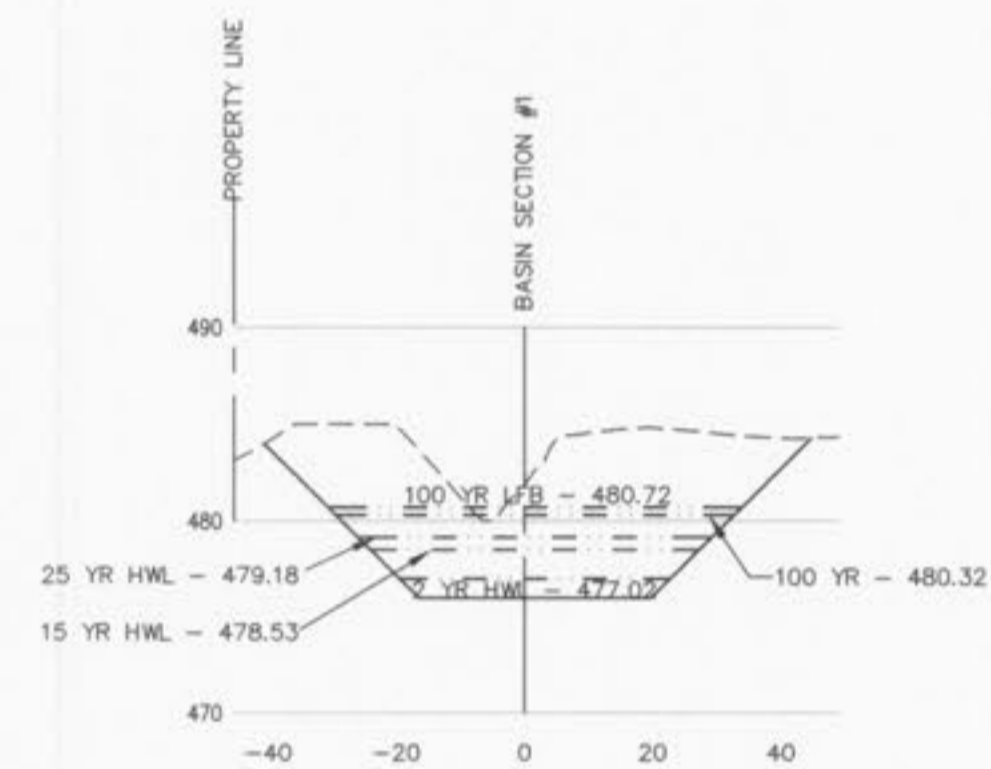
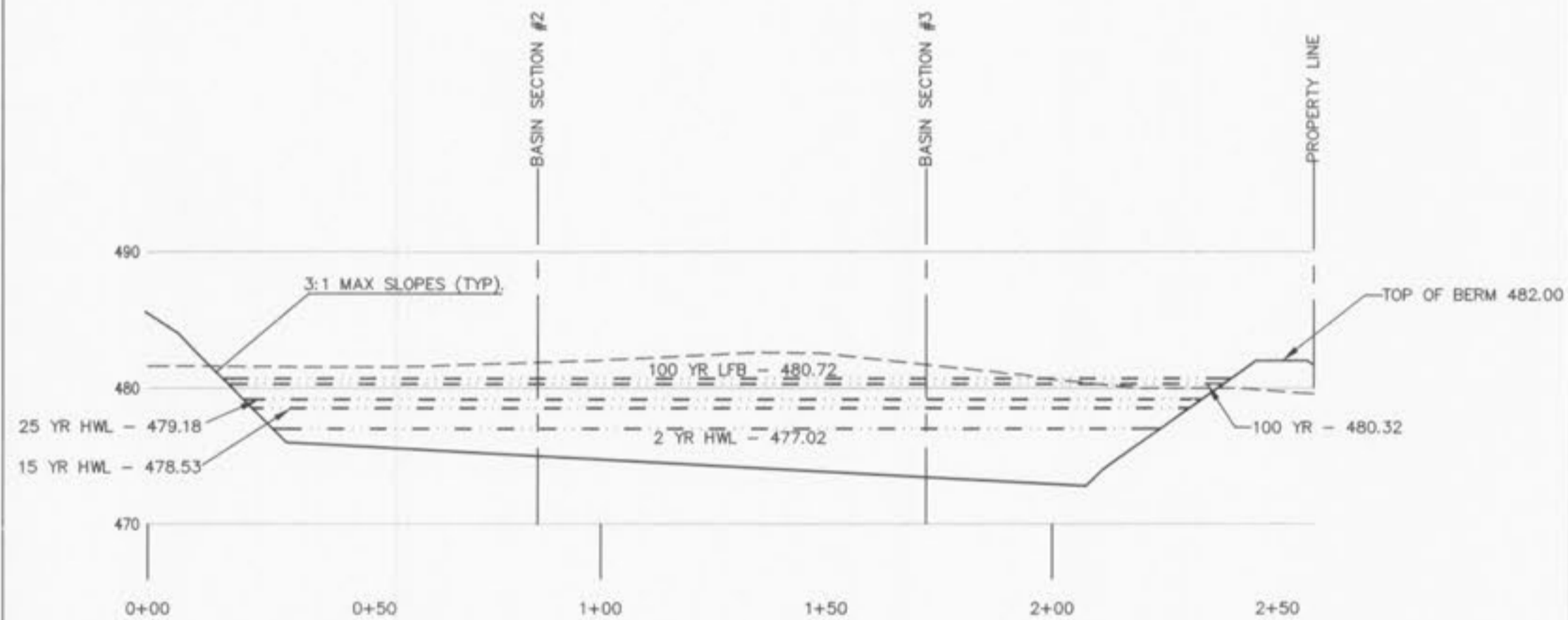


