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ARCHITECTURE
ENGINEERING
STUDIES
PLANNING
INVESTIGATION
EXPERT WITNESSES

FAST
CATERING
NEW
ADDITION

109 TAOS
STREET
SUDELL
LA

PAVING
AND
DRAINAGE
PLAN

REV:
SCALE: AS NOTED
JOB#: 2140
DATE: 04-20-12
SHEET

OF
C-2

Fast Catering

PROJECT: DRAINAGE RUN OFF CALCULATIONS - RATIONAL METHOD
PRIOR DEVELOPMENT
10 Year Frequency

Q = CIA

Waterlight Surfaces	c(1) = 0.9	0	sqft = 0.000 Acres
Gravel Surface	c(2) = 0.14	0	sqft = 0.000 Acres
Green Space	c(3) = 0.21	10500	sqft = 0.241 Acres
Summary	c = 0.21	10500	sqft = 0.241 Acres

Duration (D) = Time of concentration (TC)
TC = .7039(L^{0.3917})(c^{-1.1309})(S^{-1.985})
 where
 L = 150
 c = 0.21
 S = 1.3333
 therefore
 TC = D = 7.66 minutes
 and from Rainfall Intensity Table I = 4.50 in/hr

Q = 0.228 cfs RUNOFF LIMIT% **0.205 cfs**
 POST DEVELOPMENT
 10 Year Frequency

Q = CIA

Waterlight Surfaces	c(1) = 0.9	8968	sqft = 0.206 Acres
Gravel Surface	c(2) = 0.14	0	sqft = 0.000 Acres
Green Space	c(3) = 0.21	1532	sqft = 0.035 Acres
Summary	c = 0.80	10500	sqft = 0.241 Acres

D = Time of concentration (TC)
TC = .7039(L^{0.3917})(c^{-1.1309})(S^{-1.985})
 where
 L = 109
 c = 0.80
 S = 0.4587
 therefore
 TC = D = 6.85 minutes
 and from Rainfall Intensity Table I = 7.60 in/hr

Q = 1.464 cfs

RESULTS

DETENTION REQUIRED	1.259cfs
ONE HOUR DETENTION	4533.5cft
DETENTION DIMENSIONS	64feet 109feet 65feet

