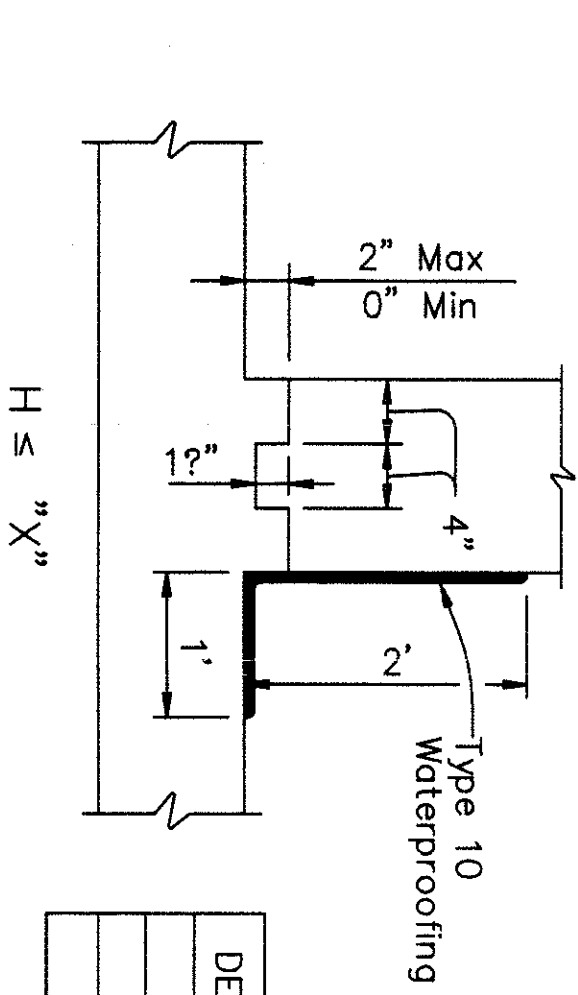


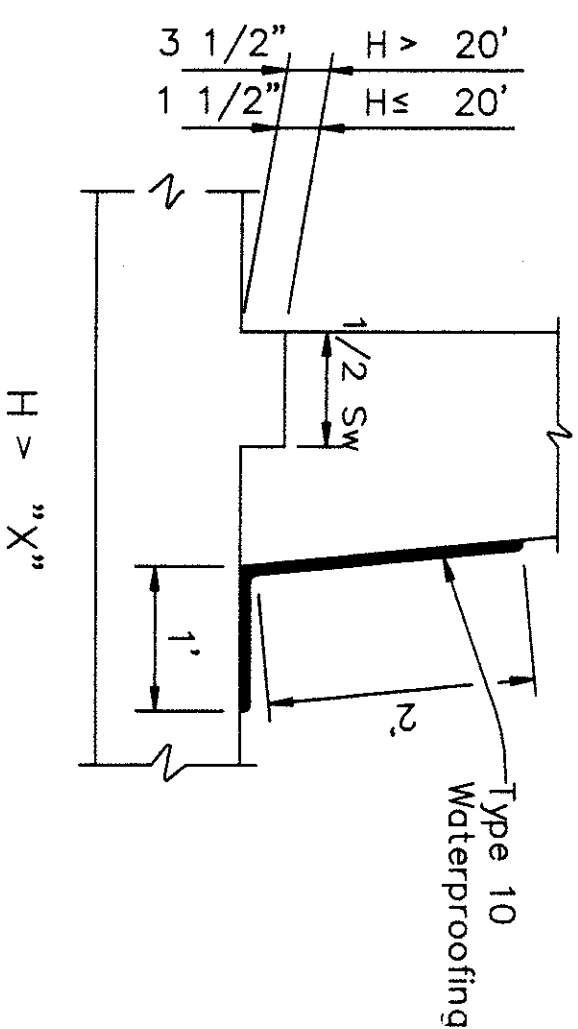
LEVELS DISPLAYED															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64

PATH:

DISCLAIMER:
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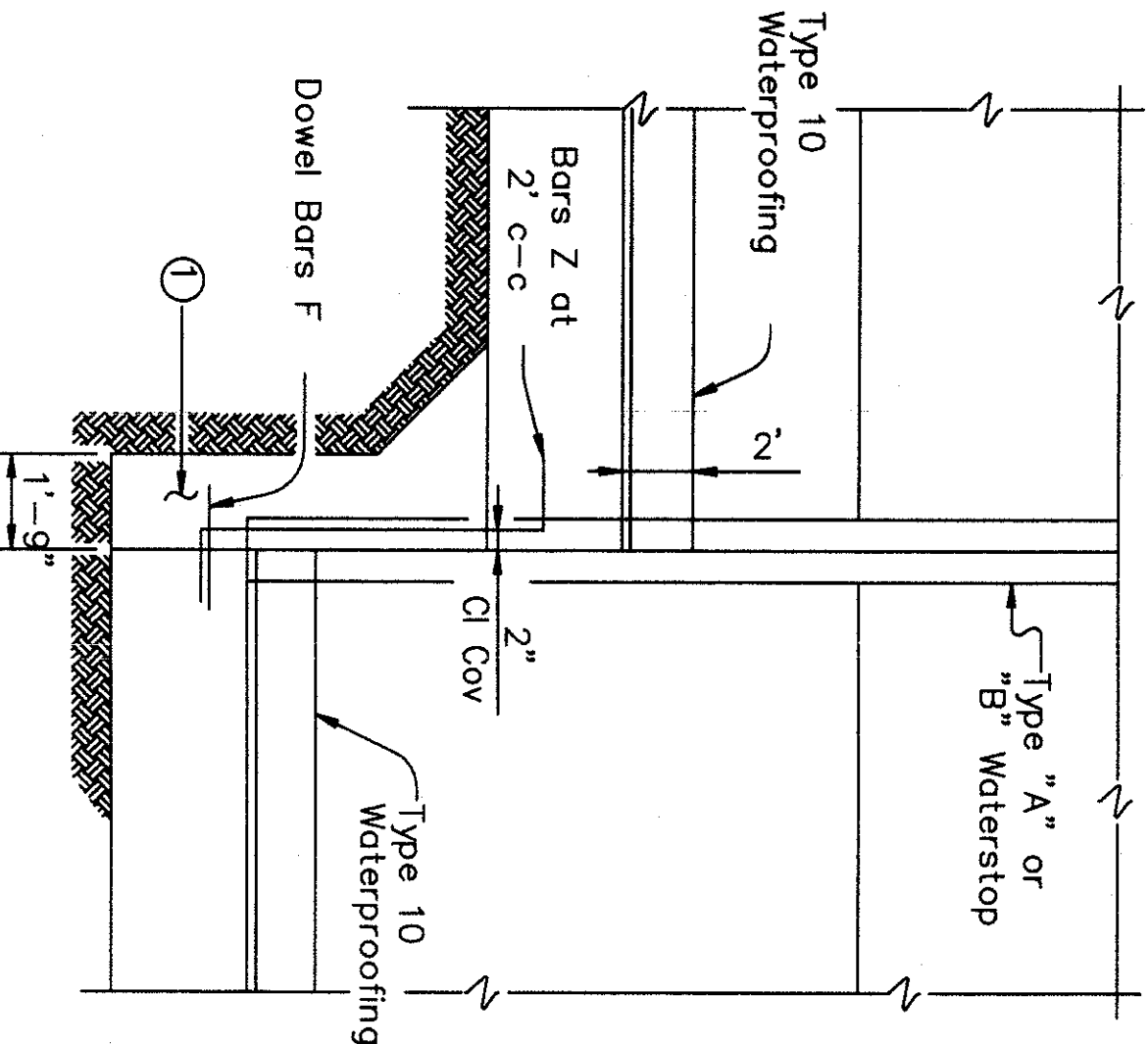


