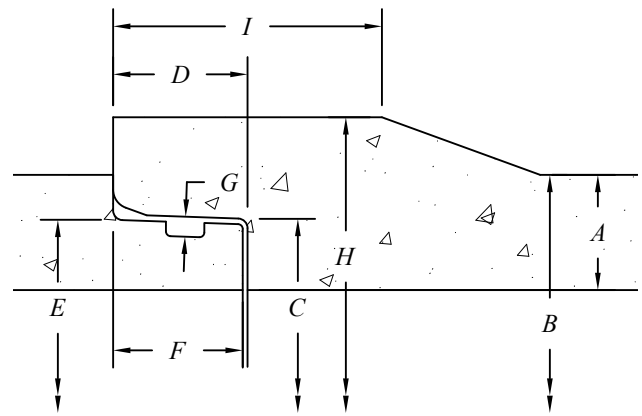
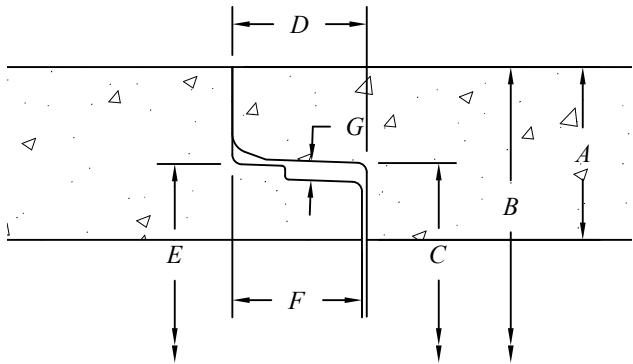


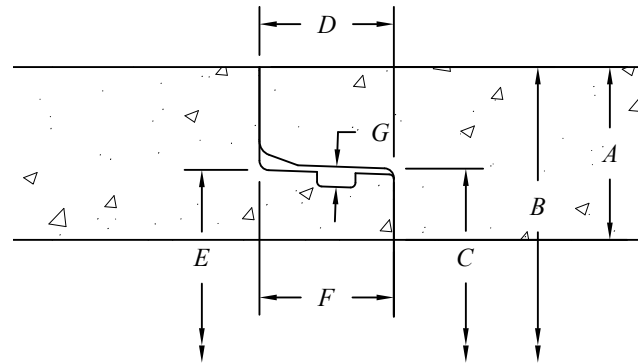
Detail A  
Gasket Joint with Bell



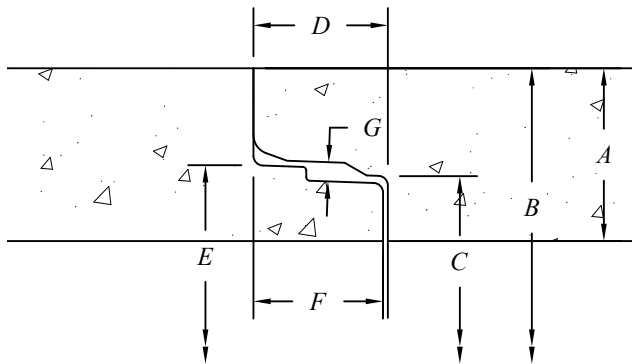
Detail B  
O-Ring Joint with Bell



Detail C  
Gasket Joint with Straight Wall



Detail D  
O-Ring Joint with Straight Wall



Detail E  
Confined Gasket Joint with Straight Wall

All Pipe Is Manufactured And Tested In Accordance With Current ASTM C-14, ASTM C-76 Or ASTM C-655 Specifications As Required w/ASTM C-443 Joints.

All Gaskets and O-Rings Meet ASTM C-443 Requirements.

All Gasket and O-Ring Materials Meet ASTM C-361 Requirements.

Install Reinforced Concrete Pipe per ASTM C-1479 - Standard Practice for Installation of Precast Concrete Sewer.

NORTHERN CONCRETE PIPE



401 Kelton St Bay City, MI 48706

12"Ø - 144"Ø Reinforced Concrete Pipe Joint Details

5281 Lansing Rd  
Charlotte, MI 48813

2701 Chicago Dr SW  
Wyoming, MI 49519

4950 White Lake Rd  
Clarkston, MI 48346

3756 Centennial Rd  
Sylvania, OH 43560

Date  
11 May 16

Revised

Rev. No.

