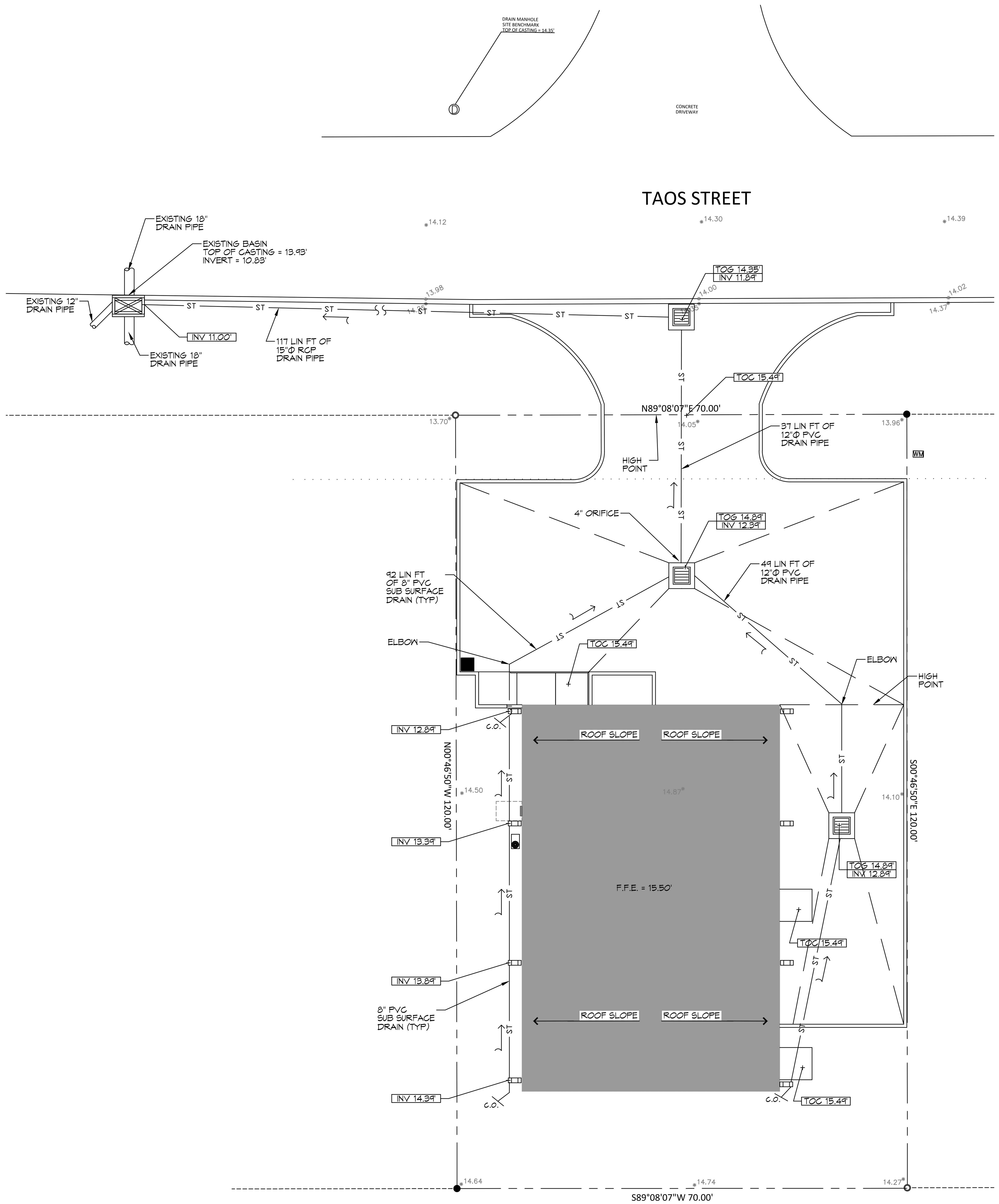
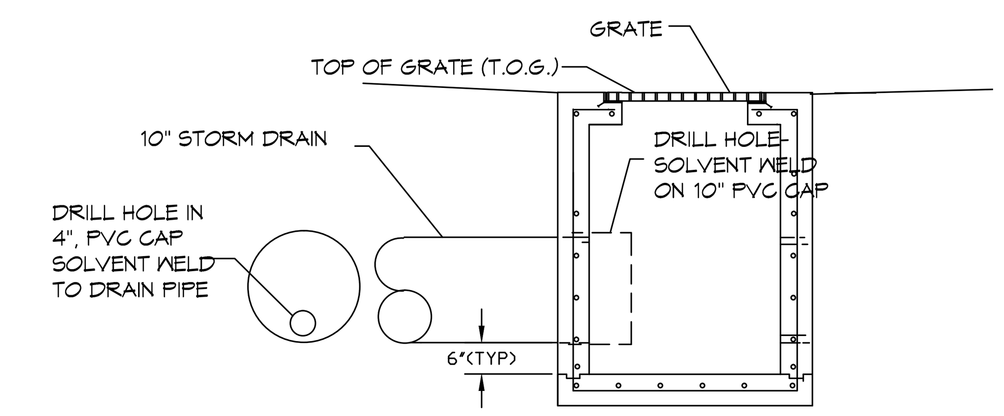


