CMB 4/12/96

1/10

Harrison Park 2nd Addn Drainage

From PEC Drg. Plan for Harrison Park Addn, Node 115 = Drainage from this Site and beyond, Area = 42.2 Acres

Of this area, 31.0 Acres to be developed.

From Sedgwick County Soil Survey - Site is Type "D" Hydrologic Group.

For Developed Areas
$C_{100} = 0.79$
$C_2 = 0.57$

For Inlet Runoff - Use $T_c = 15$ min All Areas.

PEC's drainage Plan Allows 125 cfs to exit the Site @ the North End of Todd Street. Detention Required to meet this existing condition.

For All Inlet Calcs, Rational Equation

$$Q = CiA$$

i_2 for $T_c = 15$ min → 3.83"/hr.
i_{100} for $T_c = 15$ min → 7.37"/hr.

2/10

2 year Storm

Area	Acres	T_c	i_2	C_2	(cfs) Q_2
A	3.68	15	3.83"/hr	0.57	8.0
B	2.88	15			6.3
C	2.23	15			4.9
D	2.82	15			6.2
E	3.78	15			8.3
F	0.38	15			0.8
G	8.14	15			17.8
H	2.45	15		0.57	5.3
I	2.02	15	3.83"/hr	0.57	4.4
J	11.2	20	3.33	0.26	9.7
K	0.89	15	3.83	0.57	1.9

100 yr Storm

Area	Ac	T_c	i_{100}	C_{100}	(cfs) Q_{100}
A	3.68	15	7.37"/hr	0.79	21.4
B	2.88				16.7
C	2.23				13.0
D	2.82				16.4
E	3.78				22.0
F	0.36				2.2
G	8.14				47.4
H	2.45			0.79	14.3
I	2.02	15	7.37"/hr	0.79	11.9
J	11.2	20	6.53"/hr	0.761	44.6
K	0.89	15	7.37"/hr	0.79	5.2

Inlet Routing

3/10

Area (A) Q_{100} 21.4 — $Q_2 = 8.0$
Inlet ① L=10' S=2.1%
$Q_A = 21.4$ — $Q_A = 8.0$
$Q_i = 6.0$ cfs — ① $Q_i = 3.3$
$Q_B = 15.4$ — $Q_B = 4.7$ cfs

Area (B) $Q_{100} = 16.7$ — $Q_2 = 6.3$
$+ Q_B = 15.4$ — $+ Q_B = 4.7$
$= Q_A = 32.1$ — $= Q_A = 11.0$
Inlet ② L=10 S=2.1% — ② $Q_i = 4.0$
$Q_i = 7.4$
$Q_B = 24.7$ cfs — $Q_B = 7.0$ cfs

Area (C) $Q_{100} = 13.0$ — $Q_2 = 4.9$
$+ Q_B = 24.7$ — $+ Q_B = 7.0$
$= Q_A = 37.7$ — $= Q_A = 11.9$
Inlet ③ L=10' S=1.0% — " — $Q_i = 5.1$ cfs
$Q_i = 7.3$ — $Q_B = 6.8$
$Q_B = 30.4$

Area (D) $Q_{100} = 16.4$ — $Q_2 = 6.2$
$+ Q_B = 30.4$ — $+ Q_B = 6.8$
$= Q_A = 46.8$ — $= Q_A = 13.0$ cfs
Inlet ④ L=10' S=1.0% — " — $Q_i = 5.4$
$Q_i = 7.3$ cfs — $Q_B = 7.6$ cfs
$Q_B = 39.5$ cfs

4/10

Area (E) $Q_{100} = 22.0$ — $Q_2 = 8.3$
Sump $+ Q_B = 39.5$ — $+ Q_B = 7.6$
$= Q_A = 61.5$ — $= Q_A = 15.9$

Area (F) $Q_{100} = 2.2$ — $Q_2 = 0.8$

Total $Q_A = 63.7$ — $Q_A = 16.7$

Inlets ⑤ & ⑥ 2 L=10' Inlets, Sump @ 26 cfs/ea = 52 cfs cap Inlets ⑤ & ⑥

$Q_B = 63.7 - 52 = 9.5$ cfs spills east — Q_2 = Clean No Bypass

Area (G) $Q_{100} = 47.4$ cfs — $Q_2 = 17.8$ cfs
Sump $+ Q_B = 9.5$
$Q_A = 56.9$ cfs

Inlets ① & ⑧ 2 L=10' Inlets; Cap = 52 cfs

Q_B (Todd) = 4.9 cfs — Clean 2 yr.

Area (H) $Q_{100} = 14.3$ cfs — $Q_2 = 5.3$ cfs

Inlet ⑩ L=10' S=0.7% → Ditto
$Q_i = 6.3$ — $Q_i = 3.3$ cfs
$Q_B = 8.0$ (RED OAKS) — $Q_B = 2.0$ cfs Red Oaks

5/10

Area (I) $Q_{100} = 11.9$ — $Q_2 = 4.4$
(J) $Q_{100} = 44.6$ — $Q_{100} = 9.7$
56.5 cfs — 14.1 cfs

Drop Inlet (Double)
Inlet ⑨ 3&6" each grate x 2 = 5.1 ft² open
@ Depth = 1.0'
$Q_i = 0.6 A\sqrt{2gh} = 0.6(5.1)\sqrt{2(32.2)(1)}$
$Q_i = 24.5$ cfs

$Q_B = 56.5 - 24.5 = 32.0$ cfs Red Oaks — $Q_B = 0$ Clean 2 yr.

Area (K) $Q_{100} = 5.2$
$Q_2 = 1.9$

Both Bypass to Todd Street.

Red Oaks Bypass	Todd Bypass
$Q_{100} = 8.0 + 32.0 = 40$ cfs	$Q_{100} = 4.9 + 5.2 = 10.1$
$Q_2 = 2.10 + 0 = 2.0$ cfs	$Q_2 = 0 + 1.9 = 1.9$

Total From Site =

6/10

Detention Pond

Result Target = 125 cfs off site via Todd : Red Oaks : 27" RCP in Todd Street.

Total Pond Basin = 42.4 Acres

31.0 Ac Developed ; CN = 85
11.2 Ac Undeveloped ; CN = 74
T_c Developed w/ Pond = 45 minutes

$CN = 0.73(85) + (0.27)(74) = 82.0$

SCS Lag = $0.6\,T_c = 0.6\left(\frac{45}{60}\right) = 0.45$ hrs

100 year Storm ; 7.8", SCS Type 2 Distribution

Pond Info: 4:1 Side Slopes.

Top Water Surface Not to Exceed Low R/W Elev.

Pond Can Overspill Via Concrete Flume to Todd Street.

7/10

Stage - Storage - Discharge

Elev	Ft^2	Ac	HW	$Q_{0(27")}$	Q_W (weir)	Q_T
1344	251	0.006	0.2	1.0		
1345	16989	0.390	1.2	4.5		
1346	32932	0.756	2.2	15		
1347	39206	0.900	3.2	26		
1348	44274	1.016	4.2	35		
1349	49468	1.136	5.2	40		
1349.4	—	—			0	40
1349.5	—	—			5.2	45.2
1349.6	—	—			16.4	56.4
1349.7	—	—			32.1	72.1
1349.8	—	—			51.7	91.7
1349.9	—	—			74.7	114.7
1350.0	54788	1.258	6.2	40	—	—

Weir Spillway L=30' Concrete n=0.013, Slope=0.5%

Elev	Depth	Area	kip	V (ft/s)	Q (=V*A)
1349.4	0	0	0	—	—
1349.5	0.1	3 ft²	30.2	1.73	5.2 cfs
1349.6	0.2	6	30.4	16.4	16.4 cfs
1349.7	0.3	9	30.6	32.1	32.1 cfs
1349.8	0.4	12	30.8	51.7	51.7 cfs
1349.9	0.5	15 ft²	31	74.7	74.7 cfs

Where $V = \frac{1.49}{n}(A/wp)^{.667}\sqrt{S}$ (Mannings)

8/10

From Inlet Capacities Alone, some overspill will occur on Red Oaks and Todd streets. Not all of the plat and offsite drainage will go to the detention pond.

