== Hydrology Simulations ====================================================
================================================================================

         Name: 001
     Filename: P:\Car-2e\Calculations\SWM\ICPR\001.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 2.33

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

--------------------------------------------------------------------------------
         Name: 002
     Filename: P:\Car-2e\Calculations\SWM\ICPR\002.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 2.86

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

--------------------------------------------------------------------------------
         Name: 005
     Filename: P:\Car-2e\Calculations\SWM\ICPR\005.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 3.49

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

--------------------------------------------------------------------------------
         Name: 010
     Filename: P:\Car-2e\Calculations\SWM\ICPR\010.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 3.99

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

--------------------------------------------------------------------------------
         Name: 025
     Filename: P:\Car-2e\Calculations\SWM\ICPR\025.R32
```

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 4.70

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------------
         Name: 050
     Filename: P:\Car-2e\Calculations\SWM\ICPR\050.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 5.32

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

------------------------------------------------------------------------------------------------------------
         Name: 100
     Filename: P:\Car-2e\Calculations\SWM\ICPR\100.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 6.04

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

============================================================================================
==== Routing Simulations ===================================================================
============================================================================================

         Name: 001                Hydrology Sim: 001
     Filename: P:\Car-2e\Calculations\SWM\ICPR\001.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                    End Time(hrs): 24.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
       Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: 002 Hydrology Sim: 002
Filename: P:\Car-2e\Calculations\SWM\ICPR\002.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 005 Hydrology Sim: 005
Filename: P:\Car-2e\Calculations\SWM\ICPR\005.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 010 Hydrology Sim: 010
Filename: P:\Car-2e\Calculations\SWM\ICPR\010.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000

```
       Start Time(hrs): 0.000                  End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
       Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------------------
        Name: 025                Hydrology Sim: 025
    Filename: P:\Car-2e\Calculations\SWM\ICPR\025.I32

     Execute: Yes         Restart: No            Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                  End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
       Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------------------
        Name: 050                Hydrology Sim: 050
    Filename: P:\Car-2e\Calculations\SWM\ICPR\050.I32

     Execute: Yes         Restart: No            Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                  End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
       Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: 100 Hydrology Sim: 100
Filename: P:\Car-2e\Calculations\SWM\ICPR\100.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
001	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.51	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.75	872.00	872.00	13	1	0	0.0	0.0
001	A-011	BASE	12.00	872.00	872.00	90	2	0	0.1	0.0
001	A-011	BASE	12.25	872.00	872.00	190	12	0	0.2	0.0
001	A-011	BASE	12.50	872.00	872.00	204	18	0	0.5	0.0
001	A-011	BASE	12.76	872.00	872.00	206	18	0	0.9	0.0
001	A-011	BASE	13.01	872.00	872.00	204	18	0	1.3	0.0
001	A-011	BASE	13.26	872.00	872.00	201	16	0	1.6	0.0
001	A-011	BASE	13.51	872.00	872.00	198	15	0	1.9	0.0
001	A-011	BASE	13.76	872.00	872.00	195	14	0	2.2	0.0
001	A-011	BASE	14.01	872.00	872.00	192	13	0	2.5	0.0
001	A-011	BASE	14.26	872.00	872.00	188	12	0	2.8	0.0
001	A-011	BASE	14.51	872.00	872.00	185	11	0	3.0	0.0
001	A-011	BASE	14.76	872.00	872.00	181	10	0	3.2	0.0
001	A-011	BASE	15.01	872.00	872.00	177	9	0	3.4	0.0
001	A-011	BASE	15.26	872.00	872.00	173	8	0	3.6	0.0
001	A-011	BASE	15.51	872.00	872.00	170	8	0	3.8	0.0
001	A-011	BASE	15.76	872.00	872.00	166	7	0	3.9	0.0
001	A-012	BASE	10.02	872.11	880.00	79262	2	0	0.2	0.0
001	A-012	BASE	10.27	872.13	880.00	79341	2	0	0.2	0.0
001	A-012	BASE	10.52	872.15	880.00	79436	2	0	0.3	0.0
001	A-012	BASE	10.77	872.18	880.00	79555	3	0	0.3	0.0
001	A-012	BASE	11.02	872.23	880.00	79719	5	0	0.4	0.0
001	A-012	BASE	11.27	872.28	880.00	79929	6	0	0.5	0.0
001	A-012	BASE	11.51	872.35	880.00	80179	7	0	0.7	0.0
001	A-012	BASE	11.75	872.49	880.00	80718	23	1	1.0	0.0
001	A-012	BASE	12.00	872.97	880.00	82349	77	2	2.0	0.1
001	A-012	BASE	12.25	873.73	880.00	113810	75	12	3.6	0.2
001	A-012	BASE	12.50	873.98	880.00	124505	29	18	4.7	0.5
001	A-012	BASE	12.76	874.01	880.00	125432	16	18	5.1	0.9
001	A-012	BASE	13.01	873.98	880.00	124214	12	18	5.4	1.3
001	A-012	BASE	13.26	873.93	880.00	122092	9	16	5.6	1.6
001	A-012	BASE	13.51	873.87	880.00	119807	8	15	5.8	1.9
001	A-012	BASE	13.76	873.82	880.00	117435	7	14	6.0	2.2
001	A-012	BASE	14.01	873.76	880.00	115159	6	13	6.1	2.5
001	A-012	BASE	14.26	873.71	880.00	112978	5	12	6.2	2.8
001	A-012	BASE	14.51	873.66	880.00	110851	5	11	6.3	3.0
001	A-012	BASE	14.76	873.62	880.00	108850	4	10	6.4	3.2
001	A-012	BASE	15.01	873.57	880.00	106929	4	9	6.5	3.4
001	A-012	BASE	15.26	873.53	880.00	105250	4	8	6.6	3.6
001	A-012	BASE	15.51	873.50	880.00	103732	4	8	6.7	3.8
001	A-012	BASE	15.76	873.46	880.00	102246	3	7	6.7	3.9
002	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.25	872.00	872.00	13	1	0	0.0	0.0
002	A-011	BASE	11.50	872.00	872.00	13	1	0	0.0	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
002	A-011	BASE	11.75	872.00	872.00	13	1	0	0.1	0.0
002	A-011	BASE	12.00	872.00	872.00	154	6	0	0.1	0.0
002	A-011	BASE	12.25	872.00	872.00	213	23	0	0.4	0.0
002	A-011	BASE	12.50	872.00	872.00	223	30	0	1.0	0.0
002	A-011	BASE	12.75	872.00	872.00	222	30	0	1.6	0.0
002	A-011	BASE	13.01	872.00	872.00	219	27	0	2.2	0.0
002	A-011	BASE	13.25	872.00	872.00	216	25	0	2.7	0.0
002	A-011	BASE	13.50	872.00	872.00	212	22	0	3.2	0.0
002	A-011	BASE	13.76	872.00	872.00	209	20	0	3.7	0.0
002	A-011	BASE	14.00	872.00	872.00	205	18	0	4.0	0.0
002	A-011	BASE	14.26	872.00	872.00	201	16	0	4.4	0.0
002	A-011	BASE	14.50	872.00	872.00	197	15	0	4.7	0.0
002	A-011	BASE	14.76	872.00	872.00	193	13	0	5.0	0.0
002	A-011	BASE	15.01	872.00	872.00	189	12	0	5.3	0.0
002	A-011	BASE	15.25	872.00	872.00	186	11	0	5.5	0.0
002	A-011	BASE	15.51	872.00	872.00	182	10	0	5.7	0.0
002	A-011	BASE	15.76	872.00	872.00	179	9	0	5.9	0.0
002	A-012	BASE	10.02	872.21	880.00	79638	3	0	0.4	0.0
002	A-012	BASE	10.27	872.24	880.00	79759	3	0	0.4	0.0
002	A-012	BASE	10.52	872.27	880.00	79902	4	0	0.5	0.0
002	A-012	BASE	10.77	872.32	880.00	80078	5	0	0.6	0.0
002	A-012	BASE	11.02	872.38	880.00	80316	7	0	0.7	0.0
002	A-012	BASE	11.25	872.46	880.00	80599	8	1	0.9	0.0
002	A-012	BASE	11.50	872.55	880.00	80960	11	1	1.1	0.0
002	A-012	BASE	11.75	872.74	880.00	81690	31	1	1.5	0.1
002	A-012	BASE	12.00	873.35	880.00	97484	104	6	2.9	0.1
002	A-012	BASE	12.25	874.17	880.00	130311	99	23	5.0	0.4
002	A-012	BASE	12.50	874.41	880.00	137676	38	30	6.4	1.0
002	A-012	BASE	12.75	874.40	880.00	137244	21	30	7.0	1.6
002	A-012	BASE	13.01	874.33	880.00	135062	15	27	7.4	2.2
002	A-012	BASE	13.25	874.24	880.00	132491	12	25	7.7	2.7
002	A-012	BASE	13.50	874.16	880.00	129952	10	22	7.9	3.2
002	A-012	BASE	13.76	874.07	880.00	127369	9	20	8.1	3.7
002	A-012	BASE	14.00	873.99	880.00	125020	8	18	8.3	4.0
002	A-012	BASE	14.26	873.92	880.00	121874	7	16	8.4	4.4
002	A-012	BASE	14.50	873.85	880.00	119011	6	15	8.6	4.7
002	A-012	BASE	14.76	873.79	880.00	116255	5	13	8.7	5.0
002	A-012	BASE	15.01	873.73	880.00	113694	5	12	8.8	5.3
002	A-012	BASE	15.25	873.68	880.00	111593	5	11	8.9	5.5
002	A-012	BASE	15.51	873.63	880.00	109582	5	10	9.0	5.7
002	A-012	BASE	15.76	873.59	880.00	107699	4	9	9.1	5.9
005	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.52	872.00	872.00	13	1	0	0.0	0.0
005	A-011	BASE	10.77	872.00	872.00	13	1	0	0.1	0.0
005	A-011	BASE	11.00	872.00	872.00	13	1	0	0.1	0.0
005	A-011	BASE	11.26	872.00	872.00	13	1	0	0.1	0.0
005	A-011	BASE	11.51	872.00	872.00	11	1	0	0.1	0.0
005	A-011	BASE	11.75	872.00	872.00	111	3	0	0.2	0.0
005	A-011	BASE	12.00	872.00	872.00	190	12	0	0.3	0.0
005	A-011	BASE	12.25	872.00	872.00	228	37	0	0.8	0.0
005	A-011	BASE	12.50	872.00	872.00	240	45	0	1.7	0.0
005	A-011	BASE	12.75	872.00	872.00	239	43	0	2.6	0.0
005	A-011	BASE	13.01	872.00	872.00	236	39	0	3.4	0.0
005	A-011	BASE	13.26	872.00	872.00	227	35	0	4.2	0.0

