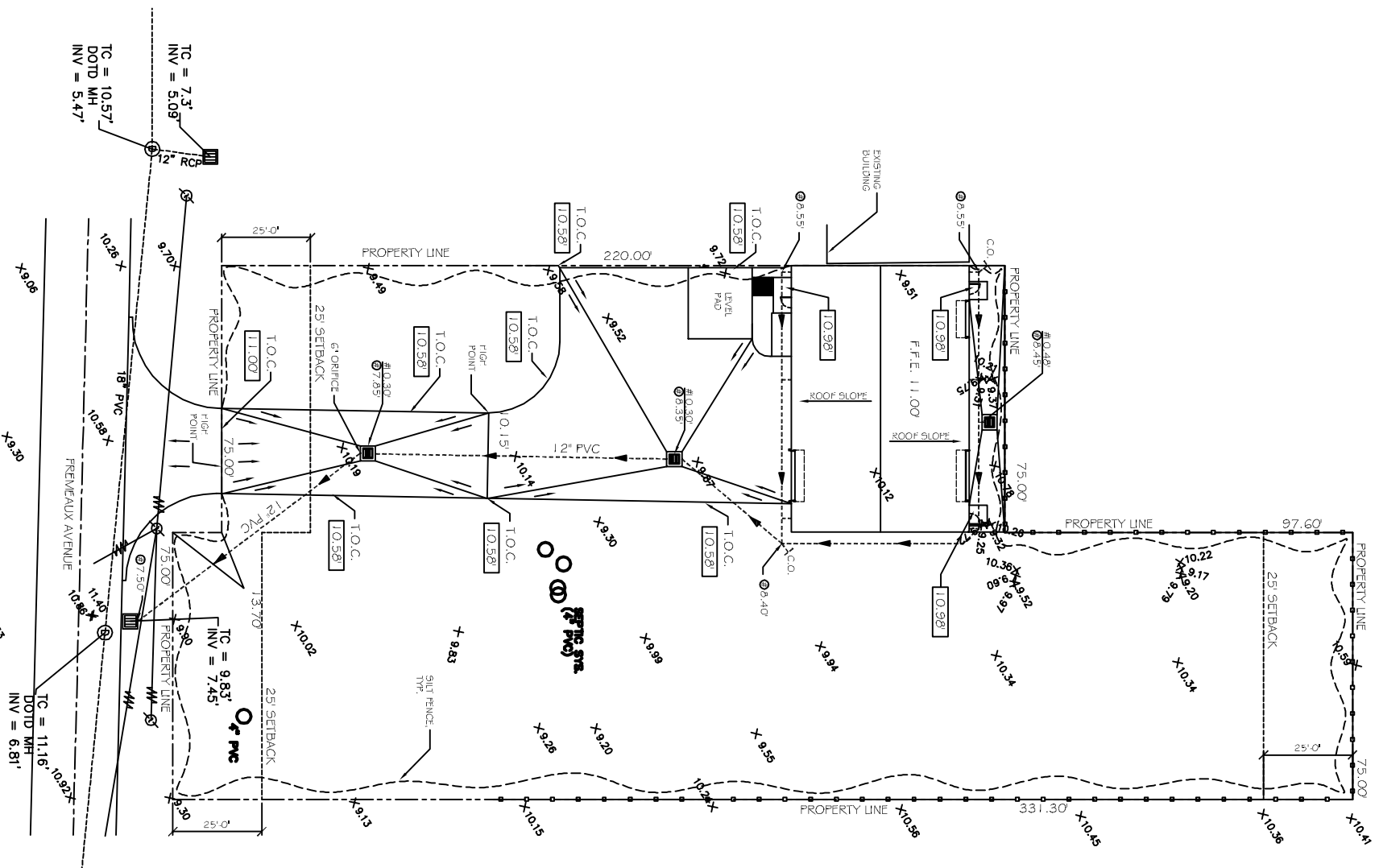


SITE DRAINAGE PLAN
SCALE: 1"=20'-0"

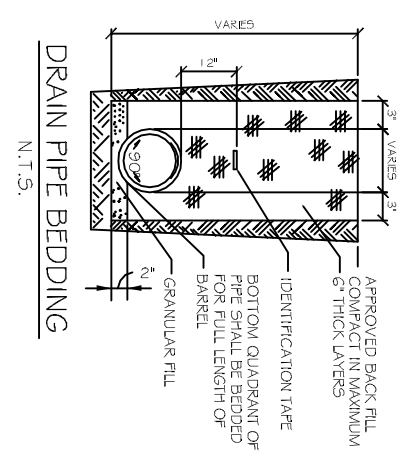
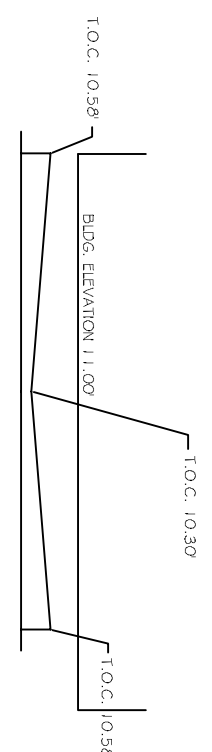


- LEGEND**
- - - PROPERTY LINE
 - - - SETBACK LINE
 - - - TEMPORARY SILT FENCING
 - - - NEW DRAIN LINE
 - - - 6\"/>
 - - - NEW DROP INLET w/TEMP. SILT FENCING
 - - - SLOPE LINES
 - - - T.O. GRAVE ELEVATION
 - ⊖ - INVERT ELEVATION
 - ⊕ - NEW ELEVATIONS
 - ⊙ - EXISTING ELEVATIONS