DISCHARGE END AREA CALCULATIONS

Q = cA(2gH)^{0.5}

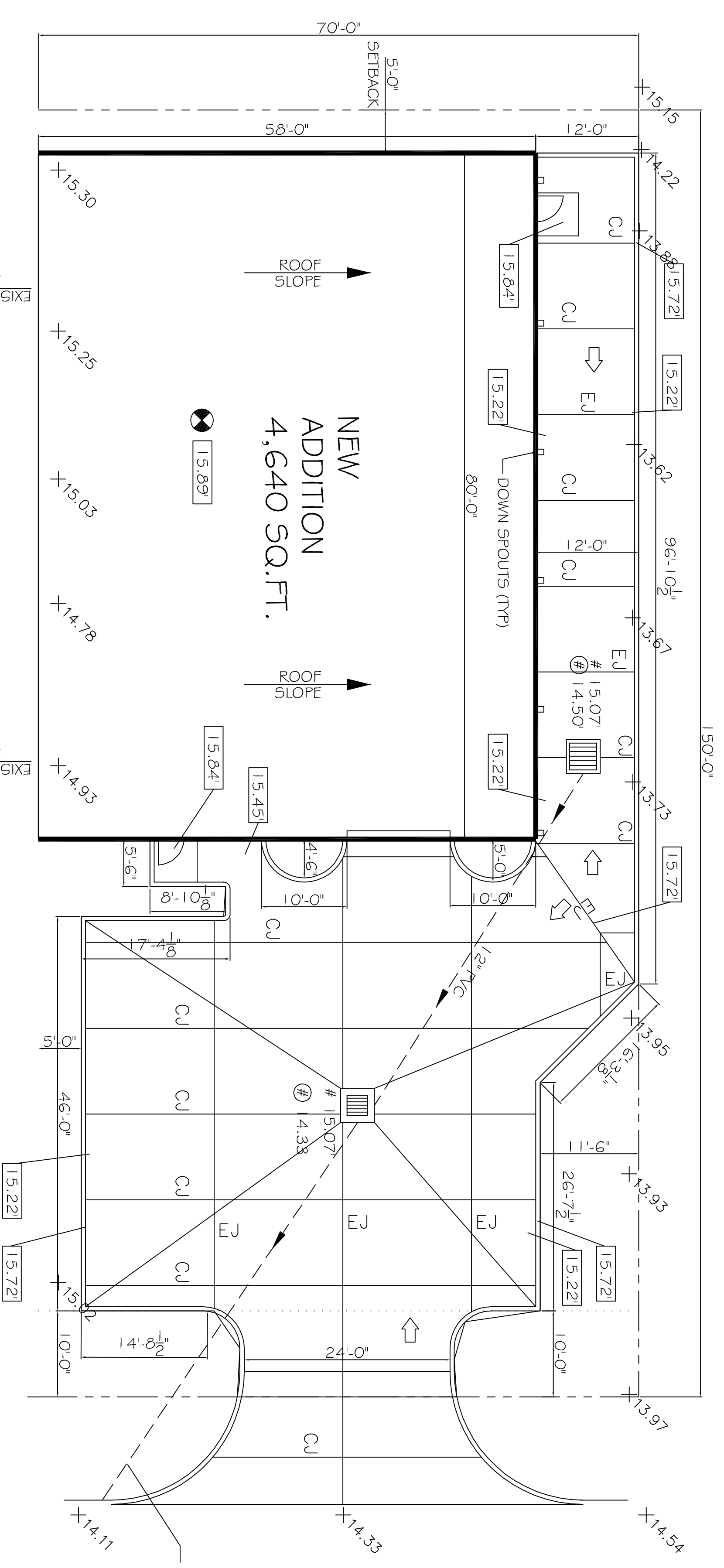
Allowable run off
 Friction loss factor
 Acceleration
 Height above invert
 End area

where Q is allowable run off

Q = 0.205 cfs
 c = 0.98 coefficient
 g = 32.2 ft/sec²
 if H = 2.00 feet
 A = 0.02 sqft

