PROJECT:	Towers Existing Parking- Slidell

DRAINAGE RUN OFF CALCULATIONS – RATIONAL METHOD

PRIOR DEVELOPMENT
10 Year Frequency

Q_1 = CIA

Watertight Surfaces		57278	sqft =	1.315	Acres
	c(1) = 0.9				
Gravel Surface		0	sqft =	0.000	Acres
	c(2) = 0.21				
Green Space		11459	sqft =	0.263	Acres
	c(3) = 0.35				
Summary		68737	sqft =	1.578	Acres
	c = 0.81				

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

Where	L = 256	Runoff length ft	Elev diff = 0.5
	c = 0.81	Runoff coef	
	S = 0.1953	Percent Slope	
Therefore	TC = D = 10.87	minutes or	
and from Rainfall Intensity Table	I = 4.50	in/hr	

Q_1 = 5.740 cfs RUNOFF LIMIT 90% 5.166 cfs

POST DEVELOPMENT
10 Year Frequency

Q_2 = CIA

Watertight Surfaces		54387	sqft =	1.249	Acres
	c(1) = 0.9				
Gravel Surface		0	sqft =	0.000	Acres
	c(2) = 0.21				
Green Space		14350	sqft =	0.329	
	c(3) = 0.35				
Summary		68737	sqft =	1.578	Acres
	c = 0.79				

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

Where	L = 256	Runoff length ft	Elev diff = 0.5
	c = 0.79	Runoff coef	
	S = 0.1953	Percent Slope	
Therefore	TC = D = 11.24	minutes or	
and from Rainfall Intensity Table	I = 7.60	in/hr	

Q_2 = 9.416 cfs

RESULTS

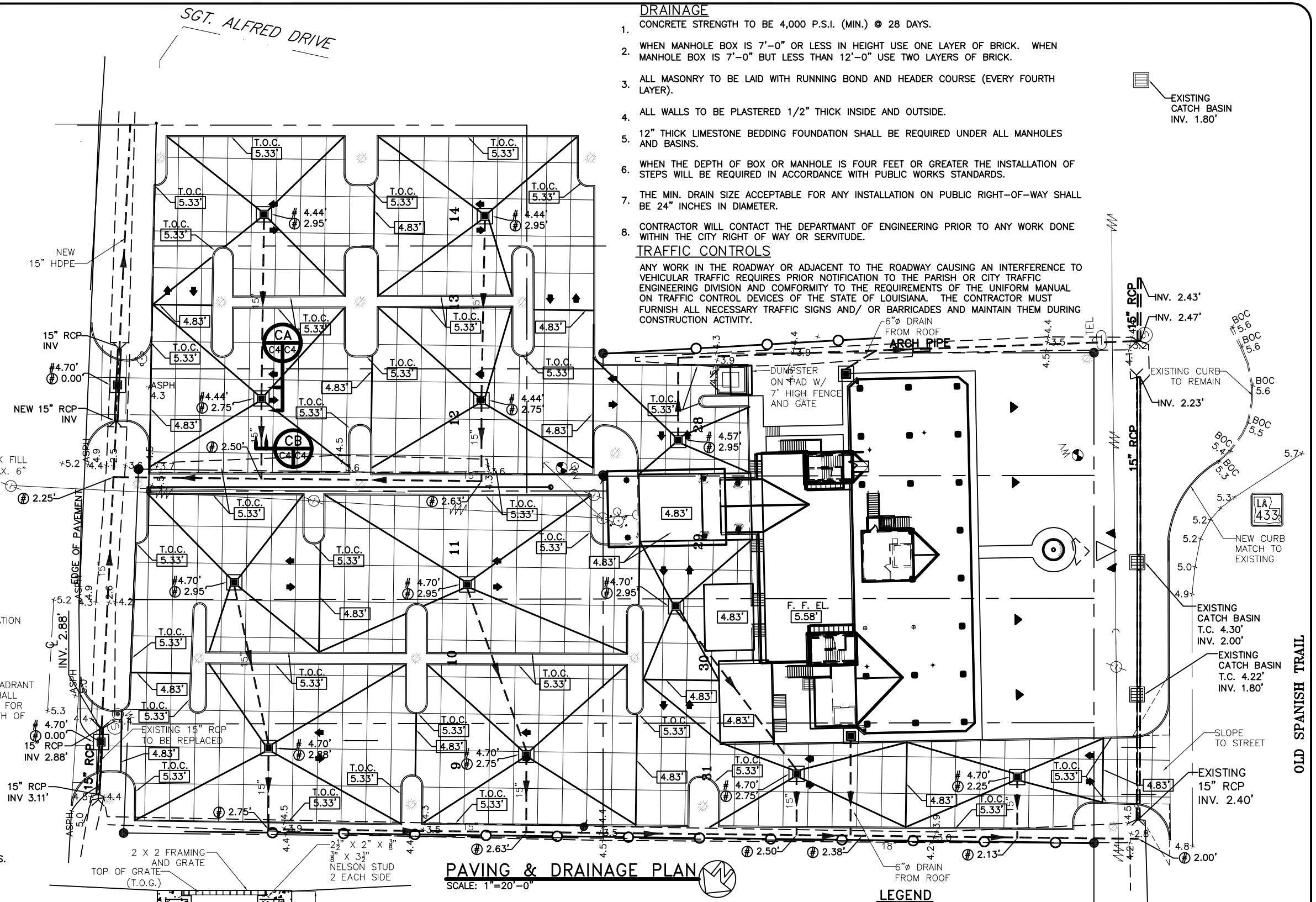
DETENTION REQUIRED Q_2-Q_1		4.251	cfs
ONE HOUR DETENTION		15302.2	cuft
DETENTION DIMENSIONS	WIDTH	289.35	feet
	LENGTH	395.28	feet
	DEPTH	**0.13**	**feet**

