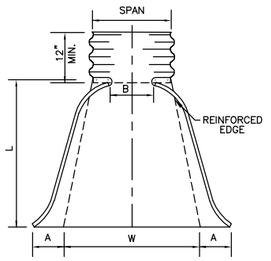
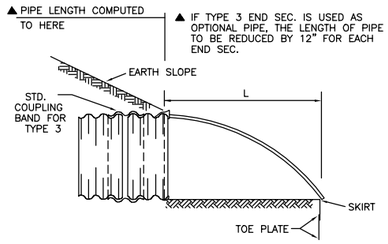
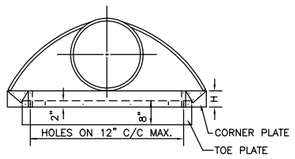


TOP VIEW

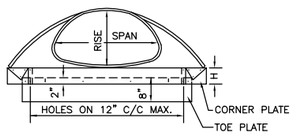


SIDE VIEW



END VIEW
ROUND METAL PIPE END SECTION

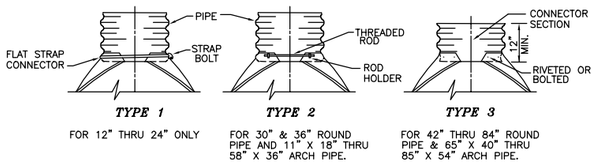
DIMENSIONS OF END SECTION FOR ROUND METAL PIPE								
DIA. IN.	GA.	A ±1 IN.	B (MAX) IN.	H ±1 IN.	L ±1½ IN.	W ±2 IN.	APPROX. SLOPE	BODY PC.
18	16	8	10	6	31	36	2–1/2:1	1
24	16	10	13	6	41	48	2–1/2:1	1
30	14	12	16	8	51	60	2–1/2:1	1
36	14	14	19	9	60	72	2–1/2:1	2
42	12	16	22	11	69	84	2–1/2:1	2
48	12	18	27	12	78	90	2–1/4:1	2



END VIEW
ARCH METAL PIPE END SECTION

DIMENSIONS OF END SECTION FOR METAL PIPE ARCH									
SPAN IN.	RISE IN.	GA.	A ±1 IN.	B (MAX) IN.	H ±1 IN.	L ±1½ IN.	W ±2 IN.	APPROX. SLOPE	BODY PC.
22	13	16	7	10	6	23	36	2–1/2:1	1
29	18	16#	9	14	6	32	48	2–1/2:1	1
36	22	14	10	16	6	39	60	2–1/2:1	1
43	27	14#	12	18	8	46	75	2–1/2:1	1
50	31	12	13	21	9	53	85	2–1/2:1	2
58	36	12	18	26	12	63	90	2–1/2:1	2
65	40	12	18	30	12	70	102	2–1/4:1	2
72	44	12	18	33	12	77	114	2–1/4:1	3

#FOR ALUMINUM END SECTIONS THE 29" X 18" SHALL BE 14 GAUGE & THE 43" X 27" SHALL BE 12 GAUGE.



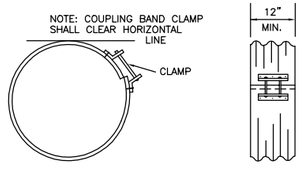
TYPE 1
FOR 12" THRU 24" ONLY

TYPE 2
FOR 30" & 36" ROUND PIPE AND 11" X 18" THRU 58" X 36" ARCH PIPE.

TYPE 3
FOR 42" THRU 84" ROUND PIPE & 65" X 40" THRU 85" X 54" ARCH PIPE.

TYPICAL METAL END SECTION CONNECTIONS

SEE SHEET NO. 2 FOR GENERAL NOTES.