REQUIRED CONDUIT = 1.84inch diameter

USE 4 inch orifices



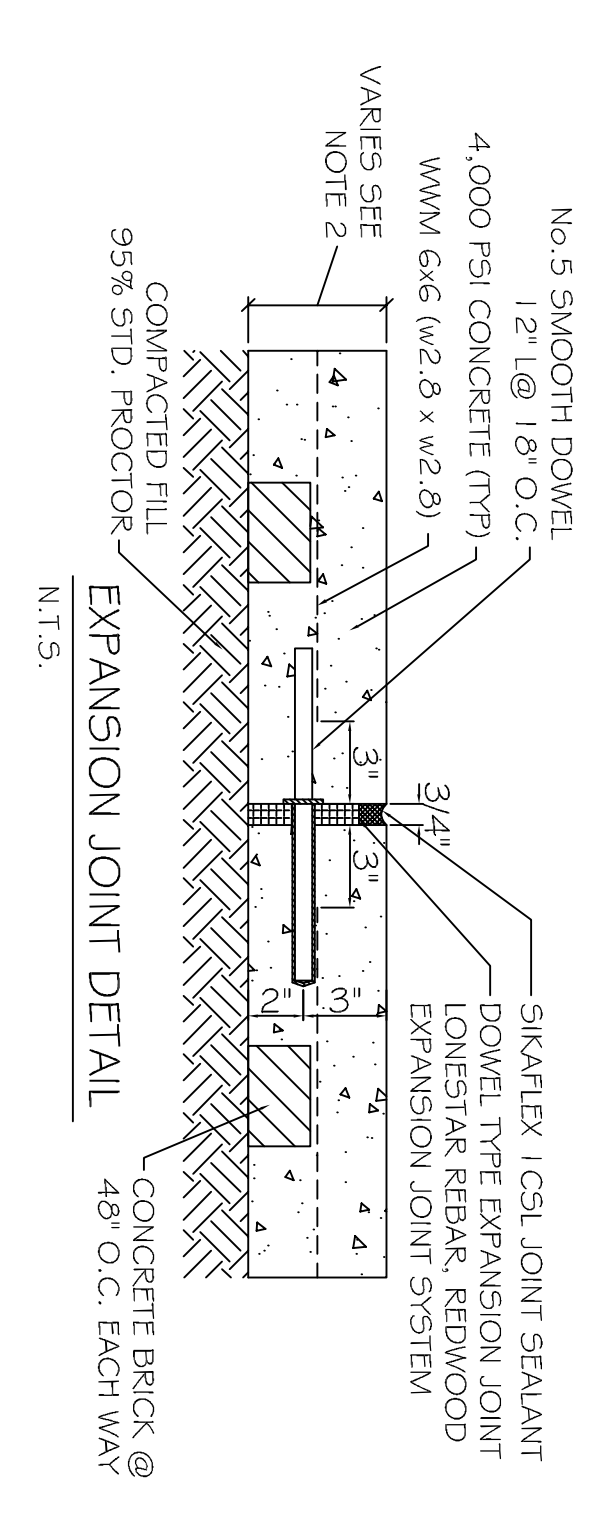
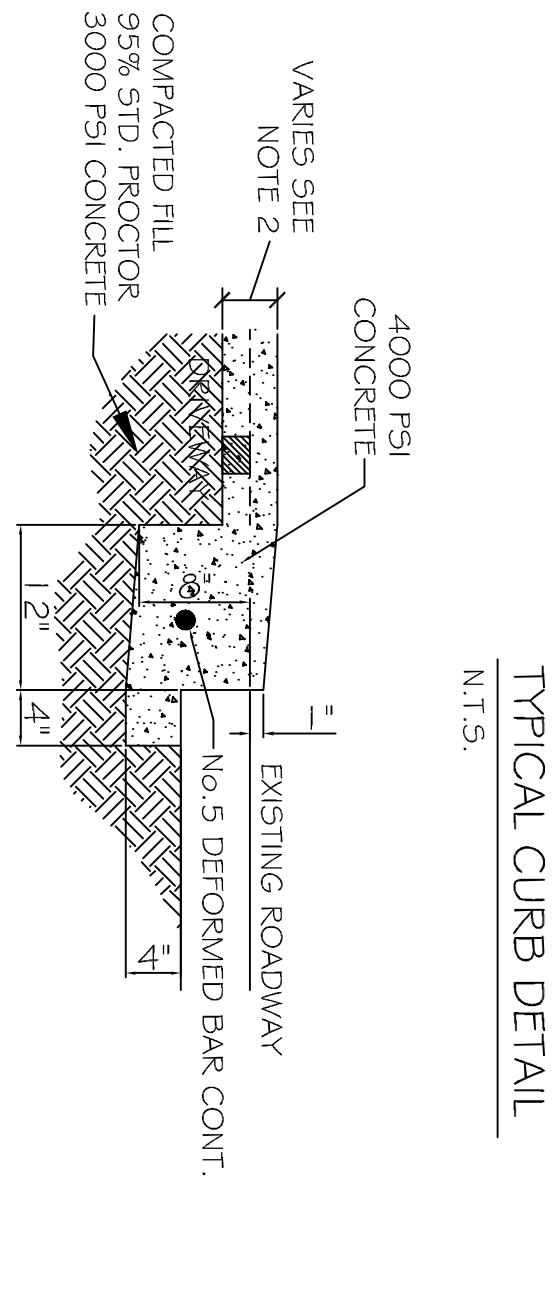