W00521 _ Ex Mod & D+C4-C4.1 _ OUTPUT SUMMARY - 68.5 ac Inflow - Future

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
A-011	BASE	001	0.00	872.00	872.00	0.0000	13	12.68	18	0.00	0
A-011	BASE	002	0.00	872.00	872.00	0.0000	13	12.58	30	0.00	0
A-011	BASE	005	0.00	872.00	872.00	0.0000	13	12.53	45	0.00	0
A-011	BASE	010	0.00	872.00	872.00	0.0000	13	12.51	56	0.00	0
A-011	BASE	025	0.00	872.00	872.00	0.0000	13	12.49	72	0.00	0
A-011	BASE	050	0.00	872.00	872.00	0.0000	13	12.48	86	0.00	0
A-011	BASE	100	0.00	872.00	872.00	0.0000	13	12.47	103	0.00	0
A-012	BASE	001	12.68	874.01	880.00	0.0050	125497	12.08	97	12.68	18
A-012	BASE	002	12.58	874.42	880.00	0.0050	137918	12.08	128	12.58	30
A-012	BASE	005	12.53	874.87	880.00	0.0050	151328	12.08	166	12.53	45
A-012	BASE	010	12.51	875.20	880.00	0.0050	157878	12.08	196	12.51	56
A-012	BASE	025	12.49	875.64	880.00	0.0050	163645	12.08	239	12.49	72
A-012	BASE	050	12.48	876.00	880.00	-0.0050	168333	12.08	276	12.48	86
A-012	BASE	100	12.47	876.39	880.00	0.0050	170975	12.08	319	12.47	103

Basins

Name: A-012 Node: A-012 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 22.00
Area(ac): 68.500 Time Shift(hrs): 0.00
Curve Number: 91.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Nodes

Name: A-011 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 872.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	872.000
999.00	872.000

Name: A-012 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 880.000
Type: Stage/Area

Stage(ft)	Area(ac)
872.000	1.8100
872.800	1.8800
873.000	1.8900
874.000	2.8700
875.000	3.5600
876.000	3.8600
876.720	3.9700
877.000	4.0100
878.000	4.1700
879.000	4.3100
879.360	4.3700
880.000	4.4600

