

NO.	DATE	REVISION	BY

PLOTTED BY: JVALDFZ
 PLOT DATE: 11/16/2017 2:13 PM
 LOCATION: C:\EGNITTE\SHARED\PROJECTS\2016-029 CRESTVIEW ROCKWALL\CADD\SHEETS\C-16 CONSTRUCTION DETAILS.DWG
 LAST SAVED: 11/16/2017 2:12 PM

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL

Values to be added for each additional Pipe

PIPE DIA. (ft.)	W	X	Y	L	Reinf. Conc. (cu. yd.)	X and W	Reinf. Conc. (cu. yd.)		
12"	4'-7 1/2"	2'-6"	2'-10"	3'-3 1/2"	84	0.6	1'-9"	20	0.2
15"	5'-5 1/2"	2'-9 1/2"	3'-4"	3'-10 1/2"	99	0.7	2'-2"	24	0.3
18"	6'-4 1/2"	3'-1 1/2"	3'-10"	4'-5"	120	0.9	2'-8"	32	0.3
21"	7'-2 1/2"	3'-4 1/2"	4'-4"	5'-0"	137	1.1	3'-1 1/2"	43	0.4
24"	8'-2 1/2"	3'-9 1/2"	4'-10"	5'-7"	158	1.3	3'-7"	50	0.5
27"	9'-1 1/2"	4'-1 1/2"	5'-4"	6'-2"	173	1.5	3'-11"	56	0.6
30"	9'-11 1/2"	4'-4 1/2"	5'-10"	6'-8 3/4"	197	1.7	4'-4"	65	0.8
33"	10'-10"	4'-8"	6'-4"	7'-3 3/4"	216	2.0	4'-8"	71	0.9
36"	11'-8 1/2"	4'-11 1/2"	6'-10"	7'-10 3/4"	241	2.2	5'-1 1/2"	81	1.0
42"	13'-5 1/2"	5'-6 1/2"	7'-10"	9'-0 1/2"	290	2.8	5'-10"	97	1.3
48"	15'-9"	6'-1 1/2"	9'-4"	10'-9 1/4"	350	3.8	6'-7"	117	1.7
54"	17'-5 3/4"	6'-8 1/2"	10'-4"	11'-11 1/4"	415	4.5	7'-6"	151	2.1
60"	19'-2 3/4"	7'-3 1/2"	11'-4"	13'-1 1/2"	469	5.3	8'-3"	174	2.5
66"	20'-11 1/2"	7'-10 1/2"	12'-4"	14'-3"	530	6.2	8'-9"	194	2.9
72"	22'-8 1/2"	8'-5 1/2"	13'-4"	15'-4 3/4"	587	7.1	9'-4"	213	3.3
12"	6'-3"	2'-6"	4'-3"	4'-11"	114	0.8	1'-9"	22	0.2
15"	7'-5"	2'-9 1/2"	5'-0"	5'-9 3/4"	133	1.1	2'-2"	28	0.3
18"	8'-6 3/4"	3'-1 1/2"	5'-8"	6'-7 3/4"	166	1.3	2'-8"	37	0.5
21"	9'-8 3/4"	3'-4 1/2"	6'-6"	7'-6"	189	1.6	3'-1 1/2"	48	0.6
24"	11'-0"	3'-9 1/2"	7'-3"	8'-4 1/2"	221	2.0	3'-7"	58	0.7
27"	12'-2"	4'-1 1/2"	8'-0"	9'-2 3/4"	245	2.3	3'-11"	67	0.8
30"	13'-4"	4'-4 1/2"	8'-9"	10'-1 1/4"	287	2.7	4'-4"	77	1.0
33"	14'-5 3/4"	4'-8"	9'-6"	10'-11 3/4"	310	3.1	4'-8"	84	1.2
36"	15'-7 3/4"	4'-11 1/2"	10'-3"	11'-10"	343	3.5	5'-1 1/2"	96	1.4
42"	17'-11 1/2"	5'-6 1/2"	11'-9"	13'-6 3/4"	424	4.5	5'-10"	119	1.7
48"	21'-1 3/4"	6'-1 1/2"	14'-0"	16'-2"	527	6.1	6'-7"	146	2.3