For pond routing, Assume all drainage routes through the pond (conservative).

To HEC-1 w/ Above pond data:

Results: (All drainage to pond)

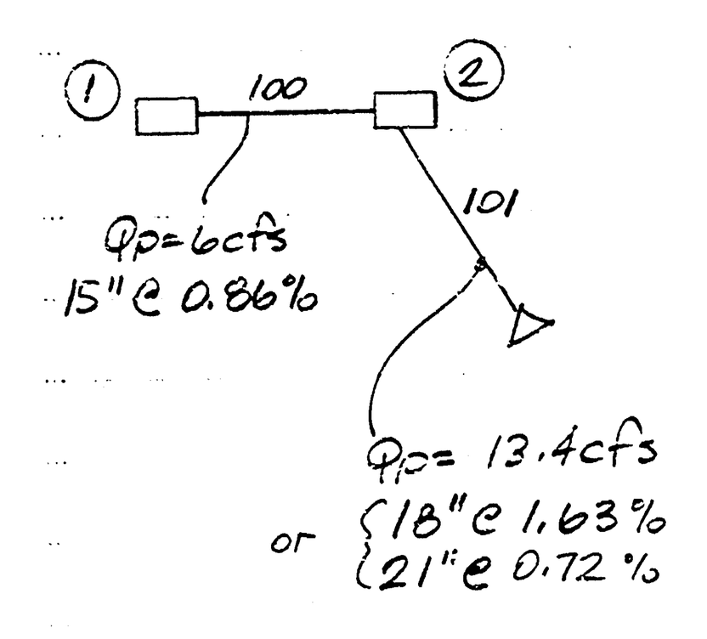
Qin developed = 151 cfs (HEC-1)
Qout pipe : Weir = 127 cfs

Within 2 cfs of allowable peak.

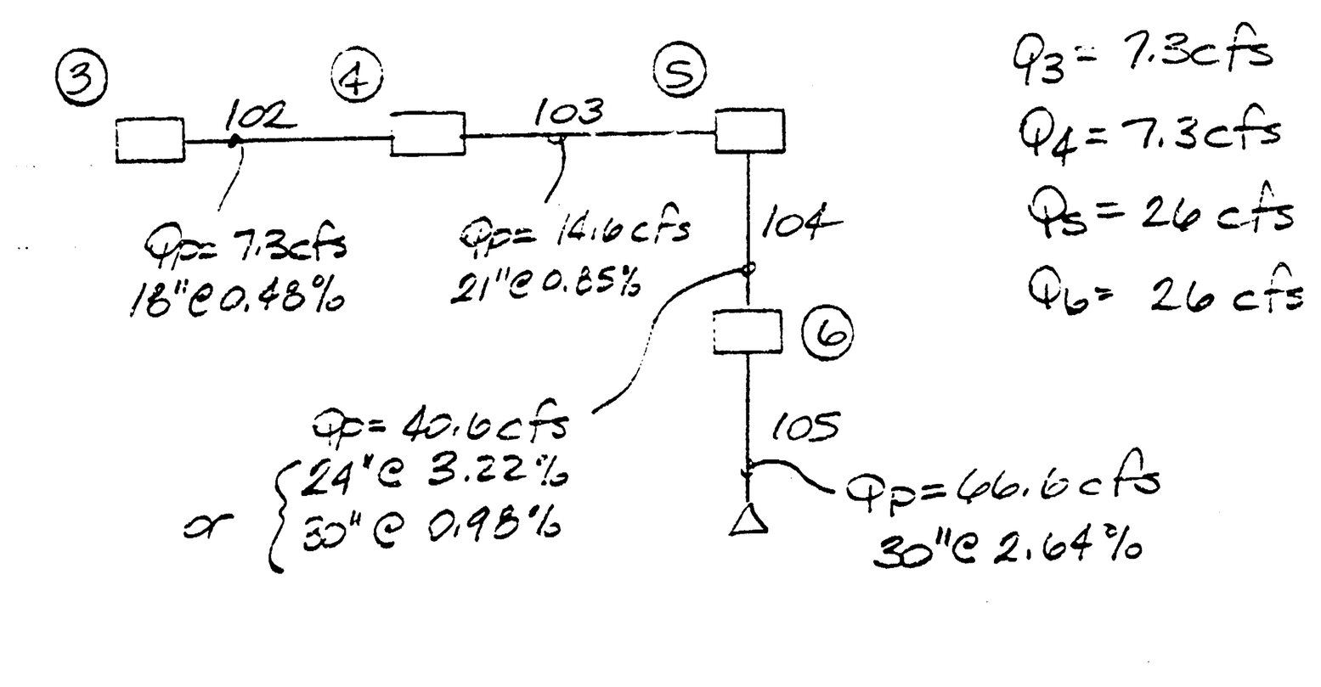
Max Stage = 1349.95 < low R/W Elev = 1350.00 O.K.

Pipe Sizes

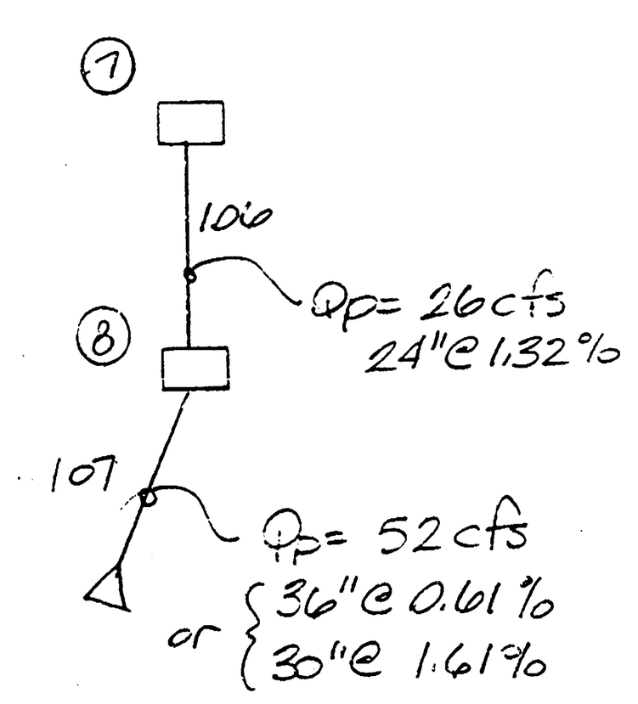
9/10



Qi1= 6cfs
Qi2= 7.4 cfs

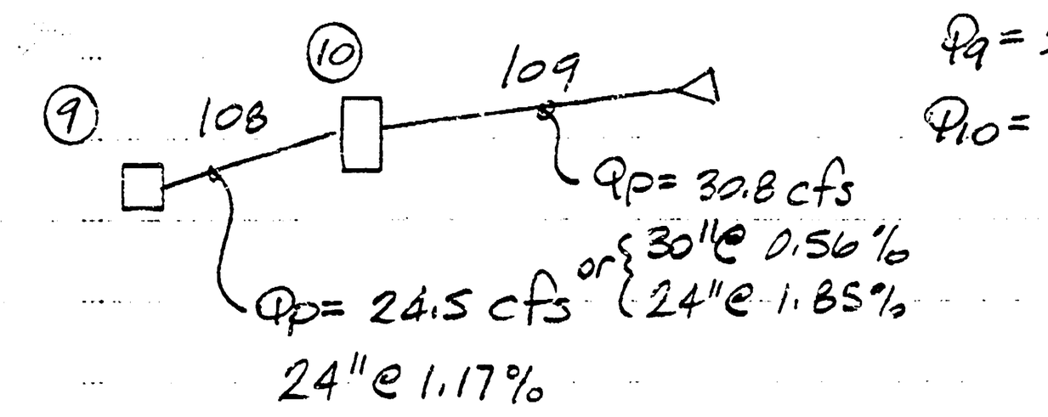


Q3= 7.3cfs
Q4= 7.3cfs
Q5= 26 cfs
Q6= 26 cfs



Q7= 26cfs
Q8= 26cfs

10/10



Q9= 24.5cfs
Q10= 6.3 cfs

Pipe Sizes may be re-calculated @ the time of design to reflet the actual Hydraulic grade Line conditions.