Drawn By  
BmG

Scale  
NTS

01.01a

Pipe I.D.		Joint Detail	Gasket Type	Wall Class	A	B	C	D	E	F	G	H	I	Joint Taper	Section Length	Lbs / Section	Joint Style
(in)	(mm)				Wall (in)	Pipe O.D.	Bell I.D.	Bell Depth	Spigot O.D.	Spigot Length	Annular Space	Bell O.D.	Bell Length				
12	300	A	288-4G	B+	2.25	16.50	15.258	3.5	15.210	3.375	0.500	19.63	6.50	2°	8.2'	975	H
12	300	A	PS-23	B+	2.13	16.25	15.252	3.563	15.296	3.563	0.500	20.00	5.125	1.83°	8.0'	950	P
12	300	A	288-4G	C	2.75	18.00	15.258	3.5	15.210	3.375	0.500	19.63	6.50	2°	8.2'	1186	H
15	375	A	288-4G	B	2.25	19.50	18.709	3.5	18.661	3.375	0.500	23.50	6.50	2°	8.2'	1285	H
15	375	A	PS-23	B+	2.50	20.00	18.751	3.563	18.796	3.563	0.500	23.88	5.25	1.83°	8.0'	1250	P
18	450	A	288-4G	B	2.50	23.00	21.709	3.5	21.661	3.375	0.500	27.00	6.50	2°	8.2'	1555	H
18	450	A	PS-23	B+	2.75	23.50	22.375	3.75	22.444	3.750	0.500	27.63	5.25	1.83°	8.0'	1760	P
21	525	A	288-4G	B	2.75	26.50	24.709	3.5	24.661	3.375	0.500	30.00	7.0	2°	8.2'	2000	H
21	525	A	PS-23	B	2.75	26.50	25.875	3.75	25.944	3.750	0.500	31.63	5.25	1.83°	8.0'	2224	P
24	600	A	288-4G	B	3.00	30.00	27.709	3.5	27.661	3.375	0.500	33.00	7.0	2°	8.2'	2390	H
24	600	A	PS-23	B	3.00	30.00	29.383	3.875	29.460	3.875	0.500	35.63	5.75	1.83°	8.0'	2568	P
27	675	C	288-4G	C	4.00	35.00	30.709	3.5	30.661	3.375	0.500	-----	-----	2°	8.2'	3495	H
27	675	A	PS-23	C	4.00	35.00	32.847	3.875	32.916	3.875	0.500	39.63	5.875	1.83°	8.0'	3680	P
30	750	A	288-4G	C	4.25	38.50	34.000	3.5	33.952	3.375	0.500	39.50	7.0	2°	8.2'	3955	H
30	750	A	PS-23	C	4.25	38.50	33.894	3.875	33.962	3.875	0.500	39.50	6.125	1.83°	8.0'	4352	P
36	900	B	O-Ring	B	4.00	44.00	40.000	3.5	39.952	3.375	0.371	45.63	7.0	2°	8.0'	4340	Q
36	900	C	288-4G	C	4.75	45.50	40.000	3.5	39.952	3.375	0.500	-----	-----	2°	8.2'	5240	H
36	900	C	PS-23	C	4.75	45.50	39.894	3.875	39.962	3.875	0.500	-----	-----	1.83°	8.0'	5744	P
36	900	E	288-4G	C	4.75	45.50	39.380	3.5	39.952	3.375	0.500	-----	-----	2°	8.2'	5240	H
42	1050	A	288-4G	B	4.50	51.00	46.281	4.0	46.252	3.875	0.500	52.00	7.5	2°	8.2'	5668	H
42	1050	B	O-Ring	B	4.50	51.00	46.281	4.0	46.435	4.0	0.420	52.00	7.5	2°	8.2'	5668	Q
42	1050	C	288-4G	C	5.25	52.50	46.281	4.0	46.252	3.875	0.500	-----	-----	2°	8.2'	6657	H
42	1050	A	PS-23	C	5.25	52.50	50.021	4.625	50.138	4.625	0.500	59.05	7.125	1.83°	8.0'	7512	P
42	1050	B	O-Ring	C	5.25	52.50	50.021	4.625	50.138	4.625	0.500	59.05	7.125	1.83°	8.0'	7512	G
42	1050	D	O-Ring	C	5.25	52.50	46.281	4.0	46.435	4.0	0.420	-----	-----	2°	8.0'	6494	Q
48	1200	C	288-4G	B	5.00	58.00	52.727	4.25	52.731	4.125	0.500	-----	-----	2°	8.2'	7111	H
48	1200	D	O-Ring	B	5.00	58.00	52.727	4.25	52.844	4.25	0.416	-----	-----	2°	8.2'	7111	Q
48	1200	C	288-4G	C	5.75	59.50	52.727	4.25	52.731	4.125	0.500	-----	-----	2°	8.2'	8294	H
48	1200	A	PS-23	C	5.75	59.50	57.023	4.75	57.148	4.75	0.500	66.25	7.25	1.83°	8.0'	8091	P
48	1200	B	O-Ring	C	5.75	59.50	57.023	4.75	57.148	4.75	0.500	66.25	7.25	1.83°	8.0'	8091	G
48	1200	D	O-Ring	C	5.75	59.50	52.727	4.25	52.844	4.25	0.416	-----	-----	2°	8.2'	8294	Q

All Pipe Is Manufactured And Tested In Accordance With Current ASTM C-14, ASTM C-76 Or ASTM C-655 Specifications As Required w/ASTM C-443 Joints.