DESIGN	"X"
A	14'
B	12'
C	11'

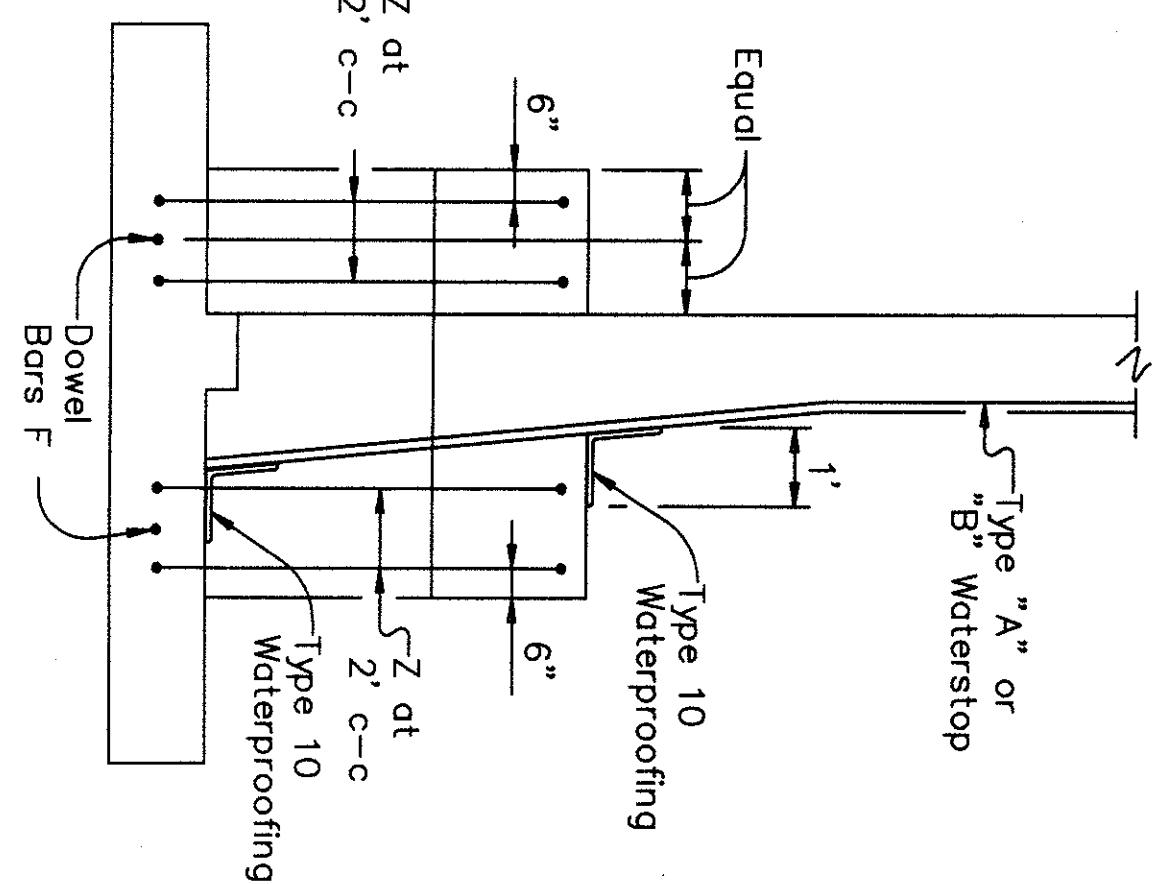


JOINT AND WATERSTOP DETAILS

PARTIAL ELEVATION



PARTIAL SECTION



① Unreinforced Class "C" Concrete when difference in top of footing elevations is less than 6'. Omit when Dowel Bars F can be placed between adjacent footings with 4" cover top and bottom.

