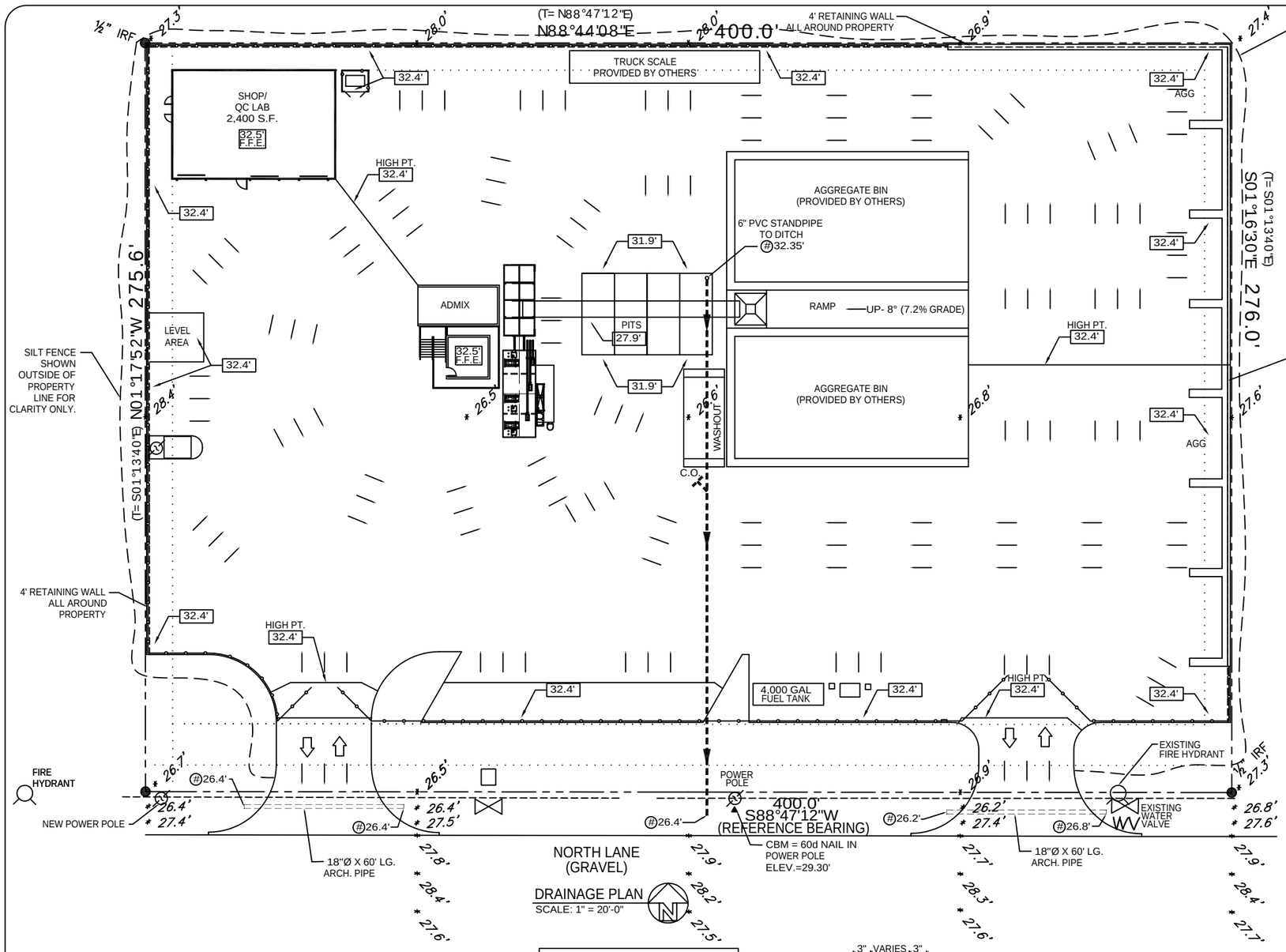
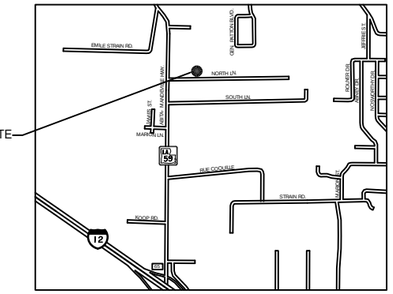



VICINITY MAP
N.T.S.

SILT FENCE SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY ONLY.

