PAVING NOTES:

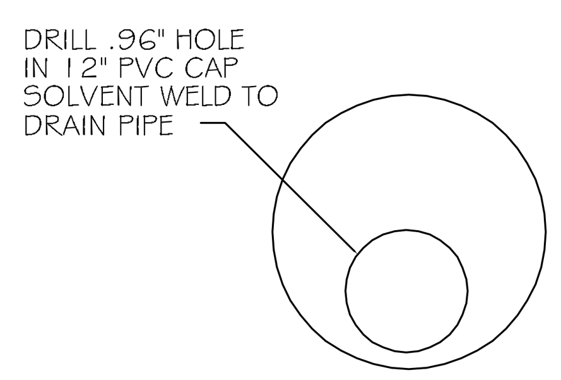
1) ALL NEW CONCRETE SHALL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A MINIMUM THICKNESS OF 5". CONCRETE MIX SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM C-150 TYPE I.
2) CONCRETE PAVING THICKNESS SHALL VARY AS FOLLOWS:
   a) APRONS = 7" THICKNESS
   b) DRIVELANES = 6" THICKNESS
   c) PARKING AREAS = 5" THICKNESS
3) ALL REINFORCING STEEL SHALL MEET ASTM-A615 (GRADE 60).
4) ALL REINFORCING STEEL SHALL BE SECURELY SUPPORTED TO PREVENT BOTH VERTICAL AND HORIZONTAL MOVEMENT DURING CONCRETE PLACEMENT. ALL CONTROL AND EXPANSION JOINTS SHALL BE LOCATED AND INSTALLED AS SHOWN ON THE PAVING PLAN AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5) ALL SUB GRADE FILL SHALL BE SELECT GRANULAR MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY IN A MAXIMUM OF 6" LIFTS.
6) CONTRACTOR SHALL CONTACT THEIR REGULATORY DEPARTMENT OF ENGINEERING PRIOR TO CONDUCTING ANY WORK.
7) ANY WORK WITHIN THE ROADWAY OR ADJACENT TO THE ROADWAY CAUSING AN INTERFERENCE TO VEHICULAR TRAFFIC REQUIRES PRIOR APPROVAL FROM THE CITY TRAFFIC ENGINEERING DIVISION, AND MUST CONFORM TO THE REQUIREMENTS SET FORTH BY THE UNIFORM MANUAL OF 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.

LEGEND

- PROPERTY LINE
- SETBACK LINE
- BUFFER ZONE LINE
- UTIL. EASEMENT LINE
- CJ - CONTROL JT. 10'x15'
- EJ - EXPANSION JT. 30'x45'
- SHEET FLOW ARROW
- (#)0.00' - INVERT ELEVATION
- # 0.00' - TOP OF GRATE ELEVATION
- [00.00] - NEW ELEVATION