14 DRAINAGE PLAN
SCALE: 1" = 10'-0"

PROJECT:	Bouche					
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) =	0.14					
Green Space			8400	sqft =	0.193	Acres
c(3) =	0.21					
Summary			8400	sqft =	0.193	Acres
c =	0.21					
Duration (D) = Time of concentration (TC)						
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)						
where	L =	120	Runoff length ft		Elev diff =	1
	c =	0.21	Runoff coef			
	S =	0.8333	Percent Slope			
therefore	TC = D =	27.82	minutes or			
and from Rainfall Intensity T	I =	4.50	in/hr			
Q_1 =	0.182	cfs	RUNOFF LIMIT	90%	0.164	cfs
POST DEVELOPMENT						
10 Year Frequency						
Q_2 = CIA						
Watertight Surfaces			5801	sqft =	0.133	Acres
c(1) =	0.9					
Gravel Surface			0	sqft =	0.000	Acres
c(2) =	0.14					
Green Space			2599	sqft =	0.060	
c(3) =	0.21					
Summary			8400	sqft =	0.193	Acres
c =	0.69					
D = Time of concentration (TC)						
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)						
where	L =	85	Runoff length ft		Elev diff =	0.5
	c =	0.69	Runoff coef			
	S =	0.5882	Percent Slope			
therefore	TC = D =	6.82	minutes or			
and from Rainfall Intensity T	I =	7.60	in/hr			
Q_2 =	1.006	cfs				
RESULTS						
DETENTION REQUIRED	Q_2-Q_1		0.842	cfs		
ONE HOUR DETENTION			3031.6	cuft		
DETENTION DIMENSIONS			WIDTH	69	feet	
			LENGTH	85	feet	
			DEPTH	0.52	feet	
DISCHARGE END AREA CALCULATIONS						
Q = cA(2gH)^1/2		where Q is allowable run off				
Allowable run off		Q =	0.164	cfs		
Friction loss factor		c =	0.98	coefficient		
Acceleration		g =	32.2	ft/ft/sec		
Height above invert		if H =	2.00	feet		
End area		A =	0.01	sqft		
REQUIRED CONDUIT =			1.64	inch diameter		
		USE	4	inch orifice		

15 DRAINAGE CALCULATIONS
SCALE: N.T.S.



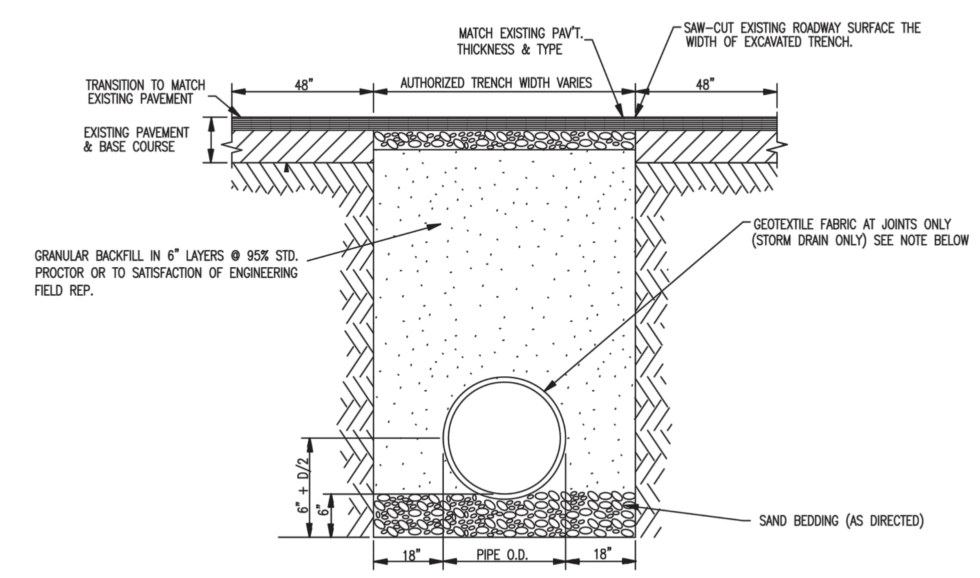
16 DROP INLET PIPE CAP
SCALE: N.T.S.