DISCHARGE END AREA CALCULATIONS

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

Allowable run off	Q =	5.166	cfs
Friction loss factor	c =	0.98	coefficient
Acceleration	g =	32.2	ft/ft/sec
Height above invert	if H =	2.75	feet
End area	A =	0.40	sqft

REQUIRED CONDUIT = 8.52 inch diameter

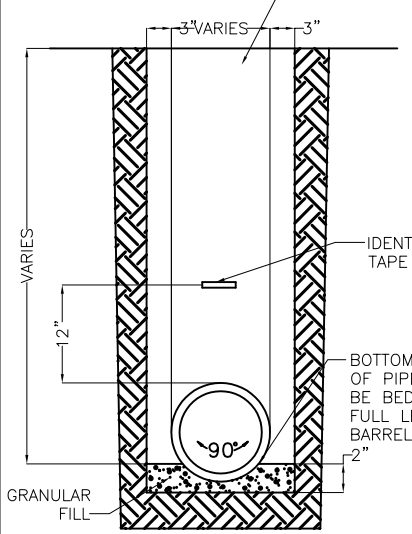


DRAINAGE

1. CONCRETE STRENGTH TO BE 4,000 P.S.I. (MIN.) @ 28 DAYS.
2. WHEN MANHOLE BOX IS 7'–0" OR LESS IN HEIGHT USE ONE LAYER OF BRICK. WHEN MANHOLE BOX IS 7'–0" BUT LESS THAN 12'–0" USE TWO LAYERS OF BRICK.
3. ALL MASONRY TO BE LAID WITH RUNNING BOND AND HEADER COURSE (EVERY FOURTH LAYER).
4. ALL WALLS TO BE PLASTERED 1/2" THICK INSIDE AND OUTSIDE.
5. 12" THICK LIMESTONE BEDDING FOUNDATION SHALL BE REQUIRED UNDER ALL MANHOLES AND BASINS.
6. WHEN THE DEPTH OF BOX OR MANHOLE IS FOUR FEET OR GREATER THE INSTALLATION OF STEPS WILL BE REQUIRED IN ACCORDANCE WITH PUBLIC WORKS STANDARDS.
7. THE MIN. DRAIN SIZE ACCEPTABLE FOR ANY INSTALLATION ON PUBLIC RIGHT–OF–WAY SHALL BE 24" INCHES IN DIAMETER.
8. CONTRACTOR WILL CONTACT THE DEPARTMANT OF ENGINEERING PRIOR TO ANY WORK DONE WITHIN THE CITY RIGHT OF WAY OR SERVITUDE.

