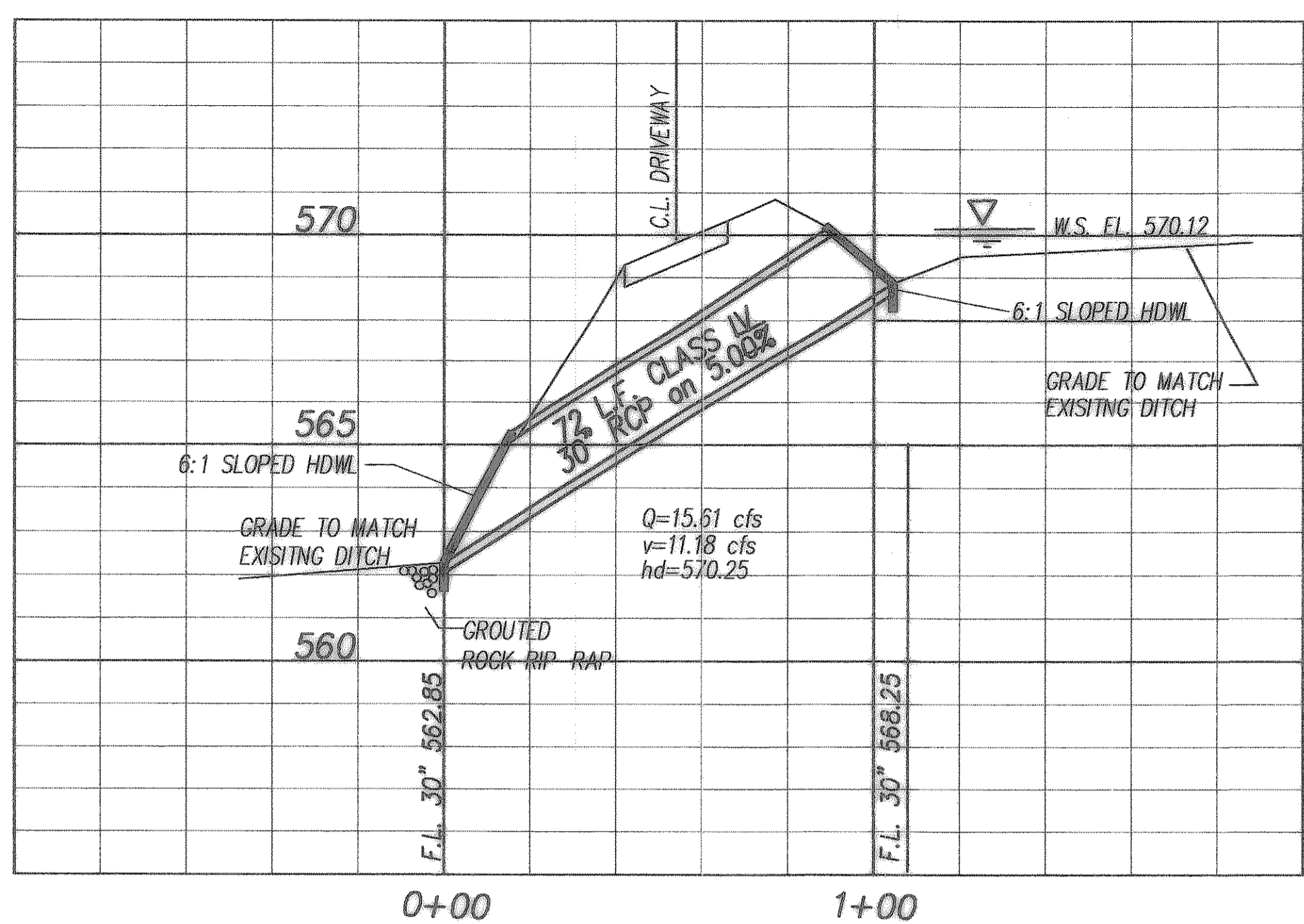


Revision	Date	Description
2-25-08		Rev. Parking Lot Grading & Detention/Retention Pond

LEGEND

- PROP. PAVEMENT
- EXTERIOR BOUNDARY LINE
- LOT LINE
- RIGHT OF WAY
- ← DRAINAGE DIRECTION
- [78.00] PROP. FINISHED PAVT. GRADE ADD 0.50' FOR T.C. GRADE