Pipes

Name: Culvert From Node: A-012 Length(ft): 75.00

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
005	A-011	BASE	13.50	872.00	872.00	226	31	0	4.9	0.0
005	A-011	BASE	13.75	872.00	872.00	219	28	0	5.5	0.0
005	A-011	BASE	14.01	872.00	872.00	215	24	0	6.0	0.0
005	A-011	BASE	14.25	872.00	872.00	211	22	0	6.5	0.0
005	A-011	BASE	14.50	872.00	872.00	207	19	0	6.9	0.0
005	A-011	BASE	14.76	872.00	872.00	203	17	0	7.3	0.0
005	A-011	BASE	15.00	872.00	872.00	199	16	0	7.7	0.0
005	A-011	BASE	15.26	872.00	872.00	196	14	0	8.0	0.0
005	A-011	BASE	15.51	872.00	872.00	192	13	0	8.3	0.0
005	A-011	BASE	15.75	872.00	872.00	189	12	0	8.5	0.0
005	A-012	BASE	10.02	872.35	880.00	80178	4	0	0.7	0.0
005	A-012	BASE	10.27	872.39	880.00	80348	5	0	0.7	0.0
005	A-012	BASE	10.52	872.44	880.00	80548	6	1	0.9	0.0
005	A-012	BASE	10.77	872.51	880.00	80790	7	1	1.0	0.1
005	A-012	BASE	11.00	872.59	880.00	81097	9	1	1.2	0.1
005	A-012	BASE	11.26	872.70	880.00	81509	11	1	1.4	0.1
005	A-012	BASE	11.51	872.82	880.00	81958	15	1	1.6	0.1
005	A-012	BASE	11.75	873.07	880.00	85464	42	3	2.2	0.2
005	A-012	BASE	12.00	873.74	880.00	114216	135	12	4.1	0.3
005	A-012	BASE	12.25	874.63	880.00	144067	127	37	6.8	0.8
005	A-012	BASE	12.50	874.87	880.00	151293	48	45	8.6	1.7
005	A-012	BASE	12.75	874.81	880.00	149729	27	43	9.4	2.6
005	A-012	BASE	13.01	874.70	880.00	146213	19	39	9.9	3.4
005	A-012	BASE	13.26	874.57	880.00	142368	15	35	10.2	4.2
005	A-012	BASE	13.50	874.45	880.00	138721	13	31	10.5	4.9
005	A-012	BASE	13.75	874.33	880.00	135262	11	28	10.7	5.5
005	A-012	BASE	14.01	874.23	880.00	132034	10	24	10.9	6.0
005	A-012	BASE	14.25	874.13	880.00	129201	9	22	11.1	6.5
005	A-012	BASE	14.50	874.04	880.00	126577	8	19	11.3	6.9
005	A-012	BASE	14.76	873.96	880.00	123655	7	17	11.5	7.3
005	A-012	BASE	15.00	873.89	880.00	120555	6	16	11.6	7.7
005	A-012	BASE	15.26	873.83	880.00	117777	6	14	11.7	8.0
005	A-012	BASE	15.51	873.77	880.00	115346	6	13	11.9	8.3
005	A-012	BASE	15.75	873.72	880.00	113151	5	12	12.0	8.5
010	A-011	BASE	10.02	872.00	872.00	13	1	0	0.0	0.0
010	A-011	BASE	10.27	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	10.52	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	10.75	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	11.01	872.00	872.00	13	1	0	0.1	0.0
010	A-011	BASE	11.26	872.00	872.00	69	2	0	0.1	0.0
010	A-011	BASE	11.51	872.00	872.00	106	2	0	0.2	0.0
010	A-011	BASE	11.75	872.00	872.00	148	5	0	0.3	0.0
010	A-011	BASE	12.00	872.00	872.00	206	19	0	0.5	0.0
010	A-011	BASE	12.25	872.00	872.00	241	48	0	1.2	0.0
010	A-011	BASE	12.50	872.00	872.00	248	56	0	2.3	0.0
010	A-011	BASE	12.75	872.00	872.00	251	54	0	3.4	0.0
010	A-011	BASE	13.01	872.00	872.00	242	48	0	4.5	0.0
010	A-011	BASE	13.25	872.00	872.00	239	43	0	5.4	0.0
010	A-011	BASE	13.50	872.00	872.00	230	38	0	6.3	0.0
010	A-011	BASE	13.76	872.00	872.00	226	34	0	7.0	0.0
010	A-011	BASE	14.00	872.00	872.00	222	30	0	7.7	0.0
010	A-011	BASE	14.25	872.00	872.00	218	26	0	8.2	0.0
010	A-011	BASE	14.50	872.00	872.00	214	23	0	8.7	0.0
010	A-011	BASE	14.75	872.00	872.00	210	21	0	9.2	0.0
010	A-011	BASE	15.00	872.00	872.00	206	18	0	9.6	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
010	A-011	BASE	15.26	872.00	872.00	202	17	0	10.0	0.0
010	A-011	BASE	15.50	872.00	872.00	198	15	0	10.3	0.0
010	A-011	BASE	15.76	872.00	872.00	194	14	0	10.6	0.0
010	A-012	BASE	10.02	872.47	880.00	80654	5	1	0.9	0.0
010	A-012	BASE	10.27	872.53	880.00	80862	6	1	1.0	0.1
010	A-012	BASE	10.52	872.59	880.00	81105	7	1	1.2	0.1
010	A-012	BASE	10.75	872.66	880.00	81380	9	1	1.3	0.1
010	A-012	BASE	11.01	872.77	880.00	81779	12	1	1.5	0.1
010	A-012	BASE	11.26	872.89	880.00	82167	14	2	1.8	0.1
010	A-012	BASE	11.51	873.04	880.00	84232	18	2	2.1	0.2
010	A-012	BASE	11.75	873.31	880.00	95726	51	5	2.8	0.3
010	A-012	BASE	12.00	874.01	880.00	125527	160	19	5.0	0.5
010	A-012	BASE	12.25	874.95	880.00	153879	149	48	8.2	1.2
010	A-012	BASE	12.50	875.20	880.00	157877	57	56	10.4	2.3
010	A-012	BASE	12.75	875.12	880.00	156849	31	54	11.3	3.4
010	A-012	BASE	13.01	874.97	880.00	154515	22	48	11.8	4.5
010	A-012	BASE	13.25	874.82	880.00	149901	18	43	12.2	5.4
010	A-012	BASE	13.50	874.67	880.00	145331	15	38	12.6	6.3
010	A-012	BASE	13.76	874.53	880.00	141038	13	34	12.9	7.0
010	A-012	BASE	14.00	874.40	880.00	137299	11	30	13.1	7.7
010	A-012	BASE	14.25	874.29	880.00	133844	10	26	13.3	8.2
010	A-012	BASE	14.50	874.18	880.00	130765	9	23	13.5	8.7
010	A-012	BASE	14.75	874.09	880.00	127927	8	21	13.7	9.2
010	A-012	BASE	15.00	874.00	880.00	125383	7	18	13.8	9.6
010	A-012	BASE	15.26	873.93	880.00	122243	8	17	14.0	10.0
010	A-012	BASE	15.50	873.87	880.00	119565	7	15	14.2	10.3
010	A-012	BASE	15.76	873.81	880.00	116921	6	14	14.3	10.6
025	A-011	BASE	10.02	872.00	872.00	13	1	0	0.1	0.0
025	A-011	BASE	10.27	872.00	872.00	13	1	0	0.1	0.0
025	A-011	BASE	10.51	872.00	872.00	3	1	0	0.1	0.0
025	A-011	BASE	10.76	872.00	872.00	72	2	0	0.2	0.0
025	A-011	BASE	11.00	872.00	872.00	102	2	0	0.2	0.0
025	A-011	BASE	11.26	872.00	872.00	128	3	0	0.3	0.0
025	A-011	BASE	11.51	872.00	872.00	150	5	0	0.4	0.0
025	A-011	BASE	11.75	872.00	872.00	179	9	0	0.5	0.0
025	A-011	BASE	12.00	872.00	872.00	220	28	0	0.9	0.0
025	A-011	BASE	12.25	872.00	872.00	247	62	0	1.8	0.0
025	A-011	BASE	12.50	872.00	872.00	249	72	0	3.2	0.0
025	A-011	BASE	12.76	872.00	872.00	249	68	0	4.7	0.0
025	A-011	BASE	13.00	872.00	872.00	247	61	0	6.0	0.0
025	A-011	BASE	13.25	872.00	872.00	250	55	0	7.2	0.0
025	A-011	BASE	13.51	872.00	872.00	242	48	0	8.3	0.0
025	A-011	BASE	13.75	872.00	872.00	238	42	0	9.2	0.0
025	A-011	BASE	14.00	872.00	872.00	229	37	0	10.0	0.0
025	A-011	BASE	14.25	872.00	872.00	225	33	0	10.7	0.0
025	A-011	BASE	14.50	872.00	872.00	220	29	0	11.4	0.0
025	A-011	BASE	14.75	872.00	872.00	216	25	0	11.9	0.0
025	A-011	BASE	15.00	872.00	872.00	212	22	0	12.4	0.0
025	A-011	BASE	15.25	872.00	872.00	209	20	0	12.8	0.0
025	A-011	BASE	15.51	872.00	872.00	205	18	0	13.3	0.0
025	A-011	BASE	15.76	872.00	872.00	201	16	0	13.6	0.0
025	A-012	BASE	10.02	872.66	880.00	81376	7	1	1.3	0.1
025	A-012	BASE	10.27	872.73	880.00	81638	8	1	1.5	0.1
025	A-012	BASE	10.51	872.81	880.00	81917	9	1	1.6	0.1

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
025	A-012	BASE	10.76	872.90	880.00	82190	12	2	1.9	0.2
025	A-012	BASE	11.00	873.02	880.00	83422	15	2	2.1	0.2
025	A-012	BASE	11.26	873.17	880.00	89705	18	3	2.5	0.3
025	A-012	BASE	11.51	873.32	880.00	96174	23	5	2.9	0.4
025	A-012	BASE	11.75	873.59	880.00	107920	64	9	3.8	0.5
025	A-012	BASE	12.00	874.34	880.00	135491	196	28	6.4	0.9
025	A-012	BASE	12.25	875.38	880.00	160271	181	62	10.3	1.8
025	A-012	BASE	12.50	875.64	880.00	163638	69	72	12.9	3.2
025	A-012	BASE	12.76	875.52	880.00	162140	38	68	14.0	4.7
025	A-012	BASE	13.00	875.34	880.00	159771	26	61	14.7	6.0
025	A-012	BASE	13.25	875.14	880.00	157208	21	55	15.2	7.2
025	A-012	BASE	13.51	874.96	880.00	154132	18	48	15.6	8.3
025	A-012	BASE	13.75	874.79	880.00	149070	15	42	15.9	9.2
025	A-012	BASE	14.00	874.64	880.00	144349	14	37	16.2	10.0
025	A-012	BASE	14.25	874.49	880.00	140124	12	33	16.5	10.7
025	A-012	BASE	14.50	874.37	880.00	136298	11	29	16.7	11.4
025	A-012	BASE	14.75	874.26	880.00	132957	9	25	16.9	11.9
025	A-012	BASE	15.00	874.15	880.00	129861	9	22	17.1	12.4
025	A-012	BASE	15.25	874.07	880.00	127320	9	20	17.3	12.8
025	A-012	BASE	15.51	873.99	880.00	124935	8	18	17.5	13.3
025	A-012	BASE	15.76	873.92	880.00	121911	8	16	17.6	13.6
050	A-011	BASE	10.00	872.00	872.00	19	1	0	0.2	0.0
050	A-011	BASE	10.26	872.00	872.00	76	2	0	0.2	0.0
050	A-011	BASE	10.51	872.00	872.00	98	2	0	0.2	0.0
050	A-011	BASE	10.75	872.00	872.00	117	3	0	0.3	0.0
050	A-011	BASE	11.01	872.00	872.00	138	4	0	0.4	0.0
050	A-011	BASE	11.25	872.00	872.00	156	6	0	0.5	0.0
050	A-011	BASE	11.50	872.00	872.00	172	8	0	0.6	0.0
050	A-011	BASE	11.75	872.00	872.00	194	14	0	0.8	0.0
050	A-011	BASE	12.00	872.00	872.00	228	36	0	1.3	0.0
050	A-011	BASE	12.25	872.00	872.00	249	75	0	2.5	0.0
050	A-011	BASE	12.50	872.00	872.00	250	86	0	4.2	0.0
050	A-011	BASE	12.75	872.00	872.00	250	80	0	5.9	0.0
050	A-011	BASE	13.00	872.00	872.00	249	72	0	7.5	0.0
050	A-011	BASE	13.25	872.00	872.00	247	63	0	8.8	0.0
050	A-011	BASE	13.50	872.00	872.00	248	56	0	10.1	0.0
050	A-011	BASE	13.75	872.00	872.00	242	49	0	11.2	0.0
050	A-011	BASE	14.00	872.00	872.00	239	43	0	12.1	0.0
050	A-011	BASE	14.25	872.00	872.00	230	38	0	13.0	0.0
050	A-011	BASE	14.50	872.00	872.00	225	33	0	13.7	0.0
050	A-011	BASE	14.75	872.00	872.00	221	29	0	14.4	0.0
050	A-011	BASE	15.00	872.00	872.00	217	26	0	14.9	0.0
050	A-011	BASE	15.25	872.00	872.00	213	23	0	15.4	0.0
050	A-011	BASE	15.51	872.00	872.00	210	21	0	15.9	0.0
050	A-011	BASE	15.76	872.00	872.00	206	19	0	16.3	0.0
050	A-012	BASE	10.00	872.83	880.00	81991	9	1	1.7	0.2
050	A-012	BASE	10.26	872.91	880.00	82216	9	2	1.9	0.2
050	A-012	BASE	10.51	873.00	880.00	82587	11	2	2.1	0.2
050	A-012	BASE	10.75	873.10	880.00	86901	14	3	2.3	0.3
050	A-012	BASE	11.01	873.23	880.00	92378	18	4	2.7	0.4
050	A-012	BASE	11.25	873.37	880.00	98343	21	6	3.1	0.5
050	A-012	BASE	11.50	873.52	880.00	104698	27	8	3.6	0.6
050	A-012	BASE	11.75	873.80	880.00	116829	75	14	4.6	0.8
050	A-012	BASE	12.00	874.59	880.00	143090	227	36	7.7	1.3
050	A-012	BASE	12.25	875.72	880.00	164793	208	75	12.2	2.5

