

# **End Sections**





## Standard End Sections for corrugated metal pipe, reinforced concrete pipe and HDPE Pipe

#### Easily installed, easily maintained culvert end treatments

Contech® End Sections provide a practical, economical and hydraulically superior method of finishing a variety of culvert materials.

The lightweight, flexible metal construction of Contech End Sections creates an attractive, durable and erosion-preventing treatment for all sizes of culvert inlets and outlets. They can be used with corrugated metal pipe having either annular or helical corrugations, and both reinforced concrete and plastic pipes. End sections can be salvaged when lengthening or relocating the culvert.

Standard End Sections are fabricated from pregalvanized steel. For added corrosion resistance, aluminum End Sections are available in smaller sizes. Special End Sections for multiple pipe installations may be available on a specific inquiry basis.

#### **Better hydraulics**

Flow characteristics are greatly improved by the exacting design of Contech End Sections. Scour and sedimentation conditions are improved, and headwater depth can be better controlled. Culverts aligned with the stream flow and finished with Contech End Sections generally require no additional hydraulic controls.

#### Improved appearance

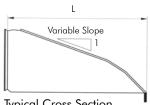
Contech End Sections blend well with the surroundings. The tapered sides of an End Section merge with slope design to improve roadside appearance. Unsightly weeds and debris collection at the culvert end are reduced.

#### **Economical installation**

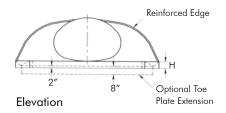
Lightweight equipment and simple crew instructions result in smooth and easy installation. Contech End Sections are easily joined to culvert barrels, forming a continuous, onepiece structure. For easiest installation, End Sections should be installed at the same time as the culvert. Installation is completed by tamping soil around the End Section.

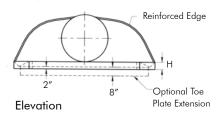
#### Low maintenance

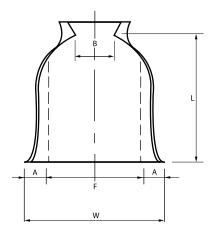
Contech End Sections reduce maintenance expense because their tapered design promotes easier mowing and snow removal. There is no obstruction to hamper weed cutting.



Typical Cross Section







Notes for all End Section:

- 1. All three-piece bodies to have 12-gage sides and 10-gage center panels. Multiple panel bodies to have lap seams which are to be tightly joined by aalvanized rivets or bolts.
- 2. For 60" through 84" sizes, reinforced edges are supplemented with stiffener angles. The angles are attached by galvanized nuts and bolts. For the 66" and 72" equivalent round pipe-arch sizes, reinforced edges are supplemented by angles. The angles are attached by galvanized nuts and bolts.
- 3. Angle reinforcements are placed under the center panel seams on the 66" and 72" equivalent round pipe-arch sizes.
- 4. Toe plate is available as an accessory, when specified on the order, and will be same gage as the End Section.
- Stiffener angles, angle reinforcement, and toe plates are the same base metal as end section body.
- 6. End sections with 6:1 and 4:1 slopes are available in 12" through 24"
- 7. Actual dimensions may vary slightly.

Table 1 End Sections for Round Pipe (2-2/3" x 1/2", 3" x 1" and 5" x 1")

Pipe			Approxima	w				
Diameter Inches	Gage	A (Min.) (Inches)	B (Max.) (Inches)	H (Min.) (Inches)	F (Min.) (Inches)	L(+/-2") (Inches)	(Max. Width) (Inches)	Approx. Slope <sup>(6)</sup>
12	16	5	7	6	22	21	44	2-1/4
15	16	6	8	6	28	26	52	2-1/4
18	16	7	10	6	34	31	58	2-1/8
21	16	8	12	6	40	36	66	2-1/8
24	16	9	13	6	46	41	72	2-1/8
30	14	11	16	8	55	51	88	2-1/8
36	14	13	19	9	70	60	105	2
42	12	15	25	10	82	69	122	2-1/8
48	12	17	29	12	88	78	131	2
54	12	17	33	12	100	84	143	2
60	12/10	17	36	12	112	87	157	1-/78
66	12/10	17	39	12	118	87	162	1-5/8
72	12/10	17	44	12	120	87	169	1-1/2
78	12/10	17	48	12	130	87	178	1-3/8
84	12/10	17	52	12	136	87	184	1-1/3

Note: Larger sizes available in some locations.

End Sections for Pipe-Arch (2-2/3" x 1/2")  Approximate Dimensions, Inches (7)  W							Approx.		
Span/ Rise	Equiv. Round (Inches)	Gage	A (Min.) (Inches)	B (Max.) (Inches)	H (Min.) (Inches)	F (Min.) (Inches)	L(+/-2") (Inches)	(Max. Width) (Inches)	Slope <sup>(6)</sup> 6
17″x13″	15	16	5	9	6	28	20	52	2-1/8
21″x15″	18	16	6	11	6	34	24	58	2
24"x18"	21	16	7	12	6	40	28	58	2-1/8
28"x20"	24	16	7	16	6	46	32	66	2
35"x24"	30	14	9	16	6	58	39	72	1-7/8
42"x29"	36	14	11	18	7	73	46	88	1-7/8
49″x33″	42	12	12	21	9	82	53	105	1-3/4
57″x38″	48	12	16	26	12	88	62	122	1-7/8
64″x43″	54	12	17	30	12	100	69	131	1-7/8
71″x47″	60	12	1 <i>7</i>	36	12	112	77	143	1-7/8
77″x52″	66	12	17	36	12	124	77	157	1-5/8
83″x57″	72	12	17	44	12	130	77	162	1-1/2

			Арр	w	Approx.				
Span/ Rise	Equiv. Round (Inches)	Gage	A (Min.) (Inches)	B (Max.) (Inches)	H (Min.) (Inches)	F (Min.) (Inches)	L(+/-2") (Inches)	(Max. Width) (Inches)	Slope <sup>(6)</sup>
53″x41″	48	12	17	26	12	88	63	130	1-3/4
60″x46″	54	12	17	36	12	100	70	142	1-7/8
66″x51″	60	12	17	36	12	112	77	156	1-3/4
73″x55″	66	12	17	36	12	124	77	168	1-1/2
81″x59″	72	12	17	44	12	136	77	179	1-5/8
87"x63"	78	12	17	44	12	136	77	186	1-1/2
95″x67″	84	12	17	44	12	160	87	210	1-1/2
03"X71"	90	12	17	44	12	172	87	222	1-1/3
112″x75″	96	12	17	44	12	172	87	226	1-1/4

### Contech End Sections attach to corrugated metal pipe, reinforced concrete and plastic pipe. End Of Pipe End Of Pipe 1/2" Flat Strap Threaded Strap Bolt Connector

Type 2

Note: The Type 3 connection is not illustrated. This connection is a one-foot length of pipe attached to the end section.

1/2"

Threaded Rod

#### **Contech End Section**



Type 1

End Section on Round CSP



**End Sections are** available for CSP Pipe Arch



Rod

**Contech End Sections** are often used on concrete pipe. They can be used on both the bell and spigot end.

Type 5

Pipe To

Which End

Section Is Attached

Dimple

Band Collar

Bolted To End

Section With

3/8" Bolts



Low-slope End Sections— Contech manufactures 4:1 and 6:1 low-slope End Sections for corrugated metal pipe. This photo shows the optional fieldattached safety bars.

Contech Engineered Solutions provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, retaining walls, sanitary sewer, stormwater, erosion control, soil stabilization and wastewater treatment products.

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