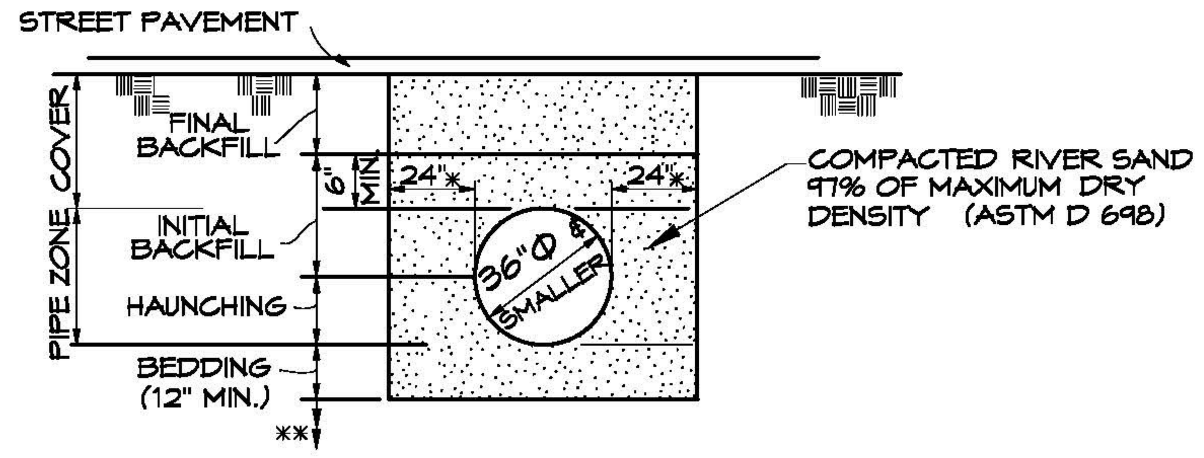


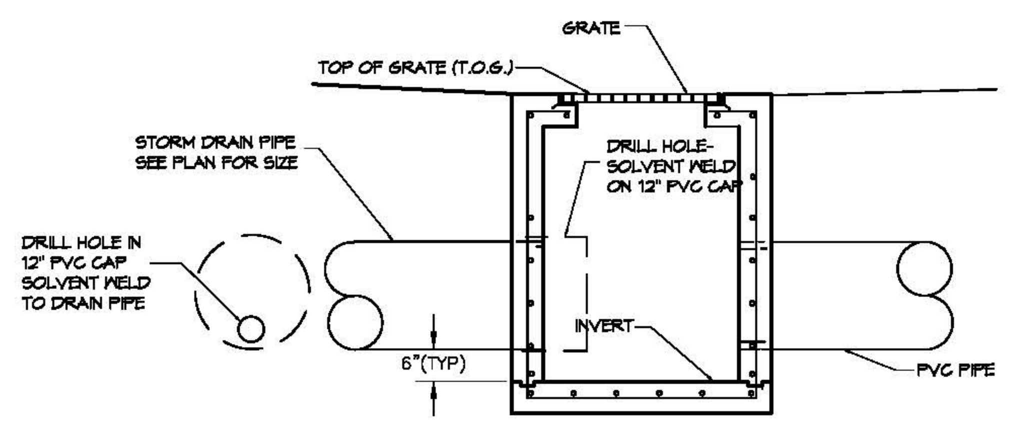

FOR A-2000, CORR-21, AND ULTRA CORR PVC PIPE (ASTM F-794 AND ASTM D2321) N.T.S.

