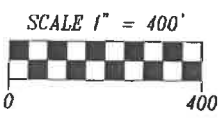
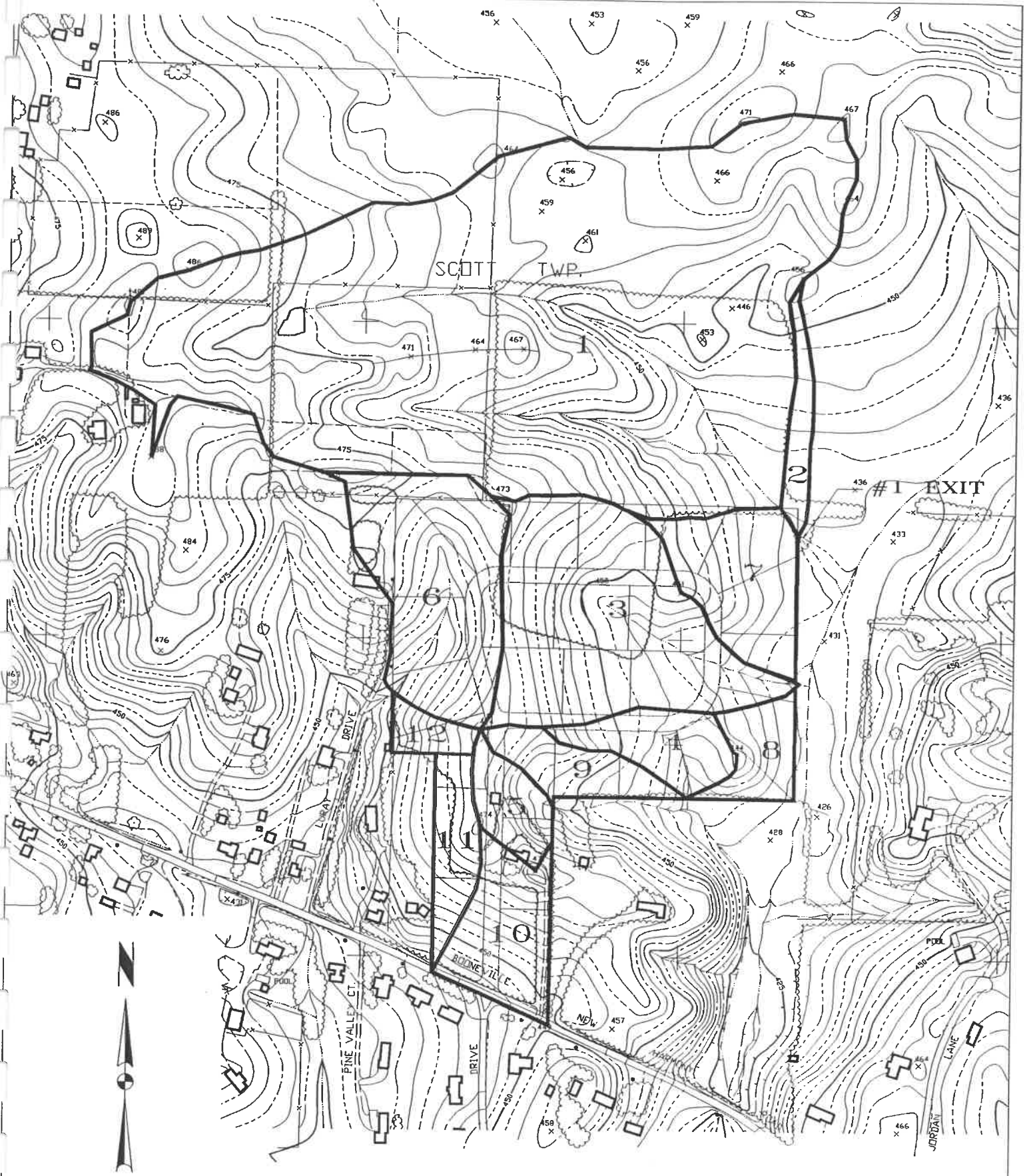


**“EAST” RIDGE RUNOFF  
to BASIN #2**



**UNDEVELOPED  
WATER SHED MAP**

**SITECON, Inc.**  
 600 S.E. EIGHTH ST. SUITE 2  
 EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-3-96	1"=400'

FILENAME: UNDEVAREA.DWG

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #5**

**65,001** Total SF 1.49 AC

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	50,429 SF	50,429 Total SF	1.16 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>50,429 TOTAL</b>	<b>1.16 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	14,572 SF	14,572 Total SF	0.33 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>14,572 TOTAL</b>	<b>0.33 AC</b>

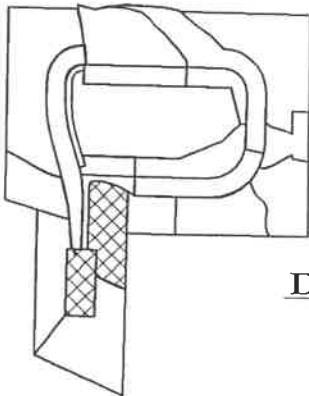
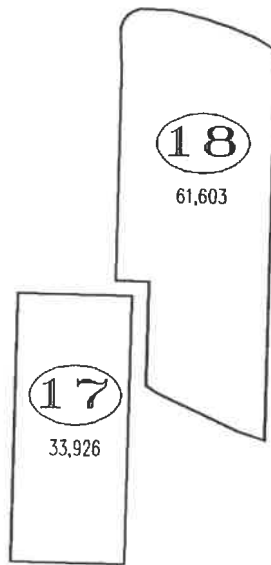
Check **65,001 GT**

Wt'd C = 0.47  
 Wt'd N = 0.29  
 High Pt El 474.00 ft  
 Inlet El 452.50 ft  
 Length 350.00 ft  
 Slope 0.0614  
 tc 13.72 min