Results

100	15"	@ 0.86%
101	18"	@ 1.63%
102	18"	@ 0.48%
103	21"	@ 0.85%
104	30"	@ 0.98%
105	30"	@ 2.64%
106	24"	@ 1.32%
107	30"	@ 1.61%
108	24"	@ 1.17%
109	24"	@ 1.35%

All Inlets 1-10 Except #9 (field Inlet) L=10'-0".

HEC1 S/N: 1343000364   HMVersion: 6.33   Data File: HARRISON.HC1

```
*****************************************        ****************************************
*                                       *        *                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *        *   U.S. ARMY CORPS OF ENGINEERS       *
*             MAY   1991                *        *   HYDROLOGIC ENGINEERING CENTER      *
*           VERSION 4.0.1E              *        *        609 SECOND STREET             *
*                                       *        *     DAVIS, CALIFORNIA 95616          *
*  RUN DATE  04/12/1996  TIME  23:42:06 *        *         (916) 756-1104               *
*                                       *        *                                      *
*****************************************        ****************************************


              X     X  XXXXXXX   XXXXX         X
              X     X  X        X     X       XX
              X     X  X        X              X
              XXXXXXX  XXXX     X       XXXXX  X
              X     X  X        X              X
              X     X  X        X     X        X
              X     X  XXXXXXX   XXXXX        XXX


              :::::::::::::::::::::::::::::::::::::::::
              :::::::::::::::::::::::::::::::::::::::::
              :::                                   :::
              :::  Full Microcomputer Implementation :::
              :::                 by                :::
              :::         Haestad Methods, Inc.     :::
              :::                                   :::
              :::::::::::::::::::::::::::::::::::::::::
              :::::::::::::::::::::::::::::::::::::::::
```

37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT   PAGE 1

```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

*** FREE ***
   1        ID    HARRISON PARK 2ND ADDITION DETENTION POND CALCS - 100 YEAR EVENT
   2        IT       5                 289
   3        IN      30
   4        IO       1

   5        KK   DEVEL
   6        BA  0.0659
   7        PC       0    0.04    0.08     .12     .17     .22     .27     .32     .37     .43
   8        PC     .49     .56     .62     .69     .77     .85     .94    1.04    1.15    1.27
   9        PC    1.41    1.59    1.83    2.21    5.17    5.73    6.02    6.23    6.40    6.54
  10        PC    6.65    6.76    6.86    6.95    7.02    7.09    7.16    7.23    7.29    7.36
  11        PC    7.43    7.49    7.54    7.59    7.63    7.68    7.72    7.76    7.80
  12        BA  0.0659
  13        UD    0.45
  14        LS       0      84

  15        KK    POND
  16        RS       1    ELEV 1343.80
  17        SA     0.1  0.0058   0.390   0.756    0.90   1.016   1.136   1.258   1.258
  18        SE 1343.80    1344    1345    1346    1347    1348    1349    1350  1350.2
  19        SQ     0.1     1.0     4.5      15      26      35      40      40    45.2    56.4
  20        SQ    72.1    91.7   114.7
  21        SE 1343.80    1344    1345    1346    1347    1348    1349  1349.4  1349.5  1349.6
  22        SE  1349.7  1349.8  1349.9
  23        ZZ
```

HEC1 S/N: 1343000364   HMVersion: 6.33   Data File: HARRISON.HC1

```
*****************************************        ****************************************
*                                       *        *                                      *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *        *   U.S. ARMY CORPS OF ENGINEERS       *
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*  RUN DATE  04/12/1996  TIME  23:42:06 *        *         (916) 756-1104               *
*                                       *        *                                      *
*****************************************        ****************************************
```

HARRISON PARK 2ND ADDITION DETENTION POND CALCS - 100 YEAR EVENT

```
 4 IO      OUTPUT CONTROL VARIABLES
              IPRNT          1  PRINT CONTROL
              IPLOT          0  PLOT CONTROL
              QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT      HYDROGRAPH TIME DATA
               NMIN          5  MINUTES IN COMPUTATION INTERVAL
              IDATE      1   0  STARTING DATE
              ITIME       0000  STARTING TIME
                 NQ        289  NUMBER OF HYDROGRAPH ORDINATES
             NDDATE      2   0  ENDING DATE
             NDTIME       0000  ENDING TIME
              ICENT         19  CENTURY MARK

        COMPUTATION INTERVAL    0.08 HOURS
             TOTAL TIME BASE   24.00 HOURS

      ENGLISH UNITS
          DRAINAGE AREA          SQUARE MILES
          PRECIPITATION DEPTH    INCHES
          LENGTH, ELEVATION      FEET
          FLOW                   CUBIC FEET PER SECOND
          STORAGE VOLUME         ACRE-FEET
          SURFACE AREA           ACRES
          TEMPERATURE            DEGREES FAHRENHEIT

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

          **************
          *            *
 5 KK     *   DEVEL    *
          *            *
          **************

 3 IN      TIME DATA FOR INPUT TIME SERIES
              JXMIN         30  TIME INTERVAL IN MINUTES
             JXDATE      1   0  STARTING DATE
             JXTIME          0  STARTING TIME
```

```
           SUBBASIN RUNOFF DATA

 12 BA      SUBBASIN CHARACTERISTICS
               TAREA        0.07  SUBBASIN AREA

            PRECIPITATION DATA

  6 PB         STORM        7.80  BASIN TOTAL PRECIPITATION

  6 PI        INCREMENTAL PRECIPITATION PATTERN
```

0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
0.04	0.04	0.06	0.06	0.06	0.06	0.06	0.06	0.49	0.49
0.49	0.49	0.49	0.49	0.09	0.09	0.09	0.09	0.09	0.09
0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.04	0.03	0.03
0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		

```
 14 LS      SCS LOSS RATE
               STRTL        0.38  INITIAL ABSTRACTION
              CRVNBR       84.00  CURVE NUMBER
               RTIMP        0.00  PERCENT IMPERVIOUS AREA

 13 UD      SCS DIMENSIONLESS UNITGRAPH
                TLAG        0.45  LAG

                                  ***
```

UNIT HYDROGRAPH
29 END-OF-PERIOD ORDINATES

5.	15.	32.	51.	62.	65.	61.	53.	42.	30.
23.	17.	13.	10.	8.	6.	4.	3.	3.	2.
1.	1.	1.	1.	1.	0.	0.	0.	0.	

