

# DETENTION POND "A"

## Pond Report

Hydroflow Hydrographs by Intellivue  
 Wednesday, Jul 19 2006, 4:11 PM

Pond No. 1 - Dalton Elementary

Pond Data

Pond storage is based on known contour areas. Average end area method used.

### Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	526.00	4,987	0	0
1.00	526.00	23,522	14,255	14,255
2.00	526.00	27,007	28,265	42,520
3.00	526.00	30,927	38,967	81,487
4.00	526.00	34,846	49,719	131,206
5.00	526.00	38,765	60,521	191,727
6.00	526.00	42,684	71,373	263,100
7.00	526.00	46,603	82,275	345,375
8.00	526.00	50,522	93,227	438,602

### Culvert / Orifice Structures

[A]	[B]	[C]	[D]	[A]	[B]	[C]	[D]
Rise (ft) = 0.00	30.00	0.00	39.00	Crest Len (ft) = 24.00	0.00	0.00	0.00
Span (ft) = 04.00	33.00	0.00	69.00	Crest El. (ft) = 534.50	0.00	0.00	0.00
No. Barrels = 1	0	1	1	Weir Coeff. = 3.33	3.33	3.33	3.33
Invert El. (ft) = 526.50	526.50	0.00	529.00	Weir Type = Riser	---	---	---
Length (ft) = 100.00	0.00	0.00	0.00	Multi-Stage = Yes	No	No	No
Slope (%) = 0.01	0.00	0.00	0.00				
N-Value = 0.13	0.13	0.13	0.13				
Orif. Coeff. = 0.60	0.60	0.60	0.60				
Multi-Stage = No	Yes	No	Yes				

### Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Cv A cfs	Cv B cfs	Cv C cfs	Cv D cfs	W A cfs	W B cfs	W C cfs	W D cfs	Exfil cfs	Total cfs
0.00	0	526.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	1,425	526.60	0.13	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.13
0.20	2,851	526.70	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.30
0.30	4,276	526.80	0.47	0.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.47
0.40	5,702	526.90	0.64	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.64
0.50	7,127	527.00	0.81	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.81
0.60	8,553	527.10	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
0.70	9,978	527.20	1.17	1.17	1.17	1.17	0.00	0.00	0.00	0.00	0.00	1.17
0.80	11,404	527.30	1.34	1.34	1.34	1.34	0.00	0.00	0.00	0.00	0.00	1.34
0.90	12,829	527.40	1.51	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	1.51
1.00	14,255	527.50	1.68	1.68	1.68	1.68	0.00	0.00	0.00	0.00	0.00	1.68
1.10	15,680	527.60	1.85	1.85	1.85	1.85	0.00	0.00	0.00	0.00	0.00	1.85
1.20	17,106	527.70	2.02	2.02	2.02	2.02	0.00	0.00	0.00	0.00	0.00	2.02
1.30	18,531	527.80	2.19	2.19	2.19	2.19	0.00	0.00	0.00	0.00	0.00	2.19
1.40	19,957	527.90	2.36	2.36	2.36	2.36	0.00	0.00	0.00	0.00	0.00	2.36
1.50	21,382	528.00	2.53	2.53	2.53	2.53	0.00	0.00	0.00	0.00	0.00	2.53
1.60	22,808	528.10	2.70	2.70	2.70	2.70	0.00	0.00	0.00	0.00	0.00	2.70
1.70	24,233	528.20	2.87	2.87	2.87	2.87	0.00	0.00	0.00	0.00	0.00	2.87
1.80	25,659	528.30	3.04	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	3.04
1.90	27,084	528.40	3.21	3.21	3.21	3.21	0.00	0.00	0.00	0.00	0.00	3.21
2.00	28,510	528.50	3.38	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	3.38
2.10	29,935	528.60	3.55	3.55	3.55	3.55	0.00	0.00	0.00	0.00	0.00	3.55
2.20	31,361	528.70	3.72	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	3.72
2.30	32,786	528.80	3.89	3.89	3.89	3.89	0.00	0.00	0.00	0.00	0.00	3.89
2.40	34,212	528.90	4.06	4.06	4.06	4.06	0.00	0.00	0.00	0.00	0.00	4.06
2.50	35,637	529.00	4.23	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	4.23
2.60	37,063	529.10	4.40	4.40	4.40	4.40	0.00	0.00	0.00	0.00	0.00	4.40
2.70	38,488	529.20	4.57	4.57	4.57	4.57	0.00	0.00	0.00	0.00	0.00	4.57
2.80	39,914	529.30	4.74	4.74	4.74	4.74	0.00	0.00	0.00	0.00	0.00	4.74
2.90	41,339	529.40	4.91	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	4.91
3.00	42,765	529.50	5.08	5.08	5.08	5.08	0.00	0.00	0.00	0.00	0.00	5.08

## Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow Hyd (ft)	Peak Outflow (cfs)							Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	
1	Mod. Rational	---	---	---	131.07	155.68	179.40	198.23	218.41	Predeveloped
2	Mod. Rational	---	---	---	31.67	37.42	43.26	48.33	53.70	Developed
3	Mod. Rational	---	---	---	2.43	2.86	3.32	3.72	4.18	Offsite 1
4	Mod. Rational	---	---	---	128.82	151.73	175.44	195.56	218.11	Offsite 2
5	Combine	2, 3, 4	---	---	182.00	192.00	222.00	248.03	276.08	Into Pond
6	Reservoir	5	---	---	116.01	137.56	155.87	169.75	200.38	Release from pond

Proj. file: RockISDDalton Elementary.gpw

Wednesday, Jul 19 2006, 4:01 PM

INLET DESIGN CALCULATIONS		PROJECT NAME		ELEMENTARY SCHOOL, ROCKWALL #11,		BY		RAH								
		LINE NAME		N/A		DATE		04/19/06								
No.	Inlet Location	Design Storm Frequency (yrs)	AREA RUNOFF					SELECTED INLET								
			Time of Conc. (min.)	Intensity I (in./hr.)	Runoff Coeff. "C"	Area (ac.)	"q" (c.f.a.)	Carry-Over From Upstream Inlet (c.f.a.)	Total Outflow Flow (c.f.a.)	Outlet Capacity (c.f.a.)	Outlet Slope (ft./100ft.)	Outlet Crown Type	Length L <sub>1</sub> (Feet)	Inlet Capacity (c.f.a.)	Type	Carry-Over To Downstream Inlet (c.f.a.)
B1	STA. 3+07 LINE "S-2"	100	10	9.8	0.70	2.82	19.35	0	N/A	LOW	POINT	N/A	10'	20.0	C.I.	0
F1	STA. 9+44 LINE "S-1"	100	10	9.8	0.70	1.46	10.01	0	N/A	LOW	POINT	N/A	10'	20.0	C.I.	0
K	AREA DRAINS	100	10	9.8	0.70	0.15	1.0	0	N/A	LOW	POINT	N/A	2'-2"x2'	4.8 EA.	AD	0
C1	0+00, 0+42 AND 0+92 LINE "S-3A"	100	10	9.8	0.70	0.79	3.60	0	N/A	LOW	POINT	N/A	5'-2"x2'	4.8 EA.	AD	0
A5	4+68, 4+88 AND 5+08 LINE "S-4"	100	10	9.8	0.70	0.10	0.70	0	N/A	LOW	POINT	N/A	3'-2"x2'	4.8 EA.	AD	0

### Consultants:

CIVIL:  
GLENN ENGINEERING CORP

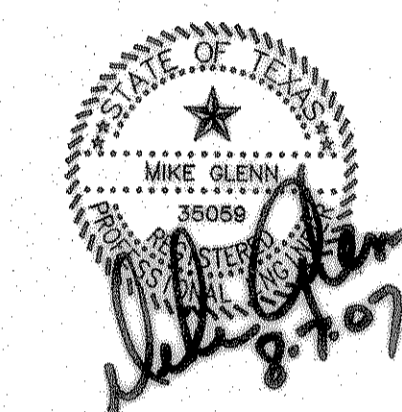
STRUCTURAL:  
SHW GROUP, LLP

MEP:  
ESTES McCURE AND ASSOCIATES.

FOOD SERVICE:  
H. G. RICE Inc.

