PROJECT: 1789 | **New Office**

DRAINAGE RUN OFF CALCULATIONS -- RATIONAL METHOD

PRIOR DEVELOPMENT
10 Year Frequency

Q_1 = CIA

Watertight Surfaces		0	sqft =	0.000	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.21				
Green Space		30181.67	sqft =	0.693	Acres
c(3) =	0.35				
Summary		30181.67	sqft =	0.693	Acres
c =	0.35				

Duration (D) = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)

where	L = 232	Runoff length ft	Elev diff = 1
	c = 0.35	Runoff coef	
	S = 0.4310	Percent Slope	
therefore	TC = D = 23.04	minutes or	
and from Rainfall Intensity Table	I = 4.50	in/hr	

Q_1 = 1.091 cfs   RUNOFF LIMIT 90%   0.982 cfs

POST DEVELOPMENT
10 Year Frequency

Q_2 = CIA

Watertight Surfaces		11407	sqft =	0.262	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.21				
Green Space		18774	sqft =	0.431	
c(3) =	0.35				
Summary		30181	sqft =	0.693	Acres
c =	0.56				

D = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)

where	L = 232	Runoff length ft	Elev diff = 0.5
	c = 0.56	Runoff coef	
	S = 0.2155	Percent Slope	
therefore	TC = D = 15.60	minutes or	
and from Rainfall Intensity Table	I = 7.60	in/hr	

Q_2 = 2.938 cfs

RESULTS

DETENTION REQUIRED	Q_2-Q_1	1.955	cfs
ONE HOUR DETENTION		7039.7	cuft
DETENTION DIMENSIONS	WIDTH	112	feet
	LENGTH	130	feet
	DEPTH	**0.48**	**feet**