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
050	A-012	BASE	12.50	875.99	880.00	168311	79	86	15.2	4.2
050	A-012	BASE	12.75	875.85	880.00	166464	43	80	16.5	5.9
050	A-012	BASE	13.00	875.63	880.00	163606	30	72	17.2	7.5
050	A-012	BASE	13.25	875.41	880.00	160644	24	63	17.8	8.8
050	A-012	BASE	13.50	875.19	880.00	157852	20	56	18.2	10.1
050	A-012	BASE	13.75	875.00	880.00	155272	17	49	18.6	11.2
050	A-012	BASE	14.00	874.82	880.00	150029	16	43	19.0	12.1
050	A-012	BASE	14.25	874.66	880.00	145244	14	38	19.3	13.0
050	A-012	BASE	14.50	874.52	880.00	140817	12	33	19.5	13.7
050	A-012	BASE	14.75	874.39	880.00	137024	11	29	19.8	14.4
050	A-012	BASE	15.00	874.27	880.00	133494	10	26	20.0	14.9
050	A-012	BASE	15.25	874.18	880.00	130626	10	23	20.2	15.4
050	A-012	BASE	15.51	874.09	880.00	128030	9	21	20.4	15.9
050	A-012	BASE	15.76	874.02	880.00	125719	9	19	20.6	16.3
100	A-011	BASE	10.01	872.00	872.00	105	2	0	0.3	0.0
100	A-011	BASE	10.26	872.00	872.00	121	3	0	0.3	0.0
100	A-011	BASE	10.50	872.00	872.00	134	4	0	0.4	0.0
100	A-011	BASE	10.75	872.00	872.00	148	5	0	0.5	0.0
100	A-011	BASE	11.01	872.00	872.00	163	7	0	0.6	0.0
100	A-011	BASE	11.25	872.00	872.00	177	9	0	0.8	0.0
100	A-011	BASE	11.51	872.00	872.00	188	12	0	1.0	0.0
100	A-011	BASE	11.75	872.00	872.00	205	18	0	1.3	0.0
100	A-011	BASE	12.00	872.00	872.00	240	45	0	1.9	0.0
100	A-011	BASE	12.25	872.00	872.00	250	91	0	3.3	0.0
100	A-011	BASE	12.50	872.00	872.00	248	103	0	5.3	0.0
100	A-011	BASE	12.75	872.00	872.00	249	95	0	7.4	0.0
100	A-011	BASE	13.00	872.00	872.00	250	84	0	9.2	0.0
100	A-011	BASE	13.25	872.00	872.00	249	74	0	10.9	0.0
100	A-011	BASE	13.50	872.00	872.00	248	65	0	12.3	0.0
100	A-011	BASE	13.75	872.00	872.00	246	57	0	13.6	0.0
100	A-011	BASE	14.00	872.00	872.00	243	50	0	14.7	0.0
100	A-011	BASE	14.25	872.00	872.00	240	44	0	15.6	0.0
100	A-011	BASE	14.50	872.00	872.00	236	39	0	16.5	0.0
100	A-011	BASE	14.75	872.00	872.00	226	34	0	17.2	0.0
100	A-011	BASE	15.01	872.00	872.00	222	30	0	17.9	0.0
100	A-011	BASE	15.26	872.00	872.00	218	26	0	18.5	0.0
100	A-011	BASE	15.50	872.00	872.00	214	24	0	19.0	0.0
100	A-011	BASE	15.75	872.00	872.00	211	21	0	19.5	0.0
100	A-012	BASE	10.01	873.04	880.00	84056	10	2	2.2	0.3
100	A-012	BASE	10.26	873.12	880.00	87693	11	3	2.4	0.3
100	A-012	BASE	10.50	873.21	880.00	91370	13	4	2.7	0.4
100	A-012	BASE	10.75	873.31	880.00	95584	17	5	3.0	0.5
100	A-012	BASE	11.01	873.43	880.00	100903	22	7	3.4	0.6
100	A-012	BASE	11.25	873.57	880.00	106726	25	9	3.8	0.8
100	A-012	BASE	11.51	873.71	880.00	112960	32	12	4.4	1.0
100	A-012	BASE	11.75	874.00	880.00	125266	87	18	5.6	1.3
100	A-012	BASE	12.00	874.86	880.00	151092	263	45	9.3	1.9
100	A-012	BASE	12.25	876.10	880.00	169073	240	91	14.5	3.3
100	A-012	BASE	12.50	876.39	880.00	170945	90	103	17.9	5.3
100	A-012	BASE	12.75	876.21	880.00	169759	49	95	19.3	7.4
100	A-012	BASE	13.00	875.95	880.00	167740	34	84	20.2	9.2
100	A-012	BASE	13.25	875.69	880.00	164309	28	74	20.8	10.9
100	A-012	BASE	13.50	875.45	880.00	161155	23	65	21.4	12.3
100	A-012	BASE	13.75	875.22	880.00	158212	20	57	21.8	13.6
100	A-012	BASE	14.00	875.02	880.00	155623	18	50	22.2	14.7

W00521 Basin WSE 872.00 9" Orifice
printed 11/5/2015

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100	A-012	BASE	14.25	874.85	880.00	150714	16	44	22.5	15.6
100	A-012	BASE	14.50	874.68	880.00	145814	14	39	22.9	16.5
100	A-012	BASE	14.75	874.54	880.00	141368	12	34	23.1	17.2
100	A-012	BASE	15.01	874.40	880.00	137425	11	30	23.4	17.9
100	A-012	BASE	15.26	874.30	880.00	134149	12	26	23.6	18.5
100	A-012	BASE	15.50	874.20	880.00	131376	11	24	23.8	19.0
100	A-012	BASE	15.75	874.12	880.00	128773	10	21	24.0	19.5

W00521 _ Ex Mod & D+C4-C4.1 _ OUTPUT SUMMARY - 241.8 ac Inflow at CN 78.3 -68.5 ac Future