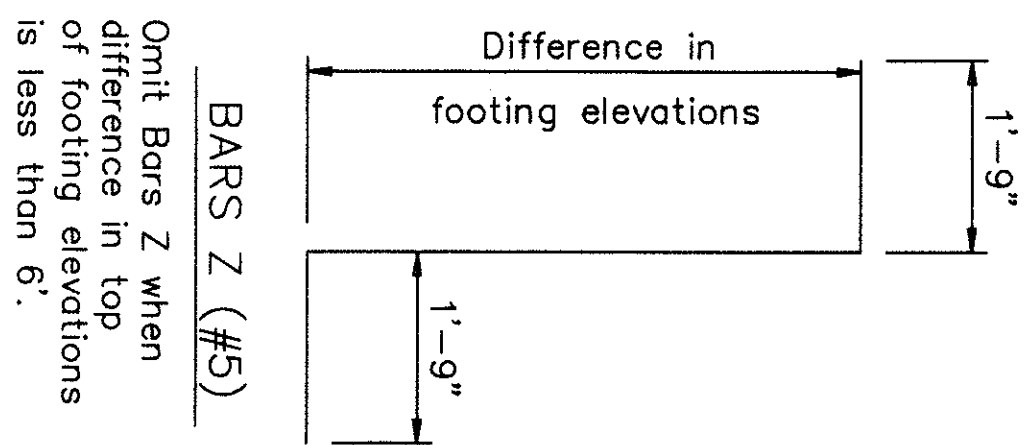
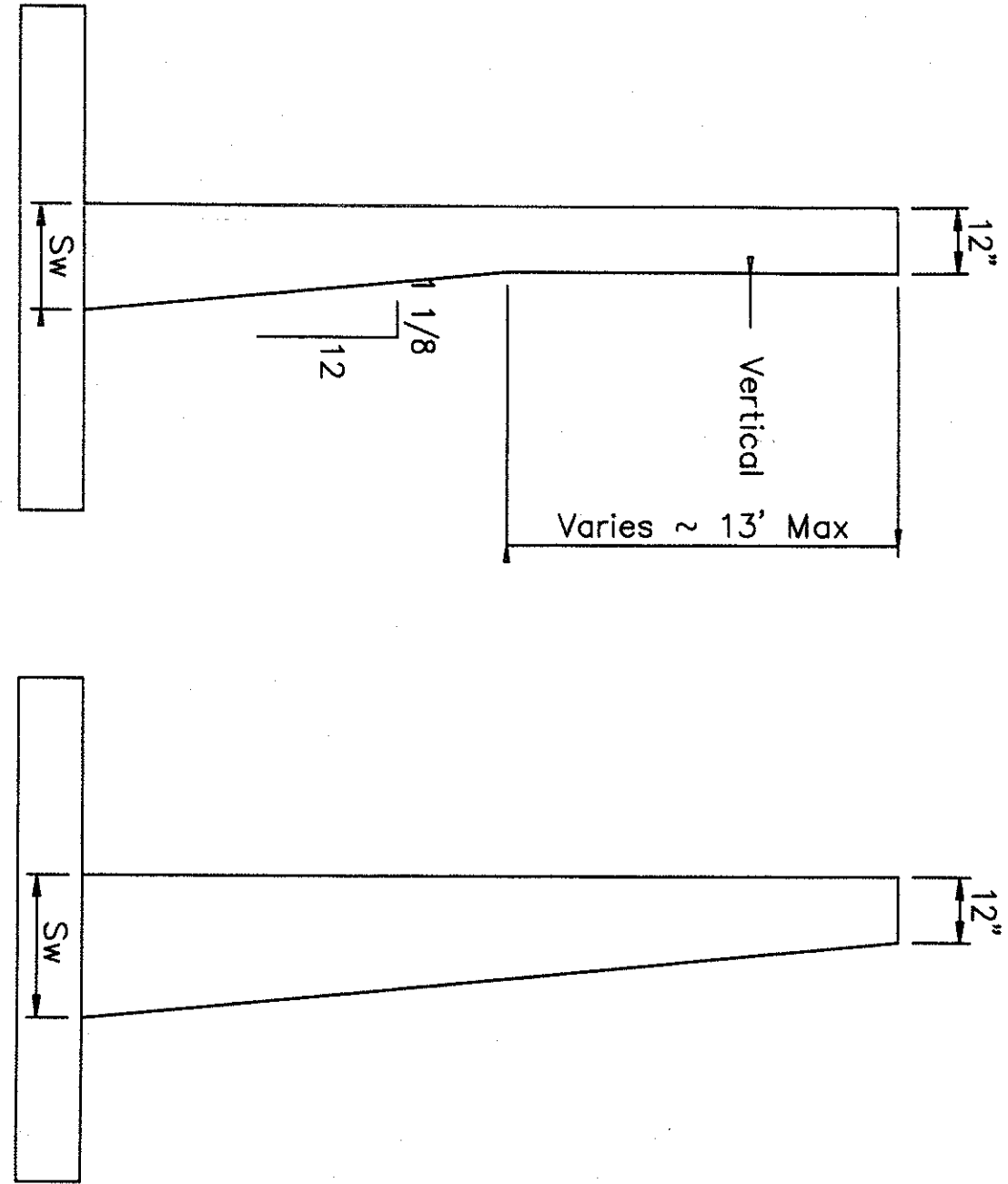
SHOWING WATERSTOP AT FOOTING JOINT

Walls with slopes other than those shown may be used after approval by the Engineer. Sw shall not be less than shown in Table on Sheet 1. No payment will be made for excess concrete due to changing of slope of wall stem.

ALTERNATE STEM SLOPE DETAILS

AS DETAILED
ALL HEIGHTS
(Basis for payment)

FRONT FACE VERTICAL
BACK FACE SLOPED

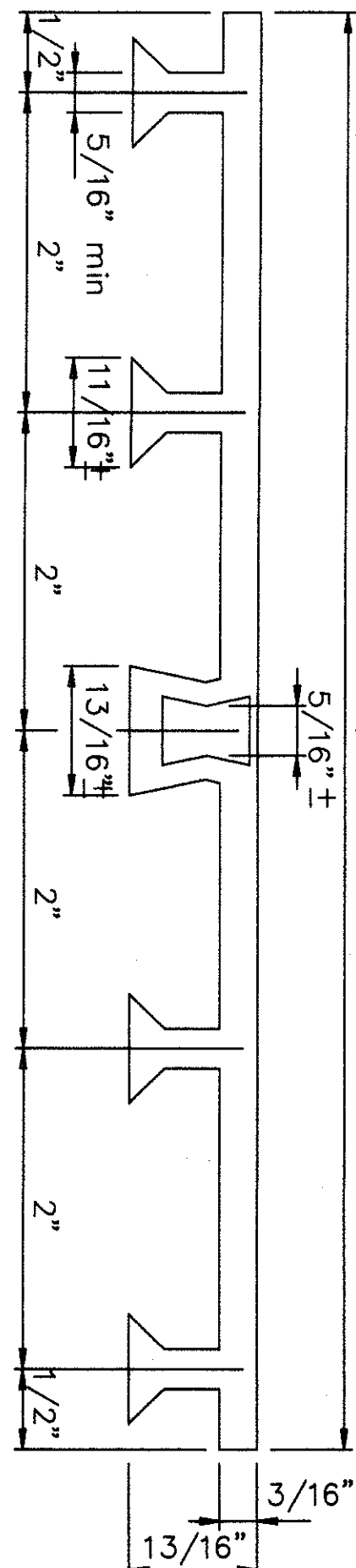


Omit Bars Z when difference in top of footing elevations is less than 6'.

