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STORM WATER DETENTION ANALYSIS
PREPARED BY: BAX ENGINEERING CO., INC.
HANSEN INDUSTRIAL PARK - O' FALLON, MO
BAX PROJECT NO. **95-6743AB**
September 03, 2004
REVISED: March 13, 2006 Per As-Built Topo

INTRODUCTION:

The presently undeveloped tract of land is located in the City of O' Fallon, Missouri. A proposed dry detention basin located along the Northern edge of the development will be used as the detention facility for the watershed area that will discharge to that point of the development. The storage volume and outflow rate shall be proportioned to insure that the peak rate of runoff leaving the site under post-developed conditions is less than or equal to the peak rate of runoff leaving the site under pre-developed conditions for the 2, 15, 25, and 100-year - 20 minutes design storms.

GENERAL SITE DATA AND RUNOFF CALCULATIONS:

The pre-developed P.I. factors to be used for the analysis are:

2 year	0-5%	Impervious	1.15	cfs/ac
15 year	0-5%	Impervious	1.87	cfs/ac
25 year	0-5%	Impervious	2.31	cfs/ac
100 year	0-5%	Impervious	2.95	cfs/ac
2 year	100%	Impervious	2.39	cfs/ac
15 year	100%	Impervious	3.85	cfs/ac
25 year	100%	Impervious	4.75	cfs/ac
100 year	100%	Impervious	6.08	cfs/ac

The post-developed P.I. factors to be used for the analysis are:

2 year	0-5%	Impervious	1.15	cfs/ac
15 year	0-5%	Impervious	1.87	cfs/ac
25 year	0-5%	Impervious	2.31	cfs/ac
100 year	0-5%	Impervious	2.95	cfs/ac

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2 year	30%	Impervious	1.29	cfs/ac
15 year	30%	Impervious	2.09	cfs/ac
25 year	30%	Impervious	2.58	cfs/ac
100 year	30%	Impervious	3.30	cfs/ac
2 year	100%	Impervious	2.39	cfs/ac
15 year	100%	Impervious	3.85	cfs/ac
25 year	100%	Impervious	4.75	cfs/ac
100 year	100%	Impervious	6.08	cfs/ac

TIME OF CONCENTRATION:

Of the inflows to the basin, the most remote point lies at the Southwest corner of the site. Flows will travel approximately 465 feet overland to a area inlet. Time of concentration is estimated as follows:

T(overland): L = 465 feet

Elevation difference = 18.00 feet
T(overland) = 3.00 minutes: See Figure 1

T(storm pipe): L = 515 feet

Estimated velocity 7 feet per second
T(storm pipe) = 1.22 minutes

Total time = 4.22 use **4 minutes**

BASIN PEAK INFLOWS:

Inflows to the basin have been estimated from the drainage area map included in the construction plans.

2 year-20 minute storm:

On site	0.30 ac x	1.15 cfs/ac =	0.35 cfs
On site	3.26 ac x	1.29 cfs/ac =	4.21 cfs
On site	7.60 ac x	2.39 cfs/ac =	18.16 cfs
Off site	2.57 ac x	1.15 cfs/ac =	2.96 cfs
Off site	9.49 ac x	2.39 cfs/ac =	+ 22.68 cfs
		Total =	48.36 cfs

15 year-20 minute storm:

On site	0.30 ac x	1.87 cfs/ac =	0.56 cfs
On site	3.26 ac x	2.09 cfs/ac =	6.81 cfs
On site	7.60 ac x	3.85 cfs/ac =	29.26 cfs
Off site	2.57 ac x	1.87 cfs/ac =	4.81 cfs
Off site	9.49 ac x	3.85 cfs/ac =	+ 36.54 cfs
		Total =	77.98 cfs

25 year-20 minute storm:

On site	0.30 ac x	2.31 cfs/ac =	0.69 cfs
On site	3.26 ac x	2.58 cfs/ac =	8.41 cfs
On site	7.60 ac x	4.75 cfs/ac =	36.10 cfs
Off site	2.57 ac x	2.31 cfs/ac =	5.94 cfs
Off site	9.49 ac x	4.75 cfs/ac =	+ 45.08 cfs
		Total =	96.22 cfs

100 year-20 minute storm:

On site	0.30 ac x	2.95 cfs/ac =	0.89 cfs
On site	3.26 ac x	3.30 cfs/ac =	10.76 cfs
On site	7.60 ac x	6.08 cfs/ac =	46.21 cfs
Off site	2.57 ac x	2.95 cfs/ac =	7.58 cfs
Off site	9.49 ac x	6.08 cfs/ac =	+ 57.70 cfs
		Total =	123.14 cfs

2 year-20 minute storm:	48.36 cfs
15 year-20 minute storm:	77.98 cfs
25 year-20 minute storm:	96.22 cfs
100 year-20 minute storm:	123.14 cfs

REQUIRED ATTENUATION: (20 minute storms)

The Required Attenuation can be found by subtracting the existing runoff rate from the proposed runoff rate for the developed portion of the site. The proposed runoff is made up of the basin inflows and any water that is going to bypass the detention basin. All bypassing water will be accounted for in the detention calculations.

Existing Runoff

2 year-20 minute storm:

12.93 ac x 1.15 cfs/ac = 14.87 cfs

15 year-20 minute storm:

12.93 ac x 1.87 cfs/ac = 24.18 cfs

25 year-20 minute storm:

12.93 ac x 2.31 cfs/ac = 29.87 cfs

100 year-20 minute storm:

12.93 ac x 2.95 cfs/ac = 38.14 cfs

Proposed Runoff

2 year-20 minute storm:

0.76 ac	x	1.15 cfs/ac	=	0.87 cfs
3.26 ac	x	1.29 cfs/ac	=	4.21 cfs
8.91 ac	x	2.39 cfs/ac	= +	21.29 cfs
		TOTAL	=	26.37 cfs

15 year-20 minute storm:

0.76 ac	x	1.87 cfs/ac	=	1.42 cfs
3.26 ac	x	2.09 cfs/ac	=	6.81 cfs
8.91 ac	x	3.85 cfs/ac	= +	34.30 cfs
		TOTAL	=	42.53 cfs

25 year-20 minute storm:

0.76 ac	x	2.31 cfs/ac	=	1.76 cfs
3.26 ac	x	2.58 cfs/ac	=	8.41 cfs
8.91 ac	x	4.75 cfs/ac	= +	42.32 cfs
		TOTAL	=	52.49 cfs

100 year-20 minute storm:

0.76 ac	x	2.95 cfs/ac	=	2.24 cfs
3.26 ac	x	3.30 cfs/ac	=	10.76 cfs
8.91 ac	x	6.08 cfs/ac	= +	54.17 cfs
		TOTAL	=	67.17 cfs