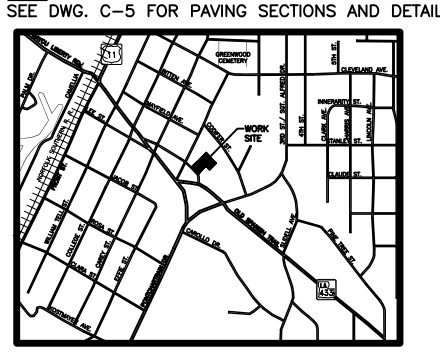
TRAFFIC CONTROLS

ANY WORK IN THE ROADWAY OR ADJACENT TO THE ROADWAY CAUSING AN INTERFERENCE TO VEHICULAR TRAFFIC REQUIRES PRIOR NOTIFICATION TO THE PARISH OR CITY TRAFFIC ENGINEERING DIVISION AND COMFORMITY TO THE REQUIREMENTS OF THE UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES OF THE STATE OF LOUISIANA. THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC SIGNS AND/ OR BARRICADES AND MAINTAIN THEM DURING CONSTRUCTION ACTIVITY.

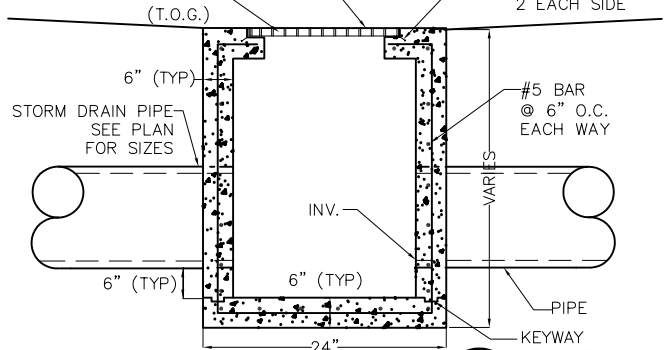


DRAIN PIPE BEDDING CB C4 C4
N. T. S.

NOTE:
SEE DWG. C–5 FOR PAVING SECTIONS AND DETAILS.



VICINITY MAP
N. T. S.



TYPICAL DROP INLET CA C4 C4
N. T. S.

PAVING & DRAINAGE PLAN
SCALE: 1"=20'–0"

NOTES:
1) FIELD VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION.
2) DRAIN PIPE & FITTINGS SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE MEETING CLASS A–2000 PVC.
3) ELEVATIONS SHOWN ARE M.S.L.
4) MUCK OUT 24" DEEP FOR FOUNDATION PAD MINIMUM, OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING.

LEGEND

PROPERTY LINE	EXISTING CATCH BASIN
SETBACK LINE	NEW CATCH BASIN W/ TEMPORARY INLET PROTECTION
NEW BUILDING	TEMPORARY SILT FENCE
EXISTING CURB	×4.4 – EXISTING ELEVATIONS
NEW CURB	# X.X' – NEW TOP OF GRATE
SLOPE LINE	(#) X.X' – NEW INVERT ELEVATION
DRAIN LINE	X.X' – NEW ELEVATION
T.O.C. – TOP OF CONCRETE	DIRECTIONAL FLOW
F.F. – FINISHED FLOOR	
PSF – POUNDS PER SQUARE FOOT	

PAVING & DRAINAGE PLAN

ST. TAMMANY PARISH ADMIN. COMPLEX
520 OLD SPANISH TRAIL
SLIDELL, LOUISIANA

RENOVATE OFFICE BUILDING

DAMMON ENGINEERING, INC.
1005 FLORIDA AVENUE 985–649–5832 SLIDELL, LA. 70458
DAMMONENGINEERING.COM

SCALE: 1"=20'
FILE:
JOB NO. 1729
DATE:1–12–07
SHEET C–4
OF