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
A-011	BASE	001	0.00	872.00	872.00	0.0000	13	13.62	28	0.00	0
A-011	BASE	002	0.00	872.00	872.00	0.0000	13	13.42	51	0.00	0
A-011	BASE	005	0.00	872.00	872.00	0.0000	13	13.31	82	0.00	0
A-011	BASE	010	0.00	872.00	872.00	0.0000	13	13.24	111	0.00	0
A-011	BASE	025	0.00	872.00	872.00	0.0000	13	13.11	169	0.00	0
A-011	BASE	050	0.00	872.00	872.00	0.0000	13	13.02	231	0.00	0
A-011	BASE	100	0.00	872.00	872.00	0.0000	13	12.96	307	0.00	0
A-012	BASE	001	13.62	874.36	880.00	0.0050	135952	12.58	80	13.62	28
A-012	BASE	002	13.42	875.06	880.00	0.0050	156059	12.58	127	13.42	51
A-012	BASE	005	13.31	875.90	880.00	0.0050	167129	12.50	188	13.31	82
A-012	BASE	010	13.24	876.57	880.00	0.0050	172184	12.50	240	13.24	111
A-012	BASE	025	13.11	877.42	880.00	0.0050	177755	12.50	317	13.11	169
A-012	BASE	050	13.02	878.03	880.00	0.0050	181874	12.50	387	13.02	231
A-012	BASE	100	12.96	878.64	880.00	0.0050	185639	12.50	469	12.96	307

Basins

Name: A-012 Node: A-012 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 60.00
Area(ac): 241.800 Time Shift(hrs): 0.00
Curve Number: 78.30 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Nodes

Name: A-011 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 872.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	872.000
999.00	872.000

Name: A-012 Base Flow(cfs): 0.000 Init Stage(ft): 872.000
Group: BASE Warn Stage(ft): 880.000
Type: Stage/Area

Stage(ft)	Area(ac)
872.000	1.8100
872.800	1.8800
873.000	1.8900
874.000	2.8700
875.000	3.5600
876.000	3.8600
876.720	3.9700
877.000	4.0100
878.000	4.1700
879.000	4.3100
879.360	4.3700
880.000	4.4600

Pipes

Name: Culvert From Node: A-012 Length(ft): 75.00

```
       Group: BASE                To Node: A-011                Count: 1
                                                      Friction Equation: Automatic
              UPSTREAM      DOWNSTREAM                Solution Algorithm: Most Restrictive
    Geometry: Horz Ellipse  Horz Ellipse                          Flow: Both
    Span(in): 81.00         81.00                   Entrance Loss Coef: 0.00
    Rise(in): 60.00         60.00                       Exit Loss Coef: 1.00
  Invert(ft): 872.800       872.420                     Bend Loss Coef: 0.00
Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000         0.000                     Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000         0.000                   Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall


==========================================================================================
==== Weirs ===============================================================================
==========================================================================================

        Name: A-011W1             From Node: A-012
       Group: BASE                  To Node: A-011
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Trapezoidal

          Bottom Width(ft): 10.00
    Left Side Slope(h/v): 0.17
   Right Side Slope(h/v): 0.17
              Invert(ft): 876.730
  Control Elevation(ft): 876.730
 Struct Opening Dim(ft): 9999.00
                                     TABLE
         Bottom Clip(ft): 0.000
            Top Clip(ft): 0.000
    Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600


------------------------------------------------------------------------------------------
        Name: A-011W3             From Node: A-012
       Group: BASE                  To Node: A-011
        Flow: Both                    Count: 1
        Type: Vertical: Mavis      Geometry: Circular

                  Span(in): 9.00
                  Rise(in): 9.00
                Invert(ft): 872.000
  Control Elevation(ft): 872.000
                                     TABLE
         Bottom Clip(in): 0.000
            Top Clip(in): 0.000
    Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600
```

==========
==== Hydrology Simulations ====
==========

Name: 001
Filename: P:\Car-2e\Calculations\SWM\ICPR\001.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 2.33

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 002
Filename: P:\Car-2e\Calculations\SWM\ICPR\002.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 2.86

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 005
Filename: P:\Car-2e\Calculations\SWM\ICPR\005.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 3.49

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 010
Filename: P:\Car-2e\Calculations\SWM\ICPR\010.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Scsii-24
Rainfall Amount(in): 3.99

Time(hrs)	Print Inc(min)
24.000	5.00

Name: 025
Filename: P:\Car-2e\Calculations\SWM\ICPR\025.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 4.70

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

-------------------------------------------------------------------------------------------------------
         Name: 050
     Filename: P:\Car-2e\Calculations\SWM\ICPR\050.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 5.32

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

-------------------------------------------------------------------------------------------------------
         Name: 100
     Filename: P:\Car-2e\Calculations\SWM\ICPR\100.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Scsii-24
    Rainfall Amount(in): 6.04

Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          5.00

===============================================================================================
==== Routing Simulations ======================================================================
===============================================================================================

         Name: 001                Hydrology Sim: 001
     Filename: P:\Car-2e\Calculations\SWM\ICPR\001.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                    End Time(hrs): 24.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
       Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
24.000          15.000