STANDARD COUPLING BAND

TOE PLATES WILL BE REQUIRED ON ALL METAL END SECTIONS UNLESS SOLID ROCK IS ENCOUNTERED. HOLES IN TOE PLATE TO BE PUNCHED TO MATCH HOLES IN SKIRT LIP, 3/8" BOLTS TO BE FURNISHED. LENGTH OF TOE PLATES FOR ROUND PIPE END SECTIONS IS W+10" FOR 12" TO 30" DIA. PIPE, W+22" FOR 36" TO 48" DIA. PIPE. LENGTH OF TOE PLATES FOR ARCH PIPE END SECTIONS IS W+10" FOR A RISE OF 11" TO 27" AND W+18" FOR A RISE OF 31" TO 44".

CONNECTOR SECTION, CORNER PLATE AND TOE PLATE TO BE SAME GAGE & MATERIAL AS THE SKIRT AND SHALL BE INCLUDED IN PRICE BID FOR END SECTION.

The City Of Enid
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Contacts:

Robert Hitt, Director of Engineering Services, Ext 344
Jason Brinley, Civil Engineer, Ext 348

The City Of Enid, Oklahoma

REVISIONS			
Number	Date	Description	
1	10/15/94	Title Sheet	
2	3/3/00	Specification Review Changes	

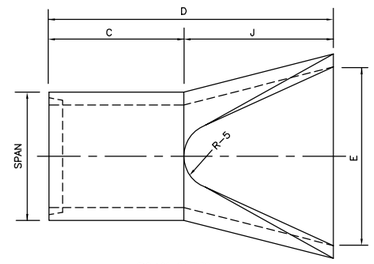
Project Number:
Project Location:

Sheet Title: STANDARD PREFABRICATED METAL CULVERT END SECTIONS
Project Title: DD – 7 SHT. 1

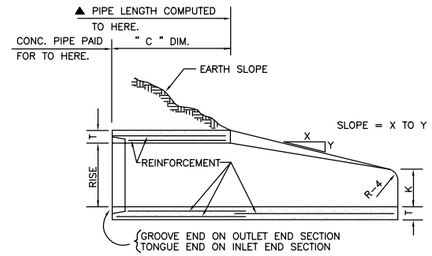
Engr. Seal: REGISTERED PROFESSIONAL ENGINEER ROBERT S. HITT 13111 OKLAHOMA

Date:	8/1/81
Scale:	NO SCALE
Cad File:	G:\DATA\SPECS\DD7
Drawn By:	P.B.
Designed By:	R.H.
Approved By:	R.H.
Sheet:	of

▲ IF CONCRETE PIPE OPTION IS USED THE LENGTH OF PIPE TO BE REDUCED BY " C " DIMENSION FOR EACH END SECTION.

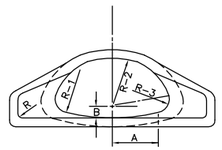


PLAN VIEW



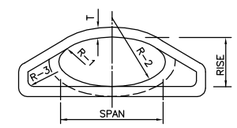
LONGITUDINAL SECTION

NOTE: See Storm Sewer Pipe Coupler Detail DD–19, Sht. 1.



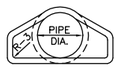
END VIEW
ARCH PIPE END SECTION

DIMENSIONS OF PRECAST END SECTION FOR ARCH–PIPES															
SPAN IN.	RISE IN.	A IN.	B IN.	R IN.	R_1 IN.	R_2 IN.	R_3 IN.	R_4 IN.	R_5 IN.	T IN.	K IN.	J IN.	C IN.	D IN.	E IN.	SLOPE
28½	18	10¼	3½	3	40 11/16	14½	4⅝	3	7	3½	8½	39	33	72	48	3 to 1
36½	22½	13⅜	3 15/16	3	51	18½	6⅛	3	8	4	9½	50	46	96	60	3 to 1
43½	26⅝	17⅛	4⅛	6	62	22½	6⅜	3	10½	4½	11⅛	60	36	96	72	3 to 1
51⅛	31 11/16	20	5 1/16	6	73	26½	7½	3	12½	4½	15 13/16	60	36	96	78	3 to 1
58½	36	22½	6	6	84	30	8⅝	3	14	5	21	60	36	96	84	3 to 1
65	40	25	6½	6	92½	33½	10	6	16	5½	25½	60	36	96	90	3 to 1
73	45	28½	7½	6	105	37½	11 1/16	6		6	31	60	36	96	96	3 to 1