0 1.	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	4.74 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 3.31 cfs**

Date: 5/9/96



**DEVELOPED WATERSHED MAP**

**SITECON, Inc.**

600 S.E. EIGHTH ST. SUITE 2  
EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-10-96	1"=200'

FILENAME: devArea.dwg

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: Basin #17

33,926 Total SF 0.78 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	3 Total	875 SF	2,625 Total SF	0.06 AC
Drives	2 Total	840 SF	1,680 Total SF	0.04 AC
Pavement	29 Width (ft)	260 L (ft)	7,540 Total SF	0.17 AC
Patios	1 Total	120 SF	120 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>11,965 TOTAL</b>	<b>0.27 AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For lawn areas:

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	8,009 SF	8,009 Total SF	0.18 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>8,009 TOTAL</b>	<b>0.18 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	13,952 SF	13,952 Total SF	0.32 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>13,952 TOTAL</b>	<b>0.32 AC</b>

Check 33,926 GT

Wt'd C = 0.57  
 Wt'd N = 0.35  
 High Pt El 471.00 ft  
 Inlet El 459.00 ft  
 Length 260.00 ft  
 Slope 0.0462  
 tc 13.91 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.23 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.34 cfs

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #18**

**61,603** Total SF 1.41 AC

**Exist. Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**Proposed Impervious surfaces (2-5%) C=0.94**

Structures	2 Total	1,125 SF	2,250 Total SF	0.05 AC
Drives	1 Total	840 SF	840 Total SF	0.02 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	2 Total	180 SF	360 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>3,450 TOTAL</b>	<b>0.08 AC</b>

**Exist cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For lawn areas:**

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	47,101 SF	47,101 Total SF	1.08 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>47,101 TOTAL</b>	<b>1.08 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	11,052 SF	11,052 Total SF	0.25 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>11,052 TOTAL</b>	<b>0.25 AC</b>

Check **61,603 GT**

Wt'd C = 0.42  
 Wt'd N = 0.41  
 High Pt El 470.00 ft  
 Inlet El 452.50 ft  
 Length 270.00 ft  
 Slope 0.0648  
 tc 14.19 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.18 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

**Q25= 3.10 cfs**

Date: 5/9/96

**Vanderburgh County Drainage Board  
Form 800**

**Computation Sheet for Detention Storage Using the Rational Method**

**Project:** Basin #2

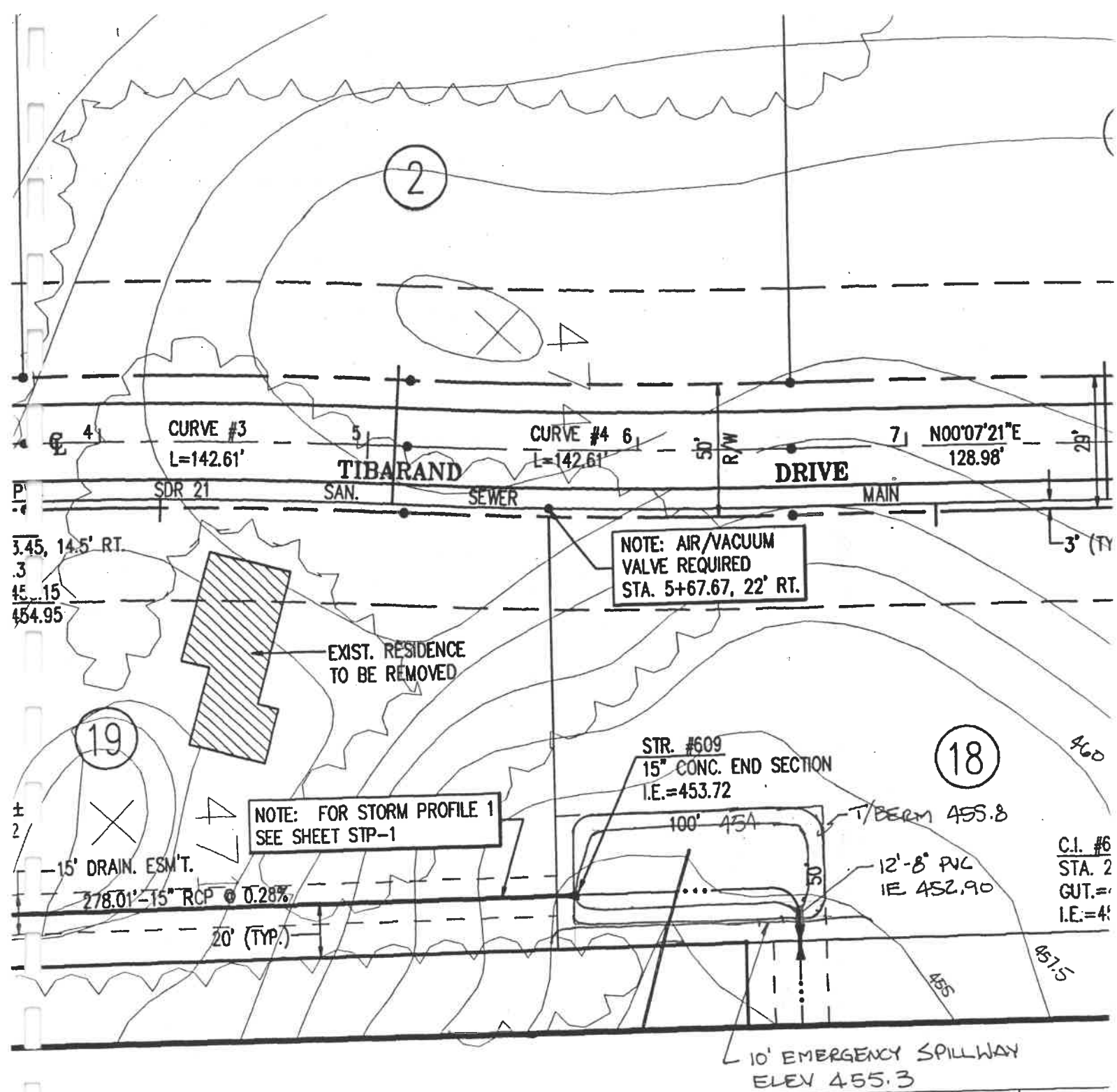
Detention Facility Design Return Period 25 years