| MIN. COVER (PVC PIPE) | PAVEMENT TYPE |
|---|---|
| 12" | CONCRETE |
| 18" | ASPHALT |
| 24" | NON-PAVED |

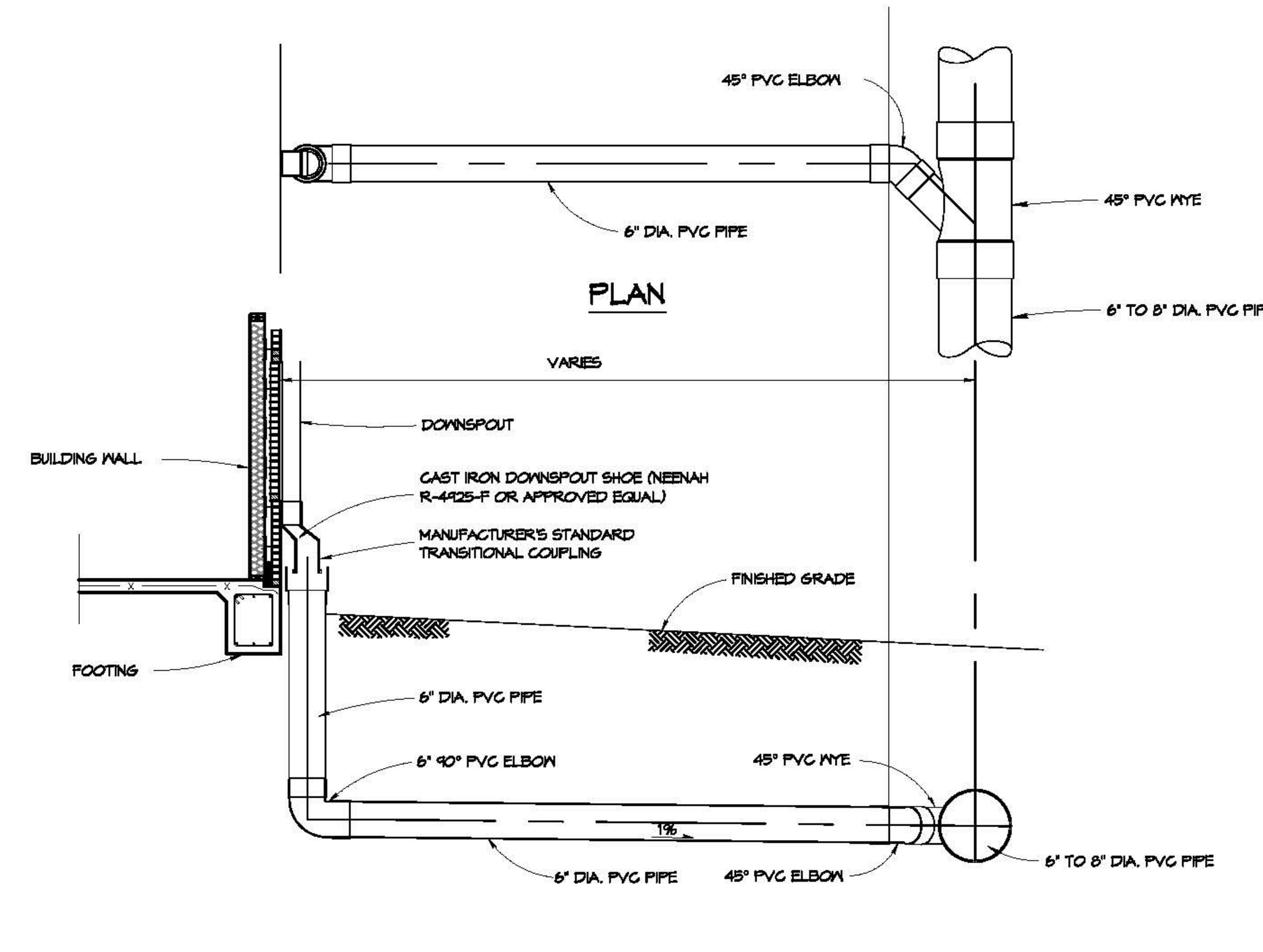
4 DETAIL
SCALE: N.T.S. PVC PIPE DRAIN LINE STANDARD TRENCH DETAIL

## NOTES FOR TIE-IN TO EXISTING CATCH BASIN

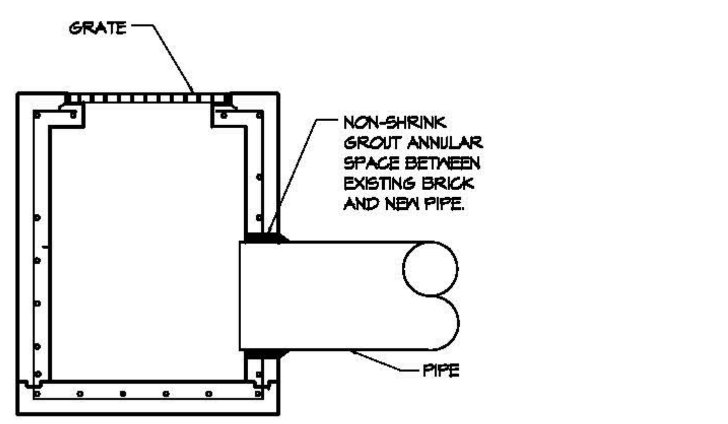
1. FOR CONCRETE STRUCTURES CORE-DRILL THE REQUIRED OPENING OR DRILL HOLES AROUND THE PERIMETER OF THE REQUIRED OPENING UNTIL THE SECTION CAN BE TAKEN OUT WITHOUT DAMAGE TO THE STRUCTURE, SAW-CUTTING MAY BE REQUIRED. FOR ANY METHOD, ALLOW ADEQUATE SPACING FOR PLACING NON-SHRINK GROUT. ANY REINFORCEMENT LEFT IN-PLACE SHALL BE INCORPORATED IN THE PATCH WORK.
2. FOR BRICK STRUCTURES, CHISEL OR DRILL OUT THE OPENING AND INSERT PIPE. REPLACE GAPS AND CRACKS WITH NEW BRICK AND MORTAR AND PLACE NON-SHRINK GROUT BETWEEN THE PIPE AND THE WALL. GROUT SHALL BE PLACED A MINIMUM OF 1/2" THICK IN THE INSIDE AND OUTSIDE WALLS OF THE STRUCTURE AROUND THE OPENING TO COVER THE BRICK SURFACES.
3. PROPOSED PLASTIC PIPE FOR THE SEWER TIE-IN SHALL BE COATED WITH AN APPROVED EPOXY AND ROLLED IN MORTAR SAND TO PROVIDE A BONDING SURFACE BETWEEN THE OUTER PIPE WALL AND THE PATCH MATERIAL. CONTRACTOR HAS THE OPTION OF PURCHASING PIPE STUBS WITH PREPARED SURFACES FROM SUPPLIER.