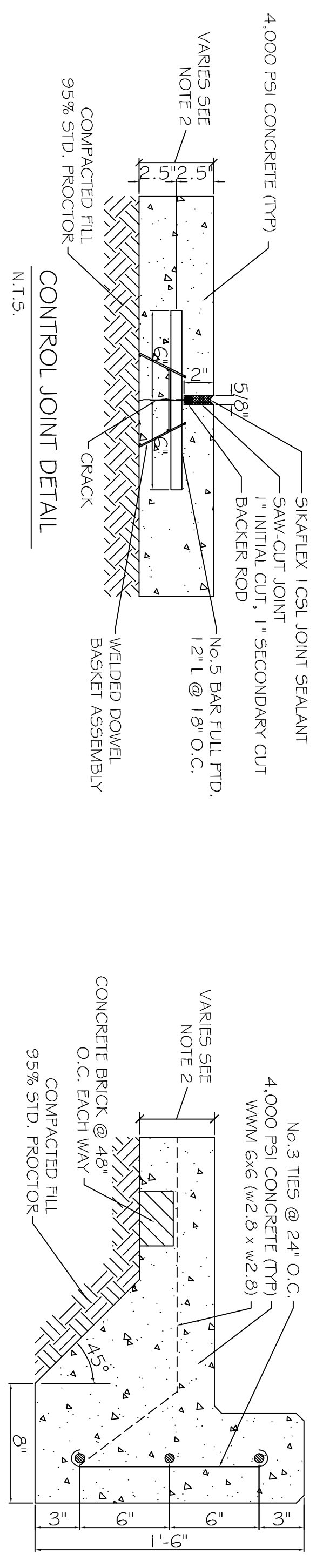
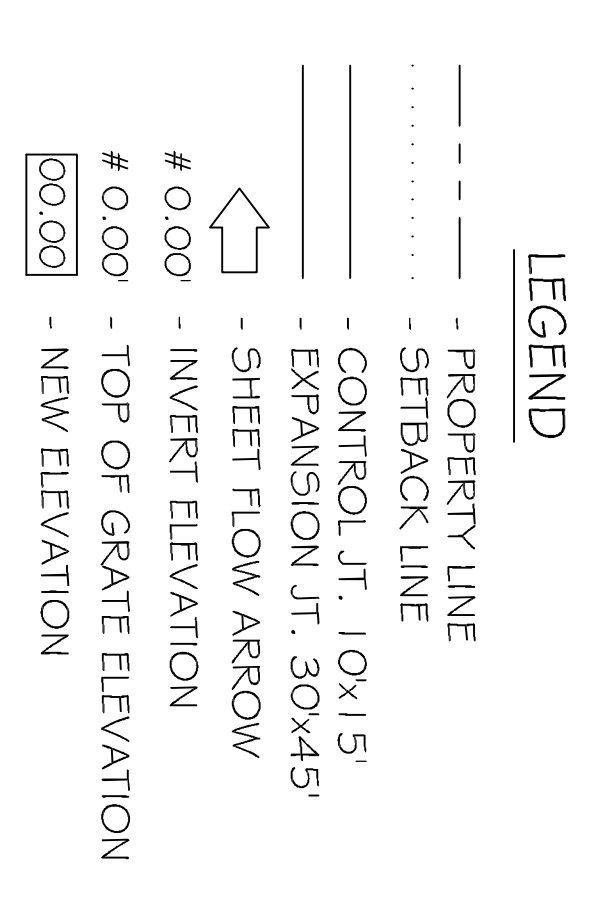
PAVING & DRAINAGE PLAN
SCALE: 1"=10'