DRAINAGE / DETENTION CALCULATIONS

Area # 5 = 0.16 Ac.
 Area # 7 = 0.35 Ac.
 Area # 8 = 0.61 Ac.
 Area # 9 = 0.25 Ac.
Total 1.37 Ac to Detain

EXIST. CONDITIONS (1.37 ACRES)
 C 0.35
 Tc 20 minutes
 I₁₀₀ 8.3 in/hr
 Q₁₀₀ .35 x 8.3 x 1.37 = 3.98 cfs (ALLOWABLE RELEASE RATE)

PROPOSED CONDITIONS (1.37 ACRES)
 C 0.90
 Tc 10 minutes
 I₁₀₀ 9.8 in/hr
 Q₁₀₀ .90 x 9.8 x 1.37 = 12.08 cfs

Storm Duration Intensity

Time	I	C	Q
10 min.	9.8 in/hr	0.9	12.08
15 min.	9.0 in/hr	0.9	11.10
20 min.	8.3 in/hr	0.9	10.23
30 min.	6.9 in/hr	0.9	8.51
40 min.	5.8 in/hr	0.9	7.15
50 min.	5.0 in/hr	0.9	6.17
60 min.	4.5 in/hr	0.9	5.55
70 min.	4.1 in/hr	0.9	5.08
80 min.	3.9 in/hr	0.9	4.81
90 min.	3.6 in/hr	0.9	4.61

* MAXIMUM VOLUME REQUIRED IS 12,336 cfs @ THE 80 MIN. STORM DURATION

Detention Volume (Modified Rational Method)

Storm Duration (minutes)	Inflow/Outflow	Storage (Cu ft)
10	Inflow: 7,250 Outflow: 2,387.91	4,862.13
15	Inflow: 9,987.5 Outflow: 2,868.89	7,002.41
20	Inflow: 12,280.68 Outflow: 3,581.87	8,698.62
30	Inflow: 15,313.86 Outflow: 4,775.82	10,538.04
40	Inflow: 17,163 Outflow: 5,959.78	11,193.59
50	Inflow: 18,485 Outflow: 7,163.73	11,331.27
60	Inflow: 19,974.6 Outflow: 8,357.69	11,616.02
70	Inflow: 21,232.26 Outflow: 9,551.64	11,616.02
80	Inflow: 23,081.76 Outflow: 10,745.6	12,336.17 *
90	Inflow: 23,989.52 Outflow: 11,839.55	12,029.97
100	Inflow: 25,153.2 Outflow: 13,133.51	12,019.7

