



DAMMON ENGINEERING, INC.

EMMETT DAMMON

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ARCHITECTURE
ENGINEERING
STUDIES
PLANNING
INVESTIGATION
EXPERT WITNESS

NEW OFFICE BUILDING

BRICE JONES
ROBERT ROAD
SLIDELL, LA

DRAINAGE PLAN

REV:08-30-07

SCALE: AS NOTED

JOB#: 1867

DATE: 7-18-07

SHEET

C-4

OF

LEGEND

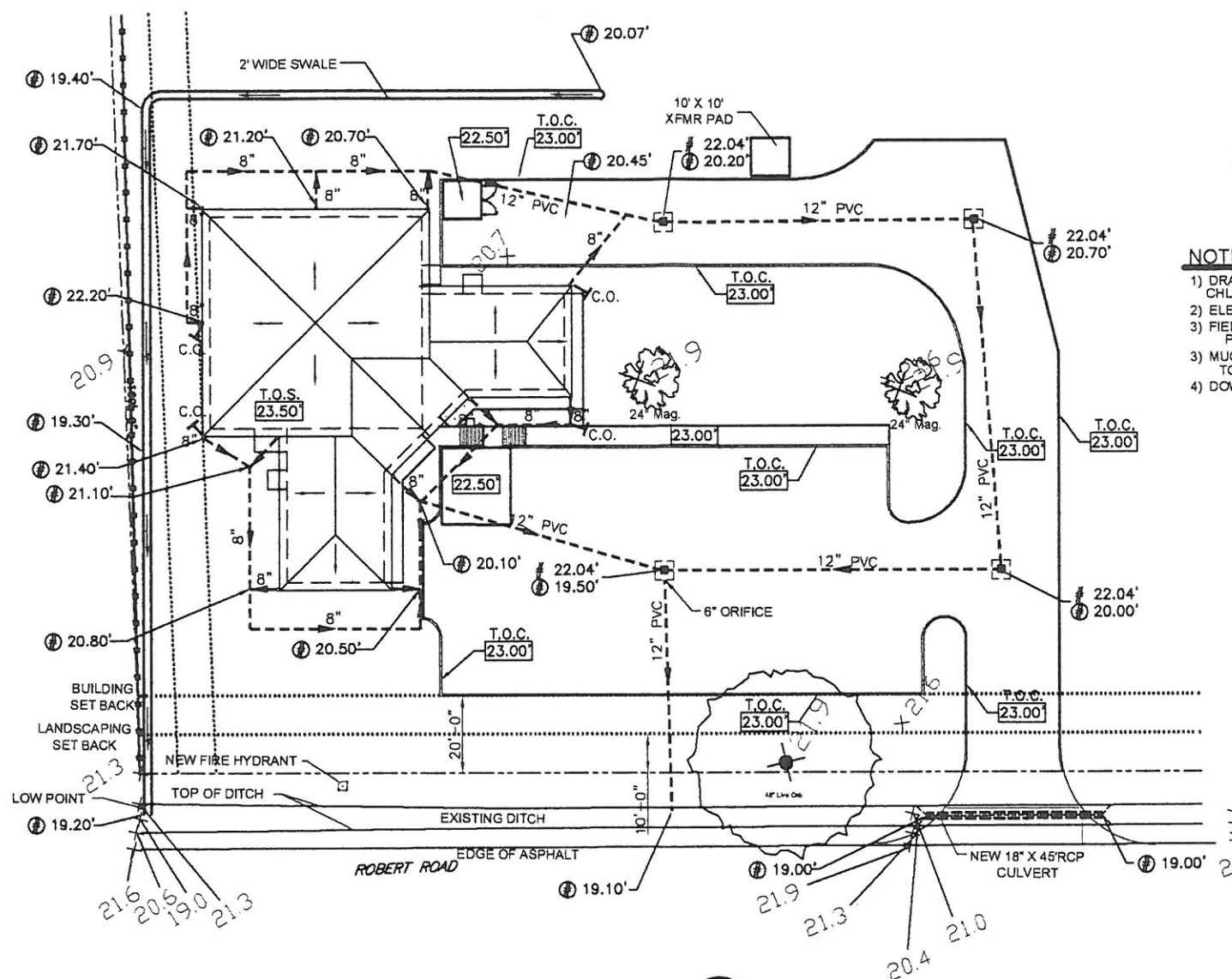
- PROPERTY LINE
- SETBACK
- DRAINAGE LINE
- NEW BUILDING OUTLINE
- ROOF LINE
- EXPANSION JOINT
- CONTROL JOINT (10"x15")
- SILT FENCE
- NEW CATCH BASIN W/SILT FENCE
- EXISTING ELEVATIONS
- NEW ELEVATIONS
- TOP OF GRATE ELEVATION
- INVERT ELEVATION
- SLOPE LINES
- NEW CURB
- NEW 6'-0" WOODEN FENCE