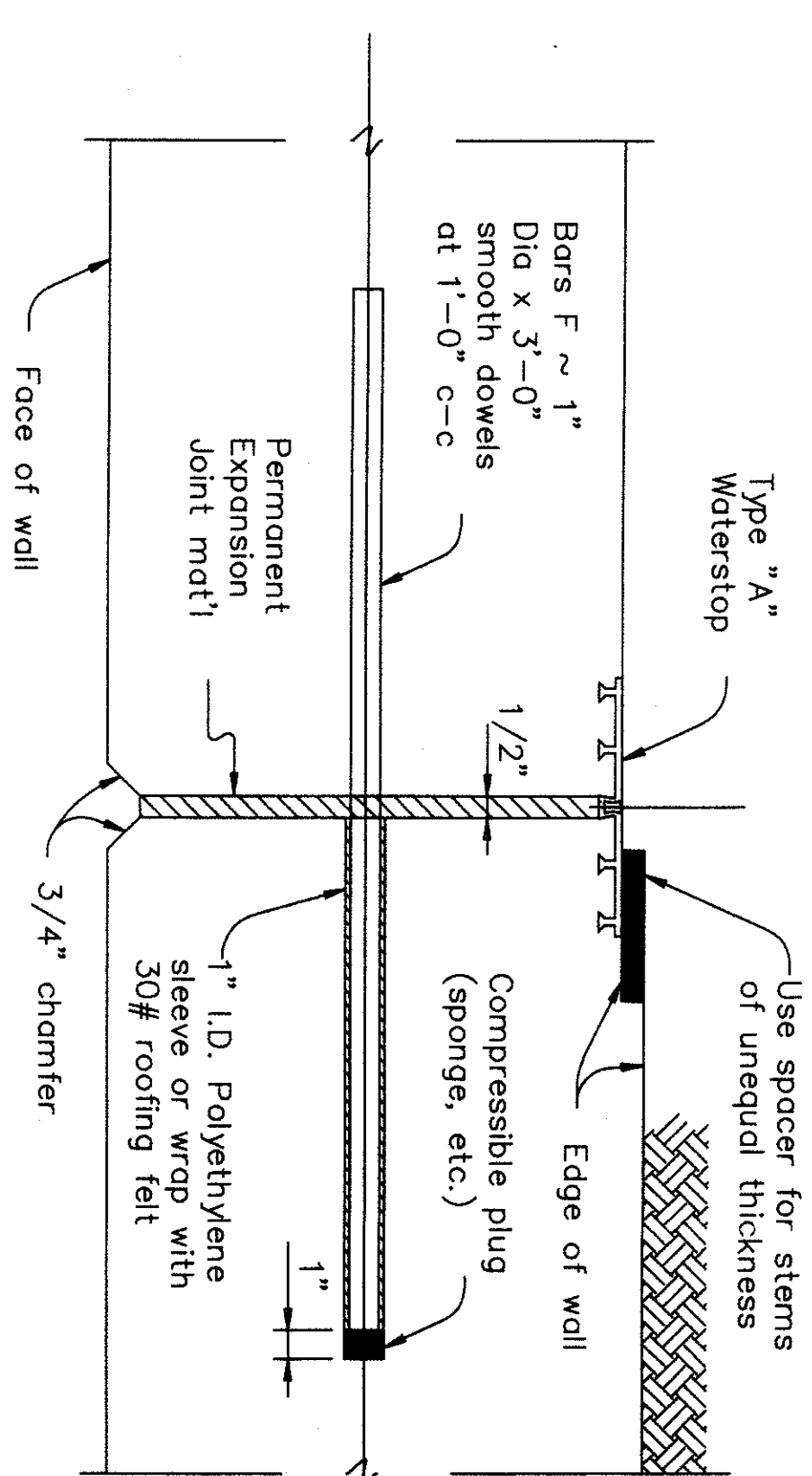
Bars Z (#5)

PVC WATERSTOP TYPE "A"