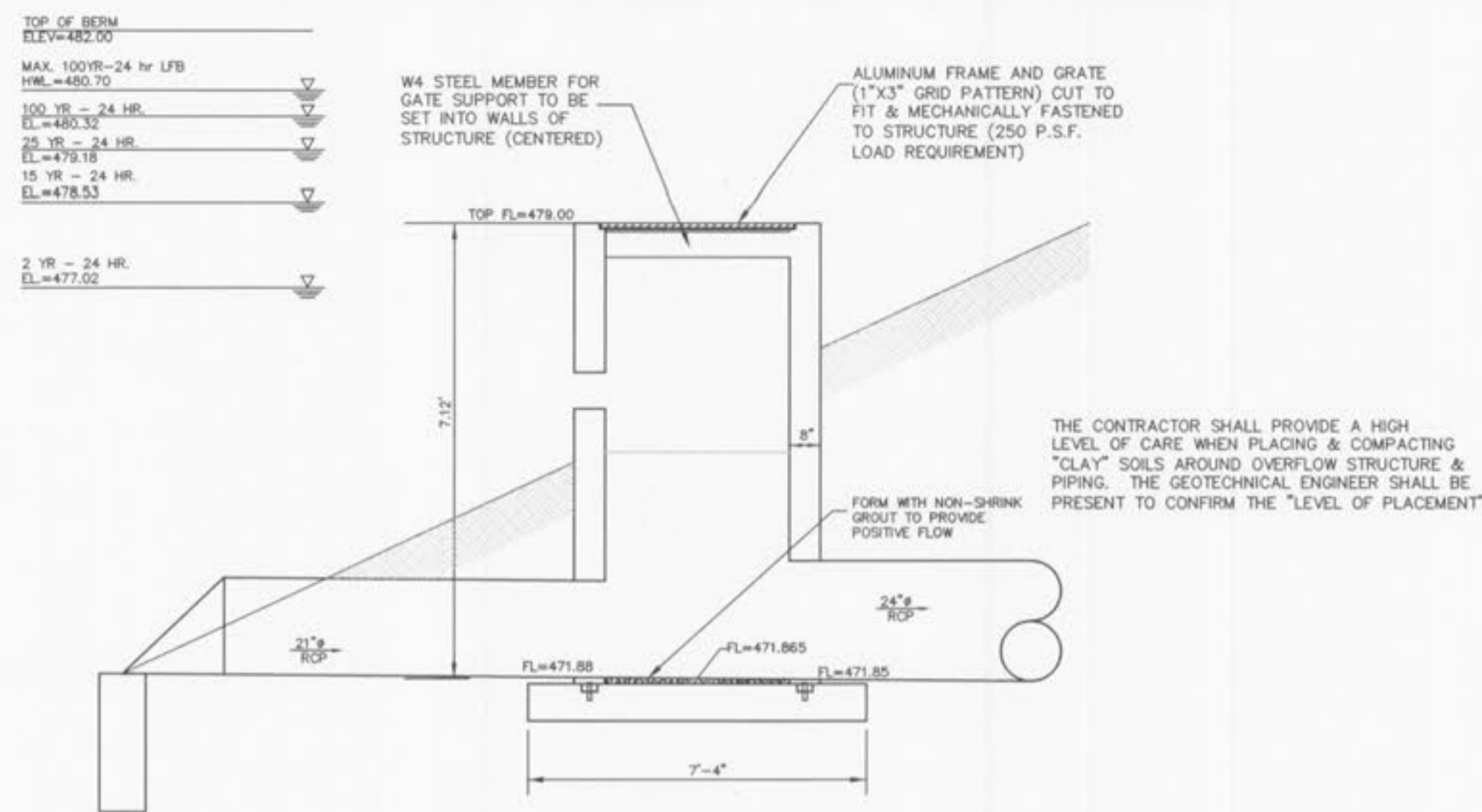
BASIN SECTION #3
SCALE: HORIZ: 1"=30'
VERT: 1"=10'