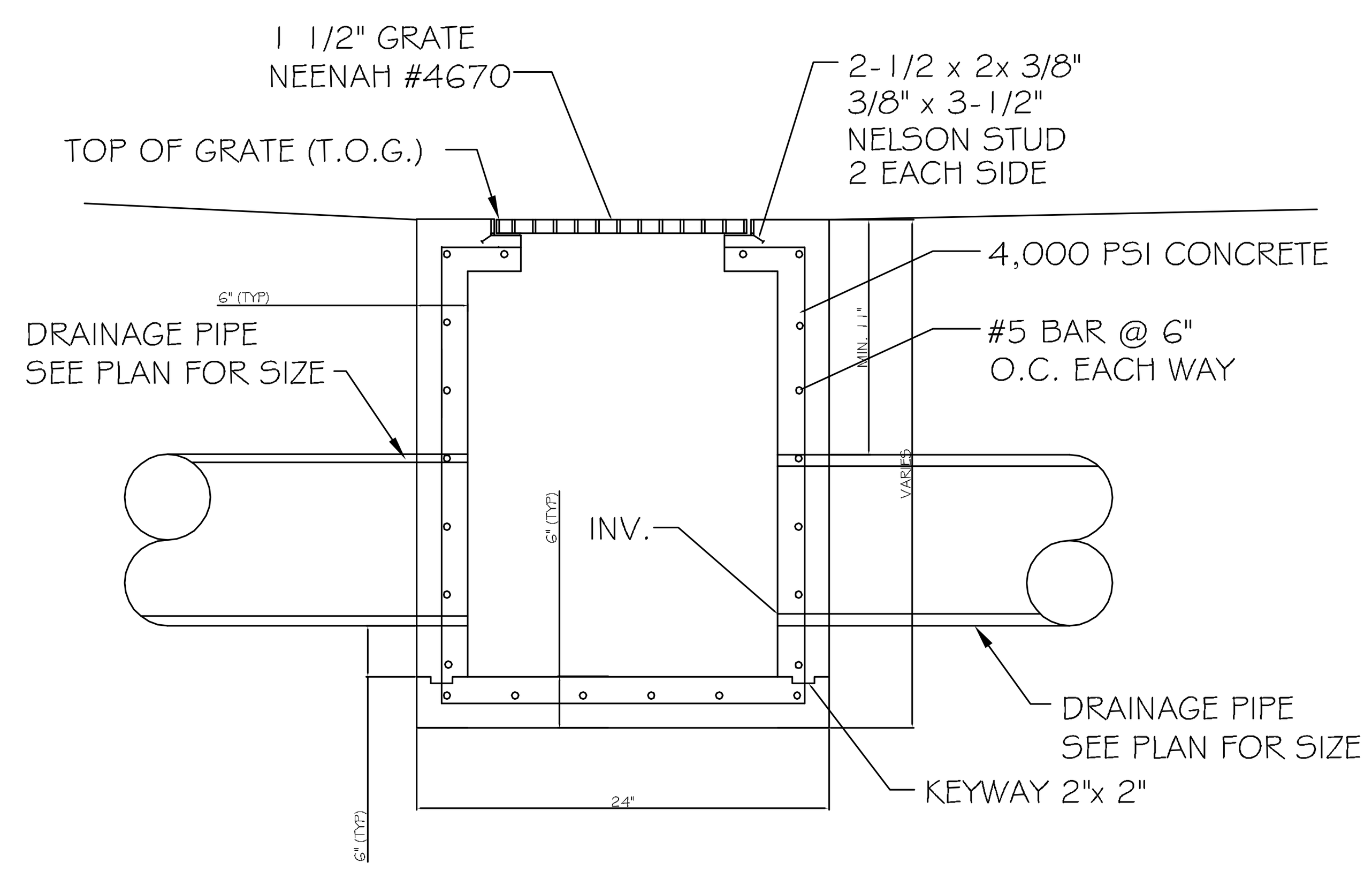
DRAINAGE PLAN NOTES:

1. ELEVATIONS SHOWN ARE M.S.L.
2. FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
3. THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY.



ORIFICE DETAIL

N.T.S.



