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 PAUL REES OFFICE BUILDING

ARCHITECTURE
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 STUDIOS
 PLANNING
 INVESTIGATION
 EXHIBIT W/IN:55

PAUL REES
 OFFICE BUILDING
 2271 8TH. ST.
 MANDEVILLE, LA
 70471

DRAINAGE
 PLAN

REV:

SCALE: AS NOTED

JOB#: 2104

DATE: 05-20-11

SHEET 4

C-3

OF 20

PAUL REES OFFICE BUILDING

STORMWATER RUNOFF CALCULATIONS

Formula used: **[1] RATIONAL METHOD: Q=AI**

where: Q= Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm assumed.
 A= Area of watershed in acres.
 I= Intensity of rainfall in inches per hour based on concentration time. [2]

$$[A] TC = \left(\frac{2.48 (1000 - 9) \sqrt{L}}{(11.4)(C^{0.7})} \right)$$

where: TC = Time of concentration = time required for rain falling at most remote point to reach discharge point.
 C= Runoff coefficient based on conditions shown.
 L= Percent slope of overland flow.
 S= Year Frequency.

PERFORM DRUG COMPONENT

2% Year Frequency

Q = Acl	Weighted Surface	c(I)	sqft =	Acres
	Gravel Surface	0.9	0	0.000
	Gravel Surface	0.25	0	0.000
	Open Space	0.35	19908	0.246
	Summary	0.15	19908	0.246

Duration (D) = Time of concentration (TC)

where: L = 140
 C = 0.15
 S = 1.000
 TC = 0 = 21.69
 I = 3.64

POST DEVELOPMENT

2% Year Frequency

Q = Acl	Weighted Surface	c(I)	sqft =	Acres
	Gravel Surface	0.9	6026	0.139
	Gravel Surface	0.25	0	0.000
	Open Space	0.35	4790	0.110
	Summary	0.57	10906	0.246

Retention Requirements

10 Year Frequency

Q = Acl	Retention Requirements	Depth	Length
	Retention required: Q=Q1	0.39 cfs	72 feet
	ONE HOUR DETENTION	1360.0 cfs	40 feet
	DISCHARGE FLOW AFTER RETENTION		0.47 cfs

REQUIRED DETENTION

10 Year Frequency

Q = Acl	Retention Requirements	Depth	Length
	Retention required: Q=Q1	0.39 cfs	72 feet
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	DISCHARGE FLOW AFTER RETENTION		0.47 cfs