HYDROGRAPH AT STATION DEVEL

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	0.00	0.00	0.00	0.	*	1		1205	146	0.09	0.01	0.09	128.
1		0005	2	0.01	0.01	0.00	0.	*	1		1210	147	0.09	0.01	0.09	144.
1		0010	3	0.01	0.01	0.00	0.	*	1		1215	148	0.09	0.01	0.09	151.
1		0015	4	0.01	0.01	0.00	0.	*	1		1220	149	0.09	0.01	0.09	146.
1		0020	5	0.01	0.01	0.00	0.	*	1		1225	150	0.09	0.01	0.09	135.
1		0025	6	0.01	0.01	0.00	0.	*	1		1230	151	0.09	0.01	0.09	120.
1		0030	7	0.01	0.01	0.00	0.	*	1		1235	152	0.05	0.00	0.05	104.
1		0035	8	0.01	0.01	0.00	0.	*	1		1240	153	0.05	0.00	0.05	89.
1		0040	9	0.01	0.01	0.00	0.	*	1		1245	154	0.05	0.00	0.05	76.
1		0045	10	0.01	0.01	0.00	0.	*	1		1250	155	0.05	0.00	0.05	66.
1		0050	11	0.01	0.01	0.00	0.	*	1		1255	156	0.05	0.00	0.05	57.
1		0055	12	0.01	0.01	0.00	0.	*	1		1300	157	0.05	0.00	0.05	50.
1		0100	13	0.01	0.01	0.00	0.	*	1		1305	158	0.03	0.00	0.03	43.
1		0105	14	0.01	0.01	0.00	0.	*	1		1310	159	0.04	0.00	0.03	38.
1		0110	15	0.01	0.01	0.00	0.	*	1		1315	160	0.03	0.00	0.03	34.
1		0115	16	0.01	0.01	0.00	0.	*	1		1320	161	0.03	0.00	0.03	31.
1		0120	17	0.01	0.01	0.00	0.	*	1		1325	162	0.04	0.00	0.03	28.
1		0125	18	0.01	0.01	0.00	0.	*	1		1330	163	0.03	0.00	0.03	25.
1		0130	19	0.01	0.01	0.00	0.	*	1		1335	164	0.03	0.00	0.03	23.
1		0135	20	0.01	0.01	0.00	0.	*	1		1340	165	0.03	0.00	0.03	22.
1		0140	21	0.01	0.01	0.00	0.	*	1		1345	166	0.03	0.00	0.03	20.
1		0145	22	0.01	0.01	0.00	0.	*	1		1350	167	0.03	0.00	0.03	19.
1		0150	23	0.01	0.01	0.00	0.	*	1		1355	168	0.03	0.00	0.03	18.
1		0155	24	0.01	0.01	0.00	0.	*	1		1400	169	0.03	0.00	0.03	17.
1		0200	25	0.01	0.01	0.00	0.	*	1		1405	170	0.02	0.00	0.02	16.
1		0205	26	0.01	0.01	0.00	0.	*	1		1410	171	0.02	0.00	0.02	15.
1		0210	27	0.01	0.01	0.00	0.	*	1		1415	172	0.02	0.00	0.02	15.
1		0215	28	0.01	0.01	0.00	0.	*	1		1420	173	0.02	0.00	0.02	14.
1		0220	29	0.01	0.01	0.00	0.	*	1		1425	174	0.02	0.00	0.02	14.
1		0225	30	0.01	0.01	0.00	0.	*	1		1430	175	0.02	0.00	0.02	13.
1		0230	31	0.01	0.01	0.00	0.	*	1		1435	176	0.02	0.00	0.02	13.
1		0235	32	0.01	0.01	0.00	0.	*	1		1440	177	0.02	0.00	0.02	12.
1		0240	33	0.01	0.01	0.00	0.	*	1		1445	178	0.02	0.00	0.02	12.
1		0245	34	0.01	0.01	0.00	0.	*	1		1450	179	0.02	0.00	0.02	11.
1		0250	35	0.01	0.01	0.00	0.	*	1		1455	180	0.02	0.00	0.02	11.
1		0255	36	0.01	0.01	0.00	0.	*	1		1500	181	0.02	0.00	0.02	10.
1		0300	37	0.01	0.01	0.00	0.	*	1		1505	182	0.02	0.00	0.02	10.
1		0305	38	0.01	0.01	0.00	0.	*	1		1510	183	0.02	0.00	0.02	10.
1		0310	39	0.01	0.01	0.00	0.	*	1		1515	184	0.02	0.00	0.02	10.
1		0315	40	0.01	0.01	0.00	0.	*	1		1520	185	0.02	0.00	0.02	9.
1		0320	41	0.01	0.01	0.00	0.	*	1		1525	186	0.02	0.00	0.02	9.
1		0325	42	0.01	0.01	0.00	0.	*	1		1530	187	0.02	0.00	0.02	9.
1		0330	43	0.01	0.01	0.00	0.	*	1		1535	188	0.02	0.00	0.02	9.
1		0335	44	0.01	0.01	0.00	0.	*	1		1540	189	0.02	0.00	0.02	9.
1		0340	45	0.01	0.01	0.00	0.	*	1		1545	190	0.02	0.00	0.02	9.
1		0345	46	0.01	0.01	0.00	0.	*	1		1550	191	0.02	0.00	0.02	9.
1		0350	47	0.01	0.01	0.00	0.	*	1		1555	192	0.02	0.00	0.02	9.
1		0355	48	0.01	0.01	0.00	0.	*	1		1600	193	0.02	0.00	0.02	9.
1		0400	49	0.01	0.01	0.00	0.	*	1		1605	194	0.01	0.00	0.01	8.
1		0405	50	0.01	0.01	0.00	0.	*	1		1610	195	0.01	0.00	0.01	8.
1		0410	51	0.01	0.01	0.00	0.	*	1		1615	196	0.02	0.00	0.01	8.
1		0415	52	0.01	0.01	0.00	0.	*	1		1620	197	0.01	0.00	0.01	8.
1		0420	53	0.01	0.01	0.00	0.	*	1		1625	198	0.01	0.00	0.01	8.
1		0425	54	0.01	0.01	0.00	0.	*	1		1630	199	0.01	0.00	0.01	8.
1		0430	55	0.01	0.01	0.00	0.	*	1		1635	200	0.01	0.00	0.01	8.