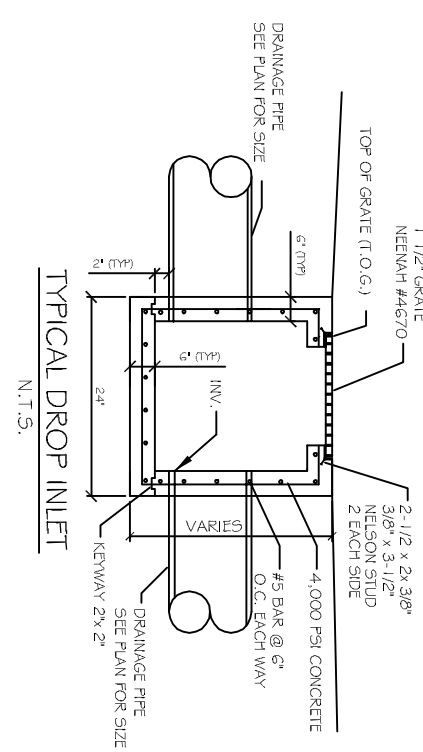
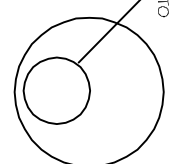
GUTTERS AND DOWN SPOUTS TO BE SEAMLESS ALUMINIUM 24 GAUGE, COLOR TO BE SELECTED BY OWNER. GUTTERS TO BE OGGED IN CROSS SECTION, MINIMUM 6\"/>

- NOTES:**
- 1) DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C 900 P.V.C.
 - 2) ELEVATIONS SHOWN ARE M.S.L.
 - 3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
 - 4) MUCK OUT 24\"/>
 - 5) DOWN SPOUTS SHALL FLOW INTO SUB-SURFACE DRAINAGE.
 - 6) THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY. NEW DRAINAGE CALCULATIONS ARE DETERMINED ACCORDINGLY.

SECTION
N.T.S.



ORIFICE DETAIL
N.T.S.



BULK SYSTEMS

PROJECT: STORMWATER RUNOFF CALCULATIONS

Formulas used: **[1] RATIONAL METHOD: Q=Aci**

where: Q= Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm assumed.
A= Area of watershed in acres.
C= Coefficient of runoff [2].
i= Intensity of rainfall in inches per hour based on concentration time, [3]

[4] TC=

where: TC=Time of concentration= time required for rain falling at most remote point to reach discharge point.
c= Site runoff coefficient based on conditions shown.
s= Percent slope of overland flow.
P= PRIOR DEVELOPMENT
25 Year Frequency

Q = Ad	Waterlight Surfaces	Gravel Surfaces	Green Space	Summary
c(1) =	0.9	0.25	0.15	0.23
c(2) =	4.44	0	37.88	41.32
c(3) =	0.25	0	37.88	41.32
c =	0.23	0	37.88	41.32
Area (sqft)	11517	0	23815	41332
Area (Acres)	0.264	0	0.854	0.949

Duration (D) = Time of concentration (TC)
where L = 208 run-off length ft
c = 0.23 runoff coefficient
S = 0.4808 percent slope
TC = D = 5.55 minutes
therefore Expected rainfall Intensity I = 3.64 in/hr

Q = 0.778 cfs
POST DEVELOPMENT
25 Year Frequency
10% reduction 0.078 cfs

Q = Ad	Waterlight Surfaces	Gravel Surfaces	Green Space	Summary
c(1) =	0.9	0.25	0.15	0.26
c(2) =	11517	0	23815	41332
c(3) =	0.25	0	23815	41332
c =	0.26	0	23815	41332
Area (sqft)	11517	0	23815	41332
Area (Acres)	0.264	0	0.854	0.949

Duration (D) = Time of concentration (TC)
where L = 170 run-off length ft
c = 0.26 runoff coefficient
S = 0.8824 percent slope
TC = D = 2.90 minutes
therefore Expected rainfall Intensity I = 3.64 in/hr

Q = 1.240 cfs
DEFENTION REQUIREMENTS
0.46cfs
ONE HOUR DETENTION DIMENSIONS
WIDTH 1683.5in
LENGTH 65feet
DISCHARGE END AREA REQUIREMENTS
0.28feet
10 Year Frequency

where
A= Discharge Area required
Q= Discharge
h= Hydraulic head
H= Hydraulic head
Q= Discharge
Q= Discharge
Q= Discharge

1.38in header diameter

REQUIRED CONDUIT

1. Chen, W.F., The Civil Engineering Handbook, 1985, East 317, 10-106
2. Sanku, R.M., Data Book for Civil Engineers, Vol 4, 1982, The R.E. & W. 10-22
3. Sanku, R.M., Data Book for Civil Engineers, Vol 4, 1982, The R.E. & W. 10-22
4. Chen, W.F., The Civil Engineering Handbook, 1985, East 317, 10-106
5. Chen, W.F., The Civil Engineering Handbook, 1985, East 317, 10-106

REVISIONS

#	DESCRIPTION	DATE

BULK SYSTEM'S NEW OFFICE/WAREHOUSE BUILDING
1226 FREMEAUX AVENUE
SLIDELL, LOUISIANA 70458

JOB No: 2173 DATE: 04-22-2013
DRAWN BY: JTL CHECKED BY:

DAMMON ENGINEERING, INC.
Architects & Engineers

CHIEF ENGINEER: EMMETT DAMMON, P.E.
CHIEF ARCHITECT: KEVIN KNIFEN
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SHEET No: 5 OF 20
SITE DRAINAGE PLAN

C4