TYPICAL DROP INLET

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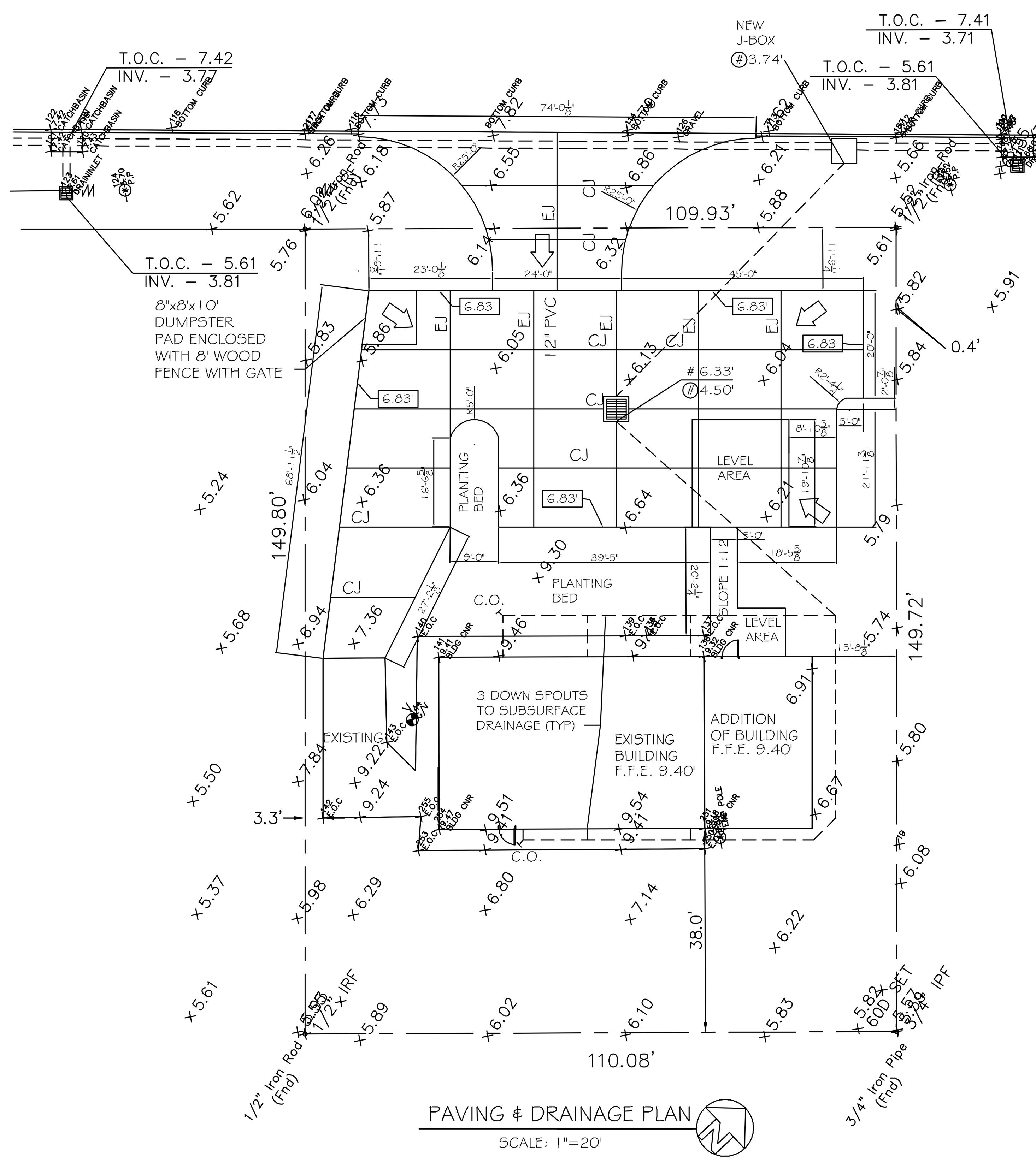
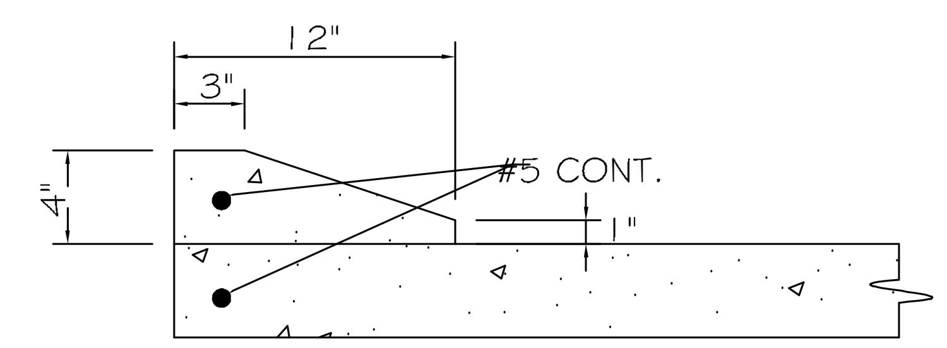


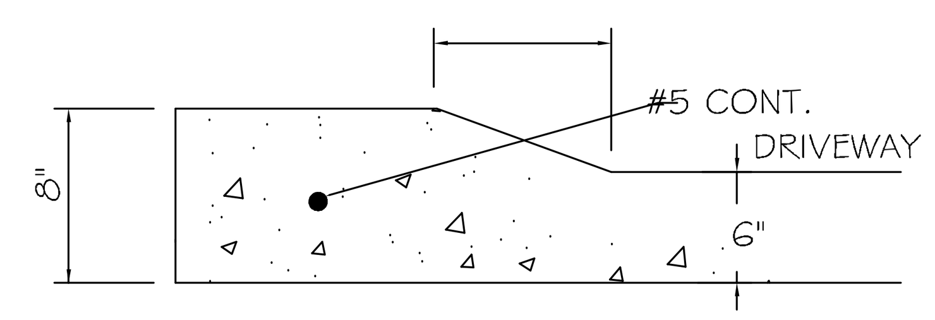
PAVING & DRAINAGE PLAN

SCALE: 1"=20'



MOUNTABLE CURB DETAIL

N.T.S.