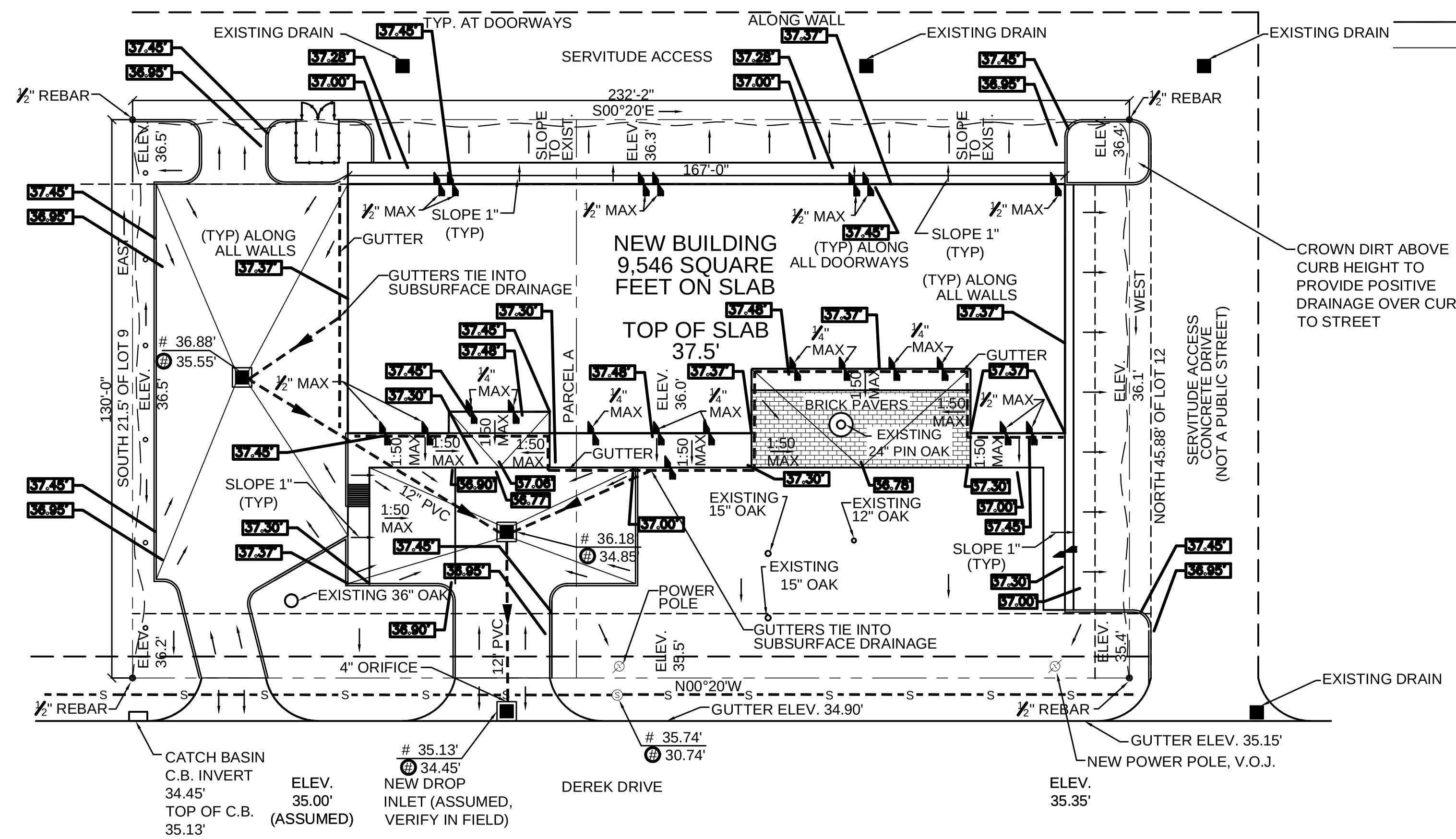
DISCHARGE END AREA CALCULATIONS

Q = cA(2gH)^1/2   where Q is allowable run off

Allowable run off	Q =	0.982	cfs
Friction loss factor	c =	0.98	coefficient
Acceleration	g =	32.2	ft/ft/sec
Height above invert	if H =	1.50	feet
End area	A =	0.10	sqft

REQUIRED CONDUIT = 4.32 inch diameter

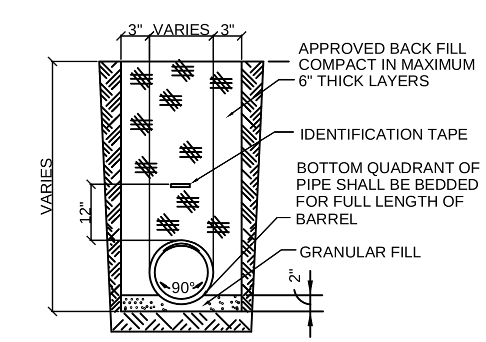
USE 4" Orifice



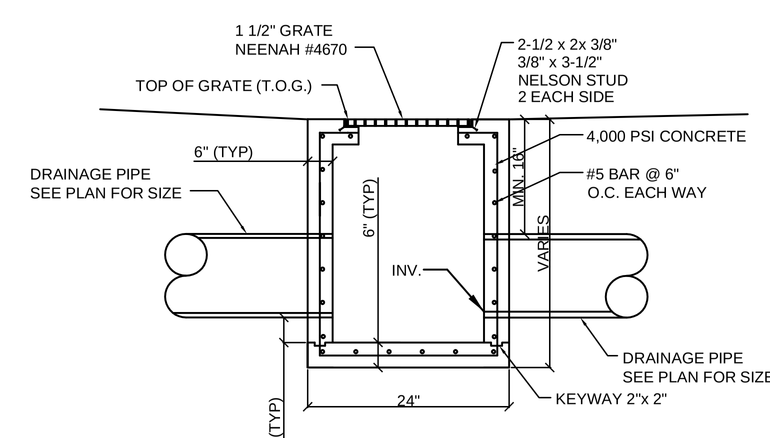
DRAINAGE PLAN
SCALE: 1"=20'-0"

NOTE:
FEATHER IN CONCRETE ELEVATIONS AT DOORWAYS TO TYPICAL ELEVATIONS, ALONG WALL AT THE BASE OF BRICK LEDGE. ALSO SEE SHEET A-1.

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 MINUMINM. OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING
4) DOWN SPOUTS SHALL FLOW INTO SUB-SUFRACE DRAINAGE.

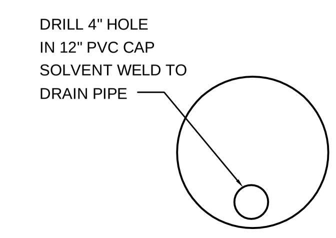


DRAIN PIPE BEDDING
N.T.S.



TYPICAL DROP INLET
N.T.S.

LEGEND:
- PROPERTY LINE
- SERVITUDE / EASEMENT
- SETBACK
- NEW BUILDING
- NEW DRAIN LINE
- SLOPE LINES
- NEW DROP INLET w/TEMP. SILT FENCING
- EXPANSION JOINT
- CONTROL JOINT
- T.O. GRATE ELEVATION
- INVERT ELEVATION
00.00 - NEW ELEVATIONS
ELEV.00.00 - EXISTING ELEVATIONS
- TEMPORARY SILT FENCING
- VERTICAL CHANGE



ORIFICE DETAIL
N.T.S.

GUTTERS AND DOWN SPOUTS TO BE SEAMLESS ALUMINUM 24 GAUGE, COLOR TO BE SELECTED BY OWNER. GUTTERS TO BE "OGEE" IN CROSS SECTION, MINIMUM 6" WIDTH.

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NEW OFFICE PROPERTY

DEREK DRIVE PROPERTY
1303/1307 DEREK DR.
HAMMOND, LA

DRAINAGE PLAN

REV:

SCALE: AS NOTED
JOB#: 1908
DATE: 11-15-07
SHEET
C-4
OF