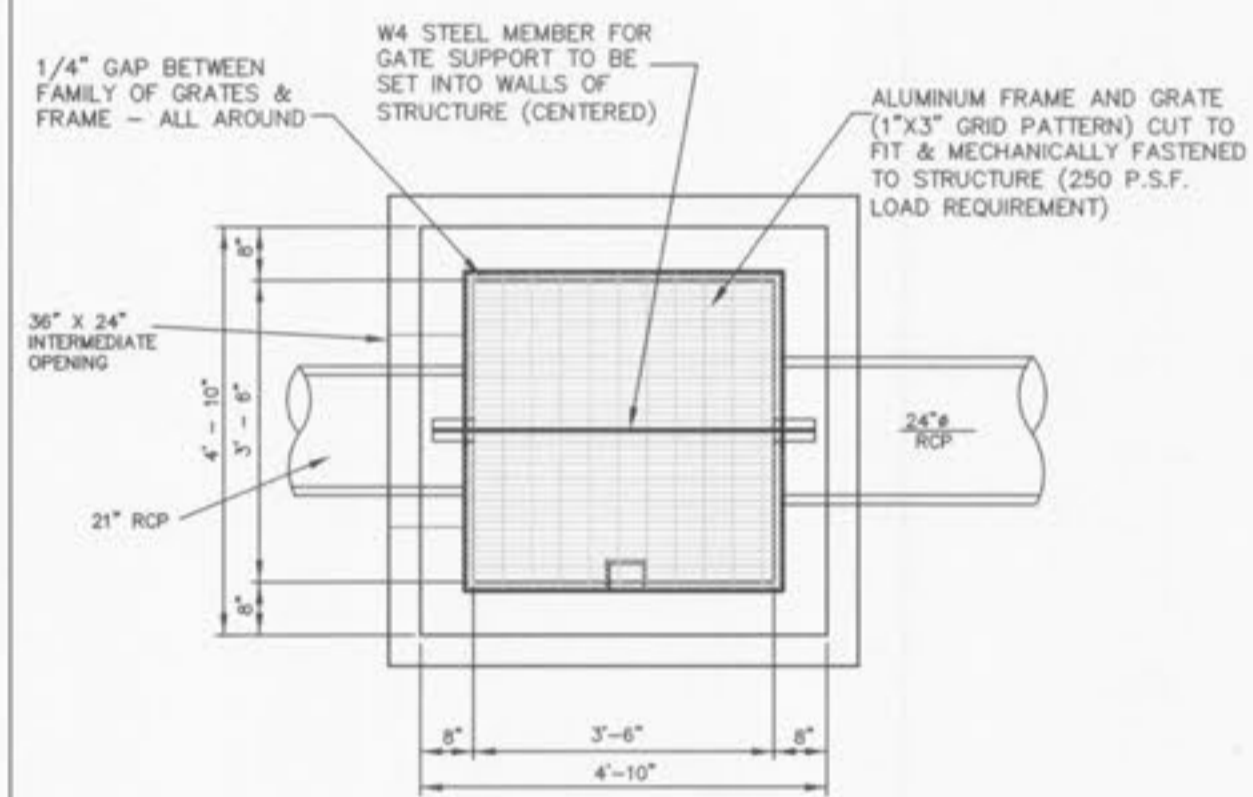
BASIN SECTION #2
SCALE: HORIZ: 1"=30'
VERT: 1"=10'