Release Rate Return Period 10 years

Watershed Area	2.19 acres
Undeveloped Time of Concentration	13.72 minutes
Undeveloped Rainfall Intensity (iu)	4.74 inches/hour
Weighted Undeveloped Runoff Coefficient (Cu)	0.32
Undeveloped Runoff Rate (O=Cu x iu x Au)	3.31 cfs
Developed Runoff Coefficient (Cd)	0.47

Storm Duration td min	Rainfall Intensity id inches/hr	Inflow Rate I(td) Cd x id x Ad cfs	Outflow Rate O Cu x iu x Au cfs	Storage Rate (I x td) - O cfs	Required Storage [I(td)-O]x[td/12] acre-ft
5	7.208	7.42	3.31	4.11	0.0285
10	5.925	6.10	3.31	2.79	0.0387
15	5.033	5.18	3.31	1.87	0.0389
20	4.571	4.70	3.31	1.39	0.0387
25	4.108	4.23	3.31	0.92	0.0318
30	3.646	3.75	3.31	0.44	0.0184
40	3.123	3.21	3.31	-0.10	-0.0054
50	2.601	2.68	3.31	-0.63	-0.0440
60	2.078	2.14	3.31	-1.17	-0.0977
90	1.578	1.62	3.31	-1.69	-0.2109

Required Storage = 0.0389 x 43,560 sf/ac = 1,694 cubic feet

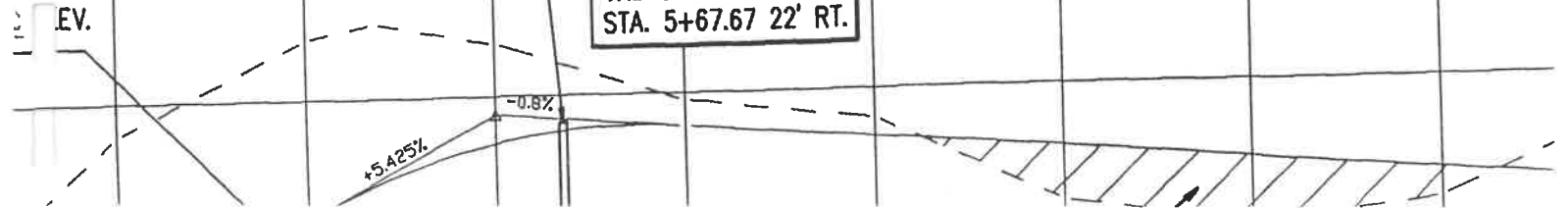


P.V.I. 5+00  
 ELEV.=469.50  
 L.C.=100.00  
 CORR.=-0.78



$28' \times 1.91' \times 80' = 4458'$   
 THIS NEGLECTED ADD.  
 CF STORAGE FROM  
 SIDES ∴

NOTE: AIR/VACUUM  
 VALVE REQUIRED  
 STA. 5+67.67 22' RT.





Flow Calculations for:

Line #1

**Mannings Flow Calculations, Pipes Flowing Full  $V=0.59/n (D^{2/3}) (S^{1/2})$**

Mannings = 0.013

Req'd Cap 2.34 cfs

ipe Size = 12 Inches

Slope = 0.0050 ft/ft

Capacity = 2.52 cfs

Velocity = 3.21 fps

Flow Calculations for:

