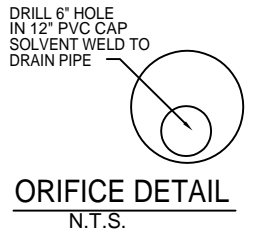
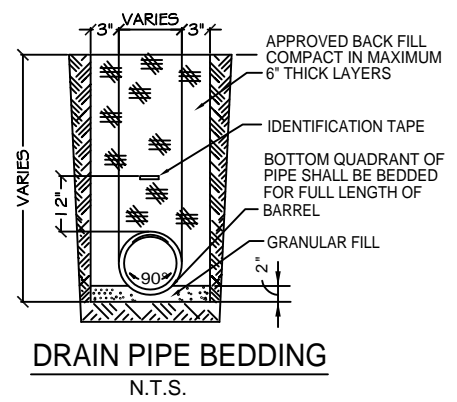
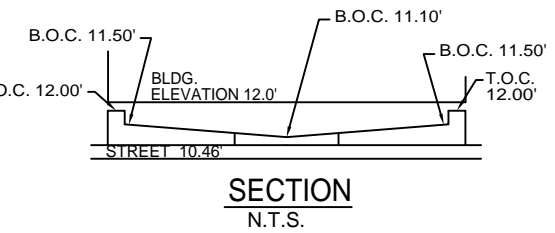
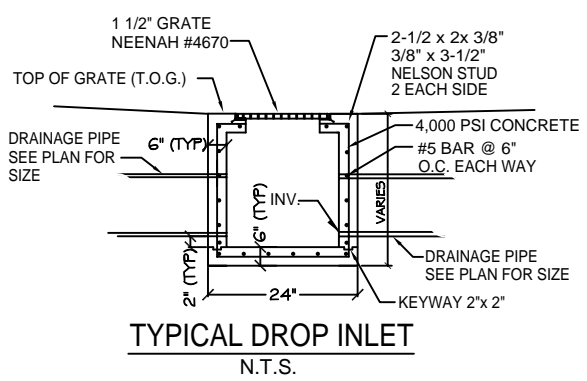


**SITE DRAINAGE PLAN**  
SCALE: 1" = 10'

**LEGEND:**

- - - - - PROPERTY LINE
- - - - - UTILITY / EASEMENT LINE
- - - - - BUILDING SETBACK MINIMUM
- - - - - LANDSCAPING SETBACK MINIMUM AND BUFFER ZONE LIMITS AT REAR
- - - - - NEW BUILDING
- - - - - NEW DRAIN LINE
- NEW DROP INLET w/TEMP. SILT FENCING
- # T.O. GRATE ELEVATION
- ⊕ INVERT ELEVATION
- 00.00' NEW ELEVATIONS
- x00.00' EXISTING ELEVATIONS
- - - - - TEMPORARY SILT FENCING
- x9.94' EXISTING SURVEY TOPO POINTS



- NOTES:**
- DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-900 PVC.
  - ELEVATIONS SHOWN ARE M.S.L.
  - FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
  - MUCK OUT 24" DEEP FOR FOUNDATION PAD MINIMUM OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING.
  - DOWNSPOUTS SHALL FLOW INTO SUB-SURFACE DRAINAGE.
  - THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY. NEW DRAINAGE CALCULATIONS ARE DETERMINED ACCORDINGLY.

**PROJECT: CAR WASH**

DRAINAGE RUN OFF CALCULATIONS -- MODIFIED RATIONAL METHOD

PRIOR DEVELOPMENT		10 Year Frequency	
Watertight Surfaces	c(1) = 0.9	0 sqft = 0.000 Acres	
Gravel Surface	c(2) = 0.25	0 sqft = 0.000 Acres	
Green Space	c(3) = 0.35	21,262.00 sqft = 0.488 Acres	
Summary	c = 0.35	21262 sqft = 0.488 Acres	

Duration (D) = Time of concentration (TC)  
 $TC = .7039(L^{.3917})(c^{-1.1309})(S^{-.1985})$   
 where L = 141 Runoff length ft Elev diff = 0.5  
 c = 0.35 Runoff coef  
 S = 0.3546 Percent Slope  
 TC = D = 19.69 minutes  
 and from Rainfall Intensity Table I = 3.50 in/hr

POST DEVELOPMENT		10 Year Frequency	
Watertight Surfaces	c(1) = 0.9	8784 sqft = 0.202 Acres	
Gravel Surface	c(2) = 0.25	0 sqft = 0.000 Acres	
Green Space	c(3) = 0.35	12478 sqft = 0.286 Acres	
Summary	c = 0.58	21262 sqft = 0.488 Acres	

D = Time of concentration (TC)  
 $TC = .7039(L^{.3917})(c^{-1.1309})(S^{-.1985})$   
 where L = 113 Runoff length ft Elev diff = 0.75  
 c = 0.58 Runoff coef  
 S = 0.6637 Percent Slope  
 TC = D = 9.06 minutes or  
 and from Rainfall Intensity Table I = 3.50 in/hr

**RESULTS**

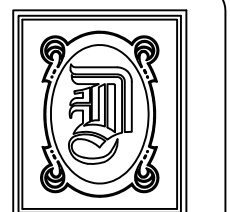
DETENTION REQUIRED	Q <sub>2</sub> -Q <sub>1</sub>	0.478 cfs
TWO HOUR DETENTION		3440.7 cuft
DETENTION DIMENSIONS		WIDTH 105 feet
		LENGTH 113 feet
		DEPTH 0.29 feet

**DISCHARGE END AREA CALCULATIONS**

where Q is allowable run off

Allowable run off	Q = 0.508 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 = 0.05 sqft

**REQUIRED CONDUIT = 4.22 inch diameter**  
USE 6 inch orifice



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**CECIL BOYD'S  
CAR WASH  
LOT 5A  
EAST HALL ST.  
SLIDELL, LA**

**DRAINAGE PLAN**

REV:

SCALE: AS NOTED

JOB#: 2074

DATE: 09-09-10

SHEET 5

**C-4**