Group           Run
--------------- -----
```

BASE Yes

Name: 002 Hydrology Sim: 002
Filename: P:\Car-2e\Calculations\SWM\ICPR\002.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 005 Hydrology Sim: 005
Filename: P:\Car-2e\Calculations\SWM\ICPR\005.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 010 Hydrology Sim: 010
Filename: P:\Car-2e\Calculations\SWM\ICPR\010.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000

Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 025 Hydrology Sim: 025
Filename: P:\Car-2e\Calculations\SWM\ICPR\025.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

Name: 050 Hydrology Sim: 050
Filename: P:\Car-2e\Calculations\SWM\ICPR\050.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

BASE Yes

Name: 100 Hydrology Sim: 100
Filename: P:\Car-2e\Calculations\SWM\ICPR\100.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
24.000	15.000

Group	Run
BASE	Yes

W00521 _ Ex Mod & D+C4-C4.1 _ OUTPUT SUMMARY - 241.8 ac Inflow at CN 78.3 -68.5 ac Future

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
001	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.52	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	11.77	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	12.00	872.00	872.00	13	0	0	0.0	0.0
001	A-011	BASE	12.25	872.00	872.00	13	1	0	0.0	0.0
001	A-011	BASE	12.50	872.00	872.00	128	3	0	0.0	0.0
001	A-011	BASE	12.75	872.00	872.00	193	13	0	0.2	0.0
001	A-011	BASE	13.00	872.00	872.00	211	22	0	0.6	0.0
001	A-011	BASE	13.25	872.00	872.00	218	26	0	1.1	0.0
001	A-011	BASE	13.50	872.00	872.00	220	28	0	1.7	0.0
001	A-011	BASE	13.75	872.00	872.00	220	28	0	2.2	0.0
001	A-011	BASE	14.00	872.00	872.00	219	27	0	2.8	0.0
001	A-011	BASE	14.25	872.00	872.00	217	26	0	3.3	0.0
001	A-011	BASE	14.50	872.00	872.00	215	24	0	3.9	0.0
001	A-011	BASE	14.75	872.00	872.00	212	22	0	4.3	0.0
001	A-011	BASE	15.00	872.00	872.00	209	20	0	4.8	0.0
001	A-011	BASE	15.25	872.00	872.00	206	19	0	5.2	0.0
001	A-011	BASE	15.50	872.00	872.00	203	17	0	5.5	0.0
001	A-011	BASE	15.75	872.00	872.00	200	16	0	5.9	0.0
001	A-012	BASE	10.02	872.00	880.00	78856	0	0	0.0	0.0
001	A-012	BASE	10.27	872.00	880.00	78856	0	0	0.0	0.0
001	A-012	BASE	10.52	872.00	880.00	78856	0	0	0.0	0.0
001	A-012	BASE	10.77	872.00	880.00	78856	0	0	0.0	0.0
001	A-012	BASE	11.02	872.00	880.00	78856	0	0	0.0	0.0
001	A-012	BASE	11.27	872.00	880.00	78857	0	0	0.0	0.0
001	A-012	BASE	11.52	872.00	880.00	78861	0	0	0.0	0.0
001	A-012	BASE	11.77	872.01	880.00	78905	2	0	0.0	0.0
001	A-012	BASE	12.00	872.09	880.00	79208	16	0	0.2	0.0
001	A-012	BASE	12.25	872.45	880.00	80565	51	1	0.9	0.0
001	A-012	BASE	12.50	873.17	880.00	89658	79	3	2.2	0.0
001	A-012	BASE	12.75	873.79	880.00	116083	74	13	3.8	0.2
001	A-012	BASE	13.00	874.13	880.00	129212	55	22	5.2	0.6
001	A-012	BASE	13.25	874.29	880.00	134013	41	26	6.2	1.1
001	A-012	BASE	13.50	874.35	880.00	135797	32	28	6.9	1.7
001	A-012	BASE	13.75	874.35	880.00	135780	25	28	7.5	2.2
001	A-012	BASE	14.00	874.32	880.00	134771	21	27	8.0	2.8
001	A-012	BASE	14.25	874.27	880.00	133250	17	26	8.4	3.3
001	A-012	BASE	14.50	874.21	880.00	131474	15	24	8.7	3.9
001	A-012	BASE	14.75	874.14	880.00	129572	13	22	9.0	4.3
001	A-012	BASE	15.00	874.08	880.00	127622	11	20	9.2	4.8
001	A-012	BASE	15.25	874.02	880.00	125738	10	19	9.5	5.2
001	A-012	BASE	15.50	873.96	880.00	123473	10	17	9.7	5.5
001	A-012	BASE	15.75	873.91	880.00	121204	9	16	9.9	5.9
002	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	11.52	872.00	872.00	13	0	0	0.0	0.0

W00521 Basin WSE 872.00 9" Orifice
11/5/2015

RELEASE DATA

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
002	A-011	BASE	11.76	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	12.00	872.00	872.00	13	0	0	0.0	0.0
002	A-011	BASE	12.25	872.00	872.00	69	2	0	0.0	0.0
002	A-011	BASE	12.50	872.00	872.00	197	14	0	0.2	0.0
002	A-011	BASE	12.75	872.00	872.00	226	34	0	0.7	0.0
002	A-011	BASE	13.00	872.00	872.00	241	46	0	1.5	0.0
002	A-011	BASE	13.25	872.00	872.00	243	50	0	2.5	0.0
002	A-011	BASE	13.51	872.00	872.00	243	51	0	3.6	0.0
002	A-011	BASE	13.76	872.00	872.00	242	49	0	4.6	0.0
002	A-011	BASE	14.01	872.00	872.00	241	46	0	5.6	0.0
002	A-011	BASE	14.25	872.00	872.00	239	43	0	6.5	0.0
002	A-011	BASE	14.51	872.00	872.00	236	39	0	7.4	0.0
002	A-011	BASE	14.75	872.00	872.00	227	36	0	8.1	0.0
002	A-011	BASE	15.01	872.00	872.00	225	32	0	8.8	0.0
002	A-011	BASE	15.26	872.00	872.00	221	29	0	9.5	0.0
002	A-011	BASE	15.50	872.00	872.00	218	26	0	10.0	0.0
002	A-011	BASE	15.76	872.00	872.00	214	24	0	10.6	0.0
002	A-012	BASE	10.02	872.00	880.00	78856	0	0	0.0	0.0
002	A-012	BASE	10.27	872.00	880.00	78856	0	0	0.0	0.0
002	A-012	BASE	10.52	872.00	880.00	78856	0	0	0.0	0.0
002	A-012	BASE	10.77	872.00	880.00	78858	0	0	0.0	0.0
002	A-012	BASE	11.02	872.00	880.00	78869	0	0	0.0	0.0
002	A-012	BASE	11.27	872.01	880.00	78908	1	0	0.0	0.0
002	A-012	BASE	11.52	872.04	880.00	78999	3	0	0.1	0.0
002	A-012	BASE	11.76	872.09	880.00	79200	8	0	0.2	0.0
002	A-012	BASE	12.00	872.27	880.00	79880	30	0	0.6	0.0
002	A-012	BASE	12.25	872.89	880.00	82164	87	2	1.8	0.0
002	A-012	BASE	12.50	873.84	880.00	118491	126	14	4.0	0.2
002	A-012	BASE	12.75	874.53	880.00	141181	116	34	6.5	0.7
002	A-012	BASE	13.00	874.90	880.00	152274	84	46	8.6	1.5
002	A-012	BASE	13.25	875.04	880.00	155794	61	50	10.1	2.5
002	A-012	BASE	13.51	875.05	880.00	156001	47	51	11.2	3.6
002	A-012	BASE	13.76	875.00	880.00	155300	36	49	12.1	4.6
002	A-012	BASE	14.01	874.91	880.00	152677	30	46	12.7	5.6
002	A-012	BASE	14.25	874.81	880.00	149590	25	43	13.3	6.5
002	A-012	BASE	14.51	874.70	880.00	146163	21	39	13.8	7.4
002	A-012	BASE	14.75	874.59	880.00	142858	18	36	14.2	8.1
002	A-012	BASE	15.01	874.47	880.00	139531	16	32	14.5	8.8
002	A-012	BASE	15.26	874.38	880.00	136566	14	29	14.8	9.5
002	A-012	BASE	15.50	874.29	880.00	133903	14	26	15.1	10.0
002	A-012	BASE	15.76	874.21	880.00	131430	13	24	15.4	10.6
005	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.27	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.50	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	11.75	872.00	872.00	13	0	0	0.0	0.0
005	A-011	BASE	12.00	872.00	872.00	13	1	0	0.0	0.0
005	A-011	BASE	12.25	872.00	872.00	172	8	0	0.1	0.0
005	A-011	BASE	12.50	872.00	872.00	227	35	0	0.6	0.0
005	A-011	BASE	12.75	872.00	872.00	247	62	0	1.6	0.0
005	A-011	BASE	13.00	872.00	872.00	249	77	0	3.0	0.0
005	A-011	BASE	13.25	872.00	872.00	250	82	0	4.7	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