Line #2

**Mannings Flow Calculations, Pipes Flowing Full  $V=0.59/n (D^{2/3}) (S^{1/2})$**

Mannings = 0.013

Req'd Cap 2.34 cfs

ipe Size = 15 Inches

Slope = 0.0028 ft/ft

Capacity = 3.42 cfs

Velocity = 2.79 fps

## Orifice Calculation

$$Q = Ca (2gh)^{1/2}$$

Q = discharge, cfs

C = coefficient of discharge

a = area of orifice, ft<sup>2</sup>

g = acceleration due to gravity, 32.2 ft/sec<sup>2</sup>

h = head on horizontal centerline of orifice, ft

Req'd Q = 3.31 cfs

C = 0.6

Trial dia = 8 in

0.67 ft

a = 0.3491 ft<sup>2</sup>

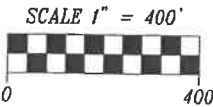
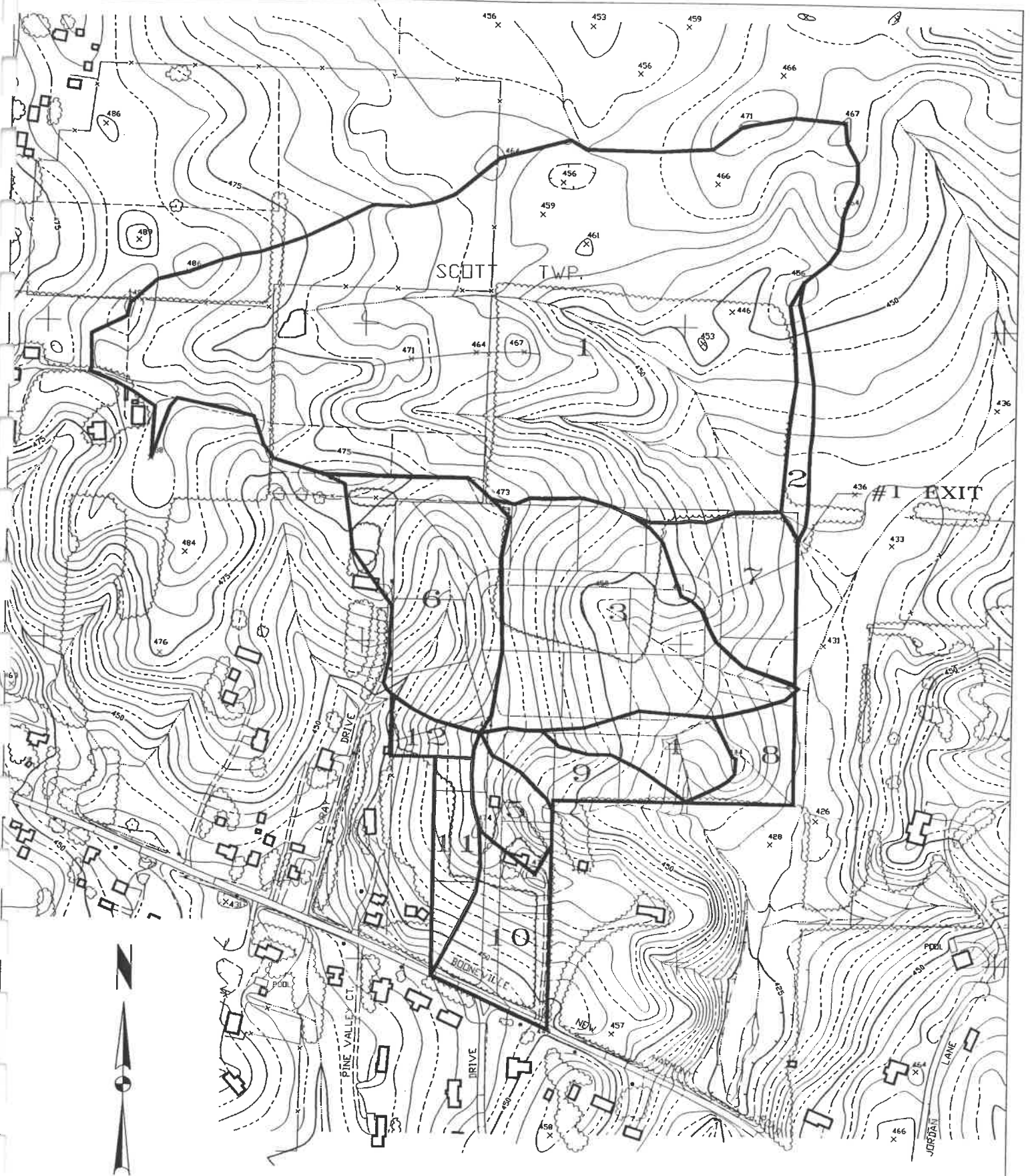
g = 32.2 ft/sec<sup>2</sup>

Total h = 2.43 ft

Q = 2.43 cfs

Substitute 8" diameter pipe for orifice plate

**“EAST” RIDGE RELEASED  
AREAS**



**UNDEVELOPED  
WATER SHED MAP**

**SITECON, Inc.**  
 600 S.E. EIGHTH ST. SUITE 2  
 EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-3-96	1"=400'

FILENAME: UNDEVAREA.DWG

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #9**

**77,706** Total SF    **1.78** AC

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	26,326 SF	26,326 Total SF	0.60 AC
5-10% slope	C=0.50	51,380 SF	51,380 Total SF	1.18 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>77,706 TOTAL</b>	<b>1.78 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check    **77,706 GT**

Wt'd C =    0.45  
 Wt'd N =    0.20  
 High Pt El   474.00 ft  
 Inlet El    435.00 ft  
 Length      600.00 ft  
 Slope       0.0650  
 tc            14.64 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	4.58 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10=    3.67 cfs**

Date: 5/9/96

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #4**

**92,993 Total SF 2.13 AC**

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	75,108 SF	75,108 Total SF	1.72 AC
5-10% slope	C=0.50	17,886 SF	17,886 Total SF	0.41 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>92,994 TOTAL</b>	<b>2.13 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check **92,994 GT**

Wt'd C = 0.38  
 Wt'd N = 0.20  
 High Pt El 465.00 ft  
 Inlet El 434.50 ft  
 Length 500.00 ft  
 Slope 0.0610  
 tc 13.65 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	4.75 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 3.84 cfs**

Date: 5/9/96

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #7**

**164,404** Total SF 3.77 AC

**Impervious surfaces (2-5%) C=0.94**

Structures	0	Total	0	SF	0	Total SF	0.00	AC
Drives	0	Total	0	SF	0	Total SF	0.00	AC
Pavement	0	Width (ft)	0	L (ft)	0	Total SF	0.00	AC
Patios	0	Total	0	SF	0	Total SF	0.00	AC
Sidewalks	0	Width (ft)	0		0	Total SF	0.00	AC
						<b>0 TOTAL</b>	<b>0.00</b>	<b>AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0	SF	0	Total SF	0.00	AC	
2-5% slope	C=0.35	89,079	SF	89,079	Total SF	2.04	AC	
5-10% slope	C=0.50	75,325	SF	75,325	Total SF	1.73	AC	
10+% slope	C=0.65	0	SF	0	Total SF	0.00	AC	
						<b>164,404 TOTAL</b>	<b>3.77</b>	<b>AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0	SF	0	Total SF	0.00	AC	
2-5% slope	C=0.24	0	SF	0	Total SF	0.00	AC	
5-10% slope	C=0.36	0	SF	0	Total SF	0.00	AC	
10+% slope	C=0.48	0	SF	0	Total SF	0.00	AC	
						<b>0 TOTAL</b>	<b>0.00</b>	<b>AC</b>