LANDSCAPING:  
GRUBBS RAMSEY

FINAL PLANS FOR BIDDING AND CONSTRUCTING



Rockwall Independent School District

ROCKWALL  
ELEMENTARY  
SCHOOL #11  
RISD, TEXAS

Project Number: 1441.05.021  
 Drawing Date: 3/09/2006  
 Drawn: R.HOWMAN  
 Checked: RAH  
 Scale: AS SHOWN  
 ACAD File: BUSIEK-ENG-SITE2\_CITYREV3.dwg  
 © 2006 SHW Group, LLP

Revisions:  
 1 07/20/2006 CITY COMMENTS  
 2 08/15/2006 CITY COMMENTS  
 3 10/17/2006 REVISED BOX ELEVATIONS  
 4 10/23/2006 WATER REVISIONS

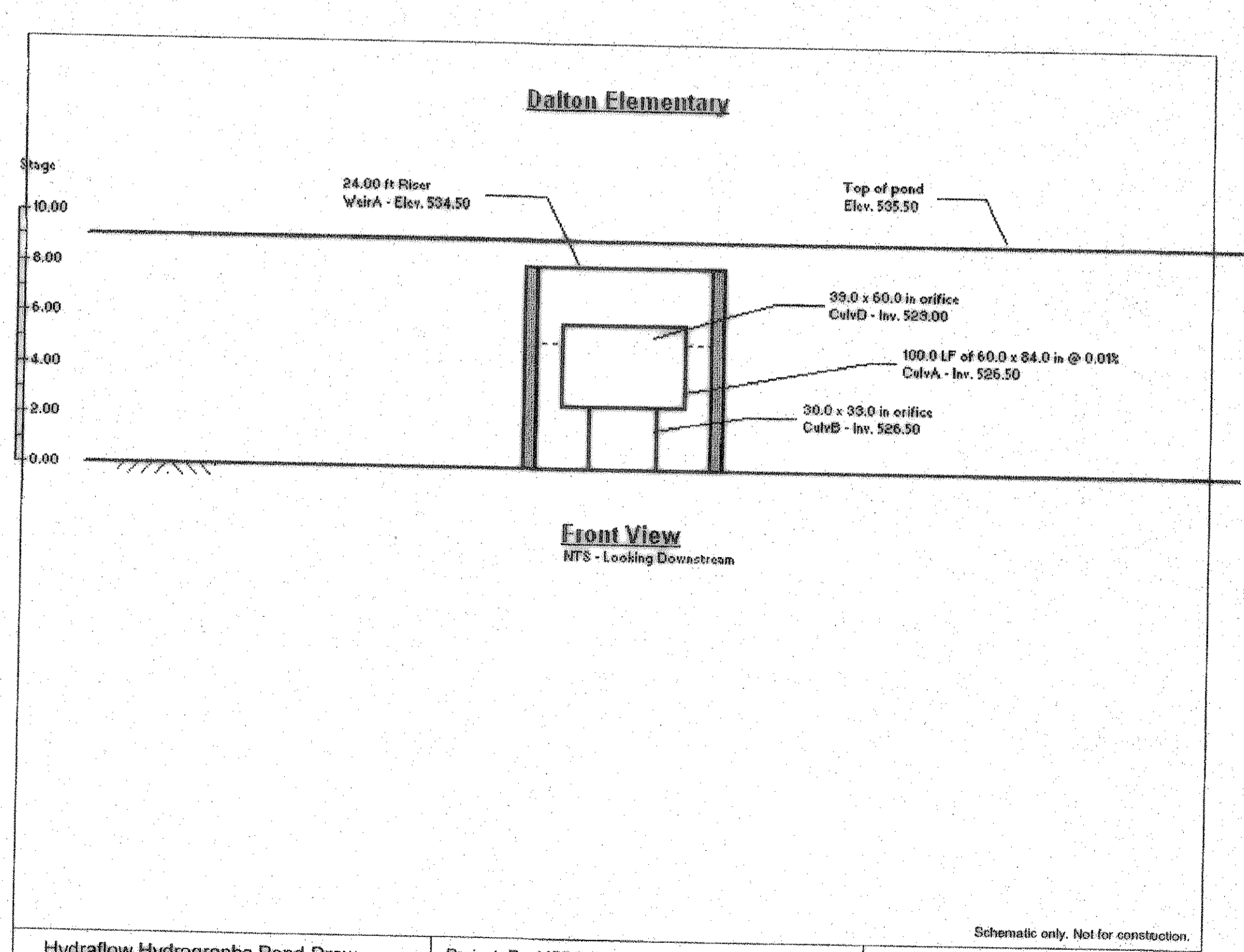