REQUIRED DETENTION

10 Year Frequency

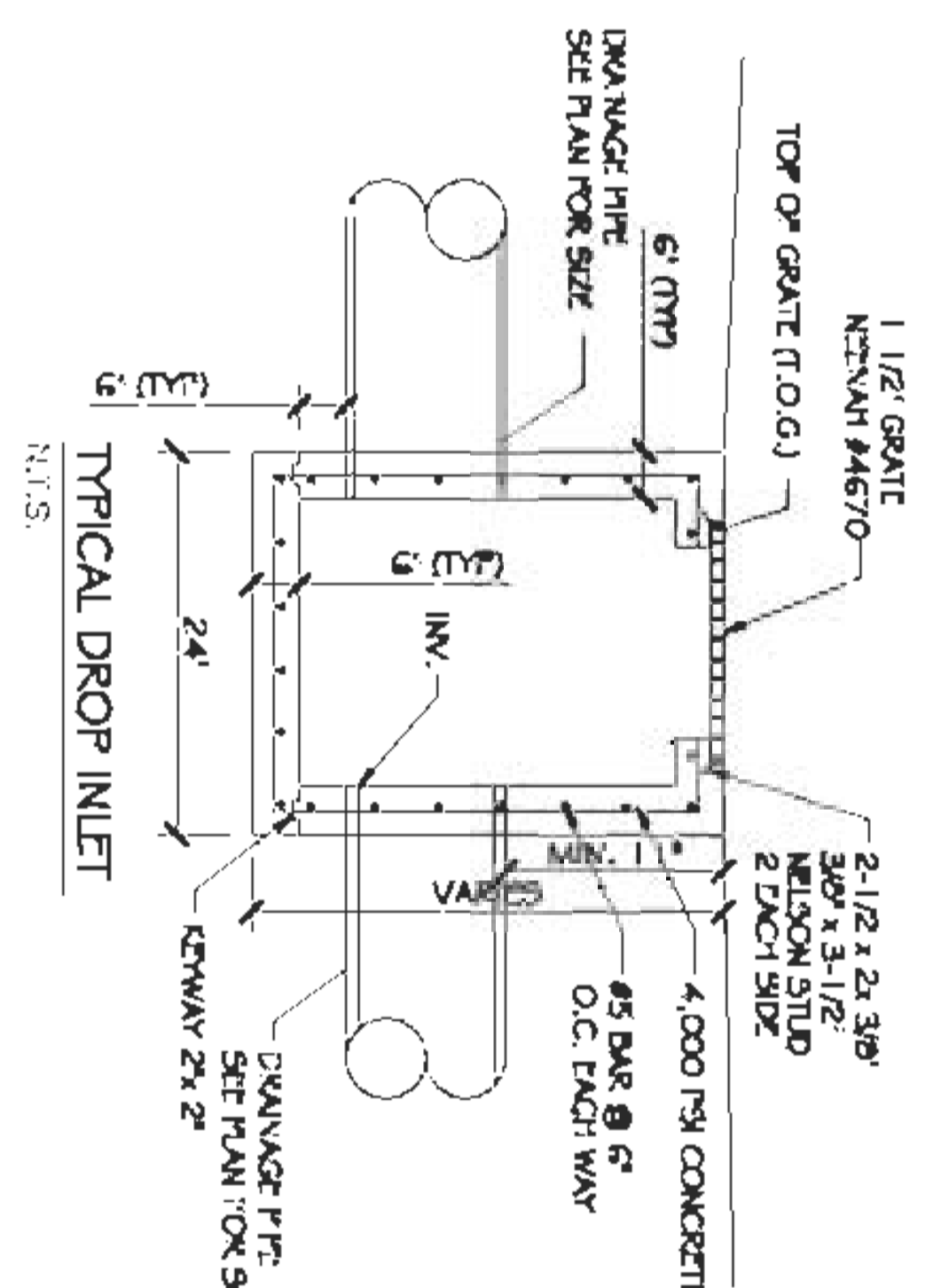
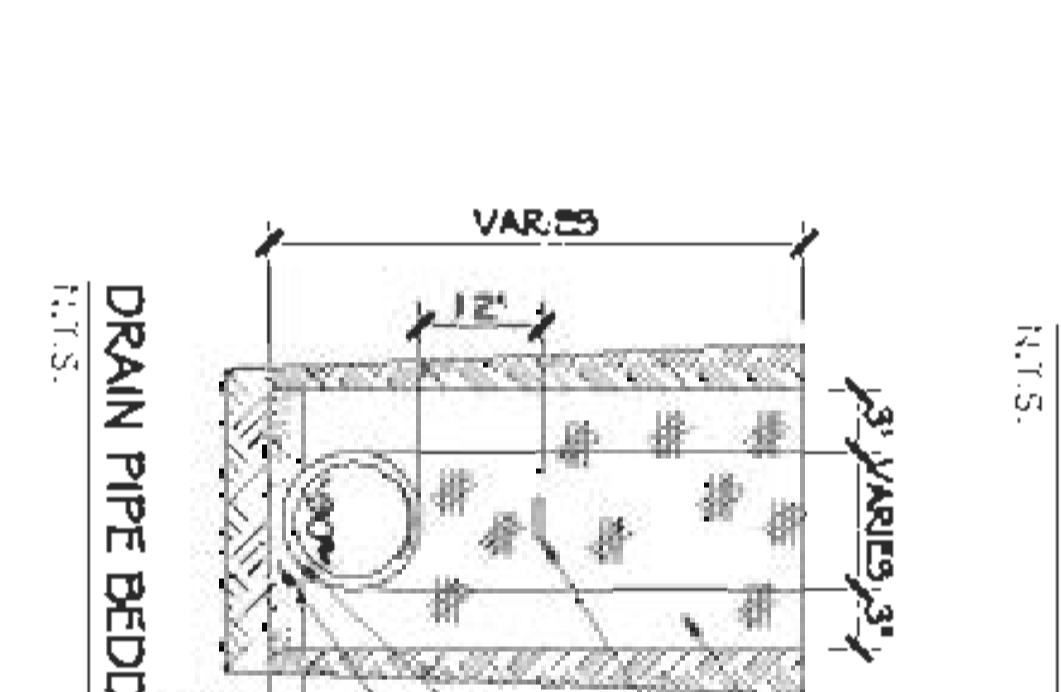