END VIEW
ELLIPTICAL CONC. END SECTION

DIMENSIONS OF PRECAST END SECTION FOR ELLIPTICAL PIPES													
SPAN IN.	RISE IN.	R_1 IN.	R_2 IN.	R_3 IN.	R_4 IN.	R_5 IN.	T IN.	K IN.	J IN.	C IN.	D IN.	E IN.	SLOPE
23	14	6	20	3	3	6	2¾	8	27	45	72	36	3 to 1
30	19	8¼	26½	3	3	7	3½	8½	39	33	72	48	3 to 1
38	24	10¼	32¾	3	3	9½	3¾	9½	54	18	72	60	3 to 1
45	29	12¼	39½	3	3	12	4¾	11¾	60	36	96	72	3 to 1
49	32	13 9/16	42 41/64	3	3	12½	4¾	12	60	36	96	75	3 to 1
53	34	14¾	46	6	6	13	5	15¾	60	36	96	78	3 to 1
60	38	16½	51 3/4	6	6	14	5½	21	60	36	96	84	3 to 1
68	43	18 41/32	58 13/32	6	6	16	6	25½	60	36	96	90	3 to 1



END VIEW
ROUND CONC. PIPE END SECTION

DIMENSIONS OF PRECAST END SECTION FOR ROUND PIPE										
DIA. IN.	K IN.	J IN.	C IN.	D IN.	E IN.	T IN.	R_3 IN.	R_4 IN.	R_5 IN.	SLOPE
18	9	27	46	73	36	2½	3	3	6	3 to 1
24	9½	43½	30	73½	48	3	3	3	7	3 to 1
30	12	54	19½	73½	60	3½	3	3	8	3 to 1
36	15	63	34½	97½	72	4	3	3	10½	3 to 1
42	21	63	35	98	78	4½	3	3	10½	3 to 1
48	24	72	26	98	84	5	6	6	14	3 to 1

NOTE: DIMENSIONS SHOWN FOR PRECAST END SECTIONS ARE SUBJECT TO MANUFACTURES TOLERANCES.

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.
2. WHEN CULVERT END SECTIONS ARE OPTIONAL THEY SHALL BE OF THE SAME MATERIAL AS THE PIPE ON WHICH THEY ARE INSTALLED. THE OPTIONAL PAYMENT SHALL BE FOR PREFAB. CULVERT END SECTION, ROUND OR ARCH.
3. WHEN CULVERT PIPE IS SPECIFIED THE SECTION SHALL BE PAID FOR AS THE SAME TYPE (STEEL, ALUM., OR CONC.) AND SHAPE (ROUND OR ARCH.). IF ELLIPTICAL CONC. PIPE IS USED THE ELLIPTICAL END SECTION SHALL BE USED AND PAID FOR AS PREFAB CULVERT END SECTION, ARCH.
4. TRENCH EXCAVATION REQUIRED FOR INSTALLATION OF CULVERT END SECTIONS SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK.

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Contacts:

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Jason Brinley, Civil Engineer, Ext 348

The City Of Enid, Oklahoma

REVISIONS

Number	Date	Description
1	10/15/94	Title Sheet
2	3/3/00	Specification Review Changes

Project Number:
Project Location:

Sheet Title: STANDARD PREFABRICATED CONCRETE CULVERT END SECTIONS
Project Title: DD – 7 SHT. 2

Engr. Seal: REGISTERED PROFESSIONAL ENGINEER ROBERT S. HITT 13111 OKLAHOMA

Date: 8/1/81
Scale: NO SCALE
Cad File: G:\DATA\SPECS\DD7
Drawn By: P.B.
Designed By: R.H.
Approved By: R.H.
Sheet: of