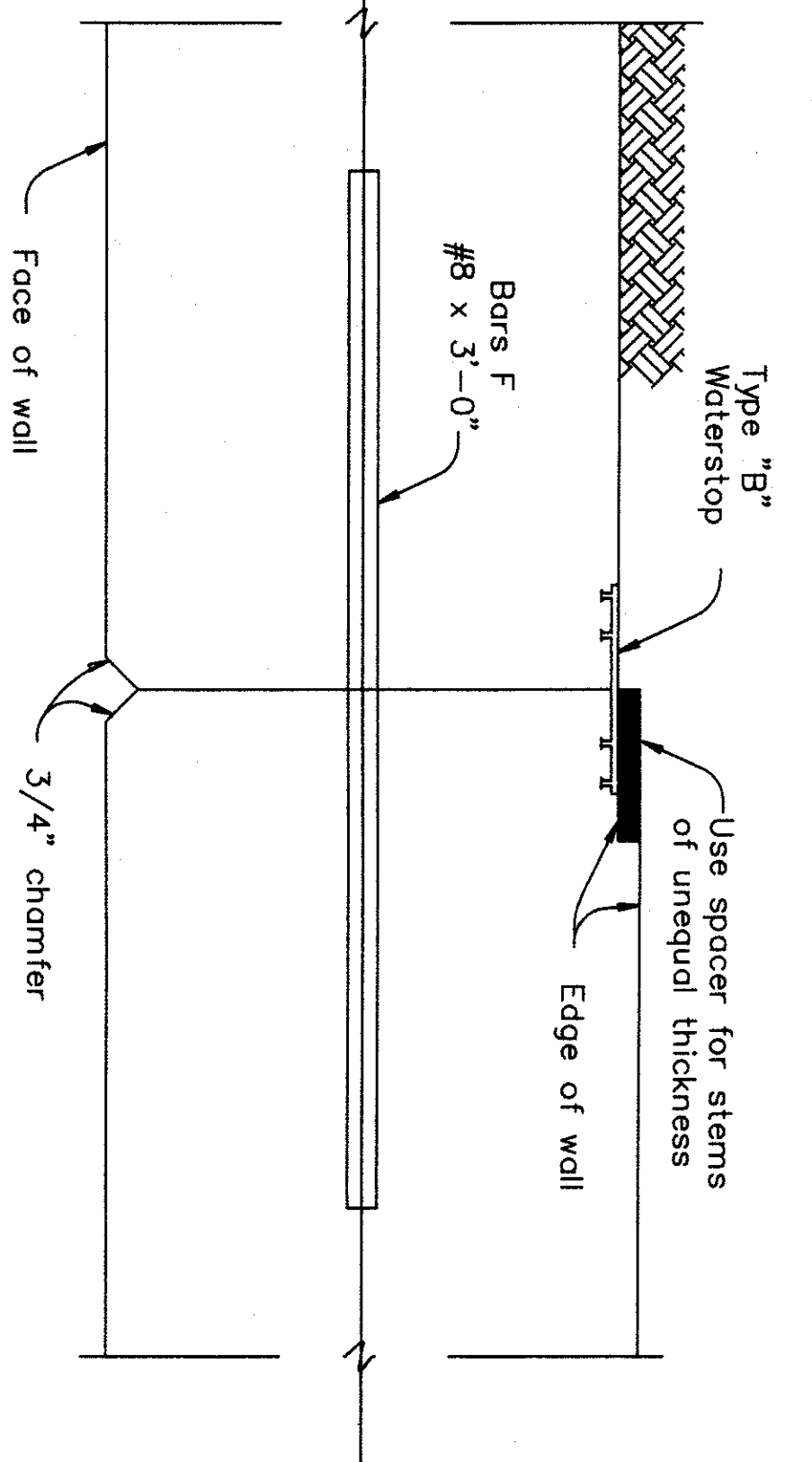
Note: Dimensions and shapes may vary slightly depending on manufacturer.



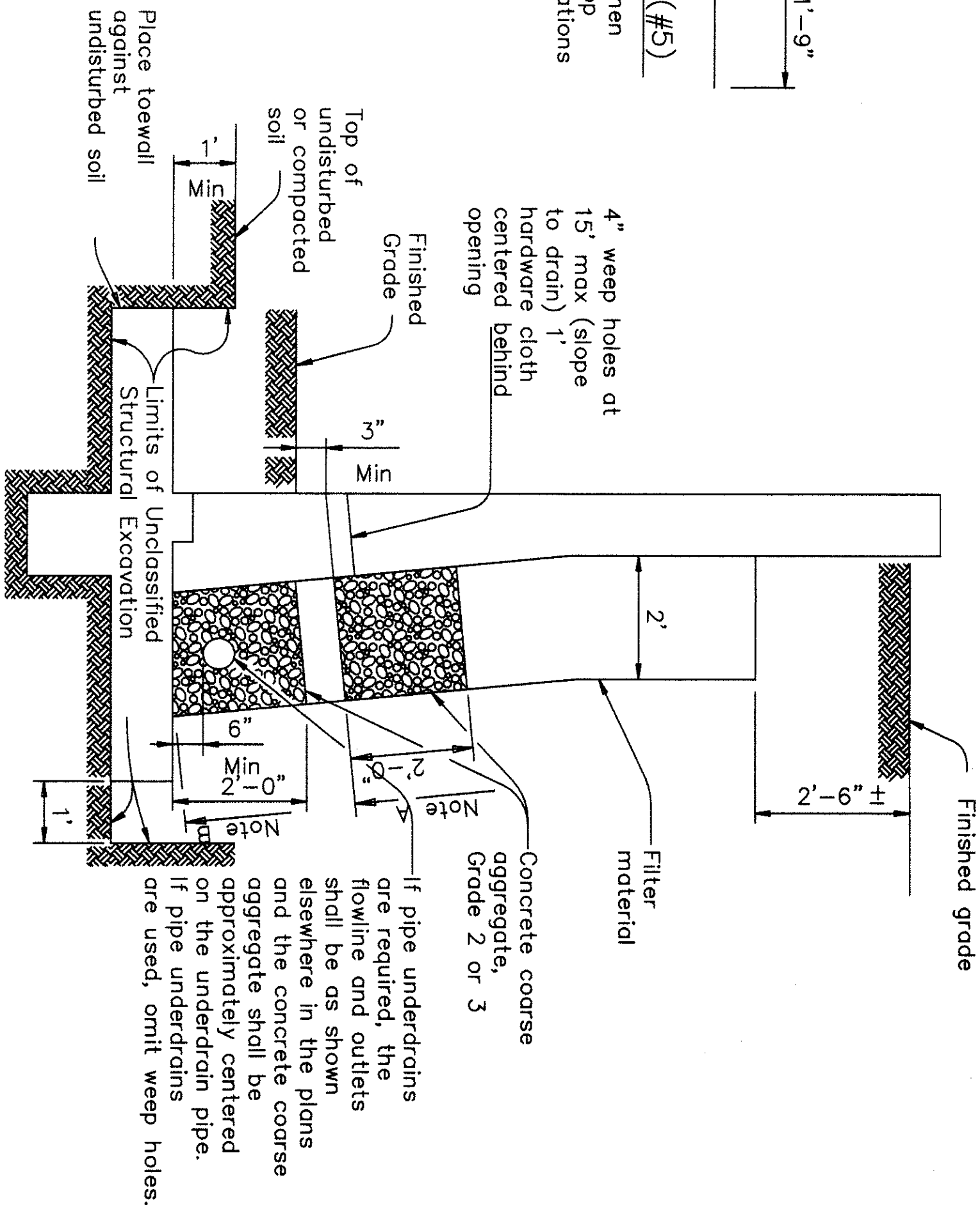
EXPANSION JOINT



CONSTRUCTION JOINT



DRAINAGE DETAILS AND EXCAVATION DIAGRAM



Note A: Stop coarse aggregate at this level when weep holes are used.
Note B: Use coarse aggregate to here with filter material above when underdrains are used.