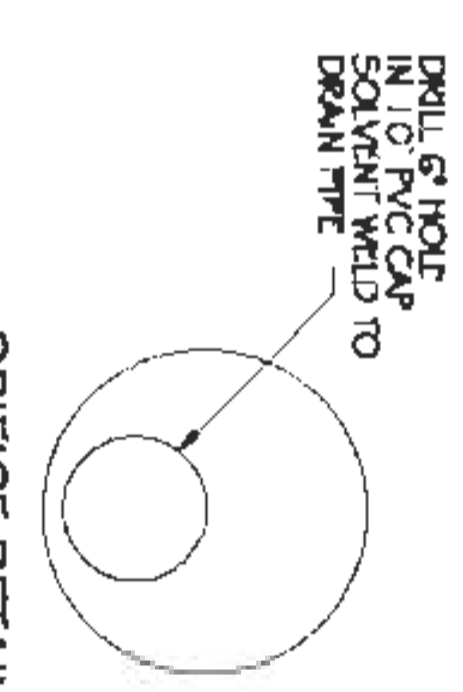
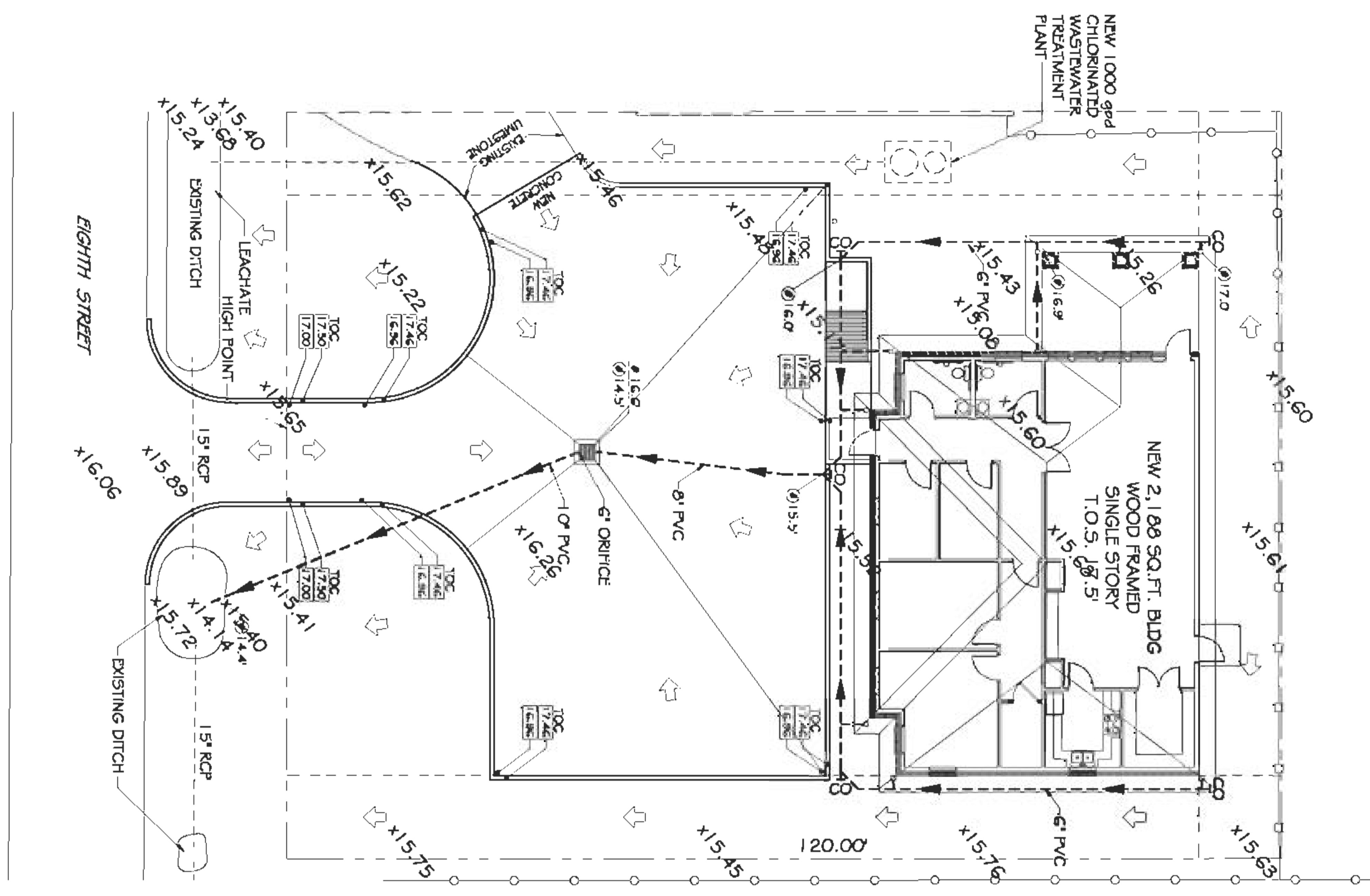
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REQUIRED DETENTION