54"	23'-5 1/2"	6'-8 1/2"	15'-6"	17'-10 3/4"	618	7.3	7'-6"	186	2.9
60"	25'-9 1/4"	7'-3 1/2"	17'-0"	19'-7 1/2"	707	8.7	8'-3"	219	3.4
66"	28'-1 1/2"	7'-10 1/2"	18'-6"	21'-4 1/4"	797	10.1	8'-9"	242	3.9
72"	30'-4 3/4"	8'-5 1/2"	20'-0"	23'-1 1/2"	910	11.7	9'-4"	272	4.4
12"	7'-10 1/2"	2'-6"	5'-8"	6'-6 1/2"	144	1.1	1'-9"	24	0.3
15"	9'-4"	2'-9 1/2"	6'-8"	7'-8 1/2"	177	1.5	2'-2"	32	0.4
18"	10'-9 1/2"	3'-1 1/2"	7'-8"	8'-10 1/4"	217	1.9	2'-8"	42	0.5
21"	12'-2 3/4"	3'-4 1/2"	8'-8"	10'-0"	254	2.3	3'-1 1/2"	57	0.7
24"	13'-9 1/2"	3'-9 1/2"	9'-8"	11'-2"	295	2.8	3'-7"	67	0.9
27"	15'-3"	4'-1 1/2"	10'-8"	12'-3 3/4"	328	3.3	3'-11"	77	1.0
30"	16'-8 1/2"	4'-4 1/2"	11'-8"	13'-5 3/4"	379	3.8	4'-4"	89	1.3
33"	18'-1 3/4"	4'-8"	12'-8"	14'-7 1/2"	417	4.5	4'-8"	101	1.4
36"	19'-7"	4'-11 1/2"	13'-8"	15'-9 1/4"	464	5.1	5'-1 1/2"	115	1.7
42"	22'-5 3/4"	5'-6 1/2"	15'-8"	18'-1 1/2"	575	6.5	5'-10"	141	2.1
48"	26'-6 1/4"	6'-1 1/2"	18'-8"	21'-6 3/4"	720	8.9	6'-7"	175	2.8
54"	29'-5"	6'-8 1/2"	20'-8"	23'-10 1/4"	863	10.7	7'-6"	226	3.6
60"	32'-3 3/4"	7'-3 1/2"	22'-8"	26'-2"	984	12.7	8'-3"	264	4.3
66"	35'-2 1/2"	7'-10 1/2"	24'-8"	28'-5 3/4"	1126	14.9	8'-9"	300	4.9
72"	38'-1 1/4"	8'-5 1/2"	26'-8"	30'-9 1/2"	1283	17.3	9'-4"	334	5.6
12"	11'-2"	2'-6"	8'-6"	9'-9 3/4"	220	1.9	1'-9"	28	0.4
15"	13'-2 1/4"	2'-9 1/2"	10'-0"	11'-6 1/2"	264	2.5	2'-2"	37	0.5
18"	15'-2 1/2"	3'-1 1/2"	11'-6"	13'-3 1/4"	326	3.2	2'-8"	50	0.7
21"	17'-2 3/4"	3'-4 1/2"	13'-0"	15'-0 1/4"	381	3.9	3'-1 1/2"	69	0.9
24"	19'-4 1/2"	3'-9 1/2"	14'-6"	16'-8"	447	4.8	3'-7"	80	1.2
27"	21'-4 3/4"	4'-1 1/2"	16'-0"	18'-5 3/4"	506	5.7	3'-11"	96	1.4
30"	23'-5 1/4"	4'-4 1/2"	17'-6"	20'-2 1/2"	587	6.7	4'-4"	110	1.7
33"	25'-5 1/2"	4'-8"	19'-0"	21'-11 1/4"	667	7.8	4'-8"	127	2.0
36"	27'-5 3/4"	4'-11 1/2"	20'-6"	23'-8"	727	9.0	5'-1 1/2"	144	2.3
42"	31'-6 1/4"	5'-6 1/2"	23'-6"	27'-1 1/2"	914	11.5	5'-10"	179	3.0
48"	37'-3 1/2"	6'-1 1/2"	28'-0"	32'-4"	1181	15.9	6'-7"	231	4.0
54"	41'-4 1/4"	6'-8 1/2"	31'-0"	35'-9 1/2"	1412	19.2	7'-6"	300	5.0
60"	45'-4 3/4"	7'-3 1/2"	34'-0"	39'-3"	1619	22.9	8'-3"	353	6.0