NOTES:

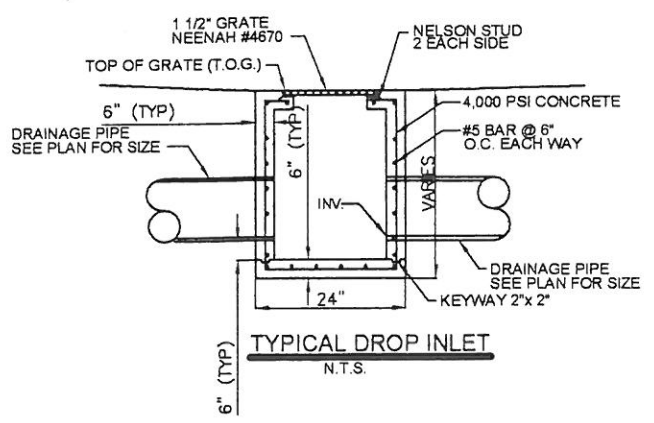
- 1) DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-900 PVC.
- 2) ELEVATIONS SHOWN ARE M.S.L.
- 3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
- 3) MUCK OUT 24" DEEP FOR FOUNDATION PAD MINIMUM, OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING
- 4) DOWN SPOUTS SHALL FLOW INTO SUBSURFACE DRAINAGE.

PROJECT: Brice Jones Office Building			
DRAINAGE RUN OFF CALCULATIONS - RATIONAL METHOD			
PRIOR DEVELOPMENT 10 Year Frequency			
Q _p = CIA			
Watertight Surfaces c(1) = 0.9	0	sqft = 0.000	Acres
Gravel Surface c(2) = 0.21	0	sqft = 0.000	Acres
Green Space c(3) = 0.35	31555.93	sqft = 0.724	Acres
Summary c = 0.35	31555.93	sqft = 0.724	Acres
Duration (D) = Time of concentration (TC) TC = .7039(L ^{0.3917})(e ^{-1.1309}) ^{0.1989} where L = 396 Runoff length ft Elev diff = 0.75 c = 0.35 Runoff coef S = 0.2831 Percent Slope therefore TC = D = 33.45 minutes or and from Rainfall Intensity Table I = 4.50 in/hr			
Q _p = 1.141 cfs	RUNOFF LIMIT 90%	1.027	cfs
POST DEVELOPMENT 10 Year Frequency			
Q _p = CIA			
Watertight Surfaces c(1) = 0.9	12438.2	sqft = 0.286	Acres
Gravel Surface c(2) = 0.21	0	sqft = 0.000	Acres
Green Space c(3) = 0.35	19117.73	sqft = 0.439	Acres
Summary c = 0.57	31555.93	sqft = 0.724	Acres
D = Time of concentration (TC) TC = .7039(L ^{0.3917})(e ^{-1.1309}) ^{0.1989} where L = 190.02 Runoff length ft Elev diff = 0.5 c = 0.57 Runoff coef S = 0.2831 Percent Slope therefore TC = D = 13.62 minutes or and from Rainfall Intensity Table I = 7.50 in/hr			
Q _p = 3.121 cfs			
RESULTS			
DETECTION REQUIRED Q _p - Q _i	2.094	cfs	
ONE HOUR DETENTION	7537.2	cuft	
DETECTION DIMENSIONS	WIDTH 87.01 feet	LENGTH 190.02 feet	DEPTH 0.46 feet
DISCHARGE END AREA CALCULATIONS			
Q = cA(2gH) ^{0.5}	where Q is allowable run off		
Allowable run off	Q = 1.027	cfs	
Friction loss factor	c = 0.38	coefficient	
Acceleration	g = 32.2	ft/sec ²	
Height above invert	H = 1.50	feet	
End area	A = 0.11	sqft	
REQUIRED CONDUIT =	4.42	Inch diameter	
USE	6	inch orifice	

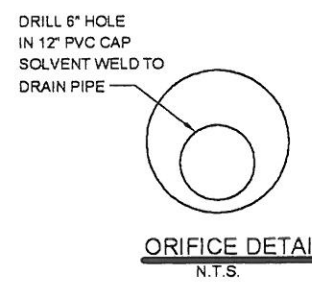
BLDG 209 CU YARDS
DRIVEWAY 250 CU YARDS



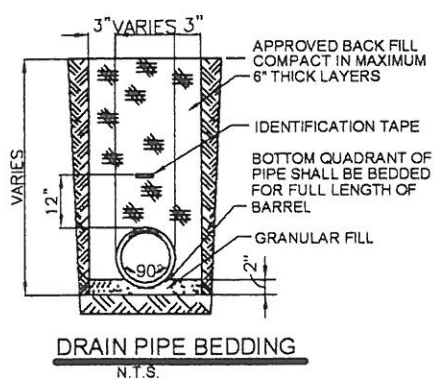
PARTIAL DRAINAGE PLAN
SCALE: 1" = 20'-0"



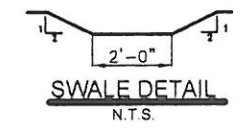
TYPICAL DROP INLET
N.T.S.