1	0435	56	0.01	0.01	0.00	0.	*	1	1640	201	0.01	0.00	0.01	8.
1	0440	57	0.01	0.01	0.00	0.	*	1	1645	202	0.01	0.00	0.01	7.
1	0445	58	0.01	0.01	0.00	0.	*	1	1650	203	0.01	0.00	0.01	7.
1	0450	59	0.01	0.01	0.00	0.	*	1	1655	204	0.01	0.00	0.01	7.
1	0455	60	0.01	0.01	0.00	0.	*	1	1700	205	0.01	0.00	0.01	7.
1	0500	61	0.01	0.01	0.00	0.	*	1	1705	206	0.01	0.00	0.01	6.
1	0505	62	0.01	0.01	0.00	0.	*	1	1710	207	0.01	0.00	0.01	6.
1	0510	63	0.01	0.01	0.00	0.	*	1	1715	208	0.01	0.00	0.01	6.
1	0515	64	0.01	0.01	0.00	0.	*	1	1720	209	0.01	0.00	0.01	6.
1	0520	65	0.01	0.01	0.00	0.	*	1	1725	210	0.01	0.00	0.01	6.
1	0525	66	0.01	0.01	0.00	0.	*	1	1730	211	0.01	0.00	0.01	6.
1	0530	67	0.01	0.01	0.00	1.	*	1	1735	212	0.01	0.00	0.01	6.
1	0535	68	0.01	0.01	0.00	1.	*	1	1740	213	0.01	0.00	0.01	6.
1	0540	69	0.01	0.01	0.00	1.	*	1	1745	214	0.01	0.00	0.01	6.
1	0545	70	0.01	0.01	0.00	1.	*	1	1750	215	0.01	0.00	0.01	6.
1	0550	71	0.01	0.01	0.00	1.	*	1	1755	216	0.01	0.00	0.01	6.
1	0555	72	0.01	0.01	0.00	1.	*	1	1800	217	0.01	0.00	0.01	6.
1	0600	73	0.01	0.01	0.00	1.	*	1	1805	218	0.01	0.00	0.01	6.
1	0605	74	0.01	0.01	0.00	1.	*	1	1810	219	0.01	0.00	0.01	6.
1	0610	75	0.01	0.01	0.00	1.	*	1	1815	220	0.01	0.00	0.01	6.
1	0615	76	0.01	0.01	0.00	1.	*	1	1820	221	0.01	0.00	0.01	6.
1	0620	77	0.01	0.01	0.00	1.	*	1	1825	222	0.01	0.00	0.01	6.
1	0625	78	0.01	0.01	0.00	1.	*	1	1830	223	0.01	0.00	0.01	6.
1	0630	79	0.01	0.01	0.00	1.	*	1	1835	224	0.01	0.00	0.01	6.
1	0635	80	0.01	0.01	0.00	1.	*	1	1840	225	0.01	0.00	0.01	6.
1	0640	81	0.01	0.01	0.00	1.	*	1	1845	226	0.01	0.00	0.01	6.
1	0645	82	0.01	0.01	0.00	1.	*	1	1850	227	0.01	0.00	0.01	6.
1	0650	83	0.01	0.01	0.00	1.	*	1	1855	228	0.01	0.00	0.01	5.
1	0655	84	0.01	0.01	0.00	2.	*	1	1900	229	0.01	0.00	0.01	5.
1	0700	85	0.01	0.01	0.00	2.	*	1	1905	230	0.01	0.00	0.01	5.
1	0705	86	0.01	0.01	0.00	2.	*	1	1910	231	0.01	0.00	0.01	5.
1	0710	87	0.01	0.01	0.00	2.	*	1	1915	232	0.01	0.00	0.01	5.
1	0715	88	0.01	0.01	0.00	2.	*	1	1920	233	0.01	0.00	0.01	5.
1	0720	89	0.01	0.01	0.00	2.	*	1	1925	234	0.01	0.00	0.01	5.
1	0725	90	0.01	0.01	0.00	2.	*	1	1930	235	0.01	0.00	0.01	5.
1	0730	91	0.01	0.01	0.00	2.	*	1	1935	236	0.01	0.00	0.01	5.
1	0735	92	0.01	0.01	0.01	2.	*	1	1940	237	0.01	0.00	0.01	5.
1	0740	93	0.01	0.01	0.01	2.	*	1	1945	238	0.01	0.00	0.01	6.
1	0745	94	0.02	0.01	0.01	2.	*	1	1950	239	0.01	0.00	0.01	6.
1	0750	95	0.01	0.01	0.01	2.	*	1	1955	240	0.01	0.00	0.01	6.
1	0755	96	0.01	0.01	0.01	2.	*	1	2000	241	0.01	0.00	0.01	6.
1	0800	97	0.01	0.01	0.01	3.	*	1	2005	242	0.01	0.00	0.01	6.
1	0805	98	0.02	0.01	0.01	3.	*	1	2010	243	0.01	0.00	0.01	6.
1	0810	99	0.02	0.01	0.01	3.	*	1	2015	244	0.01	0.00	0.01	6.
1	0815	100	0.02	0.01	0.01	3.	*	1	2020	245	0.01	0.00	0.01	5.
1	0820	101	0.02	0.01	0.01	3.	*	1	2025	246	0.01	0.00	0.01	5.
1	0825	102	0.02	0.01	0.01	3.	*	1	2030	247	0.01	0.00	0.01	5.
1	0830	103	0.02	0.01	0.01	3.	*	1	2035	248	0.01	0.00	0.01	5.
1	0835	104	0.02	0.01	0.01	3.	*	1	2040	249	0.01	0.00	0.01	5.
1	0840	105	0.02	0.01	0.01	3.	*	1	2045	250	0.01	0.00	0.01	5.
1	0845	106	0.02	0.01	0.01	3.	*	1	2050	251	0.01	0.00	0.01	5.
1	0850	107	0.02	0.01	0.01	4.	*	1	2055	252	0.01	0.00	0.01	5.
1	0855	108	0.02	0.01	0.01	4.	*	1	2100	253	0.01	0.00	0.01	5.
1	0900	109	0.02	0.01	0.01	4.	*	1	2105	254	0.01	0.00	0.01	4.
1	0905	110	0.02	0.01	0.01	4.	*	1	2110	255	0.01	0.00	0.01	4.
1	0910	111	0.02	0.01	0.01	4.	*	1	2115	256	0.01	0.00	0.01	4.
1	0915	112	0.02	0.01	0.01	4.	*	1	2120	257	0.01	0.00	0.01	4.
1	0920	113	0.02	0.01	0.01	4.	*	1	2125	258	0.01	0.00	0.01	4.
1	0925	114	0.02	0.01	0.01	5.	*	1	2130	259	0.01	0.00	0.01	4.
1	0930	115	0.02	0.01	0.01	5.	*	1	2135	260	0.01	0.00	0.01	4.

1	0935	116	0.02	0.01	0.01	5.	*	1	2140	261	0.01	0.00	0.01	4.
1	0940	117	0.02	0.01	0.01	5.	*	1	2145	262	0.01	0.00	0.01	4.
1	0945	118	0.02	0.01	0.01	5.	*	1	2150	263	0.01	0.00	0.01	4.
1	0950	119	0.02	0.01	0.01	5.	*	1	2155	264	0.01	0.00	0.01	4.
1	0955	120	0.02	0.01	0.01	6.	*	1	2200	265	0.01	0.00	0.01	4.
1	1000	121	0.02	0.01	0.01	6.	*	1	2205	266	0.01	0.00	0.01	4.
1	1005	122	0.03	0.01	0.02	6.	*	1	2210	267	0.01	0.00	0.01	4.
1	1010	123	0.03	0.01	0.02	6.	*	1	2215	268	0.01	0.00	0.01	4.
1	1015	124	0.03	0.01	0.02	7.	*	1	2220	269	0.01	0.00	0.01	4.
1	1020	125	0.03	0.01	0.02	7.	*	1	2225	270	0.01	0.00	0.01	4.
1	1025	126	0.03	0.01	0.02	7.	*	1	2230	271	0.01	0.00	0.01	4.
1	1030	127	0.03	0.01	0.02	8.	*	1	2235	272	0.01	0.00	0.01	4.
1	1035	128	0.04	0.01	0.03	8.	*	1	2240	273	0.01	0.00	0.01	4.
1	1040	129	0.04	0.01	0.03	8.	*	1	2245	274	0.01	0.00	0.01	4.
1	1045	130	0.04	0.01	0.03	9.	*	1	2250	275	0.01	0.00	0.01	4.
1	1050	131	0.04	0.01	0.03	9.	*	1	2255	276	0.01	0.00	0.01	4.
1	1055	132	0.04	0.01	0.03	10.	*	1	2300	277	0.01	0.00	0.01	4.
1	1100	133	0.04	0.01	0.03	11.	*	1	2305	278	0.01	0.00	0.01	4.
1	1105	134	0.06	0.02	0.04	11.	*	1	2310	279	0.01	0.00	0.01	3.
1	1110	135	0.06	0.02	0.04	12.	*	1	2315	280	0.01	0.00	0.01	3.
1	1115	136	0.06	0.02	0.04	13.	*	1	2320	281	0.01	0.00	0.01	3.
1	1120	137	0.06	0.02	0.05	14.	*	1	2325	282	0.01	0.00	0.01	3.
1	1125	138	0.06	0.02	0.05	16.	*	1	2330	283	0.01	0.00	0.01	3.
1	1130	139	0.06	0.02	0.05	17.	*	1	2335	284	0.01	0.00	0.01	3.
1	1135	140	0.49	0.11	0.38	20.	*	1	2340	285	0.01	0.00	0.01	3.
1	1140	141	0.49	0.09	0.40	26.	*	1	2345	286	0.01	0.00	0.01	3.
1	1145	142	0.49	0.07	0.42	38.	*	1	2350	287	0.01	0.00	0.01	3.
1	1150	143	0.49	0.06	0.43	57.	*	1	2355	288	0.01	0.00	0.01	3.
1	1155	144	0.49	0.05	0.44	80.	*	2	0000	289	0.01	0.00	0.01	3.
1	1200	145	0.49	0.04	0.45	105.	*							

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TOTAL RAINFALL = 7.30, TOTAL LOSS = 1.90, TOTAL EXCESS = 5.90

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
151.	12.25	(CFS)	33.	10.	10.	10.
		(INCHES)	4.636	5.858	5.858	5.858
		(AC-FT)	16.	21.	21.	21.