Check 164,404 GT

Wt'd C = 0.42  
 Wt'd N = 0.20  
 High Pt El 455.00 ft  
 Inlet El 432.50 ft  
 Length 500.00 ft  
 Slope 0.0450  
 tc 14.65 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	4.57 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 7.23 cfs**

Date: 5/9/96

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #8**

**69,598 Total SF 1.60 AC**

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	20,383 SF	20,383 Total SF	0.47 AC
5-10% slope	C=0.50	49,215 SF	49,215 Total SF	1.13 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>69,598 TOTAL</b>	<b>1.60 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check **69,598 GT**

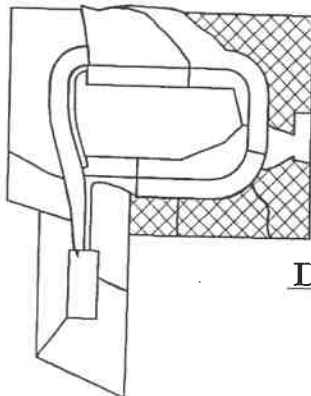
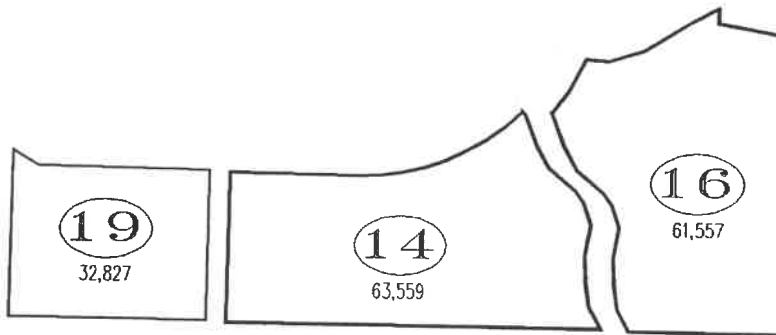
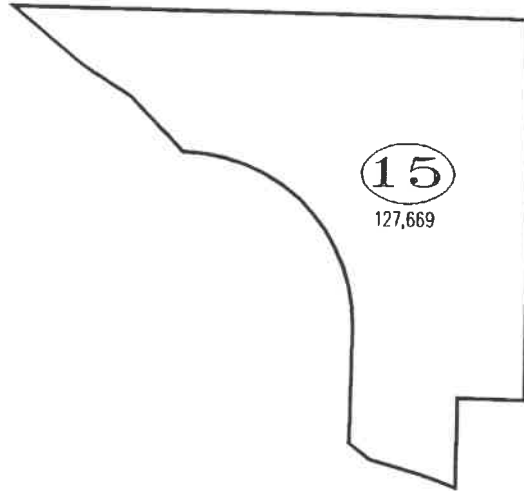
Wt'd C = 0.46  
 Wt'd N = 0.20  
 High Pt El 444.00 ft  
 Inlet El 430.00 ft  
 Length 250.00 ft  
 Slope 0.0560  
 tc 10.07 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	5.37 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 3.91 cfs**

Date: 5/9/96





DEVELOPED WATERSHED MAP

**SITECON, Inc.**

600 S.E. EIGHTH ST. SUITE 2  
EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-10-96	1"=200'

FILENAME: devlored.dwg

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: Basin #19

32,826 Total SF 0.75 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	1 Total	1,500 SF	1,500 Total SF	0.03 AC
Drives	1 Total	840 SF	840 Total SF	0.02 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	1 Total	120 SF	120 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>2,460 TOTAL</b>	<b>0.06 AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For lawn areas:

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	10,288 SF	10,288 Total SF	0.24 AC
5-10% slope	C=0.40	20,079 SF	20,079 Total SF	0.46 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>30,367 TOTAL</b>	<b>0.70 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check 32,827 GT

Wt'd C = 0.39  
 Wt'd N = 0.37  
 High Pt El 462.50 ft  
 Inlet El 452.50 ft  
 Length 200.00 ft  
 Slope 0.0500  
 tc 12.45 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.49 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 1.63 cfs

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Basin #14, released area**

**63,559** Total SF 1.46 AC

**Exist. Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**Proposed Impervious surfaces (2-5%) C=0.94**

Structures	2 Total	1,500 SF	3,000 Total SF	0.07 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	2 Total	120 SF	240 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>3,240 TOTAL</b>	<b>0.07 AC</b>

**Exist cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For lawn areas:**

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	60,319 SF	60,319 Total SF	1.38 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>60,319 TOTAL</b>	<b>1.38 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check 63,559 GT

Wt'd C = 0.29  
 Wt'd N = 0.38  
 High Pt El 450.00 ft  
 Inlet El 434.50 ft  
 Length 270.00 ft  
 Slope 0.0574  
 tc 14.02 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.21 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

**Q25= 2.17 cfs**

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Basin #15, released area**

**127,669** Total SF 2.93 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0	Total	0	SF	0	Total SF	0.00	AC
Drives	0	Total	0	SF	0	Total SF	0.00	AC
Pavement	0	Width (ft)	0	L (ft)	0	Total SF	0.00	AC
					<b>0</b>	<b>TOTAL</b>	<b>0.00</b>	<b>AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	4	Total	1,125	SF	4,500	Total SF	0.10	AC
Drives	0	Total	0	SF	0	Total SF	0.00	AC
Pavement	0	Width (ft)	0	L (ft)	0	Total SF	0.00	AC
Patios	3	Total	120	SF	360	Total SF	0.01	AC
Sidewalks	0	Width (ft)	0	L (ft)	0	Total SF	0.00	AC
					<b>4,860</b>	<b>TOTAL</b>	<b>0.11</b>	<b>AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0	SF	0	Total SF	0.00	AC	
2-5% slope	C=0.35	0	SF	0	Total SF	0.00	AC	
5-10% slope	C=0.50	0	SF	0	Total SF	0.00	AC	
10+% slope	C=0.65	0	SF	0	Total SF	0.00	AC	
					<b>0</b>	<b>TOTAL</b>	<b>0.00</b>	<b>AC</b>