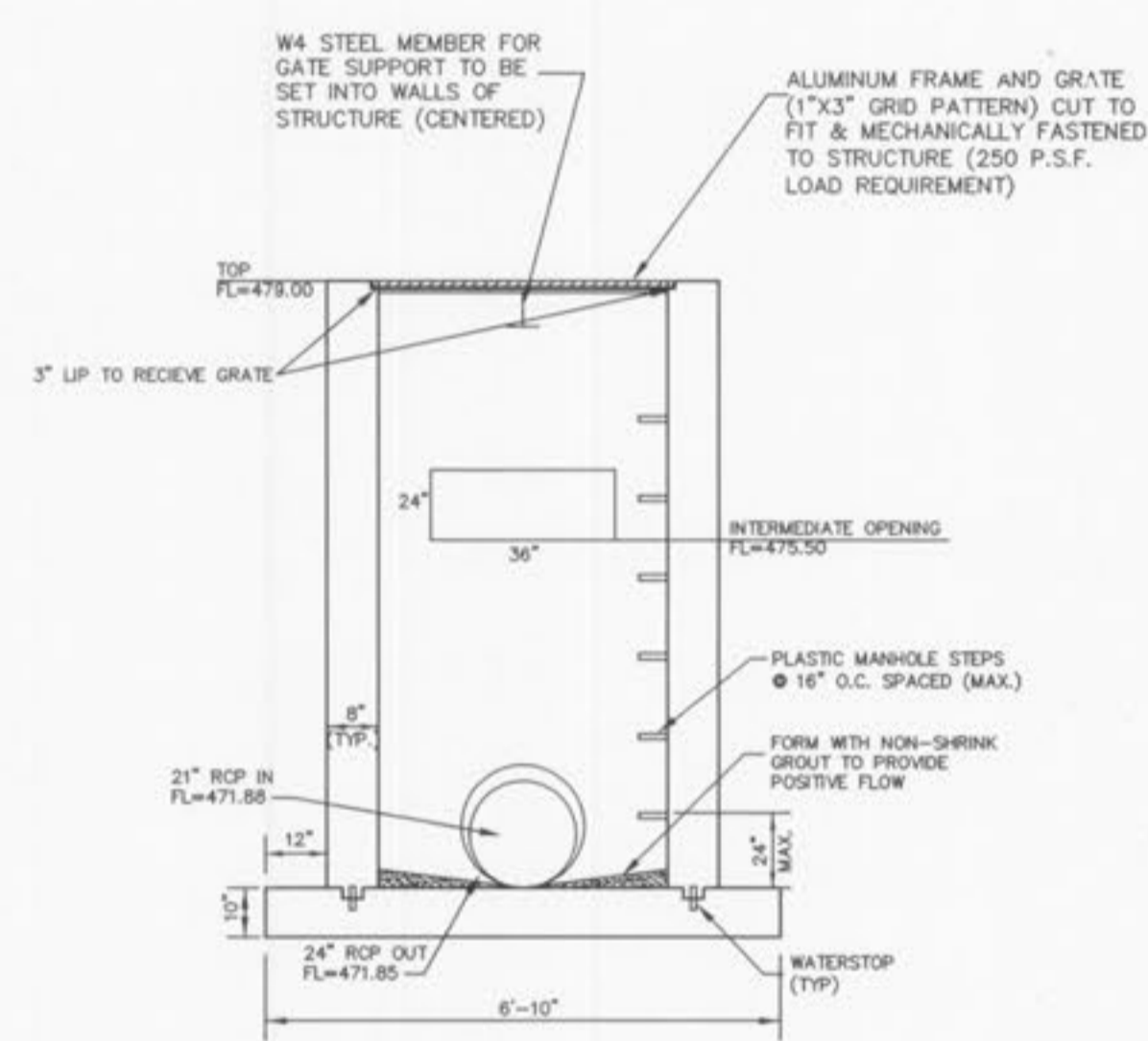
BASIN SECTION #1
SCALE: HORIZ: 1"=30'
VERT: 1"=10'