005	A-011	BASE	13.50	872.00	872.00	250	81	0	6.3	0.0
005	A-011	BASE	13.75	872.00	872.00	249	77	0	8.0	0.0
005	A-011	BASE	14.00	872.00	872.00	249	71	0	9.5	0.0
005	A-011	BASE	14.25	872.00	872.00	248	64	0	10.9	0.0
005	A-011	BASE	14.51	872.00	872.00	246	58	0	12.2	0.0
005	A-011	BASE	14.75	872.00	872.00	252	53	0	13.3	0.0
005	A-011	BASE	15.00	872.00	872.00	241	47	0	14.4	0.0
005	A-011	BASE	15.26	872.00	872.00	239	43	0	15.3	0.0
005	A-011	BASE	15.50	872.00	872.00	230	38	0	16.1	0.0
005	A-011	BASE	15.75	872.00	872.00	226	34	0	16.9	0.0
005	A-012	BASE	10.02	872.00	880.00	78862	0	0	0.0	0.0
005	A-012	BASE	10.27	872.01	880.00	78878	1	0	0.0	0.0
005	A-012	BASE	10.52	872.02	880.00	78914	1	0	0.0	0.0
005	A-012	BASE	10.77	872.03	880.00	78980	2	0	0.1	0.0
005	A-012	BASE	11.02	872.06	880.00	79094	3	0	0.1	0.0
005	A-012	BASE	11.27	872.11	880.00	79281	5	0	0.2	0.0
005	A-012	BASE	11.50	872.18	880.00	79552	8	0	0.3	0.0
005	A-012	BASE	11.75	872.31	880.00	80028	16	0	0.6	0.0
005	A-012	BASE	12.00	872.63	880.00	81264	52	1	1.3	0.0
005	A-012	BASE	12.25	873.52	880.00	104764	135	8	3.2	0.1
005	A-012	BASE	12.50	874.58	880.00	142555	188	35	6.5	0.6
005	A-012	BASE	12.75	875.36	880.00	160052	169	62	10.2	1.6
005	A-012	BASE	13.00	875.78	880.00	165469	122	77	13.2	3.0
005	A-012	BASE	13.25	875.90	880.00	167090	88	82	15.4	4.7
005	A-012	BASE	13.50	875.87	880.00	166675	66	81	17.0	6.3
005	A-012	BASE	13.75	875.76	880.00	165193	51	77	18.2	8.0
005	A-012	BASE	14.00	875.60	880.00	163199	41	71	19.1	9.5
005	A-012	BASE	14.25	875.43	880.00	160993	34	64	19.9	10.9
005	A-012	BASE	14.51	875.26	880.00	158777	29	58	20.6	12.2
005	A-012	BASE	14.75	875.10	880.00	156658	25	53	21.1	13.3
005	A-012	BASE	15.00	874.94	880.00	153641	22	47	21.6	14.4
005	A-012	BASE	15.26	874.80	880.00	149227	20	43	22.0	15.3
005	A-012	BASE	15.50	874.67	880.00	145325	18	38	22.4	16.1
005	A-012	BASE	15.75	874.55	880.00	141780	17	34	22.8	16.9
010	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	10.77	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	11.02	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	11.26	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	11.50	872.00	872.00	13	0	0	0.0	0.0
010	A-011	BASE	11.75	872.00	872.00	13	1	0	0.0	0.0
010	A-011	BASE	12.00	872.00	872.00	99	2	0	0.1	0.0
010	A-011	BASE	12.25	872.00	872.00	204	18	0	0.3	0.0
010	A-011	BASE	12.50	872.00	872.00	251	54	0	1.0	0.0
010	A-011	BASE	12.75	872.00	872.00	250	87	0	2.5	0.0
010	A-011	BASE	13.00	872.00	872.00	247	106	0	4.5	0.0
010	A-011	BASE	13.25	872.00	872.00	246	111	0	6.7	0.0
010	A-011	BASE	13.50	872.00	872.00	247	107	0	9.0	0.0
010	A-011	BASE	13.75	872.00	872.00	249	100	0	11.1	0.0
010	A-011	BASE	14.00	872.00	872.00	249	91	0	13.1	0.0
010	A-011	BASE	14.25	872.00	872.00	250	82	0	14.9	0.0
010	A-011	BASE	14.50	872.00	872.00	249	74	0	16.5	0.0
010	A-011	BASE	14.76	872.00	872.00	248	66	0	17.9	0.0
010	A-011	BASE	15.00	872.00	872.00	246	59	0	19.2	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
010	A-011	BASE	15.25	872.00	872.00	252	53	0	20.4	0.0
010	A-011	BASE	15.50	872.00	872.00	241	47	0	21.4	0.0
010	A-011	BASE	15.75	872.00	872.00	239	43	0	22.4	0.0
010	A-012	BASE	10.02	872.02	880.00	78946	1	0	0.0	0.0
010	A-012	BASE	10.27	872.04	880.00	79025	2	0	0.1	0.0
010	A-012	BASE	10.52	872.07	880.00	79139	3	0	0.1	0.0
010	A-012	BASE	10.77	872.12	880.00	79300	4	0	0.2	0.0
010	A-012	BASE	11.02	872.18	880.00	79529	6	0	0.3	0.0
010	A-012	BASE	11.26	872.26	880.00	79851	9	0	0.5	0.0
010	A-012	BASE	11.50	872.38	880.00	80298	13	0	0.7	0.0
010	A-012	BASE	11.75	872.56	880.00	81008	23	1	1.1	0.0
010	A-012	BASE	12.00	873.01	880.00	82841	70	2	2.0	0.1
010	A-012	BASE	12.25	873.98	880.00	124346	175	18	4.6	0.3
010	A-012	BASE	12.50	875.12	880.00	156958	240	54	8.9	1.0
010	A-012	BASE	12.75	876.02	880.00	168499	214	87	13.6	2.5
010	A-012	BASE	13.00	876.47	880.00	171506	152	106	17.4	4.5
010	A-012	BASE	13.25	876.57	880.00	172183	109	111	20.0	6.7
010	A-012	BASE	13.50	876.49	880.00	171663	82	107	22.0	9.0
010	A-012	BASE	13.75	876.33	880.00	170547	63	100	23.5	11.1
010	A-012	BASE	14.00	876.12	880.00	169153	50	91	24.7	13.1
010	A-012	BASE	14.25	875.90	880.00	167027	42	82	25.6	14.9
010	A-012	BASE	14.50	875.68	880.00	164213	35	74	26.4	16.5
010	A-012	BASE	14.76	875.47	880.00	161517	30	66	27.1	17.9
010	A-012	BASE	15.00	875.28	880.00	159032	26	59	27.7	19.2
010	A-012	BASE	15.25	875.10	880.00	156697	24	53	28.2	20.4
010	A-012	BASE	15.50	874.95	880.00	153738	22	47	28.7	21.4
010	A-012	BASE	15.75	874.81	880.00	149518	21	43	29.1	22.4
025	A-011	BASE	10.02	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	10.27	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	10.52	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	10.76	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	11.00	872.00	872.00	13	0	0	0.0	0.0
025	A-011	BASE	11.25	872.00	872.00	13	1	0	0.0	0.0
025	A-011	BASE	11.50	872.00	872.00	13	1	0	0.1	0.0
025	A-011	BASE	11.75	872.00	872.00	103	2	0	0.1	0.0
025	A-011	BASE	12.00	872.00	872.00	176	9	0	0.2	0.0
025	A-011	BASE	12.25	872.00	872.00	227	36	0	0.7	0.0
025	A-011	BASE	12.50	872.00	872.00	250	82	0	1.9	0.0
025	A-011	BASE	12.75	872.00	872.00	241	130	0	4.1	0.0
025	A-011	BASE	13.00	872.00	872.00	226	166	0	7.1	0.0
025	A-011	BASE	13.26	872.00	872.00	226	165	0	10.6	0.0
025	A-011	BASE	13.50	872.00	872.00	234	150	0	13.8	0.0
025	A-011	BASE	13.75	872.00	872.00	241	131	0	16.7	0.0
025	A-011	BASE	14.00	872.00	872.00	245	115	0	19.3	0.0
025	A-011	BASE	14.25	872.00	872.00	248	103	0	21.5	0.0
025	A-011	BASE	14.50	872.00	872.00	249	92	0	23.6	0.0
025	A-011	BASE	14.75	872.00	872.00	250	82	0	25.4	0.0
025	A-011	BASE	15.00	872.00	872.00	249	73	0	27.0	0.0
025	A-011	BASE	15.25	872.00	872.00	248	65	0	28.4	0.0
025	A-011	BASE	15.50	872.00	872.00	246	58	0	29.7	0.0
025	A-011	BASE	15.75	872.00	872.00	252	53	0	30.8	0.0
025	A-012	BASE	10.02	872.12	880.00	79319	4	0	0.2	0.0
025	A-012	BASE	10.27	872.17	880.00	79520	5	0	0.3	0.0
025	A-012	BASE	10.52	872.24	880.00	79769	7	0	0.4	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
025	A-012	BASE	10.76	872.32	880.00	80077	8	0	0.6	0.0
025	A-012	BASE	11.00	872.42	880.00	80466	11	0	0.8	0.0
025	A-012	BASE	11.25	872.56	880.00	81005	16	1	1.1	0.0
025	A-012	BASE	11.50	872.75	880.00	81726	21	1	1.4	0.1
025	A-012	BASE	11.75	873.03	880.00	83572	35	2	2.0	0.1
025	A-012	BASE	12.00	873.56	880.00	106221	98	9	3.4	0.2