For lawn areas:

0-2% slope	C=0.15	0	SF	0	Total SF	0.00	AC	
2-5% slope	C=0.25	122,809	SF	122,809	Total SF	2.82	AC	
5-10% slope	C=0.40	0	SF	0	Total SF	0.00	AC	
10+% slope	C=0.55	0	SF	0	Total SF	0.00	AC	
					<b>122,809</b>	<b>TOTAL</b>	<b>2.82</b>	<b>AC</b>

For woodland areas:

0-2% slope	C=0.12	0	SF	0	Total SF	0.00	AC	
2-5% slope	C=0.24	0	SF	0	Total SF	0.00	AC	
5-10% slope	C=0.36	0	SF	0	Total SF	0.00	AC	
10+% slope	C=0.48	0	SF	0	Total SF	0.00	AC	
					<b>0</b>	<b>TOTAL</b>	<b>0.00</b>	<b>AC</b>

Check 127,669 GT

Wt'd C = 0.28  
 Wt'd N = 0.39  
 High Pt El 460.00 ft  
 Inlet El 435.00 ft  
 Length 550.00 ft  
 Slope 0.0455  
 tc 20.77 min

0	1	Is 5<tc<10?	i 25=	0.00 in/hr
0	1	Is 10<tc<15?	i 25=	0.00 in/hr
1	1	Is 15<tc<30?	i 25=	4.50 in/hr
1	0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 3.64 cfs

Date: 5/8/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Basin #16, released area** 61,557 Total SF 1.41 AC

**Exist. Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**Proposed Impervious surfaces (2-5%) C=0.94**

Structures	1 Total	1,500 SF	1,500 Total SF	0.03 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	1 Total	120 SF	120 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>1,620 TOTAL</b>	<b>0.04 AC</b>

**Exist cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For lawn areas:**

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	17,554 SF	17,554 Total SF	0.40 AC
5-10% slope	C=0.40	42,383 SF	42,383 Total SF	0.97 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>59,937 TOTAL</b>	<b>1.38 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Check 61,557 GT

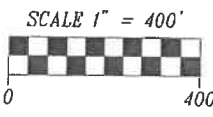
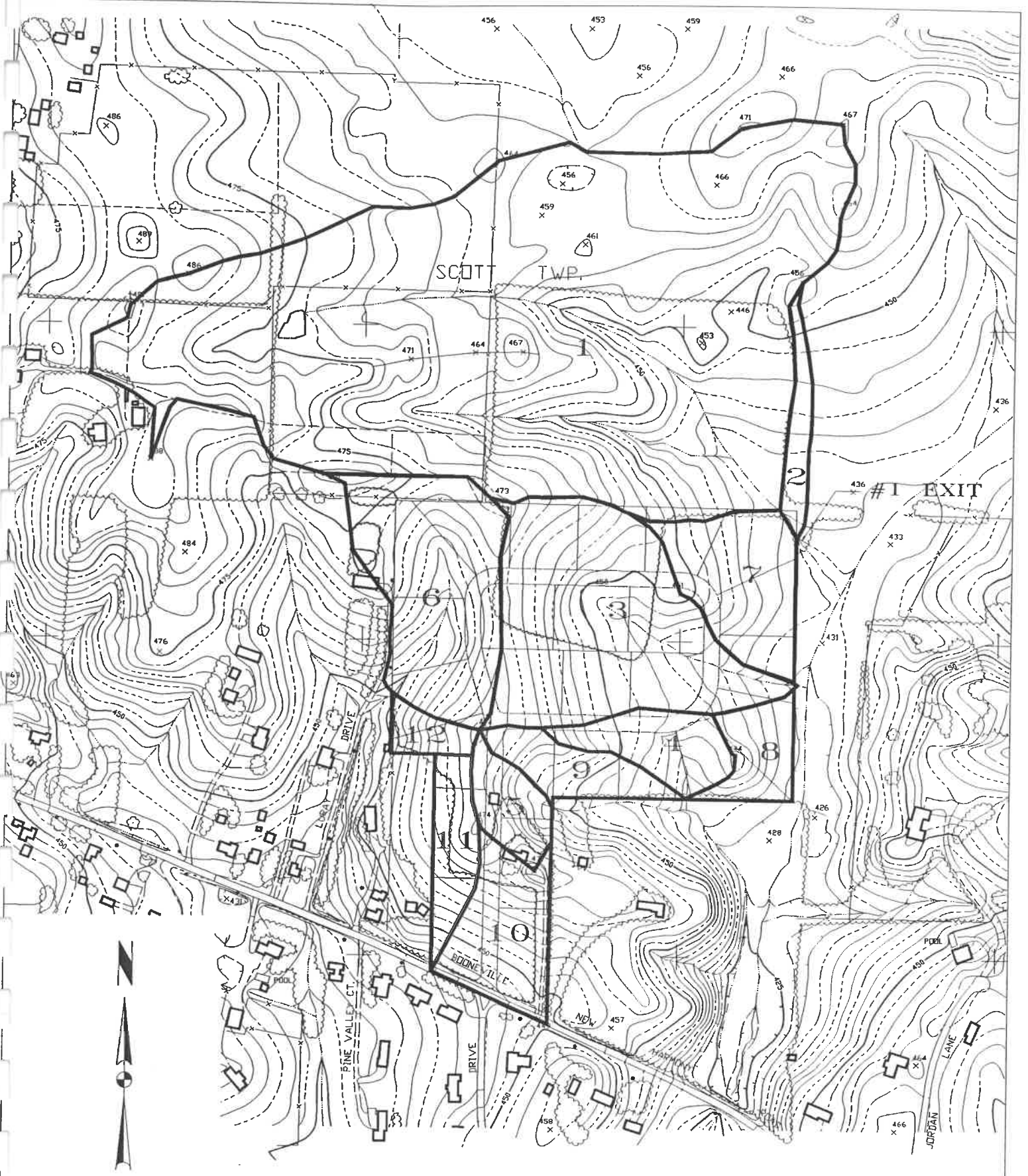
Wt'd C = 0.37  
 Wt'd N = 0.39  
 High Pt El 444.00 ft  
 Inlet El 430.00 ft  
 Length 250.00 ft  
 Slope 0.0560  
 tc 13.76 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.25 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.76 cfs