Required Attenuation

DESIGN STORM	PROPOSED RUNOFF		EXISTING RUNOFF		REQUIRED ATTENUATION
2 year	26.37 cfs	-	14.87 cfs	=	11.50 cfs
15 year	42.53 cfs	-	24.18 cfs	=	18.35 cfs
25 year	52.49 cfs	-	29.87 cfs	=	22.62 cfs
100 year	67.17 cfs	-	38.14 cfs	=	29.03 cfs

PERMITTED RELEASE RATE:

The permitted release rate of the basin was found by subtracting the required attenuation from the peak inflow to the basin for each design storm:

DESIGN STORM	PEAK INFLOW		REQUIRED ATTENUATION		PERMITTED RELEASE
2 year	48.36 cfs	-	11.50 cfs	=	36.86 cfs
15 year	77.98 cfs	-	18.35 cfs	=	59.63 cfs
25 year	96.22 cfs	-	22.62 cfs	=	73.60 cfs
100 year	123.14 cfs	-	29.03 cfs	=	94.11 cfs

STORM ROUTING CALCULATIONS AND RESULTS:

A computer program was used in routing the design 2, 15, 25, and 100 year-20 minute storms through the detention basin. As found in the routing calculations, the results are as follows:

20 MIN STORM	PEAK INFLOW	PERMITTED RELEASE RATE	CALCULATED RELEASE RATE	PEAK ELEVATION
2 year	48.36 cfs	36.86 cfs	35.07 cfs	553.60 ft
15 year	77.98 cfs	59.63 cfs	58.68 cfs	555.83 ft
25 year	96.22 cfs	73.60 cfs	73.09 cfs	556.90 ft
100 year	123.14 cfs	94.11 cfs	94.11 cfs	558.29 ft

CHECK 100-YEAR OUTFLOW:(low-flow slots blocked)

WEIR FLOW $Q = C \times L \times H (3/2)$

Where 100-YEAR FLOW Q	=	123.14 cfs
C	=	3.0
L	=	15.71 ft
H	=	1.90 ft
Sill	=	558.75 ft – AB 556.52
100 yr h/w	=	560.65 ft

SEDIMENT VOLUME CALCULATION

The basin shall be analyzed to accommodate 2 years of sediment storage.

- The Drainage area to the basin = 23.22 Acres
- Rational method runoff coefficient 'c' = 0.6
- Annual sediment storage volume (from Figure 6) = 125 ft^3/Acre
- The sediment volume and storage required =

2 years of sediment storage = 23.22 Acres (125 ft^3/Acre/Year)(2 Years)

2 years of sediment storage = 5,805 ft^3

To provide for additional sediment storage the top of the overflow sill will be set at 558.75. Volume between the 100-year high water of 558.29 and the overflow sill elevation of 558.75 is 5,965.74 ft^3.

5,965.74 ft^3 provided > 5,808 ft^3 required

SUMMARY:

2 Year - 20 MINUTE HIGH-WATER	553.60 ft
15 Year - 20 MINUTE HIGH-WATER	555.83 ft
25 Year - 20 MINUTE HIGH-WATER	556.90 ft
100 Year - 20 MINUTE HIGH-WATER	558.29 ft
100 Year - 20 MINUTE HIGH-WATER (low-flow blocked)	560.65 ft
LOW-FLOW SLOT	3.60' W x 0.67' H
LOW-FLOW ELEVATION	545.85 ft
MIDDLE-FLOW SLOT	1.35' W x 6.08' H
MIDDLE-FLOW ELEVATION	552.67 ft
EMERGENCY OVERFLOW STRUCTURE	60" STANDPIPE
EMERGENCY OVERFLOW SILL	558.75 ft
TOP OF BERM	562.00 ft

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PROJECT: HANSEN INDUSTRIAL PARK
DATE: 03/13/2006 PROJECT NO: 95-6743AB
DESIGNED: JLJ CHECKED: CLH