DRAINAGE NOTES

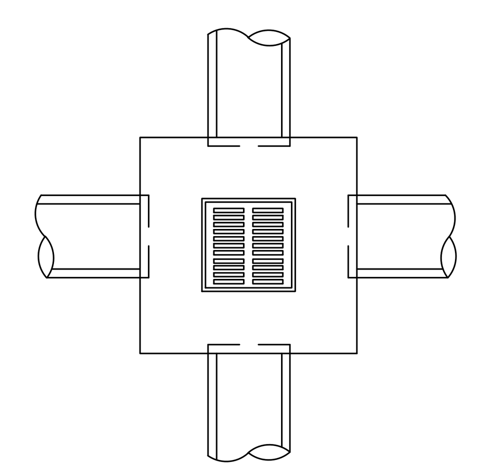
1. DRAIN PIPE AND FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-900 PVC.
2. ELEVATIONS SHOWN ARE MSL.
3. FIELD VERIFY ALL ELEVATIONS AND AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
4. PROVIDE VERTICAL ELBOW AT DOWNSPOUTS FOR CONNECTION TO SUBSURFACE DRAINAGE WHERE INDICATED. ELBOW ID SHALL BE SIZED SUCH THAT THE DOWNSPOUT CAN BE INSERTED INTO THE PIPE OPENING WITHOUT DEFORMATION TO THE DOWNSPOUT.

DRAINAGE LEGEND

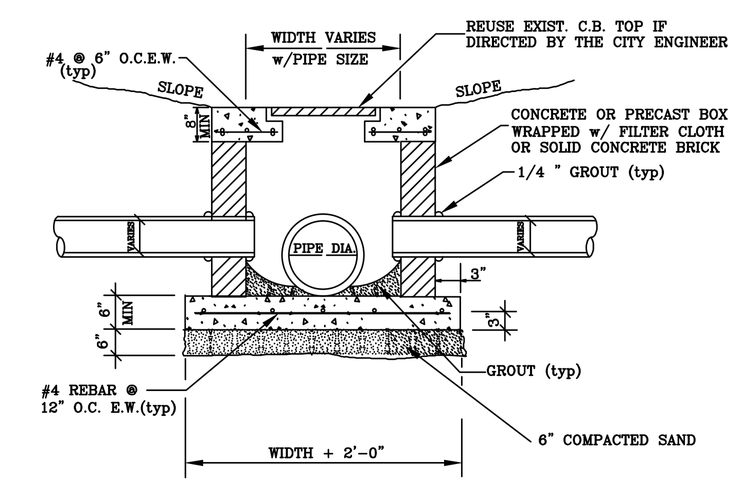
- TOC XXX.X — TOP OF CONCRETE ELEVATION
- TOG XXX.X / INV XXX.XX — TOP OF GRATE ELEVATION / INVERT OF PIPE ELEVATION
- SUB-SURFACE DRAINAGE PVC WITH DIRECTION OF FLOW ARROW, SEE PLAN FOR SIZE OF PVC
- DS — SUB-SURFACE DRAINAGE PVC AT BUILDING WITH DOWN SPOUTS (DS) FROM ROOF GUTTERS
- PARKING WHEEL STOP
- NEW CATCH BASIN



TYPICAL DETAIL FOR CULVERTS IN ROADWAYS
N.T.S.



TYPICAL DROP INLET
NTS
NOTE: NUMBER OF CULVERTS INTO/OUT OF BOX WILL VARY.



SECTION DROP INLET
NTS

NOTES:
1. ALL GEOTEXTILE FABRIC TO BE 3'-0" WIDE AND TO OVERLAP NO LESS THAN 1/2 OF PIPE DIAMETER. COST OF FABRIC IS TO BE ABSORBED IN THE UNIT PRICE OF DRAIN PIPE AND SHALL NOT BE MEASURED FOR SEPERATE PAYMENT.
2. ADDITIONAL BEDDING MATERIAL MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
3. TIMBER PLANKING UNDER CULVERTS MAY BE REQUIRED BY ENGINEER.

17 PIPE BEDDING AND DROP INLET
SCALE: N.T.S.

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#	DESCRIPTION	REVISIONS	DATE

SEAL:

NEW OFFICE WAREHOUSE
BOUCHE HEATING AND A/C
117 A & B TAOS STREET SLIDELL, LA
JOB No: 2364 DATE: 06-14-2019
DRAWN BY: CKT CHECKED BY: BAM

SHEET TITLE:
SITE DRAINAGE PLAN

DRAWING NUMBER:
C104

SHEET No: 6 of 12