GENERAL NOTES:

Walls are designed assuming unit weight of soil = 120 pcf, and coefficient of horizontal earth pressure = 0.33.
Walls are designed to provide a minimum factor of safety against sliding of 1.5. The undisturbed or compacted soil depth in front of walls, from bottom of Key up, shall not be less than $K_w + F_t + 1$.
Retaining walls are detailed to be placed on grades up thru 10% with footing level, with no changes in reinforcing steel. Steeper grades can be accommodated by shortening Bars A and increasing length of legs of Bars U by the same amount. No change in Quantities will be involved.
Retaining walls may be placed on Horizontal Curves by adjusting lengths of footing Bars T and H. Minor revisions of Concrete Quantities may be required.
Designed in accordance with current AASHTO Standard and Interim Specifications.
All concrete to be Class "C".
All reinforcing steel to be Grade 60.

Texas Department of Transportation
Bridge Division
RETAINING WALL
MISCELLANEOUS DETAILS
RW 2

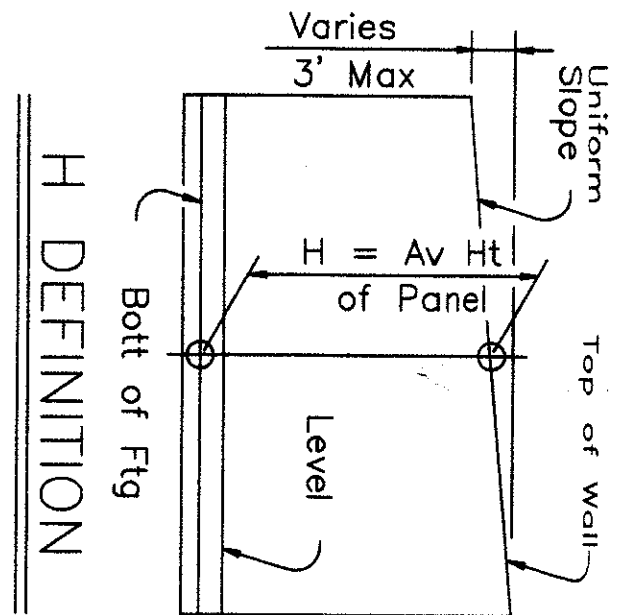
PRELIMINARY - NOT FOR CONSTRUCTION

LEVELS DISPLAYED															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64

PATH:

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PROPERTIES

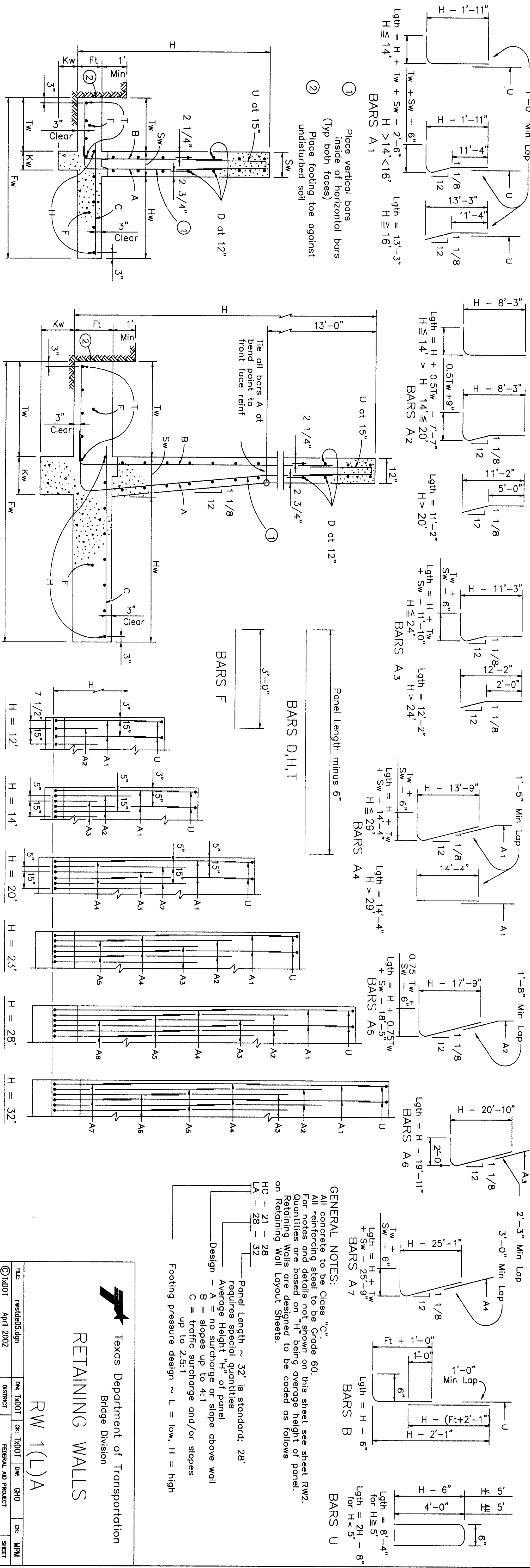
Height "H" (ft)	WALL DIMENSIONS															FOR ONE 32' PANEL															Wol Height "H" (ft)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Fw	Tw	Sw	Hw	Ft	Kw	T/SF	Max Soil Press	C							D (#5)								CONC (CY)	REINF (LB)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
									A1 ~ 26 #5 at 15" c-c	A2 ~ 25 #6 at 15" c-c	A3 ~ 25 #7 at 15" c-c	A4 ~ 26 #8 at 15" c-c	A5 ~ 25 #9 at 15" c-c	A6 ~ 25 #11 at 15" c-c	A7 ~ 26 #11 at 15" c-c	B ~ 26 #5 at 15" c-c	No	Spd	Lgth	Wt	No	F at 12" c-c	No			H (#5) at 12" c-c	T (#5) at 12" c-c	U ~ 26 #5 at 15" c-c																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
2	1'-8"	8"	1'-0"	0	9"	9"	0.11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