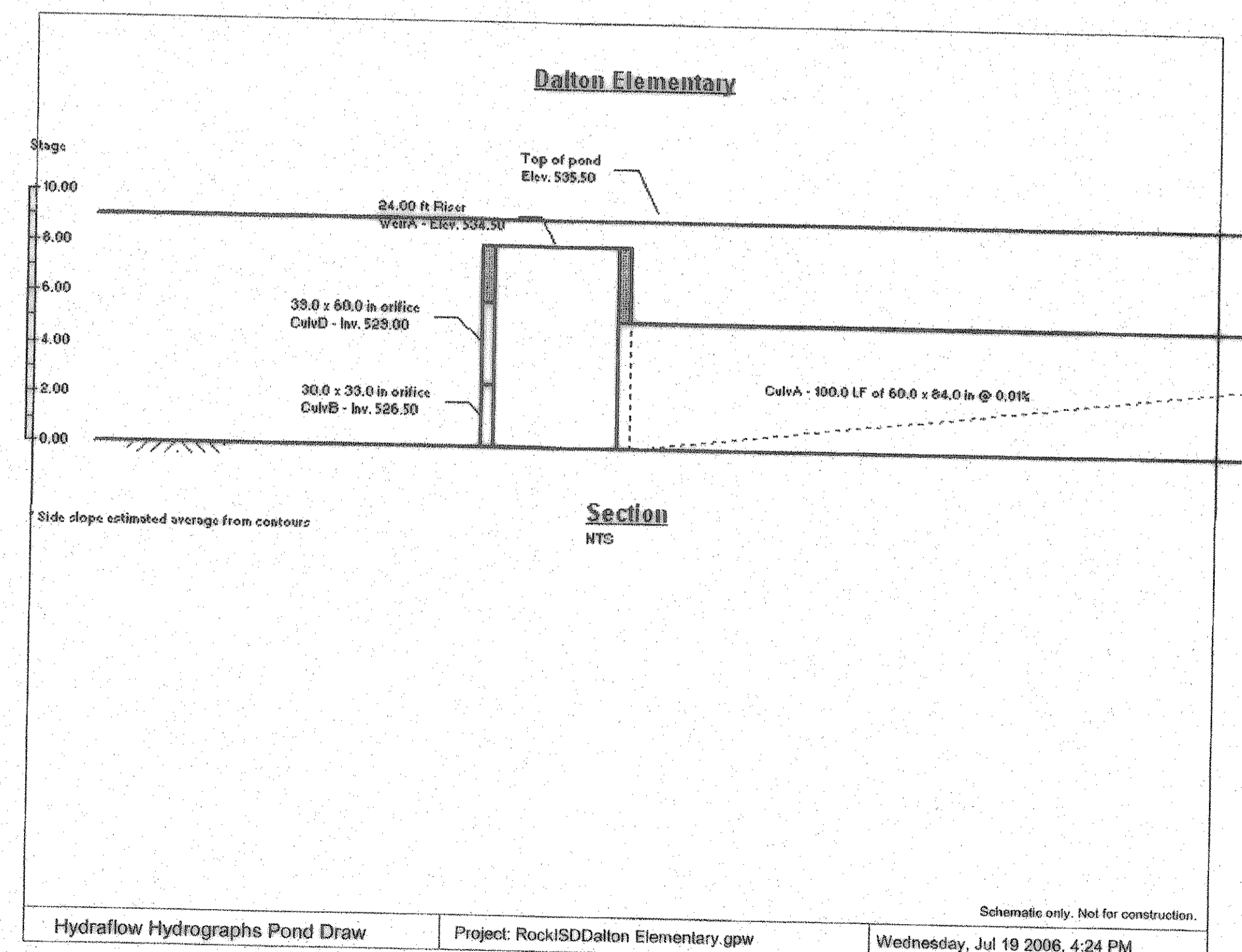
Sheet Title:  
DRAINAGE  
CALCULATIONS

RECORD DRAWING  
 This is to certify that changes and corrections have been made to conform to the contractor's record of this project.  
 Signed: *[Signature]* Date: 8-7-07  
 Glenn Engineering Corporation

DRAINAGE CALCULATIONS

GLENN  
ENGINEERING  
 PHONE 972-717-5181 FAX 972-717-2178  
 105 DECKER COURT - SUITE 910 IRVING, TEXAS 75038

CG 1.06



GLENN  
ENGINEERING  
 PHONE 972-717-5181 FAX 972-717-2178  
 105 DECKER COURT - SUITE 910 IRVING, TEXAS 75038

CG 1.06