SIDE VIEW



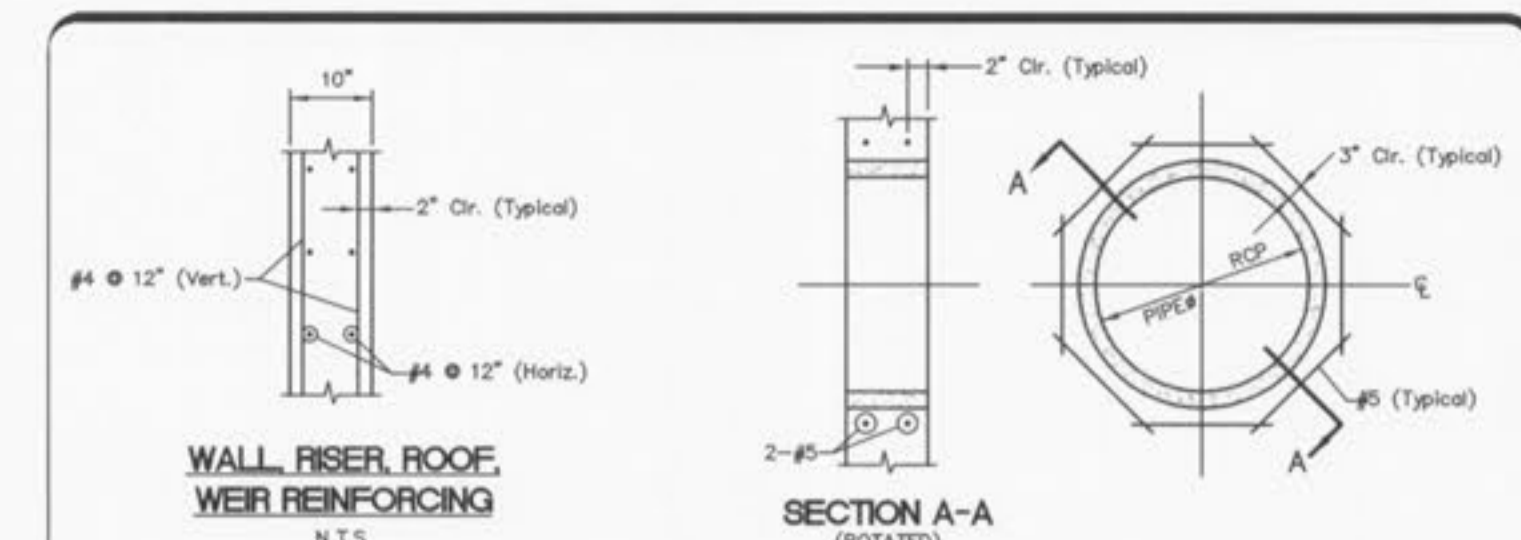
TOP VIEW



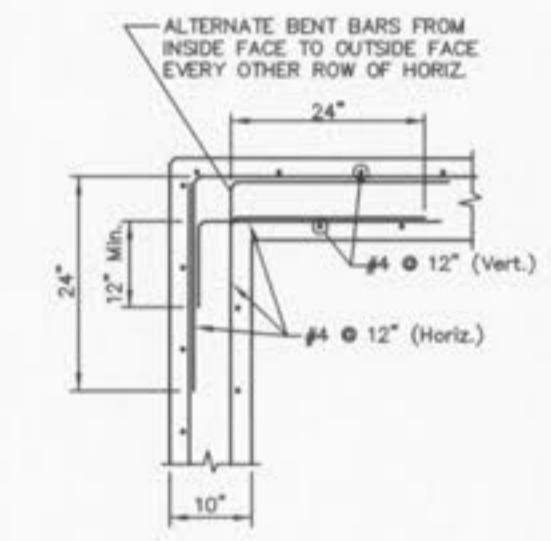
END VIEW

DETENTION STRUCTURE DETAILS

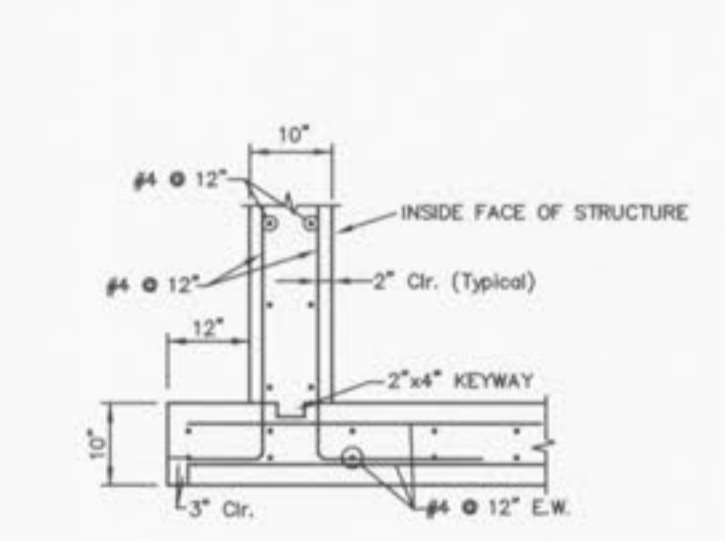
NOTE:
ENGINEER APPROVED SHOP DRAWINGS MUST BE SUBMITTED