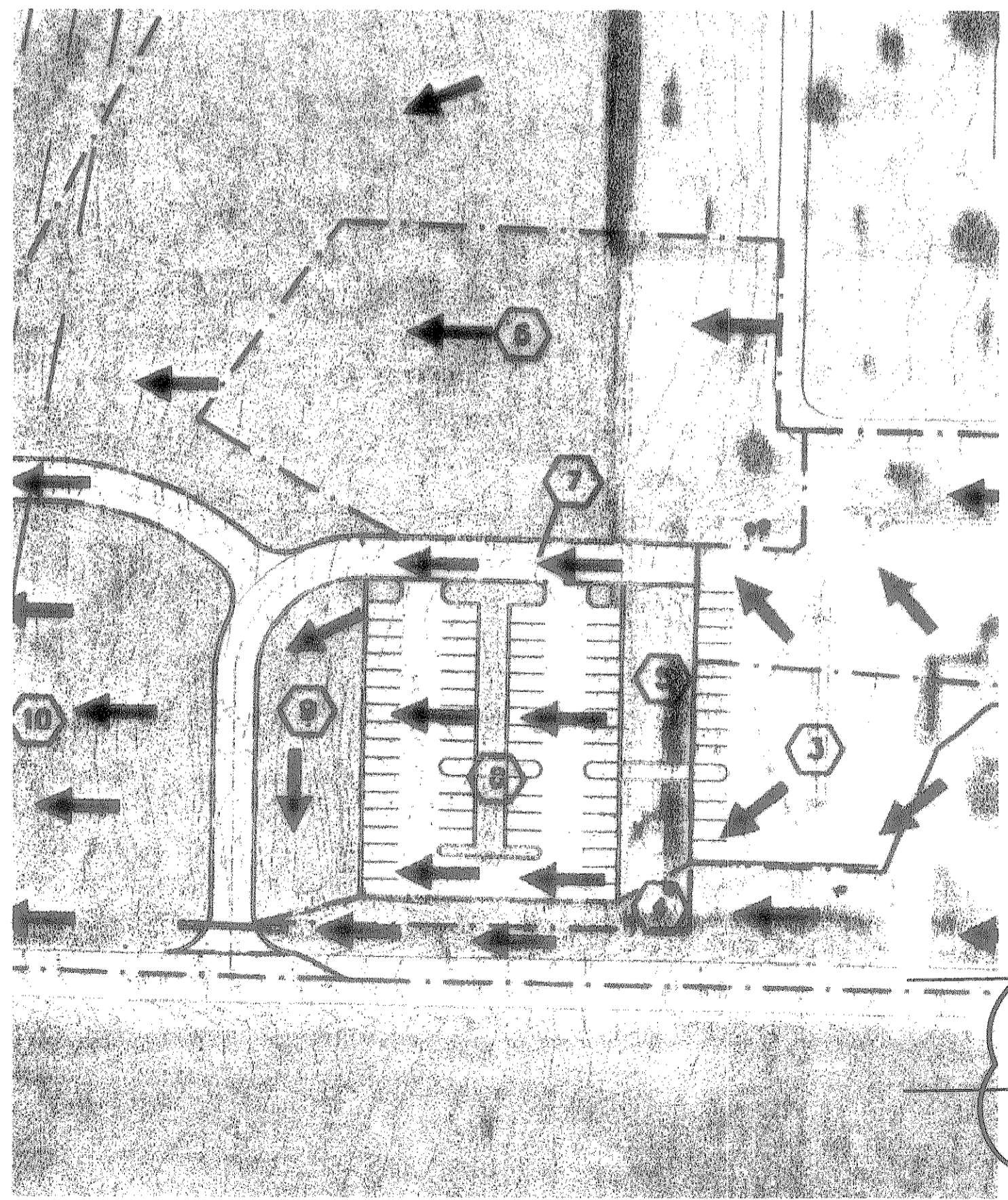
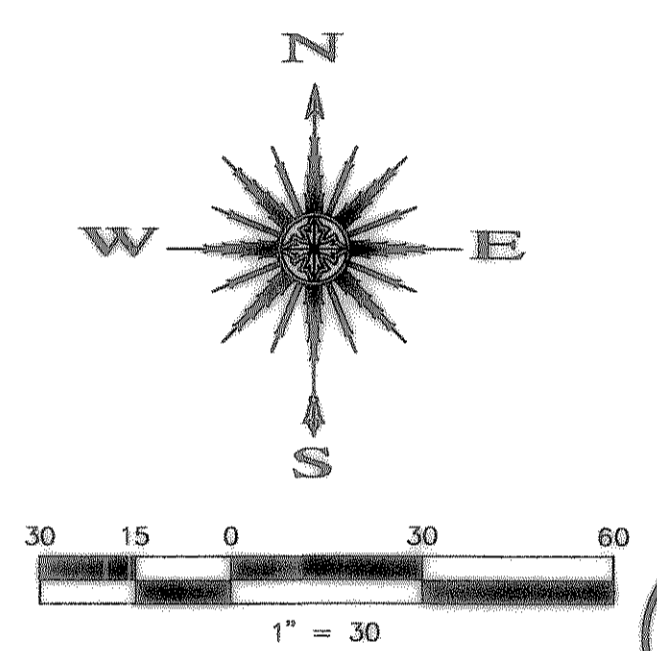