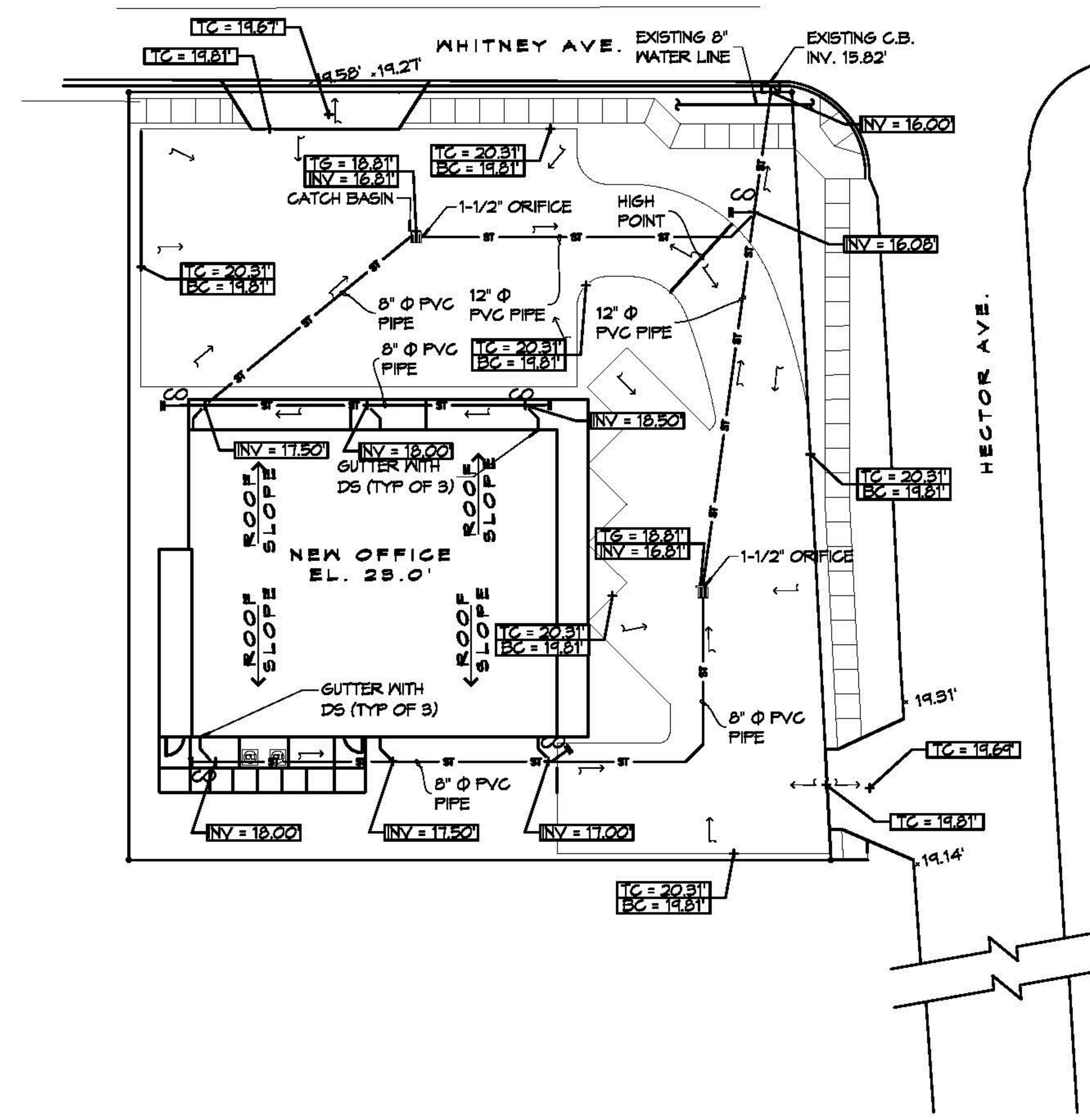

2 DETAIL
SCALE: N.T.S. TYPICAL CATCH BASIN IN PARKING LOT




3 DETAIL
SCALE: 3/4" = 1'-0" TYPICAL ROOF DRAIN DETAIL




5 DETAIL
SCALE: N.T.S. DRAIN LINE TIE-IN EXISTING CATCH BASIN-DROP INLET-MANHOLE




1 SITE DRAINAGE PLAN
SCALE: 1" = 20'

## GENERAL SITE DRAINAGE NOTES

1. DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING SDR35.
2. ELEVATIONS SHOWN ARE M.S.L.
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.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL UTILITIES. IF CONFLICT EXISTS CONTACT THE ARCHITECT/ENGINEER.

## SITE DRAINAGE LEGEND

- PROPERTY LINE
- TC=11.47 / BC=10.97: TOP OF CURB / BOTTOM OF CURB
- TG=11.47 / INV=10.97: TOP OF GRATE / INVERT OF PIPE
- +00.00: EXISTING ELEVATIONS
- NEW SUBSURFACE DRAINAGE PIPE
- DRAINAGE FLOW DIRECTION ARROWS

