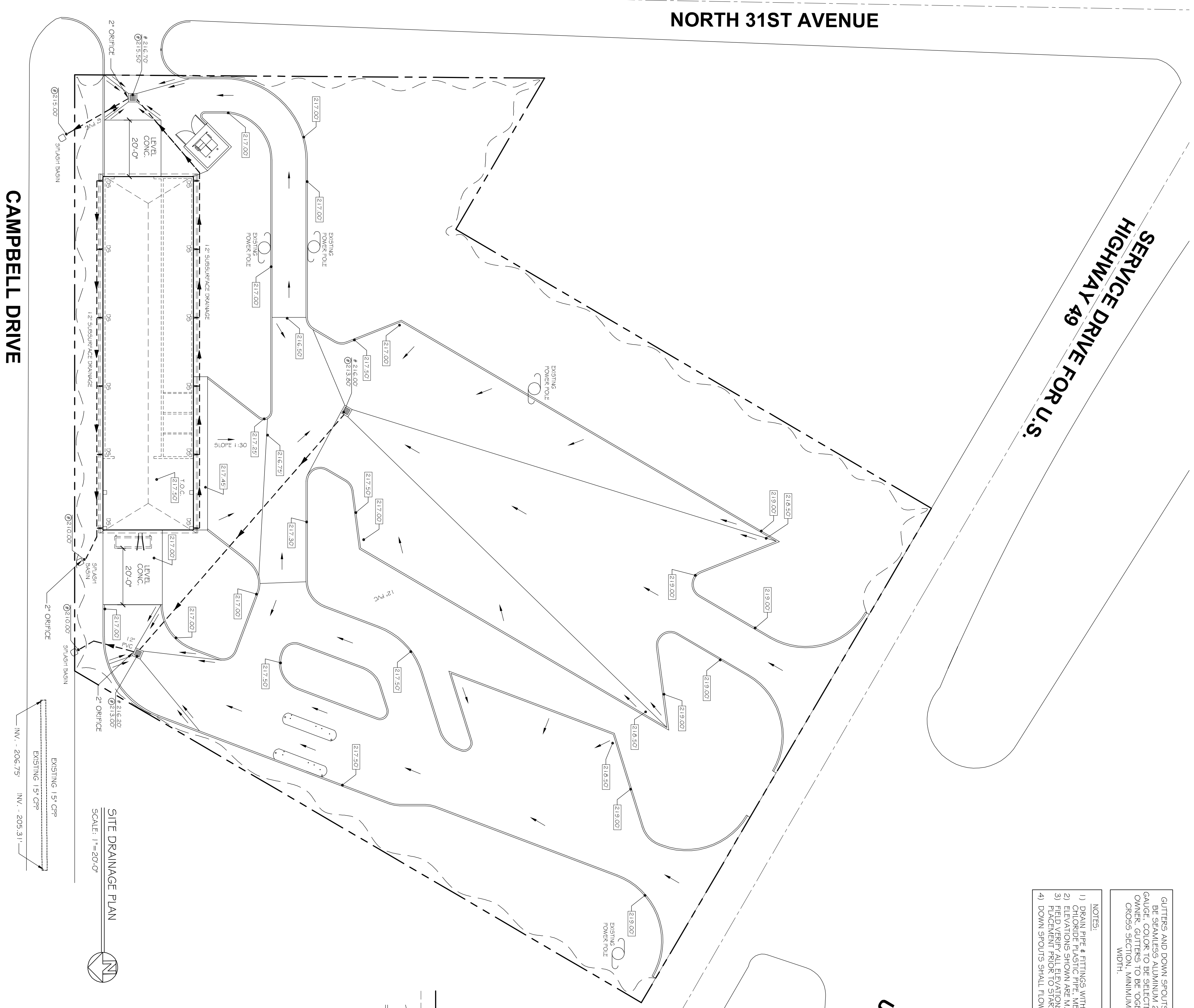


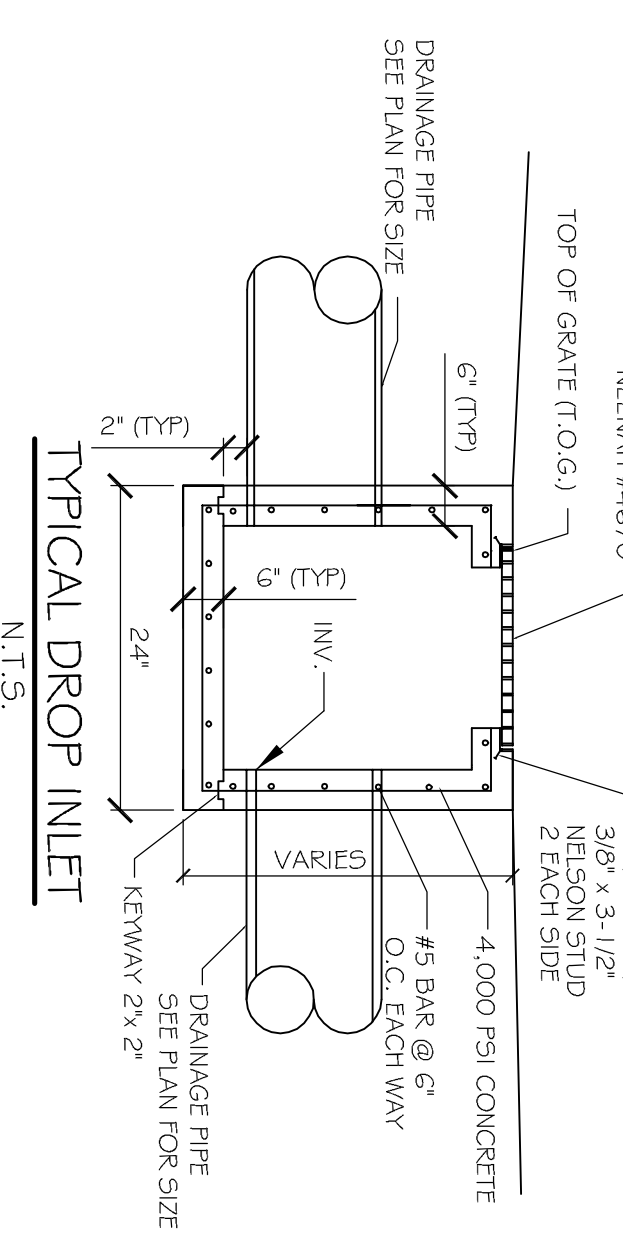
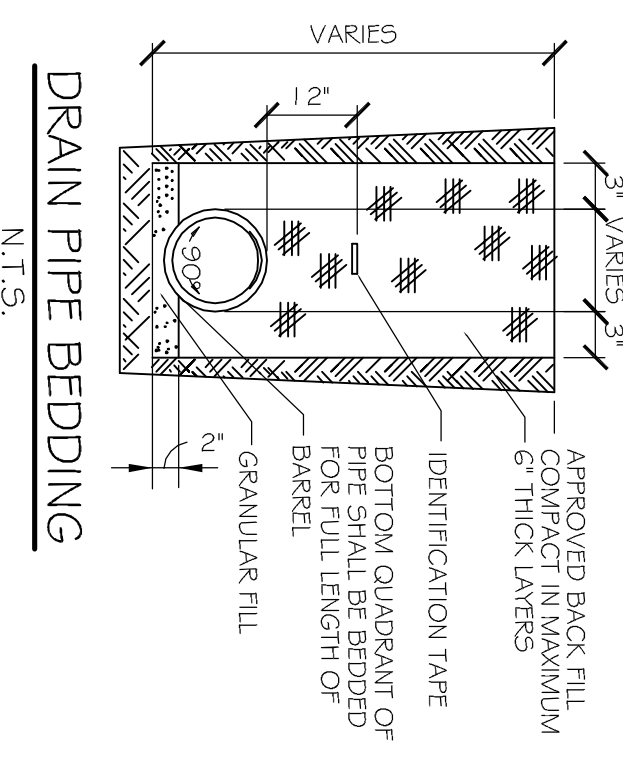
GUTTERS AND DOWN SPOUTS TO BE SPANIES. MINIMUM 24 GAUGE. COLOR TO BE SELECTED BY OWNER. GUTTERS TO BE OCCUR IN CROSS SECTION, MINIMUM 6" WIDTH.