TIME OF CONCENTRATION FOR SMALL DRAINAGE BASINS

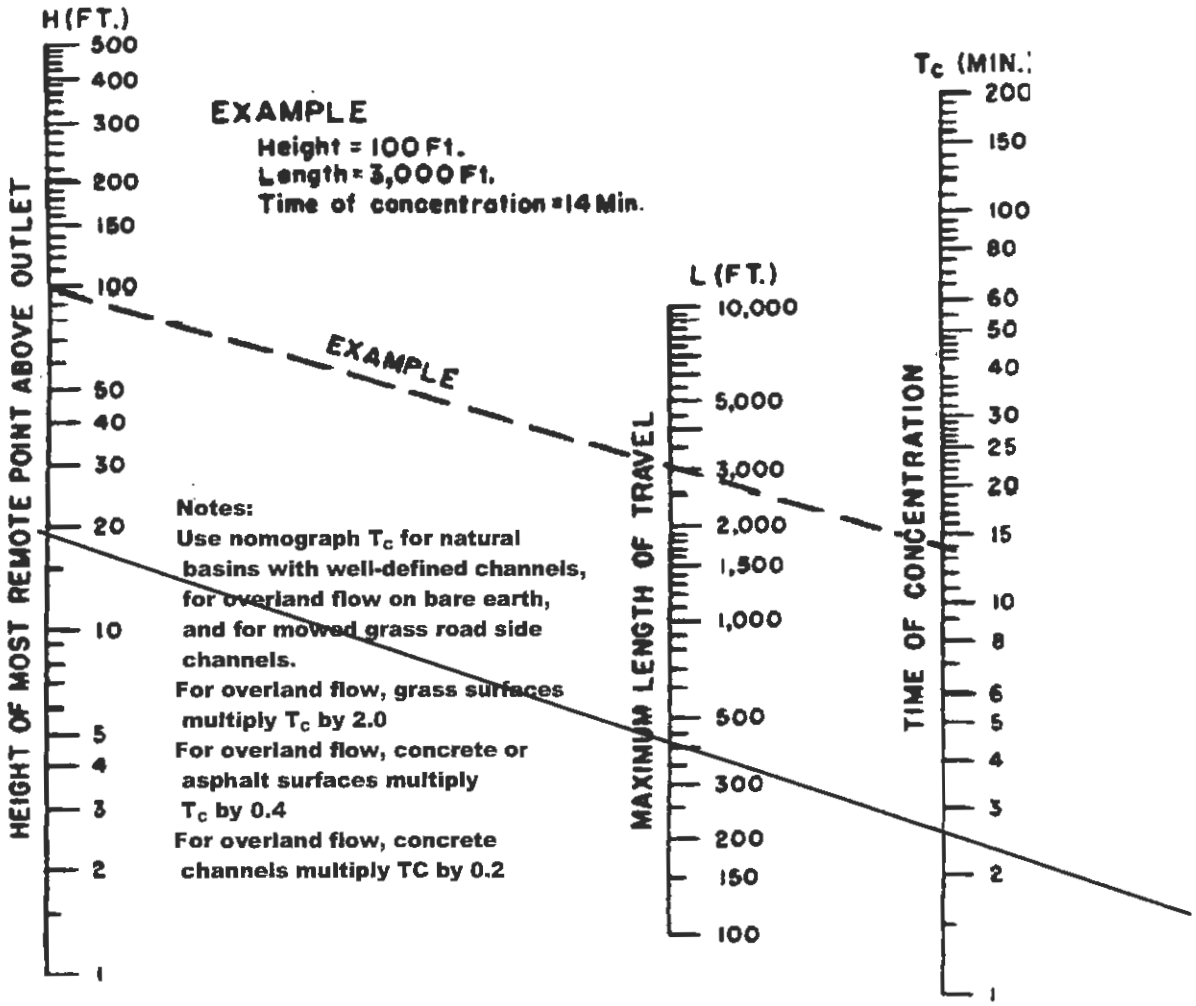

FIGURE 1

L = 465'
H = 18'
T_C = 2.6
2.6 x 1.0 = 2.6 minutes

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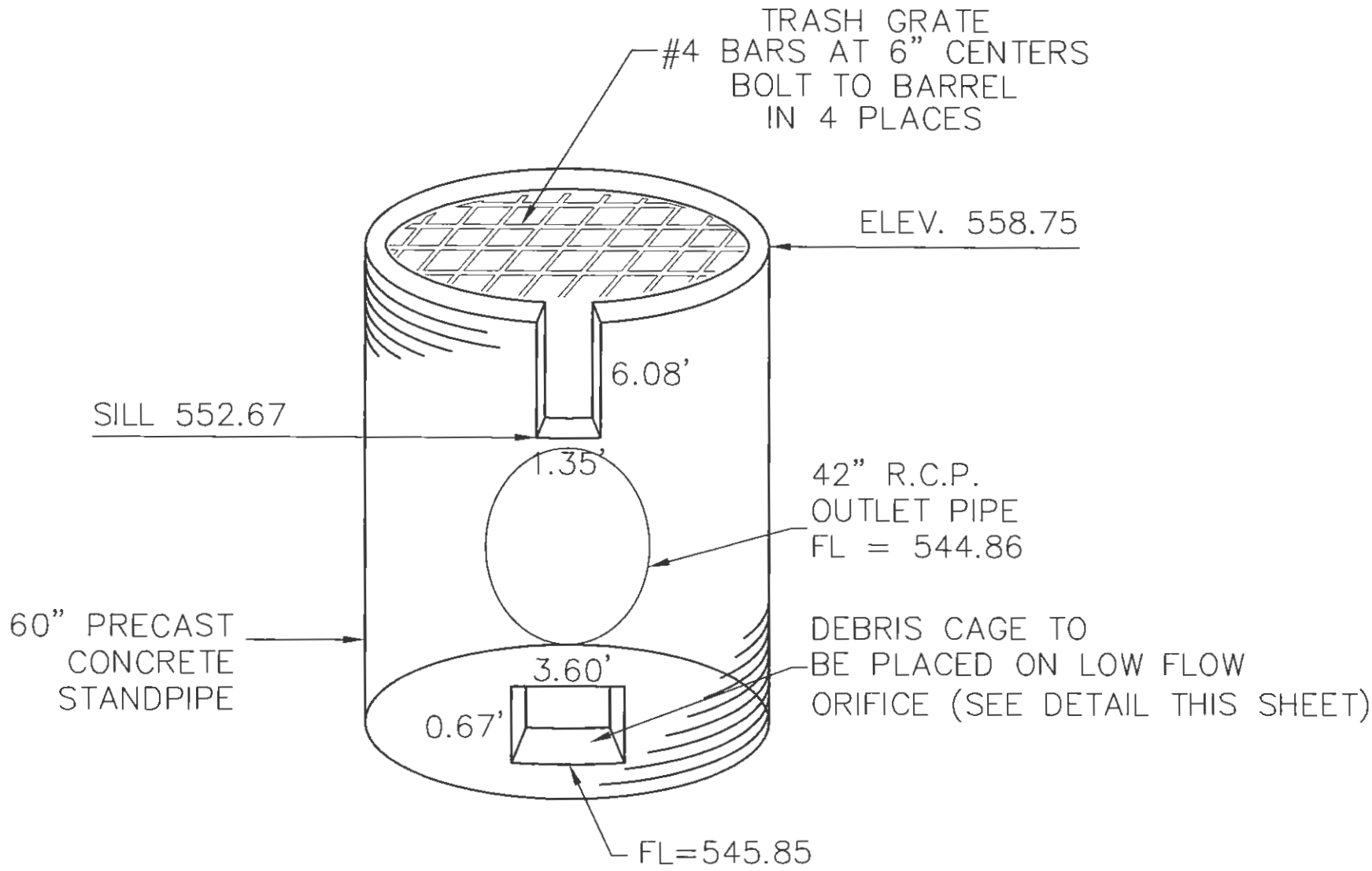

OVERFLOW STRUCTURE DETAIL

NOT TO SCALE

15 YEAR HIGHWATER 555.83
100 YEAR HIGHWATER 558.29

Put AB info in for this

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NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID		Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
	20 MINUTE		HYG	58032		4.00	48.36	
	BASIN	IN	POND	58032		4.00	48.36	
	BASIN	OUT	POND	58032		21.00	35.07	553.60
Outfall	OUTFALL		JCT	58032		21.00	35.07	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID		Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
	20 MINUTE		HYG	93577		4.00	77.98	
	BASIN	IN	POND	93577		4.00	77.98	
	BASIN	OUT	POND	93577		21.00	58.68	555.83
Outfall	OUTFALL		JCT	93577		21.00	58.68	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Node ID		Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
20 MINUTE		HYG	115465		4.00	96.22	
BASIN	IN	POND	115465		4.00	96.22	
BASIN	OUT	POND	115465		21.00	73.09	556.90
Outfall OUTFALL		JCT	115465		21.00	73.09	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID		Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
	20 MINUTE		HYG	147770		4.00	123.14	
	BASIN	IN	POND	147770		4.00	123.14	
	BASIN	OUT	POND	147770		21.00	94.11	558.29
Outfall	OUTFALL		JCT	147770		21.00	94.11	

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	545.85	546.93	548.15	548.85	549.59
5.00	550.20	550.65	551.02	551.33	551.61
10.00	551.86	552.08	552.29	552.49	552.67
15.00	552.85	553.01	553.16	553.29	553.42
20.00	553.54	553.60	553.56	553.43	553.20
25.00	552.92	552.65	552.36	552.07	551.76
30.00	551.43	551.07	550.69	550.25	549.76
35.00	549.15	548.30	546.54	545.85	