## STORMWATER RUN-OFF CALCULATIONS

PROJECT: State Farm

DRAINAGE RUN OFF CALCULATIONS -- RATIONAL METHOD

### PRIOR DEVELOPMENT
10 Year Frequency

Q1 = CIA

| | | | | |
|---|---|---|---|---|
| Watertight Surfaces | | 82 sqft = | 0.002 | Acres |
| c(1) = | 0.9 | | | |
| Gravel Surface | | 0 sqft = | 0.000 | Acres |
| c(2) = | 0.21 | | | |
| Green Space | | 13816 sqft = | 0.317 | Acres |
| c(3) = | 0.35 | | | |
| Summary | | 13898 sqft = | 0.319 | Acres |
| c = | 0.35 | | | |

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

| | | | | |
|---|---|---|---|---|
| where | L = | 125 | Runoff length ft | Elev diff 0.5 |
| | c = | 0.35 | Runoff coef | |
| | S = | 0.4000 | Percent Slope | |
| therefore | TC = D = | 18.16 | minutes or | |
| and from Rainfall Intensi | I = | 4.50 | in/hr | |
| Q1 = | 0.507 cfs | | UNOFF LIMIT 90% | 0.456 cfs |

### POST DEVELOPMENT
10 Year Frequency

Q2 = CIA

| | | | | |
|---|---|---|---|---|
| Watertight Surfaces | | 10538 sqft = | 0.242 | Acres |
| c(1) = | 0.9 | | | |
| Gravel Surface | | 0 sqft = | 0.000 | Acres |
| c(2) = | 0.21 | | | |
| Green Space | | 3360 sqft = | 0.077 | |
| c(3) = | 0.35 | | | |
| Summary | | 13898 sqft = | 0.319 | Acres |
| c = | 0.77 | | | |

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

| | | | | |
|---|---|---|---|---|
| where | L = | 108 | Runoff length ft | Elev diff 1.5 |
| | c = | 0.77 | Runoff coef | |
| | S = | 1.3889 | Percent Slope | |
| therefore | TC = D = | 5.57 | minutes or | |
| and from Rainfall Intensi | I = | 7.60 | in/hr | |
| Q2 = | 1.860 cfs | | | |

### RESULTS

| | | | |
|---|---|---|---|
| DETENTION REQUIRED | Q2-Q1 | 1.403 | cfs |
| ONE HOUR DETENTION | | 3052.4 | cuft |
| DETENTION DIMENSIONS | WIDTH | 40 | Feet |
| | LENGTH | 100 | Feet |
| | DEPTH | 1.26 | Feet |

### DISCHARGE END AREA CALCULATIONS

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

| | | | |
|---|---|---|---|
| Allowable run off | Q = | 0.456 | 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 = | 0.04 | sqft |
| REQUIRED CONDUIT = | | 2.74 | inch diameter |
| | USE | 3 | |


DAMMON ENGINEERING, INC.
Architects & Engineers
www.dammonengineering.com
info@dammonengineering.com
PH: 985.649.5832
F: 985.641.5950
Chief Architect: Kevin J. Kinchen, NCARB
Chief Engineer: Brian Mistich, PE
554 Old Spanish Trail
Slidell, LA 70458


REVISIONS
| # | DESCRIPTION | DATE |
|---|---|---|

SEAL: STATE OF LOUISIANA, BRIAN A. MISTICH, License No. 30187, PROFESSIONAL ENGINEER, 6/24/2015, BAM

NEW OFFICE BUILDING
STATE FARM OFFICE
501 WHITNEY AVE
TERRY TOWN, LOUISIANA 70056


The above drawings and specifications, designs and arrangements represented thereby are and shall remain the property of Dammon Engineering, and no part thereof shall be copied, disclosed to others, or used in connection with any work or project other than the specific project for which the have been prepared and developed without written consent of Dammon Engineering. Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions.


| JOB No: 2243 | DATE: JUNE 09, 2015 |
|---|---|
| DRAWN BY: CKD | CHECKED BY: BAM |

SHEET TITLE:
SITE DRAINAGE PLAN AND DETAILS

DRAWING NUMBER:
C100

SHEET No: 01 of 02