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References:
 1. Chow, W.T. Open Channel Hydraulics, 1959, Eq # 31.1, pg. 103c.
 2. Swamy, E. Open Channel Hydraulics, Vol. 1, 1980, The B. P. pg. 18.02.
 3. Swamy, E. Open Channel Hydraulics, Vol. 1, 1980, Fig. B, pg. 18.31.
 4. Chow, W.T. Open Channel Hydraulics, 1959, Eq # 28.2, pg. 95.
 5. Chow, W.T. Open Channel Hydraulics, 1959, Eq # 28.2, pg. 95.

USE 6" OR PVC



- DRAINAGE NOTES:**
- 1) DRAIN FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVIT.
 CHLORINATED PLASTIC PIPE, WEIGHT CLASS 100 C-900 PVC.
 - 2) ELEVATIONS SHOWN ARE M.S.L.
 - 3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM
 LOCATION PRIOR TO START OF WORK.
 - 4) DOWN SPOULTS SHALL FLOW INTO SUBSISTANCE DRAINAGE SYSTEM.
 THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE
 PROPERTY. NEW DRAINAGE CALCULATIONS ARE DETERMINED ACCORDINGLY.

- LEGEND**
- PROPERTY LINE
 - SETBACK
 - NEW DRAINAGE ELEVATION
 - EXISTING ELEVATION
 - TOP OF GRADE ELEVATION
 - NEW DRAINAGE FITTING
 - EXISTING DRAINAGE FITTING
 - SHEET FLOW DIRECTION

DRAINAGE PLAN
 SCALE: 1/8" = 1'-0"