025	A-012	BASE	12.25	874.58	880.00	142759	235	36	6.8	0.7
025	A-012	BASE	12.50	875.89	880.00	166987	317	82	12.6	1.9
025	A-012	BASE	12.75	876.94	880.00	174490	280	130	18.7	4.1
025	A-012	BASE	13.00	877.38	880.00	177526	198	166	23.6	7.1
025	A-012	BASE	13.26	877.38	880.00	177477	140	165	27.2	10.6
025	A-012	BASE	13.50	877.19	880.00	176203	104	150	29.7	13.8
025	A-012	BASE	13.75	876.94	880.00	174526	80	131	31.6	16.7
025	A-012	BASE	14.00	876.68	880.00	172872	64	115	33.1	19.3
025	A-012	BASE	14.25	876.40	880.00	171062	53	103	34.3	21.5
025	A-012	BASE	14.50	876.14	880.00	169334	44	92	35.3	23.6
025	A-012	BASE	14.75	875.90	880.00	167033	38	82	36.1	25.4
025	A-012	BASE	15.00	875.67	880.00	164019	33	73	36.9	27.0
025	A-012	BASE	15.25	875.46	880.00	161284	30	65	37.5	28.4
025	A-012	BASE	15.50	875.27	880.00	158826	28	58	38.1	29.7
025	A-012	BASE	15.75	875.10	880.00	156688	26	53	38.7	30.8
050	A-011	BASE	10.01	872.00	872.00	13	0	0	0.0	0.0
050	A-011	BASE	10.26	872.00	872.00	13	0	0	0.0	0.0
050	A-011	BASE	10.50	872.00	872.00	13	1	0	0.0	0.0
050	A-011	BASE	10.76	872.00	872.00	13	1	0	0.0	0.0
050	A-011	BASE	11.00	872.00	872.00	13	1	0	0.1	0.0
050	A-011	BASE	11.25	872.00	872.00	72	2	0	0.1	0.0
050	A-011	BASE	11.50	872.00	872.00	124	3	0	0.1	0.0
050	A-011	BASE	11.75	872.00	872.00	164	7	0	0.2	0.0
050	A-011	BASE	12.00	872.00	872.00	204	18	0	0.5	0.0
050	A-011	BASE	12.25	872.00	872.00	243	51	0	1.2	0.0
050	A-011	BASE	12.50	872.00	872.00	247	110	0	2.9	0.0
050	A-011	BASE	12.75	872.00	872.00	208	193	0	6.0	0.0
050	A-011	BASE	13.00	872.00	872.00	187	231	0	10.4	0.0
050	A-011	BASE	13.25	872.00	872.00	188	216	0	15.0	0.0
050	A-011	BASE	13.50	872.00	872.00	213	187	0	19.2	0.0
050	A-011	BASE	13.75	872.00	872.00	230	158	0	22.7	0.0
050	A-011	BASE	14.00	872.00	872.00	240	133	0	25.8	0.0
050	A-011	BASE	14.25	872.00	872.00	245	116	0	28.3	0.0
050	A-011	BASE	14.50	872.00	872.00	248	104	0	30.6	0.0
050	A-011	BASE	14.75	872.00	872.00	249	93	0	32.6	0.0
050	A-011	BASE	15.00	872.00	872.00	250	82	0	34.5	0.0
050	A-011	BASE	15.25	872.00	872.00	249	74	0	36.1	0.0
050	A-011	BASE	15.50	872.00	872.00	248	66	0	37.5	0.0
050	A-011	BASE	15.75	872.00	872.00	246	60	0	38.8	0.0
050	A-012	BASE	10.01	872.27	880.00	79871	7	0	0.5	0.0
050	A-012	BASE	10.26	872.35	880.00	80191	8	0	0.7	0.0
050	A-012	BASE	10.50	872.44	880.00	80543	10	1	0.8	0.0
050	A-012	BASE	10.76	872.56	880.00	81003	12	1	1.1	0.0
050	A-012	BASE	11.00	872.71	880.00	81548	16	1	1.4	0.1
050	A-012	BASE	11.25	872.90	880.00	82183	22	2	1.8	0.1
050	A-012	BASE	11.50	873.14	880.00	88509	29	3	2.3	0.1
050	A-012	BASE	11.75	873.44	880.00	101163	47	7	3.0	0.2
050	A-012	BASE	12.00	873.97	880.00	123938	124	18	4.8	0.5
050	A-012	BASE	12.25	875.06	880.00	156146	290	51	9.1	1.2

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
050	A-012	BASE	12.50	876.54	880.00	171997	387	110	16.1	2.9
050	A-012	BASE	12.75	877.67	880.00	179475	339	193	23.6	6.0
050	A-012	BASE	13.00	878.03	880.00	181868	237	231	29.6	10.4
050	A-012	BASE	13.25	877.90	880.00	180991	169	216	33.7	15.0
050	A-012	BASE	13.50	877.61	880.00	179069	124	187	36.8	19.2
050	A-012	BASE	13.75	877.29	880.00	176899	95	158	39.0	22.7
050	A-012	BASE	14.00	876.98	880.00	174761	76	133	40.8	25.8
050	A-012	BASE	14.25	876.69	880.00	172985	62	116	42.2	28.3
050	A-012	BASE	14.50	876.41	880.00	171141	52	104	43.4	30.6
050	A-012	BASE	14.75	876.15	880.00	169401	44	93	44.4	32.6
050	A-012	BASE	15.00	875.90	880.00	167123	38	82	45.3	34.5
050	A-012	BASE	15.25	875.68	880.00	164205	35	74	46.0	36.1
050	A-012	BASE	15.50	875.48	880.00	161587	33	66	46.7	37.5
050	A-012	BASE	15.75	875.30	880.00	159291	31	60	47.4	38.8
100	A-011	BASE	10.01	872.00	872.00	13	1	0	0.0	0.0
100	A-011	BASE	10.25	872.00	872.00	13	1	0	0.0	0.0
100	A-011	BASE	10.51	872.00	872.00	13	1	0	0.1	0.0
100	A-011	BASE	10.75	872.00	872.00	73	2	0	0.1	0.0
100	A-011	BASE	11.00	872.00	872.00	115	3	0	0.1	0.0
100	A-011	BASE	11.25	872.00	872.00	148	5	0	0.2	0.0
100	A-011	BASE	11.50	872.00	872.00	175	9	0	0.4	0.0
100	A-011	BASE	11.75	872.00	872.00	197	14	0	0.6	0.0
100	A-011	BASE	12.00	872.00	872.00	221	29	0	1.0	0.0
100	A-011	BASE	12.25	872.00	872.00	249	70	0	2.1	0.0
100	A-011	BASE	12.50	872.00	872.00	231	157	0	4.4	0.0
100	A-011	BASE	12.75	872.00	872.00	182	278	0	8.9	0.0
100	A-011	BASE	13.00	872.00	872.00	188	306	0	15.0	0.0
100	A-011	BASE	13.25	872.00	872.00	182	275	0	21.0	0.0
100	A-011	BASE	13.50	872.00	872.00	187	227	0	26.2	0.0
100	A-011	BASE	13.75	872.00	872.00	213	187	0	30.4	0.0
100	A-011	BASE	14.00	872.00	872.00	232	155	0	34.0	0.0
100	A-011	BASE	14.25	872.00	872.00	241	131	0	36.9	0.0
100	A-011	BASE	14.50	872.00	872.00	245	115	0	39.4	0.0
100	A-011	BASE	14.75	872.00	872.00	248	103	0	41.7	0.0
100	A-011	BASE	15.00	872.00	872.00	249	92	0	43.7	0.0
100	A-011	BASE	15.25	872.00	872.00	250	82	0	45.5	0.0
100	A-011	BASE	15.50	872.00	872.00	249	74	0	47.1	0.0
100	A-011	BASE	15.75	872.00	872.00	248	67	0	48.6	0.0
100	A-012	BASE	10.01	872.49	880.00	80737	11	1	0.9	0.0
100	A-012	BASE	10.25	872.61	880.00	81176	12	1	1.2	0.0
100	A-012	BASE	10.51	872.75	880.00	81704	14	1	1.4	0.1
100	A-012	BASE	10.75	872.90	880.00	82193	17	2	1.8	0.1
100	A-012	BASE	11.00	873.09	880.00	86397	22	3	2.2	0.1
100	A-012	BASE	11.25	873.31	880.00	95718	29	5	2.7	0.2
100	A-012	BASE	11.50	873.55	880.00	105964	38	9	3.4	0.4
100	A-012	BASE	11.75	873.84	880.00	118352	61	14	4.4	0.6
100	A-012	BASE	12.00	874.39	880.00	136936	156	29	6.7	1.0
100	A-012	BASE	12.25	875.59	880.00	163021	355	70	11.9	2.1
100	A-012	BASE	12.50	877.28	880.00	176791	469	157	20.4	4.4
100	A-012	BASE	12.75	878.40	880.00	184169	409	278	29.5	8.9
100	A-012	BASE	13.00	878.63	880.00	185581	285	306	36.7	15.0
100	A-012	BASE	13.25	878.37	880.00	183994	202	275	41.7	21.0
100	A-012	BASE	13.50	877.99	880.00	181641	148	227	45.3	26.2
100	A-012	BASE	13.75	877.61	880.00	179055	113	187	48.0	30.4
100	A-012	BASE	14.00	877.26	880.00	176651	89	155	50.1	34.0

W00521 _ Ex Mod & D+C4-C4.1 _ OUTPUT SUMMARY - 241.8 ac Inflow at CN 78.3 -68.5 ac Future

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100	A-012	BASE	14.25	876.94	880.00	174518	73	131	51.8	36.9
100	A-012	BASE	14.50	876.66	880.00	172751	62	115	53.2	39.4
100	A-012	BASE	14.75	876.38	880.00	170940	52	103	54.4	41.7
100	A-012	BASE	15.00	876.13	880.00	169235	45	92	55.4	43.7
100	A-012	BASE	15.25	875.89	880.00	167003	41	82	56.3	45.5
100	A-012	BASE	15.50	875.68	880.00	164275	38	74	57.1	47.1
100	A-012	BASE	15.75	875.50	880.00	161893	36	67	57.8	48.6