TRANSITION CURB

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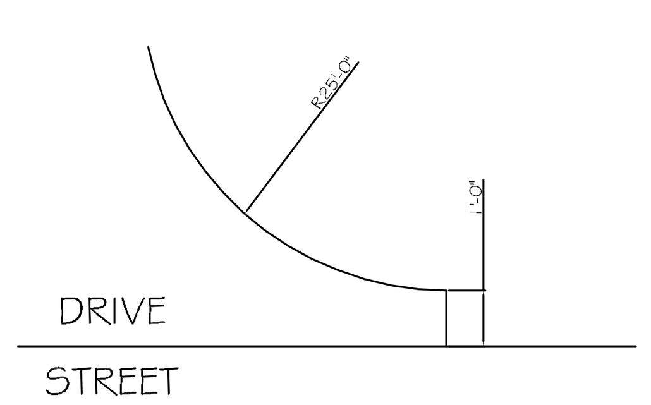


TYPICAL ENTRANCE DETAIL

N.T.S.

PROJECT: MUREAU'S THERMAL SERVICE

STORMWATER RUN-OFF CALCULATIONS

Formulas used:

[1] RATIONAL METHOD: Q=Aci

where:
- Q= Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm assumed.
- A=Area of watershed in acres.
- c= Coefficient of run-off [2].
- i= Intensity of rainfall in inches per hour based on concentration time. [3]

[4] TC=

where:
- TC= Time of concentration= time required for rain falling at most remote point to reach discharge point.
- c= Site run-off coefficient based on conditions shown.
- s= Percent slope of overland flow.

PRIOR DEVELOPMENT

25 Year Frequency

Q_1 = Aci

Watertight Surfaces	c(1) = 0.9	2616	sqft =	0.060 Acres
Gravel Surface	c(2) = 0.25	3140	sqft =	0.072 Acres
Green Space	c(3) = 0.15	10718	sqft =	0.246 Acres
Summary	c = 0.29	16474	sqft =	0.378 Acres

Duration (D) = Time of concentration (TC)

where L = 149 run-off length ft Elev diff = 2
c = 0.29 run-off coef
S = 1.3423 percent slope

therefore TC = D = 16.71 minutes

Expected rainfall intensity i = 3.64 in/hr

Q_1 = 0.397 cfs 10% reduction **0.040 cfs**

POST DEVELOPMENT

25 Year Frequency

Q_2 = Aci

Watertight Surfaces	c(1) = 0.9	7842	sqft =	0.180 Acres
Gravel Surface	c(2) = 0.25	0	sqft =	0.000 Acres
Green Space	c(3) = 0.15	8632	sqft =	0.198 Acres
Summary	c = 0.51	16474	sqft =	0.378 Acres

Duration (D) = Time of concentration (TC)

where L = 149 run-off length ft Elev diff = 2.5
c = 0.51 run-off coef
S = 1.6779 percent slope