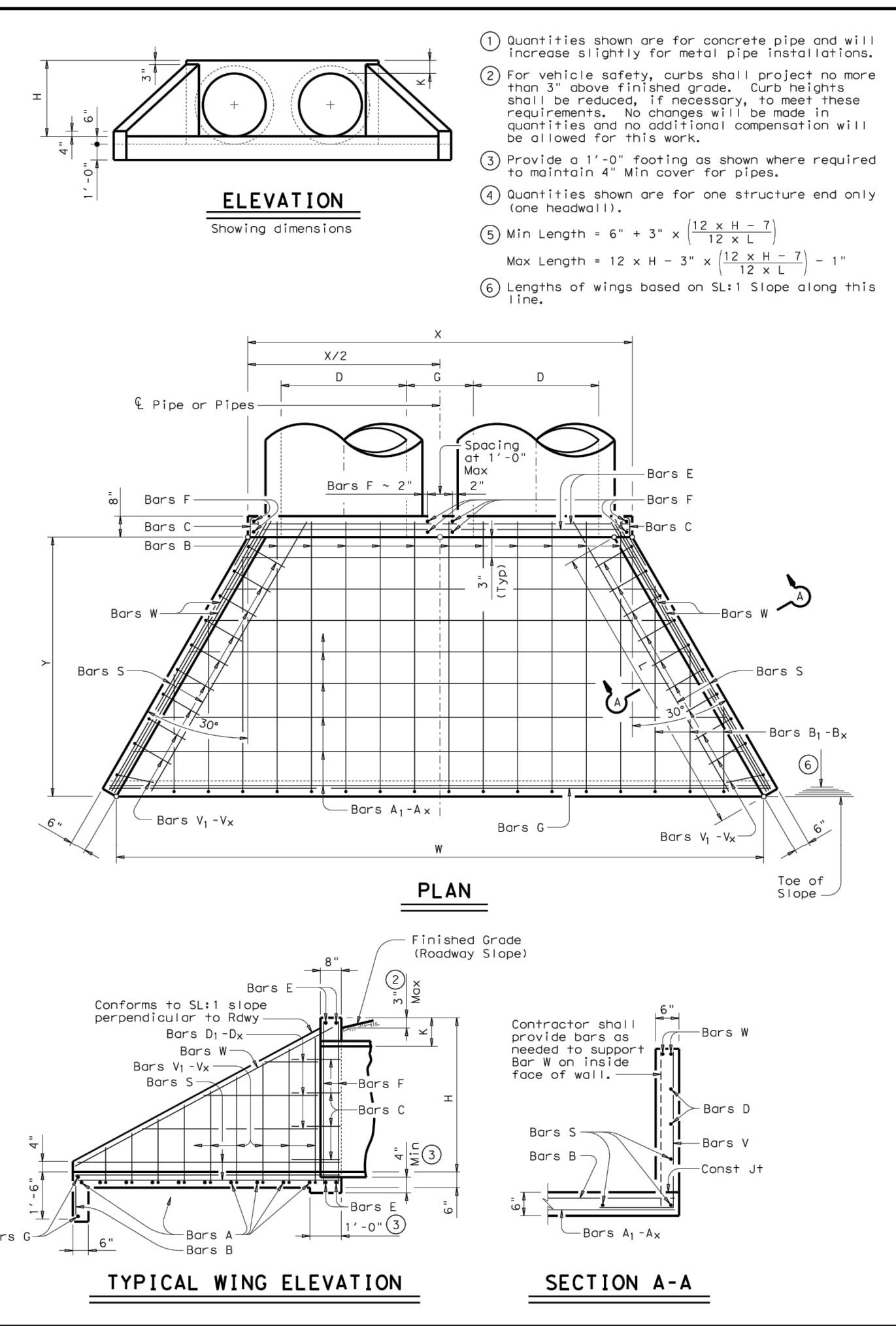


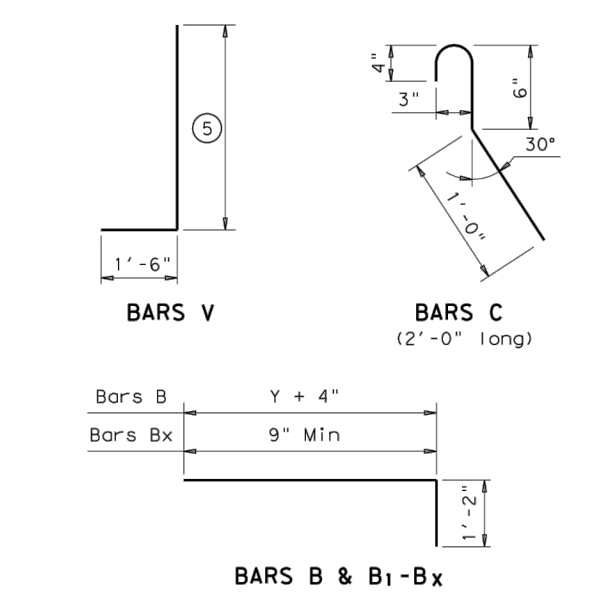
TABLE OF REINFORCING STEEL

Bar	Size	Spa	No.
A	#4	1'-0"	-
B	#3	1'-6"	-
C	#4	1'-0"	-
D	#3	1'-0"	-
E	#5	-	4
F	#5	-	-
G	#3	-	2
S	#4	-	6
V	#4	1'-0"	-
W	#5	-	4

TABLE OF CONSTANT DIMENSIONS

G	K	H
12"	9'	11'-0"
15"	11'	11'-0"
18"	11'-2"	11'-0"
21"	11'-4"	11'-0"
24"	11'-7"	11'-0"
27"	11'-8"	11'-0"
30"	11'-10"	11'-0"
33"	11'-11"	11'-0"
36"	12'-1"	11'-0"
42"	12'-4"	11'-0"
48"	12'-7"	11'-3"
54"	13'-0"	11'-3"
60"	13'-3"	11'-3"
66"	13'-3"	11'-3"
72"	13'-4"	11'-3"