Date: 5/9/96

**“WEST” RIDGE RELEASED  
AREAS**



**UNDEVELOPED  
WATER SHED MAP**

**SITECON, Inc.**  
 600 S.E. EIGHTH ST. SUITE 2  
 EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-3-96	1"=400'

FILENAME: UNDEVAREA.DWG

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: Shadow Bluff Exit pt. #6

301,212 Total SF 6.91 AC

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	285,225 SF	285,225 Total SF	6.55 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>285,225 TOTAL</b>	<b>6.55 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	15,987 SF	15,987 Total SF	0.37 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>15,987 TOTAL</b>	<b>0.37 AC</b>

Check 301,212 GT

Wt'd C = 0.49  
 Wt'd N = 0.22  
 High Pt El 481.00 ft  
 Inlet El 453.50 ft  
 Length 950.00 ft  
 Slope 0.0289  
 tc 22.98 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
0 1	Is 10<tc<15?	i 10=	0.00 in/hr
1 1	Is 15<tc<30?	i 10=	3.83 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 13.04 cfs**

Date: 5/9/96



**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: Shadow Bluff Basin #12

33,567 Total SF 0.77 AC

Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	30,390 SF	30,390 Total SF	0.70 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>30,390 TOTAL</b>	<b>0.70 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	3,177 SF	3,177 Total SF	0.07 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>3,177 TOTAL</b>	<b>0.07 AC</b>

Check 33,567 GT

Wt'd C = 0.49  
 Wt'd N = 0.24  
 High Pt El 474.00 ft  
 Inlet El 450.00 ft  
 Length 270.00 ft  
 Slope 0.0889  
 tc 10.17 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
1 1	Is 10<tc<15?	i 10=	5.35 in/hr
1 0	Is 15<tc<30?	i 10=	0.00 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 2.01 cfs**

Date: 5/9/96

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #11**

**74,267** Total SF    **1.70** AC

**Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	32,403 SF	32,403 Total SF	0.74 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>32,403 TOTAL</b>	<b>0.74 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	41,864 SF	41,864 Total SF	0.96 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>41,864 TOTAL</b>	<b>0.96 AC</b>

Check    **74,267 GT**

Wt'd C =    0.42  
 Wt'd N =    0.43  
 High Pt El 474.00 ft  
 Inlet El    440.00 ft  
 Length    480.00 ft  
 Slope      0.0708  
 tc          18.40 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
0 1	Is 10<tc<15?	i 10=	0.00 in/hr
1 1	Is 15<tc<30?	i 10=	4.22 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10=    3.03 cfs**

Date: 5/9/96

**UNDEVELOPED CALCULATIONS FLOW FOR A 10 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #10**

**136,331 Total SF 3.13 AC**

**Impervious surfaces (2-5%) C=0.94**

Structures	1 Total	1,014 SF	1,014 Total SF	0.02 AC
Drives	1 Total	5,400 SF	5,400 Total SF	0.12 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	0 Total	0 SF	0 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>6,414 TOTAL</b>	<b>0.15 AC</b>

**For lawn areas:**

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	46,041 SF	46,041 Total SF	1.06 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>46,041 TOTAL</b>	<b>1.06 AC</b>

**For cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	83,876 SF	83,876 Total SF	1.93 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>83,876 TOTAL</b>	<b>1.93 AC</b>

Check **136,331 GT**

Wt'd C = 0.40  
 Wt'd N = 0.51  
 High Pt El 474.00 ft  
 Inlet El 440.00 ft  
 Length 520.00 ft  
 Slope 0.0654  
 tc 21.08 min

0 1	Is 5<tc<10?	i 10=	0.00 in/hr
0 1	Is 10<tc<15?	i 10=	0.00 in/hr
1 1	Is 15<tc<30?	i 10=	3.99 in/hr
1 0	Is 30<tc<60?	i 10=	0.00 in/hr

**Q10= 5.01 cfs**

Date: 5/9/96

OFF-SITE  
69,323

20

143,127

21

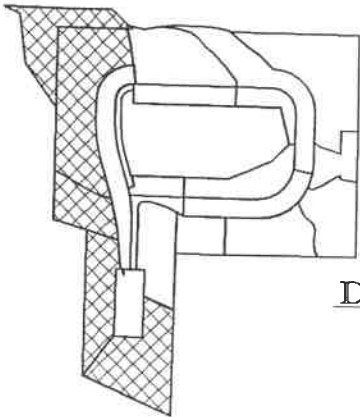
46,193

22

66,867

23

99,605



DEVELOPED WATERSHED MAP

**SITECON, Inc.**

600 S.E. EIGHTH ST. SUITE 2  
EVANSVILLE, IN 47713 PH. 812-423-2320

PROJECT #:	DRWN BY:	R'VD. BY:	DATE:	SCALE:
109-96-1	RRB		5-10-96	1"=200'