CUMULATIVE AREA = 0.07 SQ MI

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          *             *
 15 KK    *     POND    *
          *             *
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HYDROGRAPH ROUTING DATA

16 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 1343.80 INITIAL CONDITION
X 0.00 WORKING R AND D COEFFICIENT

17 SA	AREA	0.1	0.0	0.4	0.8	0.9	1.0	1.1	1.3	1.3	
18 SE	ELEVATION	1343.80	1344.00	1345.00	1346.00	1347.00	1348.00	1349.00	1350.00	1350.20	
19 SQ	DISCHARGE	0.	1.	5.	15.	26.	35.	40.	40.	45.	56.
		72.	92.	115.							
21 SE	ELEVATION	1343.80	1344.00	1345.00	1346.00	1347.00	1348.00	1349.00	1349.40	1349.50	1349.60
		1349.70	1349.80	1349.90							

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COMPUTED STORAGE-ELEVATION DATA

STORAGE	0.00	0.01	0.16	0.72	1.55	2.50	3.58	4.78	5.03
ELEVATION	1343.80	1344.00	1345.00	1346.00	1347.00	1348.00	1349.00	1350.00	1350.20

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.01	0.16	0.72	1.55	2.50	3.58	4.04	4.16	4.28
OUTFLOW	0.10	1.00	4.50	15.00	26.00	35.00	40.00	40.00	45.20	56.40
ELEVATION	1343.80	1344.00	1345.00	1346.00	1347.00	1348.00	1349.00	1349.40	1349.50	1349.60
STORAGE	4.40	4.53	4.65	4.78	5.03					
OUTFLOW	72.10	91.70	114.70	137.70	183.70					
ELEVATION	1349.70	1349.80	1349.90	1350.00	1350.20					