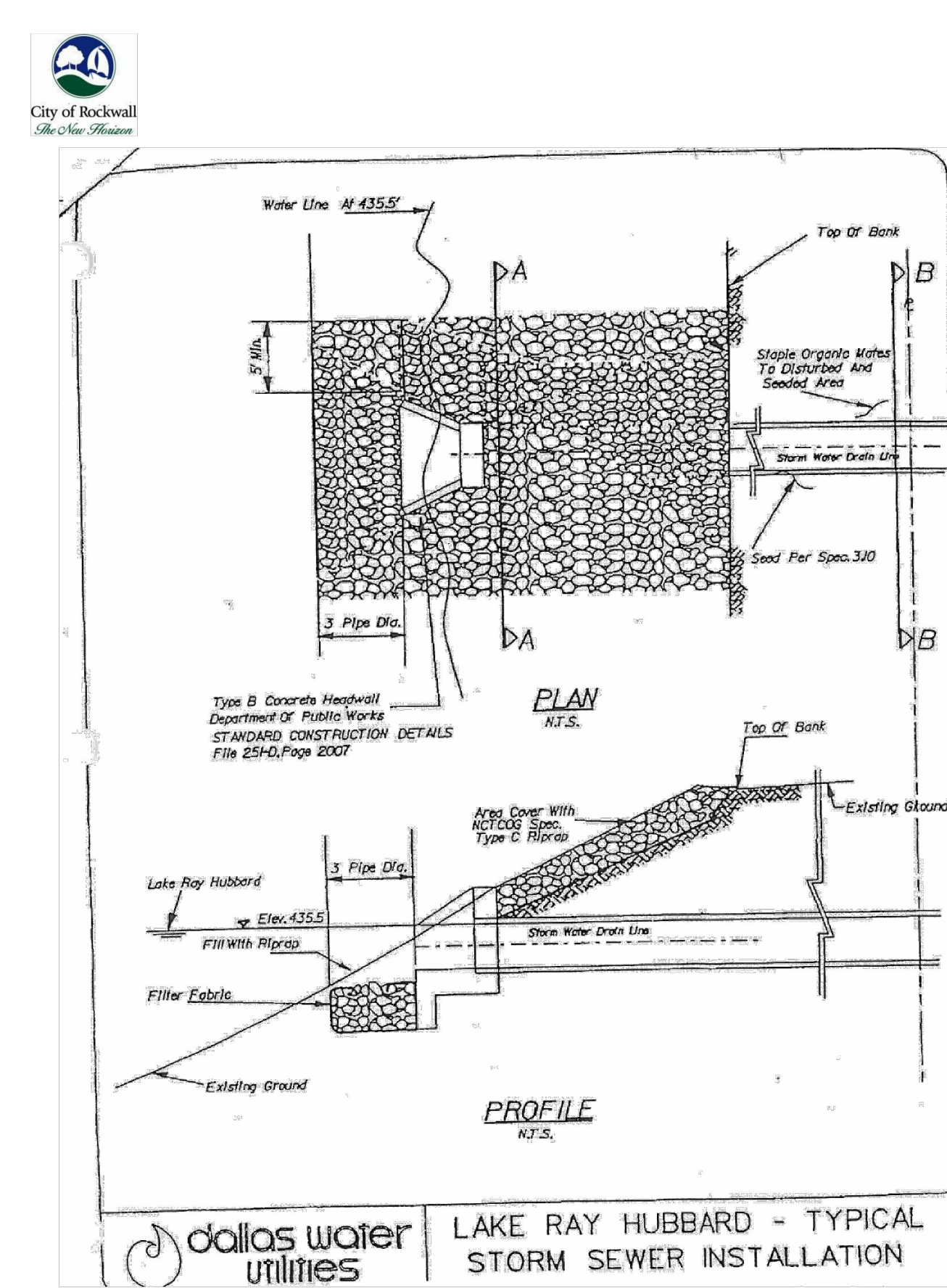
- Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- Provide a 1'-0" footing as shown where required to maintain 4" min cover for pipes.
- Quantities shown are for one structure end only (one headwall).
- Min Length = 6' + 3' x (12 x H - 7)
Max Length = 12 x H - 3' x (12 x L - 7) - 1'
- Lengths of wings based on SL:1 Slope along this line.