TO THE CITY OF O'FALLON FOR REVIEW AND APPROVAL PRIOR TO THE CONSTRUCTION OF THE STRUCTURE



WALL, RISER, ROOF, WEIR REINFORCING
N.T.S.



REINFORCING - WALL CORNER
N.T.S.

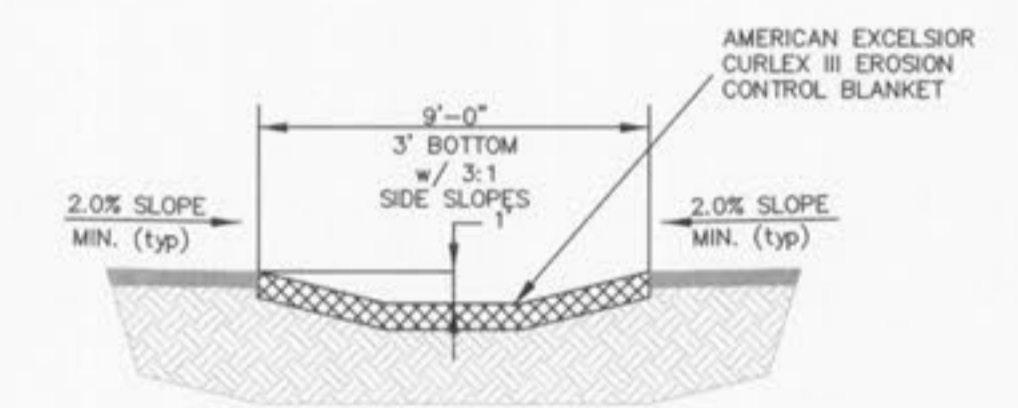


FOOTING REINFORCING
N.T.S.