4' RETAINING WALL ALL AROUND PROPERTY

| PROJECT: | STANDARD MATERIALS |
|---|---|

DRAINAGE RUN OFF CALCULATIONS -- MODIFIED 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) = | 0.25 | | | | |
| Green Space | | 110,337.00 | sqft = | 2.533 | Acres |
| c(3) = | 0.35 | | | | |
| Summary | | 110337 | sqft = | 2.533 | Acres |
| c = | 0.35 | | | | |

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

| | | | |
|---|---|---|---|
| where | L = 400 | Runoff length ft | Elev diff = 1 |
| | c = 0.35 | Runoff coef | |
| | S = 0.2500 | Percent Slope | |
| therefore | TC = D = 31.76 | minutes | |
| and from Rainfall Intensity Table | I = 3.50 | in/hr | |

$Q_1$ = **3.103 cfs** **RUNOFF LIMIT 85%** **2.637 cfs**

**POST DEVELOPMENT**
10 Year Frequency

$Q_2$ = CIA

| | | | | | |
|---|---|---|---|---|---|
| Watertight Surfaces | | 99773 | sqft = | 2.290 | Acres |
| c(1) = | 0.9 | | | | |
| Gravel Surface | | 0 | sqft = | 0.000 | Acres |
| c(2) = | 0.25 | | | | |
| Green Space | | 10564 | sqft = | 0.243 | |
| c(3) = | 0.35 | | | | |
| Summary | | 110337 | sqft = | 2.533 | Acres |
| c = | 0.85 | | | | |

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

| | | | |
|---|---|---|---|
| where | L = 397 | Runoff length ft | Elev diff = 4 |
| | c = 0.85 | Runoff coef | |
| | S = 1.0076 | Percent Slope | |
| therefore | TC = D = 8.84 | minutes or | |
| and from Rainfall Intensity Table | I = 3.50 | in/hr | |

$Q_2$ = **7.512 cfs**

**RESULTS**

| | | |
|---|---|---|
| DETENTION REQUIRED $Q_2$-$Q_1$ | 4.875 | cfs |
| TWO HOUR DETENTION | 17548.5 | cuft |
| DETENTION DIMENSIONS | | |
| WIDTH | 397 | feet |
| LENGTH | 223 | feet |
| DEPTH | **0.20** | **feet** |

**DISCHARGE END AREA CALCULATIONS**

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

| | | | |
|---|---|---|---|
| Allowable run off | Q = | 2.637 | cfs |
| Friction loss factor | c = | 0.98 | coefficient |
| Acceleration | g = | 32.2 | ft/ft/sec |
| Height above invert | if H = | 2.65 | feet |
| End area | A = | 0.21 | sqft |
| **REQUIRED CONDUIT =** | | **6.15** | **inch diameter** |

ACTUAL CONCRETE RETENTION IS 42,715.5 CU.FT.
ACTUAL PIT RETENTION IS 5760.0 CU.FT.
TOTAL RETENTION IS 48,475.5 CU.FT.
RETENTION IS 30,927.0 CU.FT. MORE THAN REQUIRED

LEGEND:

- PROPERTY LINE
- SETBACK
- NEW BUILDING
- 6' CHAIN LINK FENCE
- HIGH POINT
- #00.0 - INVERT ELEVATION
- 00.0 - NEW ELEVATIONS
- * 27.6' - EXISTING ELEVATIONS
- TEMPORARY SILT FENCING
- DRAINAGE FLOW

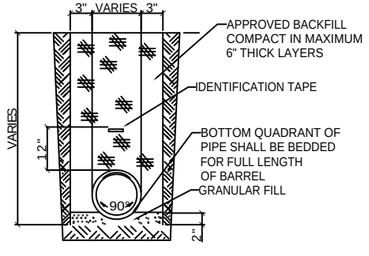
ZONING M-2
INTERMEDIATE INDUSTRIAL

FLOOD ZONE C

GUTTERS AND DOWN SPOUTS TO BE SEAMLESS ALUMINUM 24 GAUGE, COLOR TO BE SELECTED BY OWNER. GUTTERS TO BE "OGEE" 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.
3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
3) MUCK OUT 24" DEEP FOR FOUNDATION PAD MINUMINM, OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING
4) DOWN SPOUTS SHALL FLOW INTO SUB-SUFRACE DRAINAGE.




DRAIN PIPE BEDDING
N.T.S.

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NEW FACILITY

STANDARD MATERIALS
1601 NORTH LANE
MANDEVILLE, LA

DRAINAGE PLAN

REV:2-5-09

SCALE: AS NOTED
JOB#: 1906
DATE: 01-09-09
SHEET
C-3
OF