ORIFICE DETAIL
N.T.S.



DRAIN PIPE BEDDING
N.T.S.



SWALE DETAIL
N.T.S.



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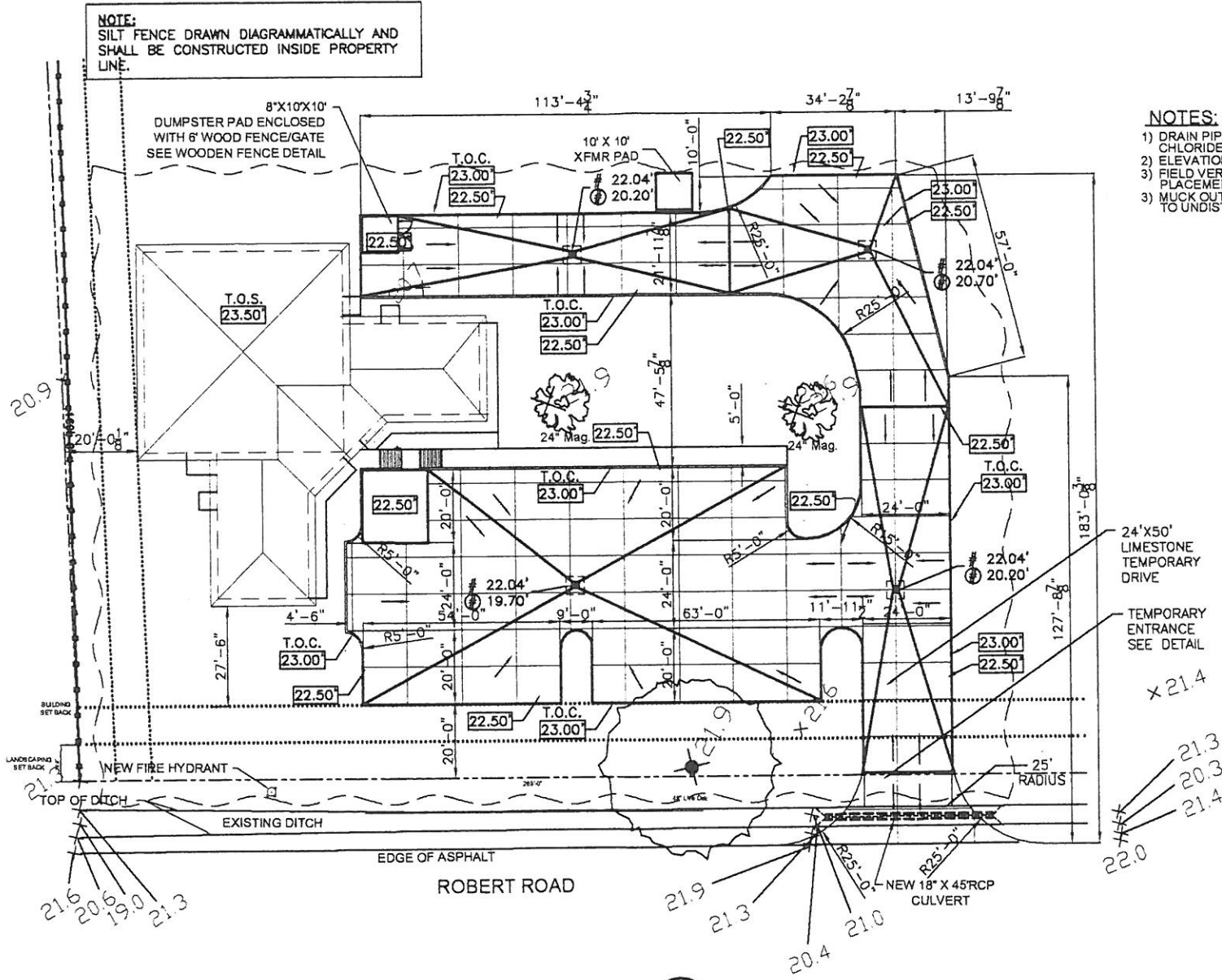
OF

LEGEND

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- - - - - NEW BUILDING OUTLINE
- ===== ROOF LINE
- - - - - EXPANSION JOINT
- - - - - CONTROL JOINT (10'x15')
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PAVING PLAN
SCALE: 1" = 20'-0"