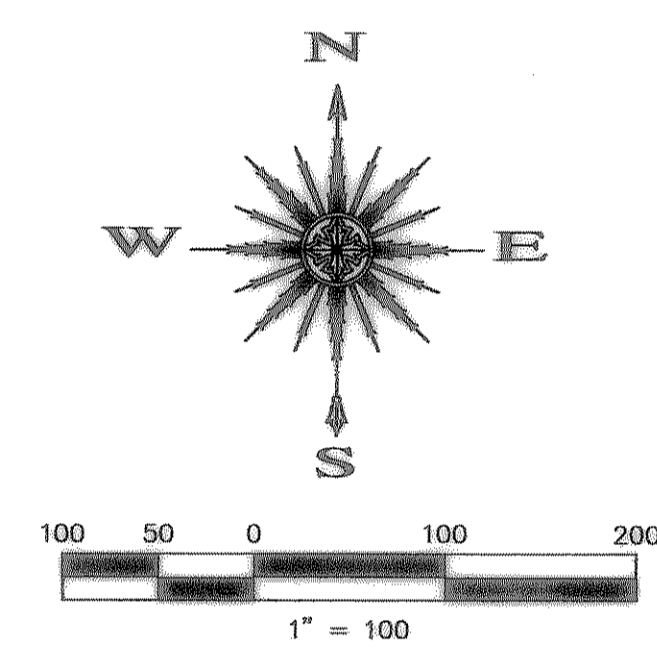
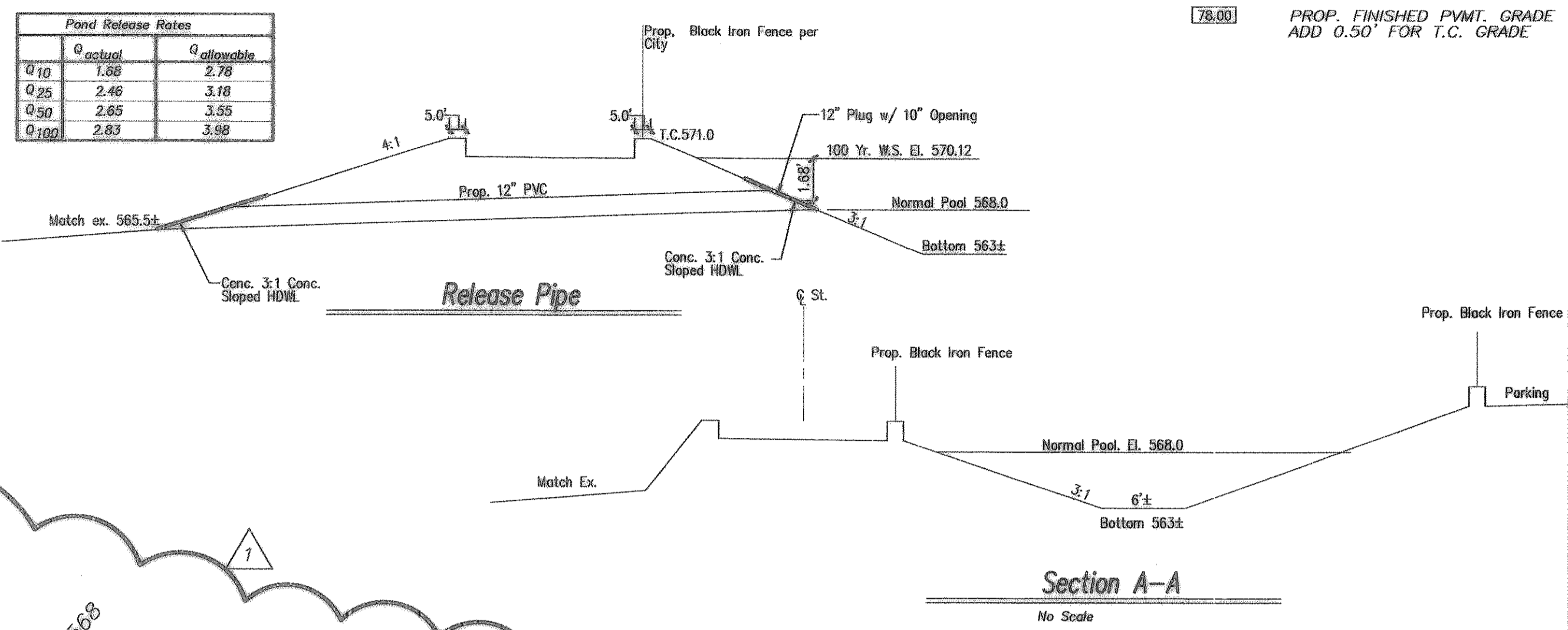
Pond Storage Calculations