therefore TC = D = 12.56 minutes

Expected rainfall intensity i = 3.64 in/hr

Q_2 = 0.698 cfs

DETENTION REQUIREMENTS

Detention required $Q_2 - Q_1$ 0.30 cfs

ONE HOUR DETENTION 1084.6 cuft

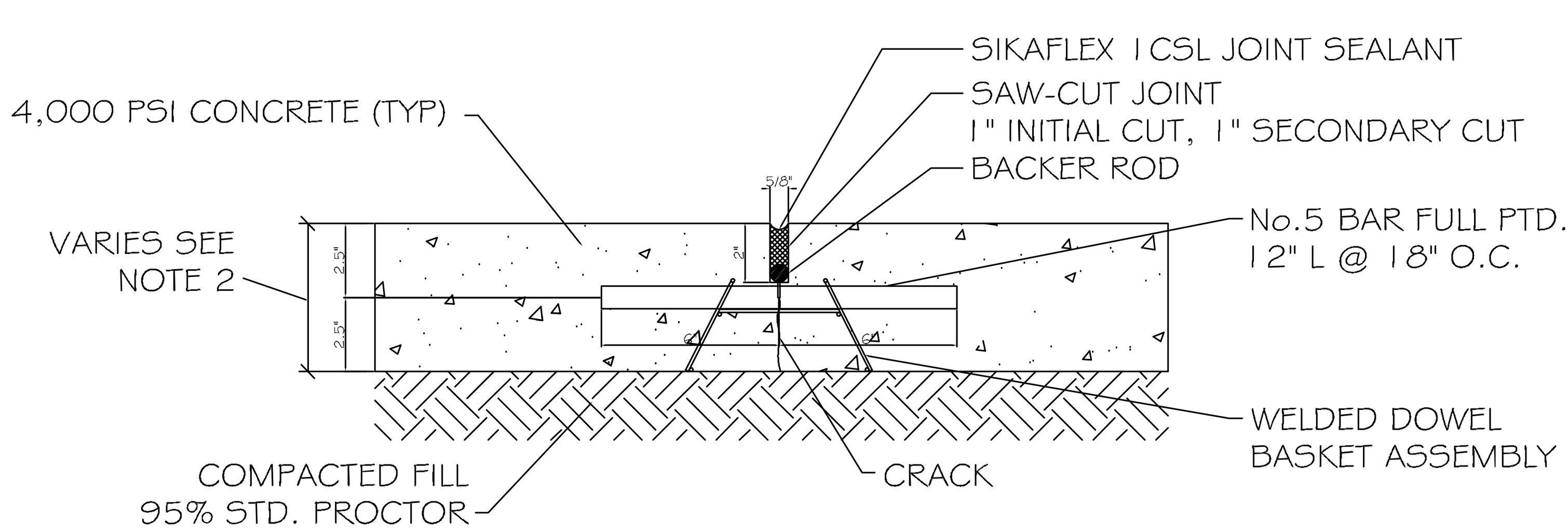
DETENTION DIMENSIONS WIDTH 90 feet; LENGTH 45 feet; DEPTH **0.27 feet**

where:
- A= Discharge Area required
- g= Acceleration of gravity
- c= Discharge coefficient
- h= Hydraulic head
- Q= Flow volume from run-off

Pipe Servicing Site Drainage

Q = 0.040 cfs h = 2.50 feet
c = 0.62 coefficient A = 0.005 sqft
g = 32.16 ft/sec/sec

REQUIRED CONDUIT = 0.96 inch inside diameter



CONTROL JOINT DETAIL

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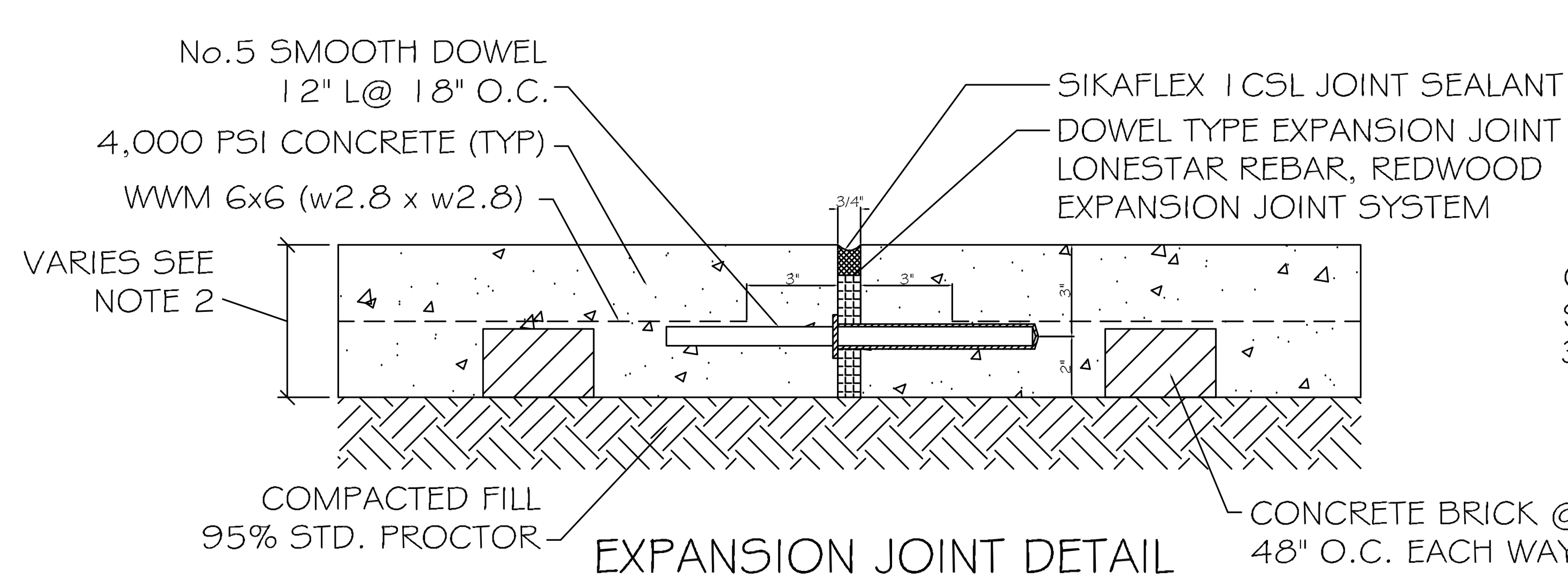