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	545.85	547.43	548.73	549.69	550.62
5.00	551.40	552.00	552.51	552.96	553.36
10.00	553.71	554.02	554.30	554.55	554.78
15.00	554.99	555.17	555.35	555.50	555.64
20.00	555.77	555.83	555.77	555.60	555.32
25.00	554.99	554.67	554.36	554.07	553.78
30.00	553.50	553.22	552.94	552.67	552.38
35.00	552.09	551.78	551.46	551.10	550.72
40.00	550.29	549.80	549.21	548.38	546.73
45.00	545.85				

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	545.85	547.67	549.00	550.08	551.11
5.00	551.97	552.66	553.25	553.75	554.19
10.00	554.57	554.92	555.23	555.51	555.76
15.00	555.98	556.19	556.37	556.54	556.70
20.00	556.84	556.90	556.83	556.64	556.32
25.00	555.95	555.59	555.25	554.92	554.60
30.00	554.30	554.00	553.72	553.44	553.16
35.00	552.88	552.61	552.32	552.02	551.71
40.00	551.38	551.02	550.63	550.19	549.68
45.00	549.05	548.14	546.31	545.85	

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	545.85	547.96	549.33	550.56	551.72
5.00	552.71	553.50	554.16	554.73	555.23
10.00	555.67	556.06	556.41	556.73	557.01
15.00	557.26	557.49	557.70	557.89	558.06
20.00	558.22	558.29	558.21	557.98	557.62
25.00	557.19	556.78	556.39	556.01	555.65
30.00	555.31	554.98	554.66	554.35	554.06
35.00	553.77	553.49	553.21	552.93	552.66
40.00	552.37	552.08	551.77	551.44	551.09
45.00	550.70	550.27	549.78	549.18	548.34
50.00	546.63	545.85			

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	62	602	1362	2693
5.00	4259	5736	7141	8494	9801
10.00	11070	12303	13506	14680	15830
15.00	16944	18011	19028	19988	20894
20.00	21747	22195	21915	20946	19331
25.00	17450	15654	13911	12209	10549
30.00	8936	7375	5873	4439	3083
35.00	1830	727	17	0	

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	0	197	1200	2921	5635
5.00	8792	11843	14814	17700	20459
10.00	23059	25498	27775	29899	31872
15.00	33705	35407	36985	38445	39800
20.00	41052	41649	41074	39417	36756
25.00	33726	30916	28304	25872	23599
30.00	21472	19474	17587	15786	14039
35.00	12333	10670	9055	7489	5983
40.00	4542	3180	1918	802	33
45.00	0				

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	298	1582	3924	7521
5.00	11691	15749	19666	23374	26848
10.00	30091	33107	35906	38501	40904
15.00	43128	45185	47088	48847	50471
20.00	51973	52666	51919	49840	46530
25.00	42775	39301	36086	33104	30338
30.00	27766	25369	23130	21033	19060
35.00	17192	15404	13667	11971	10317
40.00	8712	7159	5666	4241	2898
45.00	1663	591	5	0	

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	0	462	2155	5432	10355
5.00	16042	21512	26670	31483	35956
10.00	40102	43940	47490	50772	53805
15.00	56607	59194	61584	63792	65832
20.00	67716	68568	67578	64888	60625
25.00	55800	51343	47224	43416	39896
30.00	36635	33615	30812	28208	25782
35.00	23515	21393	19400	17516	15718
40.00	13973	12269	10608	8994	7430
45.00	5926	4489	3130	1872	764
50.00	23	0			

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POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
545.85	.000	0	0	0	0
548.00	685.000	685	685	491	491
550.00	2754.000	2754	4812	3208	3699
552.00	5542.000	5542	12203	8135	11834
554.00	8033.000	8033	20247	13498	25333
556.00	9963.000	9963	26942	17961	43294
558.00	11886.000	11886	32731	21821	65115
560.00	14083.000	14083	38907	25938	91053
562.00	16625.000	16625	46009	30673	121726

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

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REQUESTED POND WS ELEVATIONS:

Min. Elev.= 545.85 ft
Increment = .10 ft
Max. Elev.= 562.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	El, ft	E2, ft
Stand Pipe	4	--->	TW	558.750	562.000
Weir-Rectangular	3	--->	TW	552.670	562.000
Orifice-Area	2	--->	TW	546.520	562.000
Weir-Rectangular	1	--->	TW	545.850	546.520

TW SETUP, DS Channel

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OUTLET STRUCTURE INPUT DATA

Structure ID = 4
Structure Type = Stand Pipe

# of Openings	=	1
Invert Elev.	=	558.75 ft
Diameter	=	5.0000 ft
Orifice Area	=	19.6350 sq.ft
Orifice Coeff.	=	.600
Weir Length	=	15.71 ft
Weir Coeff.	=	3.000
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

Structure ID = 3
Structure Type = Weir-Rectangular

# of Openings	=	1
Crest Elev.	=	552.67 ft
Weir Length	=	1.35 ft
Weir Coeff.	=	3.000000

Weir TW effects (Use adjustment equation)

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OUTLET STRUCTURE INPUT DATA

Structure ID = 2
Structure Type = Orifice-Area

# of Openings = 1
Invert Elev. = 545.85 ft
Area = 2.4000 sq.ft
Top of Orifice = 546.52 ft
Datum Elev. = 546.18 ft
Orifice Coeff. = .600

Structure ID = 1
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 545.85 ft
Weir Length = 3.60 ft
Weir Coeff. = 3.000000

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

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***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
545.85	.00	Free Outfall		1
545.95	.34	Free Outfall		1
546.05	.97	Free Outfall		1
546.15	1.77	Free Outfall		1
546.25	2.73	Free Outfall		1
546.35	3.82	Free Outfall		1
546.45	5.02	Free Outfall		1
546.55	7.03	Free Outfall		2
546.65	7.92	Free Outfall		2
546.75	8.72	Free Outfall		2
546.85	9.46	Free Outfall		2
546.95	10.14	Free Outfall		2
547.05	10.77	Free Outfall		2
547.15	11.38	Free Outfall		2
547.25	11.95	Free Outfall		2
547.35	12.49	Free Outfall		2
547.45	13.02	Free Outfall		2
547.55	13.52	Free Outfall		2
547.65	14.01	Free Outfall		2
547.75	14.47	Free Outfall		2
547.85	14.93	Free Outfall		2
547.95	15.37	Free Outfall		2
548.05	15.80	Free Outfall		2
548.15	16.21	Free Outfall		2
548.25	16.62	Free Outfall		2
548.35	17.02	Free Outfall		2
548.45	17.40	Free Outfall		2
548.55	17.78	Free Outfall		2
548.65	18.15	Free Outfall		2
548.75	18.52	Free Outfall		2
548.85	18.87	Free Outfall		2
548.95	19.23	Free Outfall		2
549.05	19.57	Free Outfall		2
549.15	19.91	Free Outfall		2
549.25	20.24	Free Outfall		2
549.35	20.57	Free Outfall		2
549.45	20.89	Free Outfall		2
549.55	21.21	Free Outfall		2