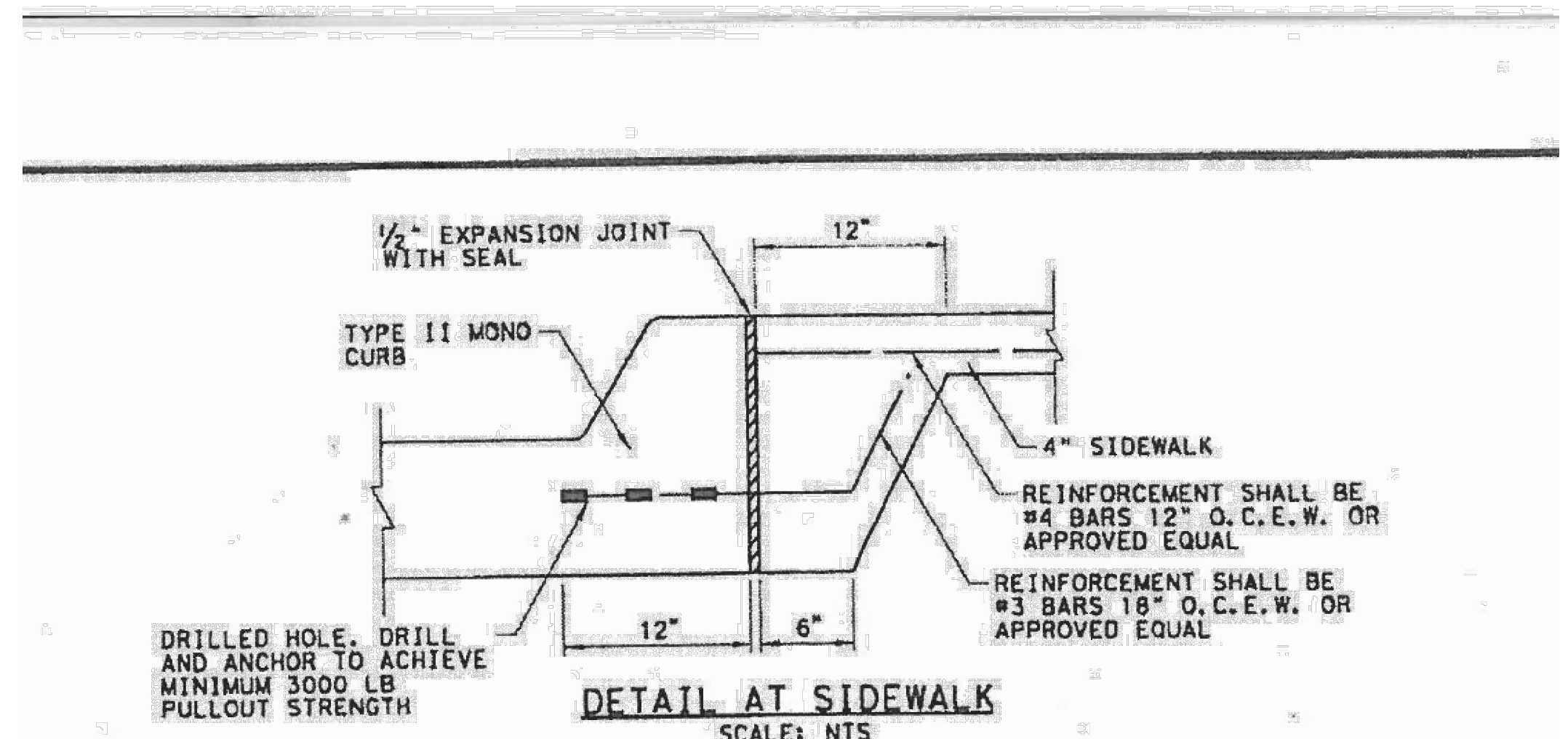
GENERAL NOTES:
 Designed according to AASHTO LRFD Specifications.
 Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.
 All reinforcing steel shall be Grade 60.
 All concrete shall be Class "C" and shall have a minimum compressive strength of 4200 psi.
 No bridge rails or any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation
CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS
 CH-FW-0

REV	DATE	BY	CHKD	APP'D
01	February 2010	REVISOR		



dallas water utilities
 LAKE RAY HUBBARD - TYPICAL STORM SEWER INSTALLATION



This drawing has been revised to show those changes during the construction process reported by the contractor to ClayMoore Engineering, Inc. and considered to be significant. This drawing is not guaranteed to be "As Built" but is based on the information made available.
 By: *Hitt dl* Date: 11/16/2017