FILENAME: devkoren.dwg

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #20**

**212,450 Total SF 4.88 AC**

Note: This includes 69,323 sf offsite

**Exist. Impervious surfaces (2-5%) C=0.94**

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

**Proposed Impervious surfaces (2-5%) C=0.94**

Structures	4 Total	1,500 SF	6,000 Total SF	0.14 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	4 Total	120 SF	480 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>6,480 TOTAL</b>	<b>0.15 AC</b>

**Exist cultivated fields:**

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	69,323 SF	69,323 Total SF	1.59 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>69,323 TOTAL</b>	<b>1.59 AC</b>

**For lawn areas:**

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	120,660 SF	120,660 Total SF	2.77 AC
5-10% slope	C=0.40	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>120,660 TOTAL</b>	<b>2.77 AC</b>

**For woodland areas:**

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	15,987 SF	15,987 Total SF	0.37 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>15,987 TOTAL</b>	<b>0.37 AC</b>

Check **212,450 GT**

Wt'd C = 0.31  
 Wt'd N = 0.34  
 High Pt El 481.00 ft  
 Inlet El 453.50 ft  
 Length 950.00 ft  
 Slope 0.0289  
 tc 28.02 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	3.83 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

**Q25= 5.83 cfs**

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #21**

**46,193** Total SF 1.06 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	1 Total	750 SF	750 Total SF	0.02 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	1 Total	120 SF	120 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>870 TOTAL</b>	<b>0.02 AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For lawn areas:

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	40,437 SF	40,437 Total SF	0.93 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>40,437 TOTAL</b>	<b>0.93 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	4,886 SF	4,886 Total SF	0.11 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>4,886 TOTAL</b>	<b>0.11 AC</b>

Check **46,193 GT**

Wt'd C = 0.41  
 Wt'd N = 0.41  
 High Pt El 470.00 ft  
 Inlet El 450.00 ft  
 Length 270.00 ft  
 Slope 0.0741  
 tc 13.74 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
1 1	Is 10<tc<15?	i 25=	5.26 in/hr
1 0	Is 15<tc<30?	i 25=	0.00 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

**Q25= 2.26 cfs**

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #22**

**66,867** Total SF 1.54 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	3 Total	1,000 SF	3,000 Total SF	0.07 AC
Drives	0 Total	0 SF	0 Total SF	0.00 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
Patios	1 Total	120 SF	120 Total SF	0.00 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>3,120 TOTAL</b>	<b>0.07 AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For lawn areas:

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	25,872 SF	25,872 Total SF	0.59 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>25,872 TOTAL</b>	<b>0.59 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	37,875 SF	37,875 Total SF	0.87 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>37,875 TOTAL</b>	<b>0.87 AC</b>

Check 66,867 GT

Wt'd C = 0.40  
 Wt'd N = 0.50  
 High Pt El 470.00 ft  
 Inlet El 440.00 ft  
 Length 480.00 ft  
 Slope 0.0625  
 tc 20.34 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.54 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 2.80 cfs

Date: 5/9/96

**DEVELOPED CALCULATIONS FLOW FOR A 25 YEAR STORM**

Job Name/Basin #: **Shadow Bluff Basin #23**

**99,605** Total SF 2.29 AC

Exist. Impervious surfaces (2-5%) C=0.94

Structures	0 Total	0 SF	0 Total SF	0.00 AC
Drives	1 Total	5,400 SF	5,400 Total SF	0.12 AC
Pavement	0 Width (ft)	0 L (ft)	0 Total SF	0.00 AC
			<b>5,400 TOTAL</b>	<b>0.12 AC</b>

Proposed Impervious surfaces (2-5%) C=0.94

Structures	3 Total	1,875 SF	5,625 Total SF	0.13 AC
Drives	2 Total	840 SF	1,680 Total SF	0.04 AC
Pavement	14.5 Width (ft)	250 L (ft)	3,625 Total SF	0.08 AC
Patios	3 Total	120 SF	360 Total SF	0.01 AC
Sidewalks	0 Width (ft)		0 Total SF	0.00 AC
			<b>11,290 TOTAL</b>	<b>0.26 AC</b>

Exist cultivated fields:

0-2% slope	C=0.20	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.35	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.50	0 SF	0 Total SF	0.00 AC
10+% slope	C=0.65	0 SF	0 Total SF	0.00 AC
			<b>0 TOTAL</b>	<b>0.00 AC</b>

For lawn areas:

0-2% slope	C=0.15	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.25	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.40	24,499 SF	24,499 Total SF	0.56 AC
10+% slope	C=0.55	0 SF	0 Total SF	0.00 AC
			<b>24,499 TOTAL</b>	<b>0.56 AC</b>

For woodland areas:

0-2% slope	C=0.12	0 SF	0 Total SF	0.00 AC
2-5% slope	C=0.24	0 SF	0 Total SF	0.00 AC
5-10% slope	C=0.36	58,416 SF	58,416 Total SF	1.34 AC
10+% slope	C=0.48	0 SF	0 Total SF	0.00 AC
			<b>58,416 TOTAL</b>	<b>1.34 AC</b>

Check 99,605 GT

Wt'd C = 0.47  
 Wt'd N = 0.45  
 High Pt El 471.00 ft  
 Inlet El 440.00 ft  
 Length 430.00 ft  
 Slope 0.0721  
 tc 17.93 min

0 1	Is 5<tc<10?	i 25=	0.00 in/hr
0 1	Is 10<tc<15?	i 25=	0.00 in/hr
1 1	Is 15<tc<30?	i 25=	4.76 in/hr
1 0	Is 30<tc<60?	i 25=	0.00 in/hr

Q25= 5.08 cfs

Date: 5/9/96