PAVING NOTES:

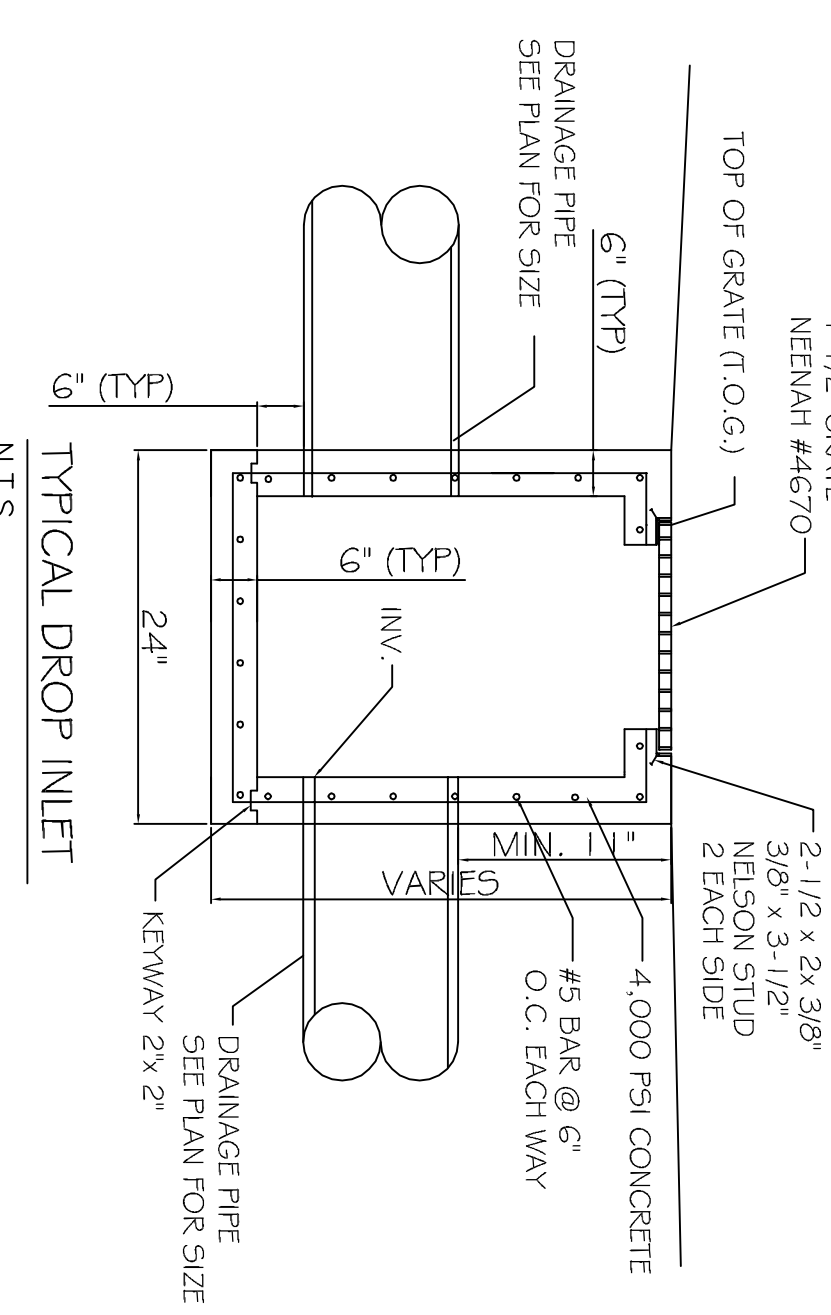
- 1) ALL NEW CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A MINIMUM THICKNESS OF 5". CONCRETE MIX SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM C-150 TYPE I.
- 2) CONCRETE PAVING THICKNESS SHALL VARY AS FOLLOWS:
 - a) APRONS = 7" THICKNESS
 - b) DRIVEWAYS = 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 MANUFACTURERS RECOMMENDATIONS.
- 5) ALL SUB GRADE FILL SHALL BE SELECT GRAVULAR 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.

DRAINAGE PLAN 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.
4. THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY.



DRIVEWAY SECTION
N.T.S.



TYPICAL DROP INLET
N.T.S.