Pond Elevation	Increment	Area (sq ft)	Increment Storage	Cummul Storage
568	0	4923	0	0
569	1	6024	5474	5474
570	1	7125	6575	12,049
570.5	1	7593	3680	15,729

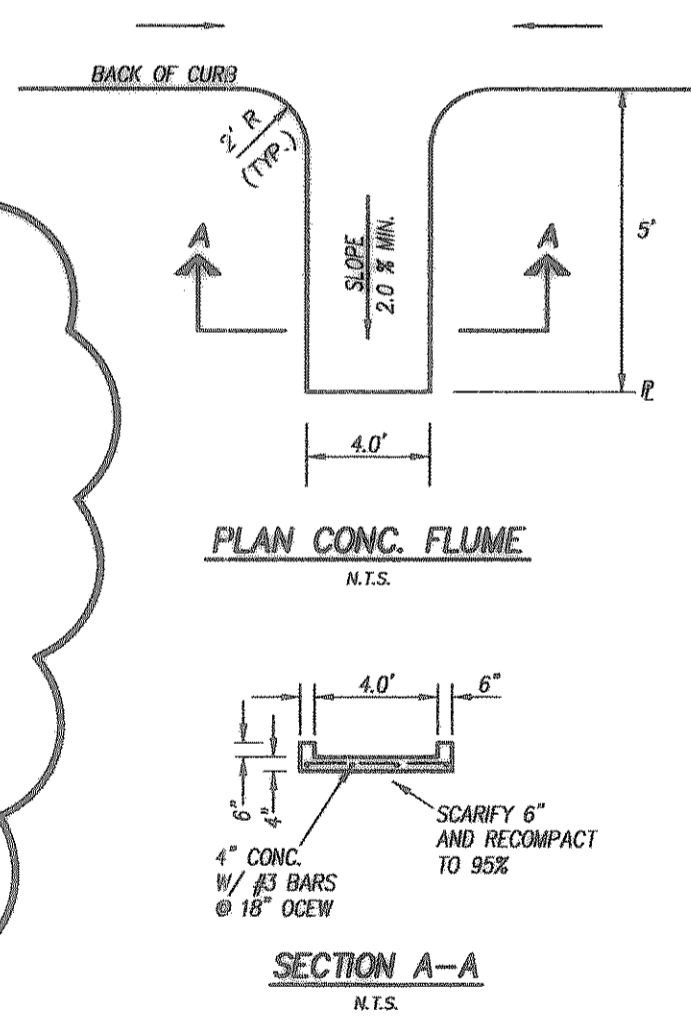
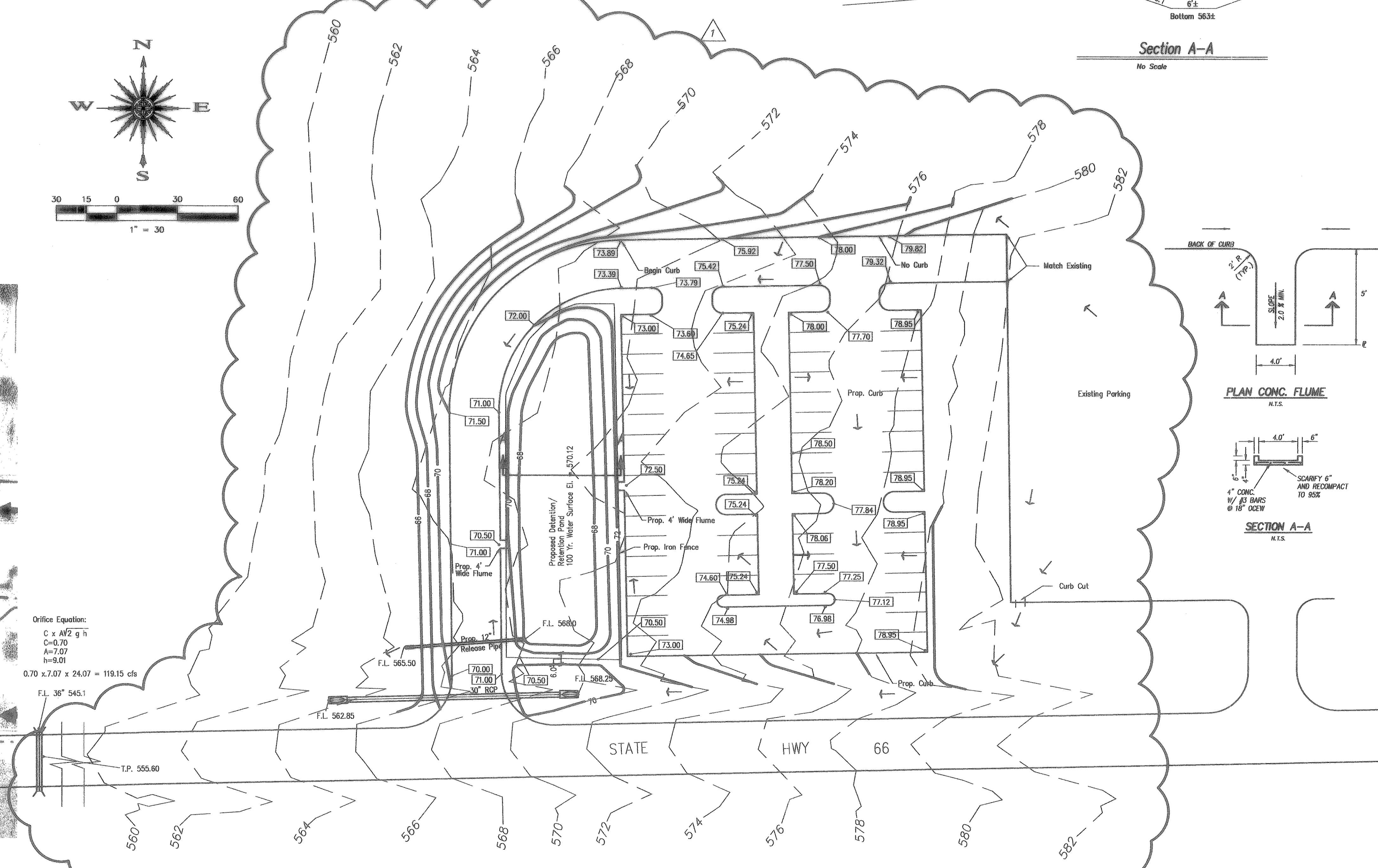
Pond Storage Volume Required = 12,336 cubic feet
 Pond Storage Volume Provided = 12,785 cubic feet @ El. 570.10