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HYDROGRAPH AT STATION POND

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1343.8	*	1		0805	98	2.	0.1	1344.3	*	1		1610	195	13.	0.6	1345.8
1		0005	2	0.	0.0	1343.8	*	1		0810	99	2.	0.1	1344.3	*	1		1615	196	13.	0.6	1345.8
1		0010	3	0.	0.0	1343.8	*	1		0815	100	2.	0.1	1344.4	*	1		1620	197	12.	0.6	1345.7
1		0015	4	0.	0.0	1343.8	*	1		0820	101	2.	0.1	1344.4	*	1		1625	198	12.	0.5	1345.7
1		0020	5	0.	0.0	1343.8	*	1		0825	102	2.	0.1	1344.4	*	1		1630	199	11.	0.5	1345.6
1		0025	6	0.	0.0	1343.8	*	1		0830	103	3.	0.1	1344.4	*	1		1635	200	11.	0.5	1345.6
1		0030	7	0.	0.0	1343.8	*	1		0835	104	3.	0.1	1344.5	*	1		1640	201	10.	0.5	1345.6
1		0035	8	0.	0.0	1343.8	*	1		0840	105	3.	0.1	1344.5	*	1		1645	202	10.	0.4	1345.5
1		0040	9	0.	0.0	1343.8	*	1		0845	106	3.	0.1	1344.5	*	1		1650	203	10.	0.4	1345.5
1		0045	10	0.	0.0	1343.8	*	1		0850	107	3.	0.1	1344.6	*	1		1655	204	9.	0.4	1345.5
1		0050	11	0.	0.0	1343.8	*	1		0855	108	3.	0.1	1344.6	*	1		1700	205	9.	0.4	1345.4
1		0055	12	0.	0.0	1343.8	*	1		0900	109	3.	0.1	1344.6	*	1		1705	206	9.	0.4	1345.4
1		0100	13	0.	0.0	1343.8	*	1		0905	110	3.	0.1	1344.7	*	1		1710	207	8.	0.4	1345.4
1		0105	14	0.	0.0	1343.8	*	1		0910	111	3.	0.1	1344.7	*	1		1715	208	8.	0.4	1345.3
1		0110	15	0.	0.0	1343.8	*	1		0915	112	4.	0.1	1344.7	*	1		1720	209	8.	0.3	1345.3
1		0115	16	0.	0.0	1343.8	*	1		0920	113	4.	0.1	1344.8	*	1		1725	210	8.	0.3	1345.3
1		0120	17	0.	0.0	1343.8	*	1		0925	114	4.	0.1	1344.8	*	1		1730	211	7.	0.3	1345.3
1		0125	18	0.	0.0	1343.8	*	1		0930	115	4.	0.1	1344.8	*	1		1735	212	7.	0.3	1345.3
1		0130	19	0.	0.0	1343.8	*	1		0935	116	4.	0.1	1344.9	*	1		1740	213	7.	0.3	1345.2
1		0135	20	0.	0.0	1343.8	*	1		0940	117	4.	0.1	1344.9	*	1		1745	214	7.	0.3	1345.2
1		0140	21	0.	0.0	1343.8	*	1		0945	118	4.	0.1	1344.9	*	1		1750	215	7.	0.3	1345.2
1		0145	22	0.	0.0	1343.8	*	1		0950	119	4.	0.2	1345.0	*	1		1755	216	7.	0.3	1345.2
1		0150	23	0.	0.0	1343.8	*	1		0955	120	5.	0.2	1345.0	*	1		1800	217	7.	0.3	1345.2
1		0155	24	0.	0.0	1343.8	*	1		1000	121	5.	0.2	1345.0	*	1		1805	218	6.	0.3	1345.2
1		0200	25	0.	0.0	1343.8	*	1		1005	122	5.	0.2	1345.0	*	1		1810	219	6.	0.3	1345.2
1		0205	26	0.	0.0	1343.8	*	1		1010	123	5.	0.2	1345.0	*	1		1815	220	6.	0.3	1345.2
1		0210	27	0.	0.0	1343.8	*	1		1015	124	5.	0.2	1345.1	*	1		1820	221	6.	0.2	1345.2
1		0215	28	0.	0.0	1343.8	*	1		1020	125	5.	0.2	1345.1	*	1		1825	222	6.	0.2	1345.2
1		0220	29	0.	0.0	1343.8	*	1		1025	126	6.	0.2	1345.1	*	1		1830	223	6.	0.2	1345.1
1		0225	30	0.	0.0	1343.8	*	1		1030	127	6.	0.2	1345.1	*	1		1835	224	6.	0.2	1345.1
1		0230	31	0.	0.0	1343.8	*	1		1035	128	6.	0.2	1345.1	*	1		1840	225	6.	0.2	1345.1
1		0235	32	0.	0.0	1343.8	*	1		1040	129	6.	0.3	1345.2	*	1		1845	226	6.	0.2	1345.1
1		0240	33	0.	0.0	1343.8	*	1		1045	130	7.	0.3	1345.2	*	1		1850	227	6.	0.2	1345.1
1		0245	34	0.	0.0	1343.8	*	1		1050	131	7.	0.3	1345.2	*	1		1855	228	6.	0.2	1345.1
1		0250	35	0.	0.0	1343.8	*	1		1055	132	7.	0.3	1345.3	*	1		1900	229	6.	0.2	1345.1
1		0255	36	0.	0.0	1343.8	*	1		1100	133	8.	0.3	1345.3	*	1		1905	230	6.	0.2	1345.1
1		0300	37	0.	0.0	1343.8	*	1		1105	134	8.	0.3	1345.3	*	1		1910	231	6.	0.2	1345.1
1		0305	38	0.	0.0	1343.8	*	1		1110	135	8.	0.4	1345.4	*	1		1915	232	6.	0.2	1345.1
1		0310	39	0.	0.0	1343.8	*	1		1115	136	9.	0.4	1345.4	*	1		1920	233	6.	0.2	1345.1
1		0315	40	0.	0.0	1343.8	*	1		1120	137	10.	0.4	1345.5	*	1		1925	234	5.	0.2	1345.1
1		0320	41	0.	0.0	1343.8	*	1		1125	138	10.	0.5	1345.5	*	1		1930	235	5.	0.2	1345.1
1		0325	42	0.	0.0	1343.8	*	1		1130	139	11.	0.5	1345.6	*	1		1935	236	5.	0.2	1345.1
1		0330	43	0.	0.0	1343.8	*	1		1135	140	12.	0.6	1345.7	*	1		1940	237	5.	0.2	1345.1
1		0335	44	0.	0.0	1343.8	*	1		1140	141	13.	0.6	1345.8	*	1		1945	238	5.	0.2	1345.1
1		0340	45	0.	0.0	1343.8	*	1		1145	142	15.	0.8	1346.0	*	1		1950	239	5.	0.2	1345.1
1		0345	46	0.	0.0	1343.8	*	1		1150	143	18.	1.0	1346.3	*	1		1955	240	5.	0.2	1345.1
1		0350	47	0.	0.0	1343.8	*	1		1155	144	23.	1.3	1346.7	*	1		2000	241	5.	0.2	1345.1
1		0355	48	0.	0.0	1343.8	*	1		1200	145	28.	1.8	1347.2	*	1		2005	242	6.	0.2	1345.1
1		0400	49	0.	0.0	1343.8	*	1		1205	146	34.	2.4	1347.8	*	1		2010	243	6.	0.2	1345.1
1		0405	50	0.	0.0	1343.8	*	1		1210	147	38.	3.0	1348.5	*	1		2015	244	6.	0.2	1345.1
1		0410	51	0.	0.0	1343.8	*	1		1215	148	40.	3.8	1349.2	*	1		2020	245	6.	0.2	1345.1
1		0415	52	0.	0.0	1343.8	*	1		1220	149	75.	4.4	1349.7	*	1		2025	246	6.	0.2	1345.1
1		0420	53	0.	0.0	1343.8	*	1		1225	150	124.	4.7	1349.9	*	1		2030	247	5.	0.2	1345.1
1		0425	54	0.	0.0	1343.8	*	1		1230	151	127.	4.7	1350.0	*	1		2035	248	5.	0.2	1345.1
1		0430	55	0.	0.0	1343.8	*	1		1235	152	115.	4.7	1349.9	*	1		2040	249	5.	0.2	1345.1
1		0435	56	0.	0.0	1343.8	*	1		1240	153	100.	4.6	1349.8	*	1		2045	250	5.	0.2	1345.1
1		0440	57	0.	0.0	1343.8	*	1		1245	154	87.	4.5	1349.8	*	1		2050	251	5.	0.2	1345.1
1		0445	58	0.	0.0	1343.8	*	1		1250	155	75.	4.4	1349.7	*	1		2055	252	5.	0.2	1345.1
1		0450	59	0.	0.0	1343.8	*	1		1255	156	66.	4.4	1349.7	*	1		2100	253	5.	0.2	1345.1
1		0455	60	0.	0.0	1343.8	*	1		1300	157	58.	4.3	1349.6	*	1		2105	254	5.	0.2	1345.1
1		0500	61	0.	0.0	1343.8	*	1		1305	158	52.	4.2	1349.5	*	1		2110	255	5.	0.2	1345.1
1		0505	62	0.	0.0	1343.8	*	1		1310	159	47.	4.2	1349.5	*	1		2115	256	5.	0.2	1345.0
1		0510	63	0.	0.0	1343.8	*	1		1315	160	43.	4.1	1349.5	*	1		2120	257	5.	0.2	1345.0
1		0515	64	0.	0.0	1343.8	*	1		1320	161	40.	4.1	1349.4	*	1		2125	258	5.	0.2	1345.0
1		0520	65	0.	0.0	1343.9	*	1		1325	162	40.	4.0	1349.3	*	1		2130	259	5.	0.2	1345.0
1		0525	66	0.	0.0	1343.9	*	1		1330	163	40.	3.9	1349.3	*	1		2135	260	5.	0.2	1345.0
1		0530	67	0.	0.0	1343.9	*	1		1335	164	40.	3.8	1349.2	*	1		2140	261	5.	0.2	1345.0
1		0535	68	1.	0.0	1343.9	*	1		1340	165	40.	3.7	1349.1	*	1		2145	262	5.	0.2	1345.0
1		0540	69	1.	0.0	1343.9	*	1		1345	166	40.	3.5	1349.0	*	1		2150	263	4.	0.2	1345.0
1		0545	70	1.	0.0	1343.9	*	1		1350	167	39.	3.4	1348.8	*	1		2155	264	4.	0.2	1345.0
1		0550	71	1.	0.0	1343.9	*	1		1355	168	38.	3.2	1348.7	*	1		2200	265	4.	0.1	1344.9
1		0555	72	1.	0.0	1343.9	*	1		1400	169	38.	3.1	1348.6	*	1		2205	266	4.	0.1	1344.9
1		0600	73	1.	0.0	1344.0	*	1		1405	170	37.	3.0	1348.4	*	1		2210	267	4.	0.1	1344.9
1		0605	74	1.	0.0	1344.0	*	1		1410	171	36.	2.8	1348.3	*	1		2215	268	4.	0.1	1344.9
1		0610	75	1.	0.0	1344.0	*	1		1415	172	36.	2.7	1348.2	*	1		2220	269	4.	0.1	1344.8
1		0615	76	1.	0.0	1344.0	*	1		1420	173	35.	2.5	1348.0	*	1		2225	270	4.	0.1	1344.8
1		0620	77	1.	0.0	1344.0	*	1		1425	174	34.	2.4	1347.9	*	1		2230	271	4.	0.1	1344.8
1		0625	78	1.	0.0	1344.0	*	1		1430	175	33.	2.2	1347.7	*	1		2235	272	4.	0.1	1344.8
1		0630	79	1.	0.0	1344.0	*	1		1435	176	31.	2.1	1347.6	*	1		2240	273	4.	0.1	1344.8
1		0635	80	1.	0.0	1344.0	*	1		1440	177	30.	2.0	1347.5	*	1		2245	274	4.	0.1	1344.8
1		0640	81	1.	0.0	1344.0	*	1		1445	178	29.	1.9	1347.3	*	1		2250	275	4.	0.1	1344.8
1		0645	82	1.	0.0	1344.0	*	1		1450	179	28.	1.8	1347.2	*	1		2255	276	4.	0.1	1344.8
1		0650	83	1.	0.0	1344.0	*	1		1455	180	27.	1.6	1347.1	*	1		2300	277	4.	0.1	1344.8
1		0655	84	1.	0.0	1344.1	*	1		1500	181	26.	1.5	1347.0	*	1		2305	278	4.	0.1	1344.8
1		0700	85	1.	0.0	1344.1	*	1		1505	182	24.	1.4	1346.9	*	1		2310	279	4.	0.1	1344.8
1		0705	86	1.	0.0	1344.1	*	1		1510	183	23.	1.3	1346.7	*	1		2315	280	4.	0.1	1344.8
1		0710	87	1.	0.0	1344.1	*	1		1515	184	22.	1.2	1346.6	*	1		2320	281	4.	0.1	1344.8
1		0715	88	1.	0.0	1344.1	*	1		1520	185	21.	1.2	1346.5	*	1		2325	282	4.	0.1	1344.7
1		0720	89	1.	0.0	1344.1	*	1		1525	186	20.	1.1	1346.4	*	1		2330	283	4.	0.1	1344.7
1		0725	90	2.	0.0	1344.2	*	1		1530	187	19.	1.0	1346.4	*	1		2335	284	4.	0.1	1344.7
1		0730	91	2.	0.0	1344.2	*	1		1535	188	18.	1.0	1346.3	*	1		2340	285	3.	0.1	1344.7
1		0735	92	2.	0.0	1344.2	*	1		1540	189	17.	0.9	1346.2	*	1		2345	286	3.	0.1	1344.7
1		0740	93	2.	0.0	1344.2	*	1		1545	190	17.	0.8	1346.1	*	1		2350	287	3.	0.1	1344.7
1		0745	94	2.	0.0	1344.2	*	1		1550	191	16.	0.8	1346.1	*	1		2355	288	3.	0.1	1344.7
1		0750	95	2.	0.0	1344.3	*	1		1555	192	15.	0.7	1346.0	*	2		0000	289	3.	0.1	1344.7
1		0755	96	2.	0.0	1344.3	*	1		1600	193	15.	0.7	1346.0	*							
1		0800	97	2.	0.1	1344.3	*	1		1605	194	14.	0.7	1345.9	*							

****

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	24.00-HR
127.	12.50	(CFS)	33.	10.	10.	10.
		(INCHES)	4.597	5.837	5.837	5.837
		(AC-FT)	16.	21.	21.	21.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	24.00-HR
5.	12.50	2.	1.	1.	1.