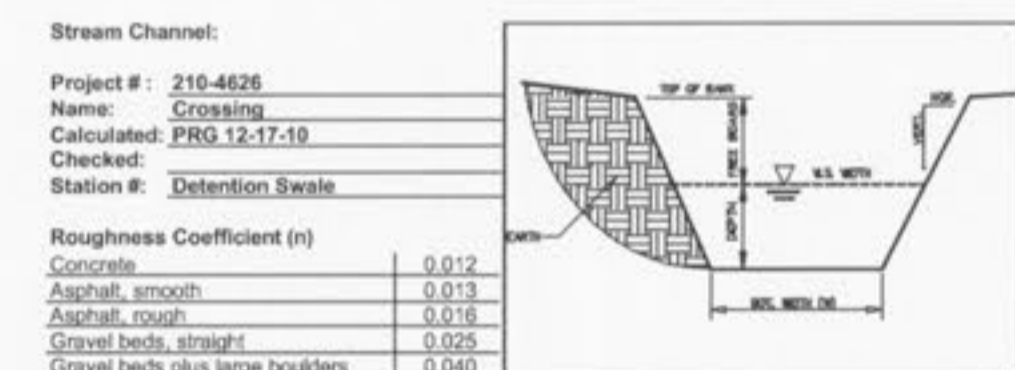
NOTES:

1. ANY UNSUITABLE SOIL (AS DETERMINED BY SOILS ENGINEER) BELOW DETENTION STRUCTURE SHALL BE REMOVED AND REPLACED WITH SELECTED EARTHEN MATERIAL AND COMPACTED IN PLACE WITH VIBRATORY TAMPER.
2. ALL EXPOSED CONCRETE EDGES TO HAVE 3/4" CHAMFER EDGES.
3. CONCRETE - $f_c = 3000$ psi
STEEL - $f_y = 60,000$ psi

REINFORCING DETAILS FOR SPECIAL REINFORCED STRUCTURES AND DETENTION OUTFALL STRUCTURES
N.T.S.



GRASS SWALE - DETENTION BASIN AREA
(n.t.s.)



Stream Channel:

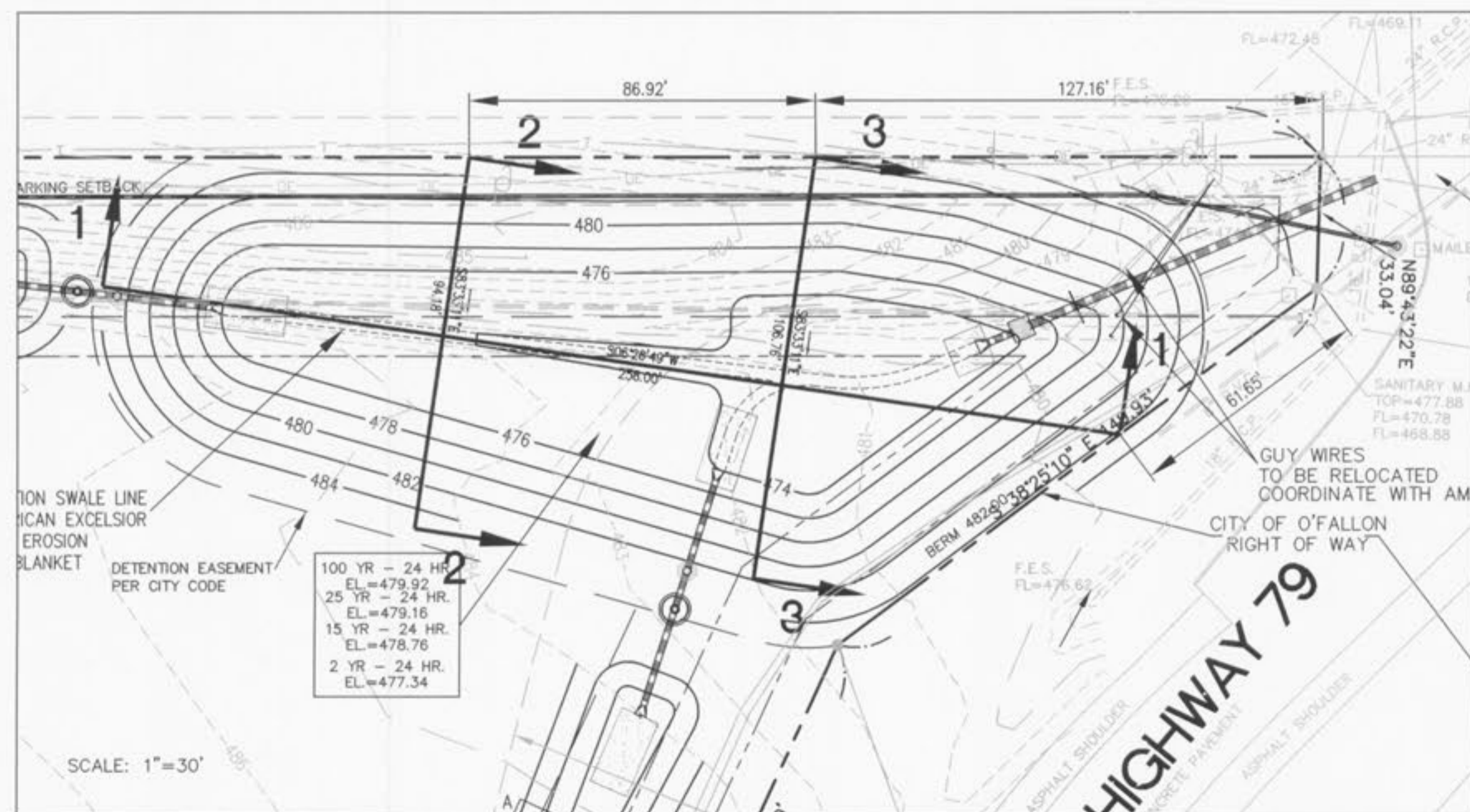
Project #: 210-4626
Name: Crossing
Calculated: PMS 12-17-10
Checked:
Station #: Detention Swale

FIND DEPTH OF WATER AND WIDTH OF THE CHANNEL:

INPUT:		Top Of bank Elevation = 2.00	
Q = 27.55 (cfs)	Stream Slope = 0.015 (ft/ft)	Bot. Elevation = 1.00	Side Slope
n = 0.020	W (Bottom width) = 3 (ft)	Horizontal (H) = 3	Vertical (V) = 1
OUTPUT:			
Depth = 0.94 (ft)	Velocity = 5.07 (ft/sec)	Water Surface Width = 8.62 (ft)	R ^{2.49} = 0.72
Water Surface Elev = 1.94	Free Board = 0.06 (ft)	Perimeter = 8.92 (ft)	Cross section Area = 5.44 (ft ²)

2YR 20MIN SWALE CALCULATIONS

- ▲ CITY APPROVAL 02/01/11
- ▲ CITY COMMENTS 01/26/11
- ▲ CITY COMMENTS 01/13/11



SCALE: 1"=30'

02/01/11

GEORGE M. STOCK E-25116
CIVIL ENGINEER
CERTIFICATE OF AUTHORITY
NUMBER: 000996

**THE CROSSING AT RIVERSIDE CENTRE
DETENTION DETAILS**

STOCK & ASSOCIATES
Consulting Engineers, Inc.

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St. Louis, MO 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stockassoc.com
Web: www.stockassoc.com

DRWN BY: P.R.G.	DATE: 12/21/10	CHECKED BY: G.M.S.	DATE: 12/21/10	JOB NUMBER: 210-4626	SHEET: C16
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