SECTIONS

H > 14'

PARTIAL WALL ELEVATIONS

(Showing vertical reinforcing pattern in back face)



RETAINING WALLS

RW 1(L)A

Texas Department of Transportation
Bridge Division

GENERAL NOTES:
All concrete to be Class "C".
All reinforcing steel to be Grade 60.
For notes and details not shown on this sheet see sheet RW2.
Quantities are based on "H" being average height of panel.
Retaining Walls are designed to be coded as follows
on Retaining Wall Layout Sheets.
HC - 21 - 28
LA - 28 - 32
Panel Length ~ 32' is standard; 28'
requires special quantities
Average Height "H" of panel
B = no surcharge or slope above wall
C = traffic surcharge and/or slopes
up to 2.5:1
Footing pressure design ~ L = low, H = high

PRELIMINARY - NOT FOR CONSTRUCTION

FILE	rw1d05.dgn	DRW TxDOT	CHK TxDOT	CHK GH0	CHK JPM
DATE	April 2002	DISTRICT	FEDERAL AID PROJECT		SHEET
SCALE	SEE DWG	COUNTY	CONTROL SECT	JOB	HIGHWAY

SHEET TITLE:

STRUCTURAL DETAILS

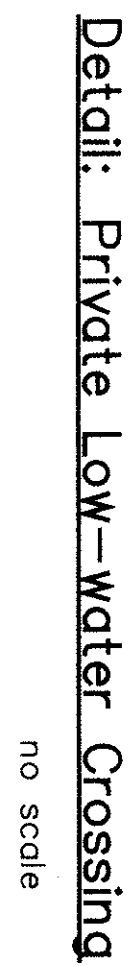
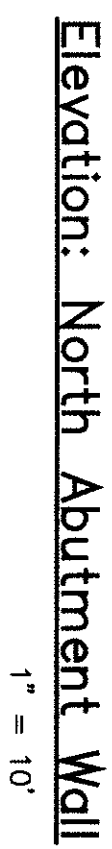
PROJECT NAME:

BARNETT INDUSTRIAL PARK
CITY OF CLEBURNE
JOHNSON COUNTY, TEXAS

ZWINGGI Engineering/Planning, LLC

150 Parish Lane, #337
Roanoke, Texas 76282

940-390-0040
817-961-0299 Fax



LEGEND

740 ——— Ex. Elevation Contour

37.5x ——— Finished Contour (add 700')

37.5x ——— Dimension Spot Elevation (add 700')

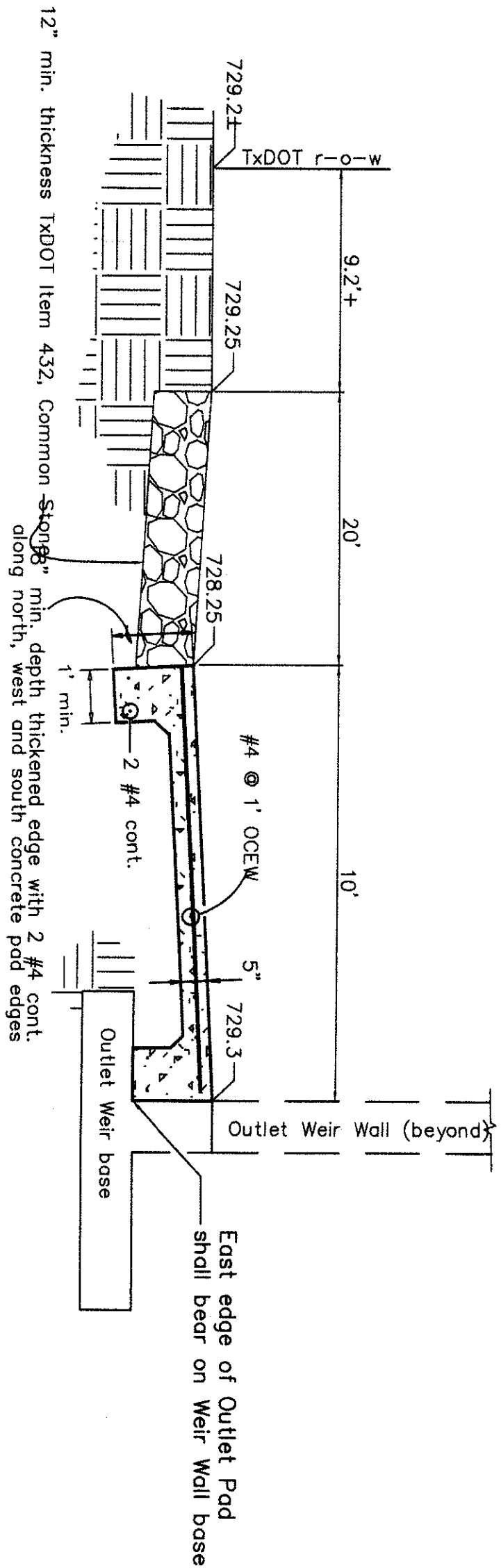
TDOT Item 432 'Common Stone' Riprap

Outlet/Spillway Coordinates:

Point No.	Northing	Easting
1	N 6,000.00	E 1,000.00 (Southwest corner of Lot 17)
2	N 6,225.73	E 1,013.73
3	N 6,226.04	E 1,046.72
4	N 6,226.38	E 1,083.50
5	N 6,184.95	E 1,037.11
6	N 6,172.54	E 1,047.23
7	N 6,167.54	E 1,047.27
8	N 6,154.95	E 1,037.39
9	N 6,113.79	E 1,020.94
10	N 6,114.04	E 1,047.77
11	N 6,114.38	E 1,084.19
12	N 6,194.77	E 1,027.02
13	N 6,144.86	E 1,027.48