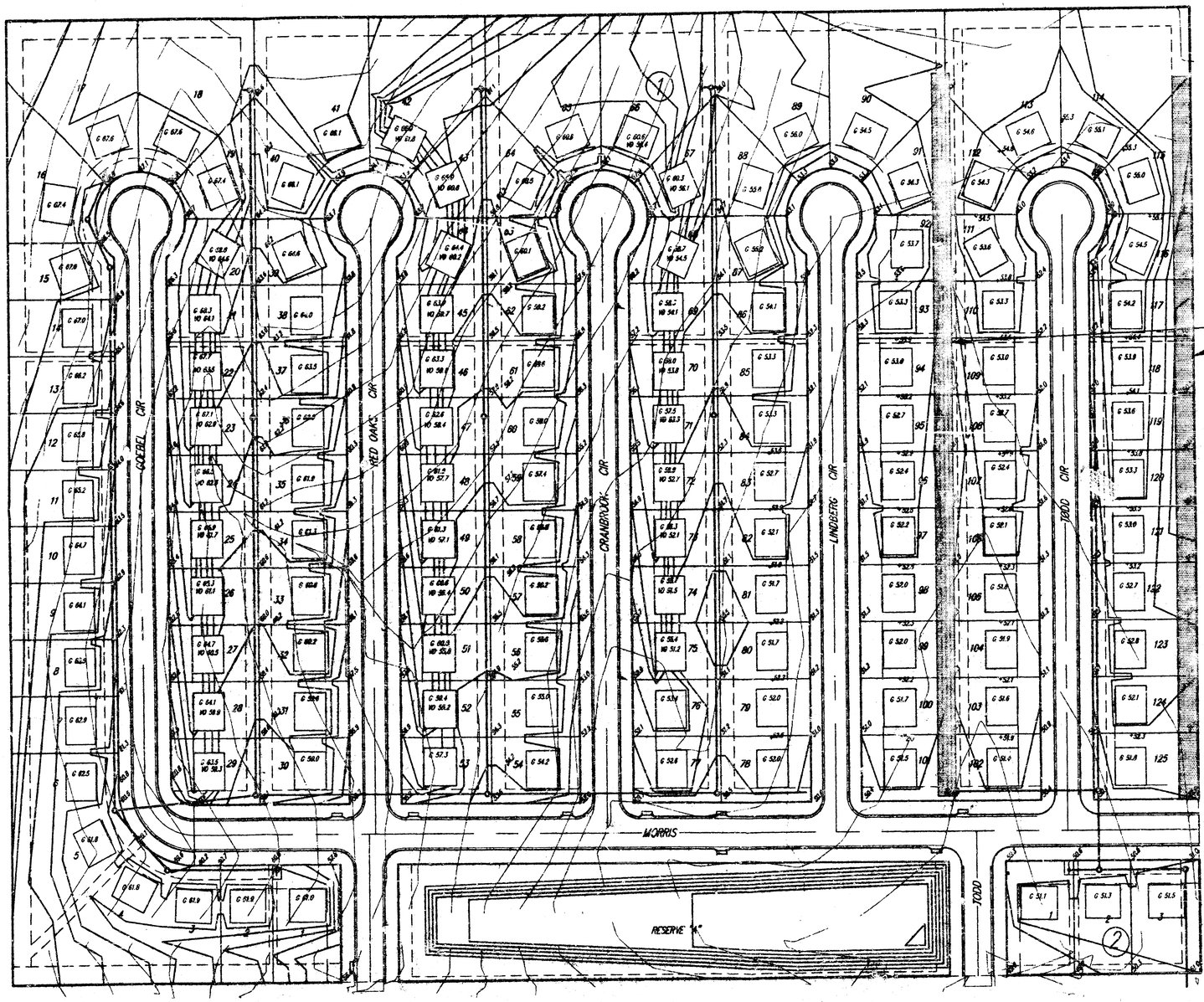
PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	24.00-HR
1349.95	12.50	1347.36	1345.20	1345.20	1345.20

CUMULATIVE AREA = 0.07 SQ MI

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	DEVEL	151.	12.25	33.	10.	10.	0.07		
ROUTED TO	POND	127.	12.50	33.	10.	10.	0.07	1349.95	12.50

*** NORMAL END OF HEC-1 ***



APPROVED
DRAINAGE PLAN

HARRISON PARK 2ND ADDITION
SITE GRADING PLAN
SEDGWICK COUNTY, KS

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
316-264-8008
FAX 264-7025
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER

DESIGN	DRAWN	VERIFY	REVISED	DATE
CMB	AML			Sept. 24, 1992

SHEET 7 OF 8

KANSAS TURNPIKE AUTHORITY RIGHT-OF-WAY
CONDEMNATION CASE NO. A-55770

N 90° E
1,324.23'

50' ACCESS EASEMENT
FILM 1502, PAGE 1400

KANSAS TURNPIKE AUTHORITY R/W
CONDEMNATION CASE A-55770

30' ACCESS EASEMENT FILM 1502, PAGE 1400

WEBB ROAD

LOT 1
FIRST ASSEMBLY OF GOD ADDITION

N 00°21'04" E
1020.23'

S 00°35'12" W
1021.72'

UNPLATTED

CONDUIT DATA		
100	15"	0.86%
101	15"	1.63%
102	18"	0.48%
103	21"	0.85%
104	30"	0.98%
105	30"	2.64%
106	24"	1.32%
107	30"	1.61%
108	24"	1.17%
109	24"	1.85%
110	27"	0.90%

POND DATA:
SIDE SLOPES 4:1
FLOW OUT 27" RCP = 1343.80
TOP ELEVATION = 1351.00
100 YR. WATER SURFACE = 150.00
OUTLET WEIR: CONCRETE, L = 30'
FLOW ELEVATION WEIR = 1349.40
TOP OF WEIR ELEVATION = 1350.00

GOEBEL CIR
RED OAKS CIR
CRANBROOK CIR
HAWLEY CIR
TODD CIR

MORRIS

RESERVE "A"
1349

SE COR LOT 1
FIRST ASSEMBLY OF
GOD ADDITION

SE COR NW 1/4
SEC 28-27S-1E

1326.01'
N 89°56'07" W

FOX RUN
STONEYBROOK CIR
GOEBEL
LINCOLN
RED OAKS
HARRISON PARK ADDITION
TODD
LINCOLN
UNPLATTED

SRB

1" = 100'
ELEV = MSL

GROSS SIZE OF PROPERTY
1,352,921.71 SQ. FT.
31.058 ACRES

PROJECT SITE
HARRISON PARK 2ND ADDITION

VICINITY MAP

DRAINAGE PLAN
HARRISON PARK 2ND ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS.

DWG FILE: Chris\drainage\newharrison
PROJECT NO. 96A00423P

DRAINAGE PLAN
HARRISON PARK 2ND ADDITION

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
316-264-8009
FAX 264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER

DRAWN	DESIGN	REVIEW	DATE	UTILITY	SRB JOB
AMS	CMB		4-12-96		