- 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. AND DRAINAGE SYSTEM SHALL BE INSTALLED TO STAGES OF WORK.
 - 3) PLACEMENT SHALL BE TO STAGES OF WORK.
 - 4) DOWN SPOUTS SHALL FLOW INTO SUB-SURFACE DRAINAGE.



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

- LEGEND
- PROPERTY LINE
 - BUILDING SETBACK MINIMUM
 - TEMPORARY SILT FENCING
 - NEW 6" CURB, SEE DETAIL
 - NEW ELEVATIONS
 - NEW 24"x24" DROP INLET W/TEMP. SILT FENCING
 - DRAINAGE FLOW ARROWS
 - T.O. GRATE ELEVATION
 - INVERT ELEVATION



U.S. HIGHWAY 49

PROJECT:		Rainforest Carwash	
Formula used:		STORMWATER RUNOFF CALCULATIONS	
[1] RATIONAL METHOD - Q=Ai			
where:	Q = Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm runoff	assumed.	
A = Area of watershed in acres.	i = Intensity of rainfall in inches per hour based on concentration time [3]	[4] TC = $(1.10i^{0.22} - 0.7)$	
c = Coefficient of runoff [2]	TC = Time of concentration - time required for rain falling at most remote point to reach outlet		
TC = D = 45.49 minutes	Percent slope of watershed shown.		
PRIOR DEVELOPMENT			
where:	Q = Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm runoff	assumed.	
A = Area of watershed in acres.	i = Intensity of rainfall in inches per hour based on concentration time [3]	[4] TC = $(1.10i^{0.22} - 0.7)$	
c = Coefficient of runoff [2]	TC = Time of concentration - time required for rain falling at most remote point to reach outlet		
TC = D = 45.49 minutes	Percent slope of watershed shown.		
POST DEVELOPMENT			
where:	Q = Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm runoff	assumed.	
A = Area of watershed in acres.	i = Intensity of rainfall in inches per hour based on concentration time [3]	[4] TC = $(1.10i^{0.22} - 0.7)$	
c = Coefficient of runoff [2]	TC = Time of concentration - time required for rain falling at most remote point to reach outlet		
TC = D = 45.49 minutes	Percent slope of watershed shown.		
DETENTION REQUIREMENTS			
Detention required - Q _{2-Q₁}	4.05 cfs	195 feet	150 feet
ONE HOUR DETENTION	14808.9 cfs	195 feet	150 feet
DETENTION DIMENSIONS		195 feet	150 feet
DISCHARGE END AREA REQUIREMENTS		0.87 feet	
10 Year Frequency			
where:	A = Discharge Area required	[9] A = $\frac{Q}{1.486 K}$	
g = Acceleration of gravity	c = Discharge coefficient	h = Hydraulic head	
Q = Flow volume from run-off	Pipe Sizing Site Drainage	0.179 - ft	1 = 2.50 feet
c = 0.62 coefficient	g = 32.16 ft/sec ²	A = 0.003 sqft	
REQUIRED CONDUIT = 2.00 inch inside diameter			
References: The Civil Engineering Handbook, 1995, Ed. # 31, pp. 1036			
1. Chen, W. F. The Civil Engineering Handbook, 1995, Ed. # 31, pp. 1802			
2. Chow, V. T. Open Channel Hydraulics, 1959, pp. 150-151			
3. Savin, E. W. E. Data Book for Civil Engineers, Vol. 1, 1960, pp. B, pp. 18-21			
4. Chen, W. F. The Civil Engineering Handbook, 1995, Ed. # 31, 2 Region Equation (4-013)			
5. Chen, W. F. The Civil Engineering Handbook, 1995, Ed. # 31, pp. 899			

SITE DRAINAGE PLAN
SHEET No: 00 OF 00

C4

RAINFOREST CARWASH #2
6485 U.S. HWY. 49

HATTIESBURG, MISSISSIPPI
JOB No: 2212 DATE: 08-11-2014
DRAWN BY: CKD CHECKED BY: CKD



DAMMON
ENGINEERING, INC.
Architects & Engineers

CHIEF ENGINEER: BRIAN MISTICH, P.E.
554 OLD SPANISH TRAIL
SLIDELL, LA 70456

dammoneengineering.com
dammoneg@bellsouth.net
PHONE: 985-649-5832
FAX: 985-641-5990