Type.... Composite Rating Curve
Name.... FIX

File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
549.65	21.52	Free Outfall		2
549.75	21.83	Free Outfall		2
549.85	22.13	Free Outfall		2
549.95	22.43	Free Outfall		2
550.05	22.72	Free Outfall		2
550.15	23.02	Free Outfall		2
550.25	23.30	Free Outfall		2
550.35	23.59	Free Outfall		2
550.45	23.87	Free Outfall		2
550.55	24.15	Free Outfall		2
550.65	24.42	Free Outfall		2
550.75	24.69	Free Outfall		2
550.85	24.96	Free Outfall		2
550.95	25.23	Free Outfall		2
551.05	25.49	Free Outfall		2
551.15	25.75	Free Outfall		2
551.25	26.01	Free Outfall		2
551.35	26.26	Free Outfall		2
551.45	26.52	Free Outfall		2
551.55	26.77	Free Outfall		2
551.65	27.02	Free Outfall		2
551.75	27.26	Free Outfall		2
551.85	27.51	Free Outfall		2
551.95	27.75	Free Outfall		2
552.05	27.99	Free Outfall		2
552.15	28.22	Free Outfall		2
552.25	28.46	Free Outfall		2
552.35	28.69	Free Outfall		2
552.45	28.92	Free Outfall		2
552.55	29.15	Free Outfall		2
552.65	29.38	Free Outfall		2
552.67	29.43	Free Outfall		3 +2
552.75	29.70	Free Outfall		3 +2
552.85	30.14	Free Outfall		3 +2
552.95	30.66	Free Outfall		3 +2
553.05	31.23	Free Outfall		3 +2
553.15	31.84	Free Outfall		3 +2
553.25	32.50	Free Outfall		3 +2

File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
553.35	33.20	Free Outfall	3	+2
553.45	33.94	Free Outfall	3	+2
553.55	34.70	Free Outfall	3	+2
553.65	35.50	Free Outfall	3	+2
553.75	36.33	Free Outfall	3	+2
553.85	37.18	Free Outfall	3	+2
553.95	38.06	Free Outfall	3	+2
554.05	38.97	Free Outfall	3	+2
554.15	39.90	Free Outfall	3	+2
554.25	40.86	Free Outfall	3	+2
554.35	41.84	Free Outfall	3	+2
554.45	42.84	Free Outfall	3	+2
554.55	43.86	Free Outfall	3	+2
554.65	44.90	Free Outfall	3	+2
554.75	45.97	Free Outfall	3	+2
554.85	47.05	Free Outfall	3	+2
554.95	48.15	Free Outfall	3	+2
555.05	49.27	Free Outfall	3	+2
555.15	50.41	Free Outfall	3	+2
555.25	51.57	Free Outfall	3	+2
555.35	52.75	Free Outfall	3	+2
555.45	53.94	Free Outfall	3	+2
555.55	55.15	Free Outfall	3	+2
555.65	56.38	Free Outfall	3	+2
555.75	57.63	Free Outfall	3	+2
555.85	58.89	Free Outfall	3	+2
555.95	60.16	Free Outfall	3	+2
556.05	61.46	Free Outfall	3	+2
556.15	62.77	Free Outfall	3	+2
556.25	64.09	Free Outfall	3	+2
556.35	65.43	Free Outfall	3	+2
556.45	66.78	Free Outfall	3	+2
556.55	68.15	Free Outfall	3	+2
556.65	69.53	Free Outfall	3	+2
556.75	70.93	Free Outfall	3	+2
556.85	72.34	Free Outfall	3	+2
556.95	73.77	Free Outfall	3	+2
557.05	75.21	Free Outfall	3	+2

File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
557.15	76.66	Free Outfall	3 +2	
557.25	78.13	Free Outfall	3 +2	
557.35	79.61	Free Outfall	3 +2	
557.45	81.10	Free Outfall	3 +2	
557.55	82.61	Free Outfall	3 +2	
557.65	84.13	Free Outfall	3 +2	
557.75	85.66	Free Outfall	3 +2	
557.85	87.21	Free Outfall	3 +2	
557.95	88.77	Free Outfall	3 +2	
558.05	90.34	Free Outfall	3 +2	
558.15	91.92	Free Outfall	3 +2	
558.25	93.52	Free Outfall	3 +2	
558.35	95.12	Free Outfall	3 +2	
558.45	96.74	Free Outfall	3 +2	
558.55	98.37	Free Outfall	3 +2	
558.65	100.02	Free Outfall	3 +2	
558.75	101.67	Free Outfall	4 +3 +2	
558.85	104.83	Free Outfall	4 +3 +2	
558.95	109.23	Free Outfall	4 +3 +2	
559.05	114.45	Free Outfall	4 +3 +2	
559.15	120.33	Free Outfall	4 +3 +2	
559.25	126.78	Free Outfall	4 +3 +2	
559.35	133.74	Free Outfall	4 +3 +2	
559.45	141.17	Free Outfall	4 +3 +2	
559.55	149.04	Free Outfall	4 +3 +2	
559.65	157.31	Free Outfall	4 +3 +2	
559.75	165.97	Free Outfall	4 +3 +2	
559.85	174.99	Free Outfall	4 +3 +2	
559.95	184.36	Free Outfall	4 +3 +2	
560.05	194.06	Free Outfall	4 +3 +2	
560.15	204.08	Free Outfall	4 +3 +2	
560.25	214.42	Free Outfall	4 +3 +2	
560.35	225.05	Free Outfall	4 +3 +2	
560.45	235.97	Free Outfall	4 +3 +2	
560.55	247.18	Free Outfall	4 +3 +2	
560.65	258.65	Free Outfall	4 +3 +2	
560.75	270.40	Free Outfall	4 +3 +2	
560.85	275.94	Free Outfall	4 +3 +2	