Pond Release Rates

	Q _{actual}	Q _{allowable}
Q ₁₀	1.68	2.78
Q ₂₅	2.46	3.18
Q ₅₀	2.65	3.55
Q ₁₀₀	2.83	3.98



Orifice Equation:
 $C \times AV^2 g h$
 $C=0.70$
 $A=71.07$
 $h=9.01$
 $0.70 \times 71.07 \times 24.07 = 119.15$ cfs
 F.L. 36' 545.1
 T.P. 555.60



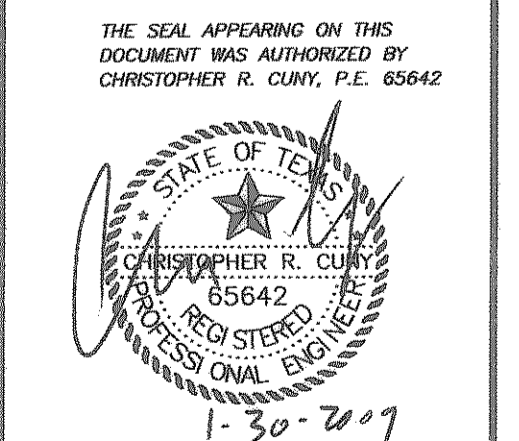
Drainage Area Map
 Scale: 1" = 100'

CONSTRUCTION RECORD DRAWING
 JANUARY 2009

Owner:
Rest Haven Cemetary
 2500 St. Hwy 66, Rockwall, TX 75166
 Phone: 972-8641

Rest Haven Cemetary

F.C. CUNY CORPORATION
 #2 Horizon Court • Ste. 500 • Heath, Texas 75032
 Phone: 469-402-7700
 Fax: 469-402-0700



Drawn By:	Checked By:
FCC	FCC
Date:	Project No.:
1-09	08-000
Sheet Title:	Sheet No.:
Parking Lot/ Pond Plan and Details	1 of 1
Scale:	Sheet No.:
1"=30'	