EXPANSION JOINT DETAIL

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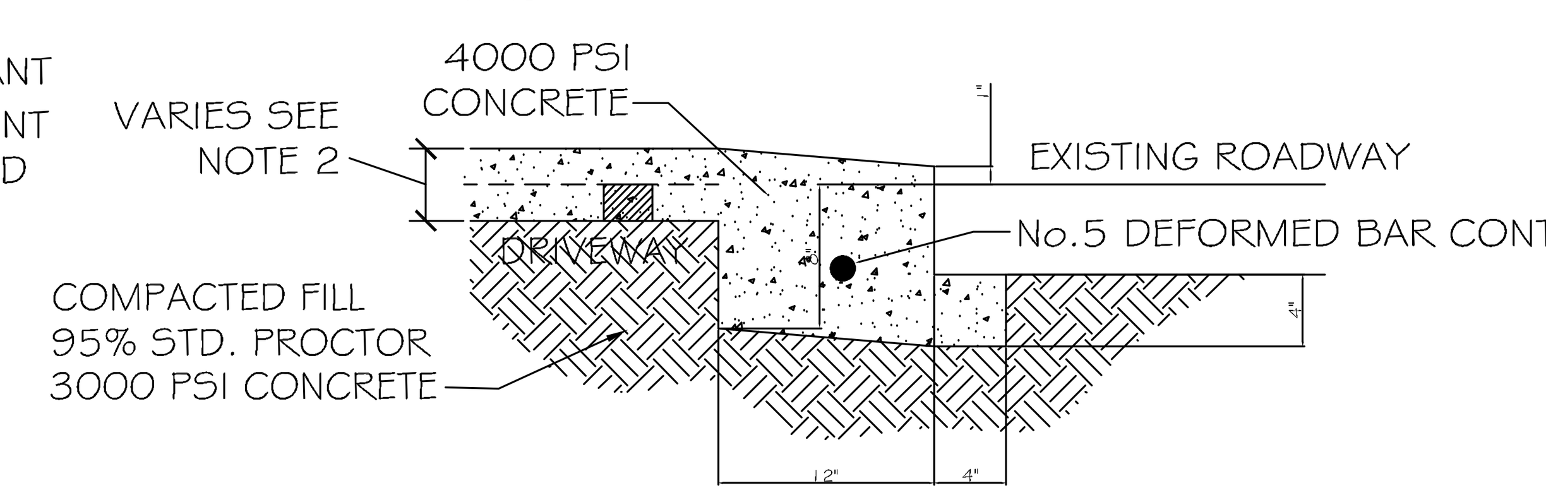

DRIVEWAY SECTION

N. T. S.

DAMMON ENGINEERING, INC.
Architects & Engineers

dammonengineering.com
dammoneng@bellsouth.net
PHONE: 985-649-5832
FAX: 985-641-5950

CHIEF ENGINEER: EMMETT DAMMON, P.E.
CHIEF ARCHITECT: KEVIN KINCHEN
554 OLD SPANISH TRAIL
SLIDELL, LA 70458

MOREAU'S THERMAL SERVICE

SHANE MOREAU
136 W.HOWZE BEACH RD
SLIDELL, LA 70458

JOB No:	2127	DATE:	03-20-2013
DRAWN BY:	JCT	CHECKED BY:	CD

REVISIONS		
#	DESCRIPTION	DATE

PAVING AND DRAINAGE PLAN

SHEET No: 03 OF 11

C3