File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
560.95	281.06	Free Outfall	4	+3 +2
561.05	286.11	Free Outfall	4	+3 +2
561.15	291.11	Free Outfall	4	+3 +2
561.25	296.05	Free Outfall	4	+3 +2
561.35	300.94	Free Outfall	4	+3 +2
561.45	305.79	Free Outfall	4	+3 +2
561.55	310.59	Free Outfall	4	+3 +2
561.65	315.35	Free Outfall	4	+3 +2
561.75	320.08	Free Outfall	4	+3 +2
561.85	324.76	Free Outfall	4	+3 +2
561.95	329.42	Free Outfall	4	+3 +2
562.00	331.73	Free Outfall	4	+3 +2

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 545.85 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout = .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
545.85	.00	0	0	.00	.00	.00
545.95	.34	0	1	.00	.34	.34
546.05	.97	0	6	.00	.97	.98
546.15	1.77	1	13	.00	1.77	1.82
546.25	2.73	3	24	.00	2.73	2.84
546.35	3.82	6	37	.00	3.82	4.02
546.45	5.02	11	53	.00	5.02	5.37
546.55	7.03	17	73	.00	7.03	7.59
546.65	7.92	25	95	.00	7.92	8.76
546.75	8.72	36	120	.00	8.72	9.92
546.85	9.46	49	148	.00	9.46	11.10
546.95	10.14	66	179	.00	10.14	12.33
547.05	10.77	85	213	.00	10.77	13.62
547.15	11.38	109	250	.00	11.38	14.99
547.25	11.95	136	290	.00	11.95	16.47
547.35	12.49	167	333	.00	12.49	18.05
547.45	13.02	202	379	.00	13.02	19.76
547.55	13.52	243	428	.00	13.52	21.61
547.65	14.01	288	480	.00	14.01	23.61
547.75	14.47	339	535	.00	14.47	25.77

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 545.85 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
547.85	14.93	395	593	.00	14.93	28.10
547.95	15.37	457	653	.00	15.37	30.62
548.05	15.80	526	720	.00	15.80	33.33
548.15	16.21	602	792	.00	16.21	36.27
548.25	16.62	685	868	.00	16.62	39.44
548.35	17.02	775	947	.00	17.02	42.86
548.45	17.40	874	1030	.00	17.40	46.54
548.55	17.78	981	1116	.00	17.78	50.50
548.65	18.15	1097	1206	.00	18.15	54.73
548.75	18.52	1223	1299	.00	18.52	59.27
548.85	18.87	1357	1395	.00	18.87	64.12
548.95	19.23	1502	1495	.00	19.23	69.28
549.05	19.57	1656	1599	.00	19.57	74.78
549.15	19.91	1822	1706	.00	19.91	80.63
549.25	20.24	1998	1816	.00	20.24	86.83
549.35	20.57	2185	1930	.00	20.57	93.40
549.45	20.89	2384	2047	.00	20.89	100.34
549.55	21.21	2594	2168	.00	21.21	107.69
549.65	21.52	2817	2292	.00	21.52	115.43
549.75	21.83	3053	2420	.00	21.83	123.59

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 545.85 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
549.85	22.13	3301	2551	.00	22.13	132.18
549.95	22.43	3563	2685	.00	22.43	141.20
550.05	22.72	3838	2812	.00	22.72	150.67
550.15	23.02	4125	2930	.00	23.02	160.53
550.25	23.30	4424	3050	.00	23.30	170.78
550.35	23.59	4735	3172	.00	23.59	181.43
550.45	23.87	5059	3297	.00	23.87	192.49
550.55	24.15	5395	3424	.00	24.15	203.98
550.65	24.42	5744	3554	.00	24.42	215.88
550.75	24.69	6106	3686	.00	24.69	228.22
550.85	24.96	6481	3821	.00	24.96	241.00
550.95	25.23	6870	3958	.00	25.23	254.23
551.05	25.49	7273	4097	.00	25.49	267.92
551.15	25.75	7690	4239	.00	25.75	282.07
551.25	26.01	8121	4383	.00	26.01	296.70
551.35	26.26	8566	4530	.00	26.26	311.81
551.45	26.52	9027	4679	.00	26.52	327.41
551.55	26.77	9502	4831	.00	26.77	343.51
551.65	27.02	9993	4984	.00	27.02	360.11
551.75	27.26	10499	5141	.00	27.26	377.24

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
551.85	27.51	11021	5299	.00	27.51	394.88
551.95	27.75	11559	5460	.00	27.75	413.05
552.05	27.99	12113	5599	.00	27.99	431.75
552.15	28.22	12678	5713	.00	28.22	450.83
552.25	28.46	13256	5828	.00	28.46	470.31
552.35	28.69	13844	5945	.00	28.69	490.16
552.45	28.92	14444	6062	.00	28.92	510.40
552.55	29.15	15057	6181	.00	29.15	531.04
552.65	29.38	15681	6301	.00	29.38	552.07
552.67	29.43	15807	6325	.00	29.43	556.32
552.75	29.70	16317	6422	.00	29.70	573.60
552.85	30.14	16965	6544	.00	30.14	595.64
552.95	30.66	17625	6668	.00	30.66	618.17
553.05	31.23	18299	6792	.00	31.23	641.18
553.15	31.84	18984	6918	.00	31.84	664.64
553.25	32.50	19682	7045	.00	32.50	688.58
553.35	33.20	20393	7173	.00	33.20	712.97
553.45	33.94	21117	7302	.00	33.94	737.82
553.55	34.70	21854	7432	.00	34.70	763.16
553.65	35.50	22603	7564	.00	35.50	788.94

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
553.75	36.33	23367	7696	.00	36.33	815.21
553.85	37.18	24143	7830	.00	37.18	841.94
553.95	38.06	24932	7965	.00	38.06	869.14
554.05	38.97	25735	8079	.00	38.97	896.81
554.15	39.90	26548	8171	.00	39.90	924.82
554.25	40.86	27370	8263	.00	40.86	953.17
554.35	41.84	28200	8356	.00	41.84	981.84
554.45	42.84	29040	8449	.00	42.84	1010.84
554.55	43.86	29890	8543	.00	43.86	1040.20
554.65	44.90	30749	8637	.00	44.90	1069.87
554.75	45.97	31618	8732	.00	45.97	1099.89
554.85	47.05	32496	8828	.00	47.05	1130.23
554.95	48.15	33383	8924	.00	48.15	1160.91
555.05	49.27	34280	9020	.00	49.27	1191.95
555.15	50.41	35187	9117	.00	50.41	1223.32
555.25	51.57	36104	9215	.00	51.57	1255.04
555.35	52.75	37030	9313	.00	52.75	1287.09
555.45	53.94	37966	9412	.00	53.94	1319.48
555.55	55.15	38913	9511	.00	55.15	1352.24
555.65	56.38	39869	9610	.00	56.38	1385.33