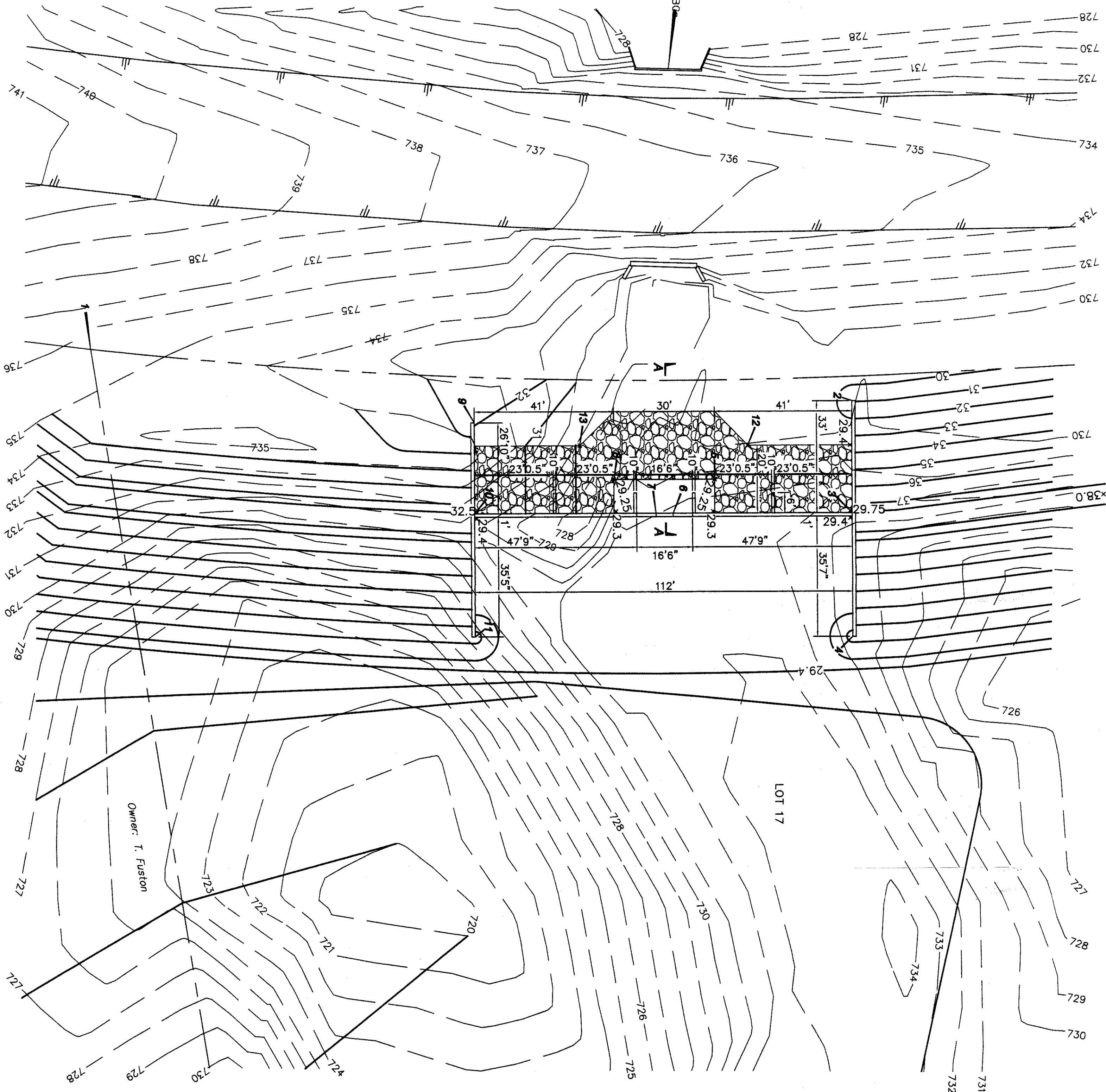
Steel and Concrete Notes:

1. Concrete work shall comply with North Central Council of Governments and American Concrete Institute requirements. Reinforcing steel bars shall be grade 60.
2. Concrete shall contain a minimum of 4.5 sacks Portland cement per cubic yard and provide minimum 28-day compressive strength of 4,000 psi.
3. Outlet Wier Wall and North & South Abutment Walls shall conform to Texas Department of Transportation detail sheets RW 1(L)A and RW 2.



Detail A-A: Concrete Pad & Riprap at Outlet

not to scale



Detail: Dimensions at Outlet Structure

1" = 20'

PRELIMINARY - NOT FOR CONSTRUCTION

SEAL

DATE: JUNE 2008

SCALE: 1"=20'

SHEET 1

OF 1

OWNER: T. Fuston

OWNER: T. Fuston

OWNER: T. Fuston

SHEET TITLE:

STRUCTURAL DETAILS

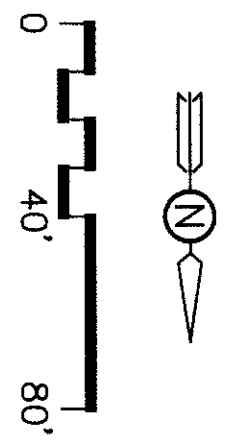
PROJECT NAME:

BARNETT INDUSTRIAL PARK
CITY OF CLEBURNE
JOHNSON COUNTY, TEXAS

ZWINGGI Engineering/
Planning, LLC

150 Parish Lane, #337
Roanoke, Texas 76262

940-390-0040
817-961-0299 Fax



LEGEND

- 740 ——— Ex. Elevation Contour
——— 31 ——— Finished Contour (odd 700')
+ N 5,769.55, E 1,205.52 Grading Control Coordinate

- NOTES:
1. Grade to 729.4 finished elevation at base of all 5H:1V bank slopes.
2. Establish solid grass cover over project bench marks.
3. Project bench marks: use current contours established by project surveyor.
4. Reference coordinate is southwest corner of Lot 17. Bearings same as plat.

well pad site



NOTE: Section B-B is on Sheet SD-2.

PRELIMINARY - NOT FOR CONSTRUCTION

1 of 1
JOB NO.: 07-194
DRAWN BY: KZ
DATE: JUNE 2008
SCALE: 1"=40'
SHEET: 1

SHEET TITLE:
POND GRADING PLAN

PROJECT NAME:
**BARNETT INDUSTRIAL PARK
CITY OF CLEBURNE
JOHNSON COUNTY, TEXAS**

ZWINGGI Engineering/Planning, LLC
150 Parish Lane, #337
Roanoke, Texas 76262
940-390-0040
817-961-0299 Fax