DURAND–HOLLIS RUPE
ARCHITECTS, INC.

14603 HUEBNER RD.
BUILDING 18
SAN ANTONIO,
TEXAS 78230

TEL. 210 308–0080
FAX. 210 697–3309
eMAIL OFFICE@DHRARCHITECTS.COM

REVISED ISSUE DATES:
1 _____
2 _____
3 _____

BUSH'S CHICKEN
1550 STATE HWY 46
BOERNE, TX.

DRAINAGE DETAILS

TYPICAL SECTION

PLAN OF REINF STEEL

SECTION THRU CURB

① 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

② For vehicle safety, the following requirements must be met:
– For structures without bridge rail, curbs shall project no more than 3" above finished grade.
– For structures with bridge rail, curbs shall be flush with finished grade.
Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

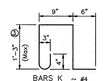
③ For curbs less than 1'-0" high, tilt bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, bars K may be omitted.

④ 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.

Deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064 may be used to replace conventional reinforcement shown at the Contractor's option. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes.

Example Conversion: Replacement of No. 6 Gr 60 at 6" Spacing with WWR
WWR required = (0.44 sq in/ 0.5") x (60 ksi/70 ksi)
= 0.754 sq in/ft
If D30.6 wire is used to meet the 0.754 sq in/ft requirement in this example, the required spacing = (0.306 sq in/ 0.754 sq in/ft) x 12 in/ft = 4.87" Max spacing.
Required lap length for the provided D30.6 wire is 2'-2" (Lap required for uncoated No. 5 bars, as shown in Item 440).

GENERAL NOTES:
Designed according to AASHTO LRFD Specifications.
Designed to the maximum fill height shown.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface. Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi.
The use of permanent forms is not allowed.
The bottom edge of the top slab shall be chamfered at the entrance.
Reinforcing steel shall be adjusted to provide a minimum of 1" clear cover.
Construction joints shown at the flow line may be raised a maximum of 6" at the Contractor's option. If this option is used, Bars E may be cut off or raised, and Bars C and D may be reversed.
See standard SCC-MD for skewed ends, angle sections and lengthening details.



HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS
CAST-IN-PLACE
0' TO 30' FILL

SCC-3 & 4

FILE:	scc34dtl-dgn	DN: GAF	CK: LMW	DW: BWHTxDOT	CK: GAF
©TxDOT	February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS					
10-12 Added WWR		DIST	COUNTY		SHEET NO.

SECTION DIMENSIONS				FILL HEIGHT	BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																								QUANTITIES				
					Bars B				Bars C						Bars D						Bars E ~ #4 at 18" Max		Bars F ~ #4			Bars F ~ #4 at 18" Max		Bars H 4 ~ #4		Bars K	Per foot of Barrel		Curb		Total	
S	H	T	U		No.	Size	Spa	Length	Weight	No.	Size	Spa	Length	Weight	"x"	"y"	No.	Size	Spa	Length	Weight	"y"	"z"	No.	Length	Wt	No.	Spa	Length	Wt	No.	Length	Wt	Length	Wt	No.	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)
3'–0"	2'–0"	7"	7"	32	138	#4	7"	3'–11"	361	98	#5	10"	4'– 2"	273	3'– 5"	1'– 9"	98	#4	10"	3'–11"	256	1'– 9"	2'– 2"	56	2'–0"	75	3	13"	39'–9"	80	19	39'–9"	505	3'–11"	10	10	28	0.266	38.8	0.3	38					10.9	1,588
3'–0"	3'–0"	7"	7"	32	162	#4	6"	3'–11"	424	98	#4	10"	5'– 2"	338	3'– 5"	1'– 9"	98	#4	10"	3'–11"	256	1'– 9"	2'– 2"	56	3'–0"	112	3	12"	39'–9"	80	23	39'–9"	611	3'–11"	10	10	28	0.310	45.5	0.3	38					12.7	1,859
4'–0"	2'–0"	7"	7"	32	194	#4	5"	4'–11"	637	162	#4	6"	4'– 8"	505	3'– 5"	2'– 3"	162	#4	6"	4'– 5"	478	2'– 3"	2'– 2"	56	2'–0"	75	5	10"	39'–9"	133	21	39'–9"	558	4'–11"	13	12	34	0.310	59.7	0.4	47					12.8	2,433
4'–0"	3'–0"	7"	7"	32	162	#5	6"	4'–11"	831	162	#5	6"	5'– 8"	613	3'– 5"	2'– 3"	162	#4	6"	4'– 5"	478	2'– 3"	2'– 2"	56	3'–0"	112	6	8"	39'–9"	59	25	39'–9"	664	4'–11"	13	12	34	0.353	71.4	0.4	47					14.5	2,904
4'–0"	4'–0"	7"	7"	32	162	#5	6"	4'–11"	831	162	#5	6"	6'– 8"	721	4'– 5"	2'– 3"	162	#4	6"	4'– 5"	478	2'– 3"	2'– 2"	56	4'–0"	150	6	8"	39'–9"	59	25	39'–9"	664	4'–11"	13	12	34	0.396	75.1	0.4	47					16.2	3,050

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CAST-IN-PLACE
0' TO 30' FILL

SCC-3 & 4

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10-12 Added WWR		DIST	COUNTY		SHEET NO.

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STATE OF TEXAS
ROBERT A. LIESMAN
64131
LICENSED
PROFESSIONAL ENGINEER

mbc ENGINEERS
1035 Central Parkway North
San Antonio, Texas 78232
(210) 545-1122 FAX (210) 545-8302
FIRM REGISTRATION NUMBER:
T.B.P.E. F-784 & T.B.P.L.S. 10011700

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C-8

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