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 545.85 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
555.75	57.63	40835	9710	.00	57.63	1418.79
555.85	58.89	41811	9811	.00	58.89	1452.57
555.95	60.16	42797	9912	.00	60.16	1486.72
556.05	61.46	43793	10009	.00	61.46	1521.23
556.15	62.77	44798	10101	.00	62.77	1556.04
556.25	64.09	45814	10194	.00	64.09	1591.21
556.35	65.43	46837	10287	.00	65.43	1626.67
556.45	66.78	47871	10381	.00	66.78	1662.46
556.55	68.15	48914	10475	.00	68.15	1698.60
556.65	69.53	49966	10569	.00	69.53	1735.05
556.75	70.93	51028	10664	.00	70.93	1771.85
556.85	72.34	52099	10760	.00	72.34	1808.96
556.95	73.77	53179	10855	.00	73.77	1846.40
557.05	75.21	54270	10951	.00	75.21	1884.20
557.15	76.66	55370	11048	.00	76.66	1922.31
557.25	78.13	56480	11145	.00	78.13	1960.78
557.35	79.61	57599	11242	.00	79.61	1999.56
557.45	81.10	58728	11340	.00	81.10	2038.68
557.55	82.61	59867	11439	.00	82.61	2078.17
557.65	84.13	61015	11537	.00	84.13	2117.97

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
557.75	85.66	62174	11636	.00	85.66	2158.14
557.85	87.21	63343	11736	.00	87.21	2198.63
557.95	88.77	64521	11836	.00	88.77	2239.47
558.05	90.34	65710	11939	.00	90.34	2280.67
558.15	91.92	66909	12044	.00	91.92	2322.22
558.25	93.52	68119	12150	.00	93.52	2364.15
558.35	95.12	69339	12257	.00	95.12	2406.43
558.45	96.74	70570	12364	.00	96.74	2449.07
558.55	98.37	71812	12472	.00	98.37	2492.11
558.65	100.02	73065	12580	.00	100.02	2535.50
558.75	101.67	74328	12688	.00	101.67	2579.28
558.85	104.83	75602	12797	.00	104.83	2624.90
558.95	109.23	76887	12906	.00	109.23	2672.13
559.05	114.45	78184	13016	.00	114.45	2720.57
559.15	120.33	79491	13126	.00	120.33	2770.01
559.25	126.78	80809	13237	.00	126.78	2820.42
559.35	133.74	82138	13349	.00	133.74	2871.68
559.45	141.17	83478	13460	.00	141.17	2923.78
559.55	149.04	84830	13572	.00	149.04	2976.72
559.65	157.31	86193	13685	.00	157.31	3030.41

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 545.85 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
559.75	165.97	87568	13798	.00	165.97	3084.89
559.85	174.99	88953	13912	.00	174.99	3140.08
559.95	184.36	90349	14026	.00	184.36	3196.00
560.05	194.06	91758	14144	.00	194.06	3252.67
560.15	204.08	93178	14266	.00	204.08	3310.02
560.25	214.42	94612	14389	.00	214.42	3368.14
560.35	225.05	96056	14513	.00	225.05	3426.92
560.45	235.97	97513	14637	.00	235.97	3486.41
560.55	247.18	98984	14761	.00	247.18	3546.63
560.65	258.65	100466	14886	.00	258.65	3607.51
560.75	270.40	101961	15012	.00	270.40	3669.10
560.85	275.94	103468	15138	.00	275.94	3724.88
560.95	281.06	104988	15264	.00	281.06	3780.65
561.05	286.11	106521	15391	.00	286.11	3836.82
561.15	291.11	108067	15519	.00	291.11	3893.32
561.25	296.05	109625	15647	.00	296.05	3950.22
561.35	300.94	111196	15776	.00	300.94	4007.47
561.45	305.79	112780	15905	.00	305.79	4065.11
561.55	310.59	114377	16035	.00	310.59	4123.16
561.65	315.35	115987	16165	.00	315.35	4181.58

Name.... BASIN
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW

LEVEL POOL ROUTING DATA

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
561.75	320.08	117611	16296	.00	320.08	4240.42
561.85	324.76	119246	16427	.00	324.76	4299.63
561.95	329.42	120895	16559	.00	329.42	4359.25
562.00	331.73	121726	16625	.00	331.73	4389.24

LEVEL POOL ROUTING SUMMARY

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 2
Outflow HYG file = NONE STORED - BASIN OUT 2

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	48.36 cfs	at	4.00 min
Peak Outflow	=	35.07 cfs	at	21.00 min
Peak Elevation	=	553.60 ft		
Peak Storage	=	22195 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	58032
- Infiltration	=	0
- HYG Vol OUT	=	58032
- Retained Vol	=	0
Unrouted Vol	=	0 cu.ft (.000% of Outflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 15
Outflow HYG file = NONE STORED - BASIN OUT 15

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	77.98 cfs	at	4.00 min
Peak Outflow	=	58.68 cfs	at	21.00 min
Peak Elevation	=	555.83 ft		
Peak Storage	=	41649 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	93577
- Infiltration	=	0
- HYG Vol OUT	=	93577
- Retained Vol	=	0
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

Name.... BASIN OUT Tag: 25 Event: 25 yr
File.... H:\PONDPACK\6000PLUS\6743AB\6743AB-FIX.PPW
Storm... 25 Tag: 25

LEVEL POOL ROUTING SUMMARY

HYG Dir = H:\PONDPACK\6000PLUS\6743AB\
Inflow HYG file = NONE STORED - BASIN IN 25
Outflow HYG file = NONE STORED - BASIN OUT 25

Pond Node Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	545.85 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	96.22 cfs	at	4.00 min
Peak Outflow	=	73.09 cfs	at	21.00 min
Peak Elevation	=	556.90 ft		
Peak Storage	=	52666 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	115465
- Infiltration	=	0
- HYG Vol OUT	=	115465
- Retained Vol	=	0
Unrouted Vol	=	0 cu.ft (.000% of Outflow Volume)

LEVEL POOL ROUTING SUMMARY

```
HYG Dir          = H:\PONDPACK\6000PLUS\6743AB\
Inflow  HYG file = NONE STORED - BASIN        IN  100
Outflow HYG file = NONE STORED - BASIN        OUT 100

Pond Node   Data = BASIN
Pond Volume Data = BASIN
Pond Outlet Data = FIX

No Infiltration

INITIAL CONDITIONS
----------------------------------
Starting WS Elev   =   545.85 ft
Starting Volume    =         0 cu.ft
Starting Outflow   =       .00 cfs
Starting Infiltr.  =       .00 cfs
Starting Total Qout=       .00 cfs
Time Increment     =      1.00 min


INFLOW/OUTFLOW HYDROGRAPH SUMMARY
==================================================
Peak Inflow        =    123.14 cfs    at      4.00 min
Peak Outflow       =     94.11 cfs    at     21.00 min
--------------------------------------------------
Peak Elevation     =    558.29 ft
Peak Storage =           68568 cu.ft
==================================================


MASS BALANCE (cu.ft)
-------------------------
+ Initial Vol  =            0
+ HYG Vol IN   =       147770
- Infiltration =            0
- HYG Vol OUT  =       147770
- Retained Vol =            0
               ----------
Unrouted Vol =              0 cu.ft  (.000% of Outflow Volume)
```

Index of Starting Page Numbers for ID Names

THIS SHEET FOR DRAINAGE AREA PURPOSES ONLY, NOT FOR CONSTRUCTION!!!!

A DRAINAGE AREA MAP FOR
LOT 4 OF
HANSEN INDUSTRIAL PARK
95-6743AB 9-07-04

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

N

PROPERTY N/F
ROSEMARY PIEPER LIVING TRUST
4072/1176
ST. CHARLES COUNTY
ZONED A-1

PROPERTY N/F
GERARD PIEPER & WIFE
BK.696 PG.1043
CITY OF O'FALLON
ZONED I-1

HANSEN COURT (PUBLIC 50' R.O.W.)

ENVIRONMENTAL WAY (PRIVATE 25')

ELKLINE (60' W.) DRIVE

LOT 1
0.671 AC.

LOT 2
1.075 AC.
MINIMUM F.F. 591.00

LOT 3
0.515 AC.

LOT 4
8.859 AC.
PROPERTY N/F
G & K LAND L.L.C.
3938/0485

COMMON GROUND
UTILITY EASEMENT
1.409 AC.

SITE BENCHMARK
CONCRETE MONUMENT
114.89'S.
OF THE N.W. CORNER
ELEVATION=603.14

PROPERTY N/F
SUSAN M. MERRY & THOMAS BRAUN
3959/1080

HICKORY HILL FARM
PLAT BOOK 19 PAGE 115
ST. CHARLES COUNTY
ZONED A-2

PROPERTY N/F
CHARLES & JUDITH LOSEMAN
772/1561

NORFOLK AND SOUTHERN RAILROAD
(RIGHT OF WAY)

CITY OF O'FALLON
ZONED I-1

CITY OF O'FALLON
ZONED I-2

CITY OF O'FALLON
ZONED I-1
LOT 11A
"RESUBDIVISION OF LOTS 11 & 12 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 30 PAGE 74

PROPERTY N/F
JAMES & IRMA
WARRINER
2025/2038

LOT 10A

LOT 10B

PROPERTY N/F
TEN SUI
PROPERTIES LP
2540/915

PROPERTY N/F
GREEN ACRES LAND
DEVELOPMENT COMPANY
2460/524

"RESUBDIVISION OF LOT 10 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 31 PAGE 94

"RESUBDIVISION OF LOTS 8 AND 9 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 31 PAGE 94

LOT 9B

LOT 9A

LOT 8B

PROPERTY N/F
SMITH R L TRUCK
BROKERS INC.
1719/219

PROPERTY N/F
S & D PARTNERSHIP

PROPERTY N/F
JASON & JENNIFER
ABERNATHY
3688/1076

COMMON GROUND
"NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 28 PAGE 15
CITY OF O'FALLON
ZONED I-1

RAILROAD ACTIVITY #1074584

O'FALLON #3004.01

THIS SHEET FOR DRAINAGE AREA PURPOSES ONLY, NOT FOR CONSTRUCTION!!!!

A PRE-DR
LO
HANSEN IN
95-6743AB

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

N

PROPERTY N/F
ROSEMARY PIEPER LIVING TRUST
4072/1176
ST. CHARLES COUNTY
ZONED A-1

PROPERTY N/F
MERRY & THOMAS
DEAN 18
3359/1080

SITE BENCHMARK
CONCRETE MONUMENT
114.89'S.
OF THE N.W. CORNER
ELEVATION=603.14

SECTION 19

SECTION 30

ONSITE TO OFFSITE
Q = 0.21 ac. @ 1.87
= 0.42 c.f.s.

HICKORY HILL FARM
PLAT BOOK 19 PAGE 115
ST. CHARLES COUNTY
ZONED A-2

PROPERTY N/F
CHARLES & JUDITH
LOSEMAN
772/1861

PROPERTY N/F
C & K LAND L.L.C.
3938/0485

MPN TRANSMISSION LINE EASEMENT
GRANTED TO CENTRAL
POWER COOPERATIVE ELECTRIC
BY BOOK 418 PAGE 239

11.64ac. @ 1.87
Q = 21.77c.f.s.

OFFSITE TO ONSITE
Q = 0.17 ac. @ 1.87
= 0.32 c.f.s.

2.40 ac. @ 1.87
Q = 4.49 c.f.s.

0.65 ac. @ 1.87
Q = 1.21 c.f.s.

ELAINE (60'W.) DRIVE

75.00'

75.00'

NORFOLK AND SOUTHERN RAILROAD
(RIGHT OF WAY)

PROPERTY N/F
GERARD PIEPER & WIFE
BK.696 PG.1043
CITY OF O'FALLON
ZONED I-1

CITY OF O'FALLON
ZONED I-2
0.49 ac. @ 3.85
Q = 36.54c.f.s.
EXISTING UTILITY EASEMENT PB. 28, PG. 15

LOT 10A

LOT 10B

PROPERTY N/F
GREEN ACRES LAND
DEVELOPMENT COMPANY
2460/524

PROPERTY N/F
TEN SUI
PROPERTIES LP
2540/915

CITY OF O'FALLON
ZONED I-1

LOT 11A
"RESUBDIVISION OF LOTS 11 & 12 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 30 PAGE 74

PROPERTY N/F
JAMES & IRMA
WARRINER
2025/2038

"RESUBDIVISION OF LOTS 8 AND 9 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 31 PAGE 94

LOT 9B

LOT 9A

CITY OF O'FALLON
ZONED I-2

PROPERTY N/F
S & D PARTNERSHIP

PROPERTY N/F
JASON & JENNIFER
ABERNATHY
3688/1076

COMMON GROUND
"NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 28 PAGE 15
CITY OF O'FALLON
ZONED I-1

PROPERTY N/F
SMITH R L TRUCK
BROKERS INC.
1719/219

LOT 8B

CITY OF O'FALLON
ZONED I-1

"RESUBDIVISION OF LOT 10 OF
NORTH CENTRAL INDUSTRIAL PARK"
PLAT BOOK 31 PAGE 94

RAILROAD ACTIVITY #1074584

O'FAL

E:\DWG\6500PLUS\6743AB GRP FARMS\construction\6743Abcon.dwg, PREDRAINAGE 4, 3/22/2006 10:59:40 AM, Station 62 JJ