All Gaskets and O-Rings Meet ASTM C-443 Requirements.

All Gasket and O-Ring Materials Meet ASTM C-361 Requirements.

Install Reinforced Concrete Pipe per ASTM C-1479 - Standard Practice for Installation of Precast Concrete Sewer.



401 Kelton St Bay City, MI 48706		12"Ø - 144"Ø Reinforced Concrete Pipe Joint Details	
5281 Lansing Rd Charlotte, MI 48813	2701 Chicago Dr SW Wyoming, MI 49519		
4950 White Lake Rd Clarkston, MI 48346	3756 Centennial Rd Sylvania, OH 43560	Date 11 May 16	Revised
		Rev. No.	Drawn By BmG
		Scale NTS	01.01b

Pipe I.D.		Joint Detail	Gasket Type	Wall Class	A	B	C	D	E	F	G	H	I	Joint Taper	Section Length	Lbs / Section	Joint Style
(in)	(mm)				Wall (in)	Pipe O.D.	Bell I.D.	Bell Depth	Spigot O.D.	Spigot Length	Annular Space	Bell O.D.	Bell Length				
54	1350	C	288-4G	B	5.50	65.00	58.727	4.25	58.844	4.125	0.500	-----	-----	2°	8.2'	8781	H
54	1350	D	O-Ring	B	5.50	65.00	58.727	4.25	58.844	4.25	0.420	-----	-----	2°	8.2'	8781	Q
54	1350	C	288-4G	C	6.25	66.50	58.727	4.25	58.844	4.125	0.500	-----	-----	2°	8.2'	10105	H
54	1350	D	O-Ring	C	6.25	66.50	58.727	4.25	58.844	4.25	0.420	-----	-----	2°	8.2'	10105	Q
54	1350	D	O-Ring	C	6.25	66.50	60.564	5.394	61.100	5.394	0.500	-----	-----	1.83°	8.0'	9858	G
60	1500	C	288-4G	B	6.00	72.00	64.875	4.75	64.914	4.625	0.500	-----	-----	2°	8.2'	10626	H
60	1500	D	O-Ring	B	6.00	72.00	64.875	4.75	65.028	4.75	0.420	-----	-----	2°	8.2'	10626	Q
60	1500	C	288-4G	C	6.75	73.50	64.875	4.75	64.914	4.625	0.500	-----	-----	2°	8.2'	12094	H
60	1500	D	O-Ring	C	6.75	73.50	64.875	4.75	65.028	4.75	0.420	-----	-----	2°	8.2'	12094	Q
60	1500	D	O-Ring	C	6.75	73.50	67.314	5.394	67.460	5.394	0.500	-----	-----	1.83°	8.0'	11796	G
66	1650	D	O-Ring	C	7.25	80.50	71.375	5.0	71.482	5.0	0.558	-----	-----	2°	8.2'	14250	Q
66	1650	D	O-Ring	C	7.25	80.50	71.688	5.0	71.850	5.0	0.492	-----	-----	2°	8.0'	13903	G
72	1800	D	O-Ring	C	7.75	87.50	77.875	5.0	77.983	5.0	0.558	-----	-----	2°	8.2'	16585	Q
72	1800	C	288-4G	C	7.75	87.50	77.875	5.0	77.932	4.875	0.500	-----	-----	2°	8.2'	16585	H
72	1800	D	O-Ring	C	7.75	87.50	77.938	5.394	78.084	5.394	0.500	-----	-----	1.83°	8.0'	16181	G
78	1950	D	O-Ring	C	8.25	94.50	84.470	5.0	84.577	5.0	0.602	-----	-----	2°	8.0'	18629	Q
78	1950	D	O-Ring	C	8.25	94.50	84.470	5.0	84.632	5.0	0.492	-----	-----	2°	8.0'	18629	G
84	2100	D	O-Ring	C	8.75	101.50	90.875	5.0	90.982	5.0	0.558	-----	-----	2°	8.2'	21778	Q
84	2100	D	O-Ring	C	8.75	101.50	90.970	5.0	91.132	5.0	0.492	-----	-----	2°	8.0'	21247	G
90	2250	D	O-Ring	C	9.25	108.50	97.500	5.0	97.599	5.0	0.562	-----	-----	2°	8.0'	24035	Q
90	2250	D	O-Ring	C	9.25	108.50	97.470	5.0	97.632	5.0	0.492	-----	-----	2°	8.0'	24035	G
96	2400	C	O-Ring	B	9.00	114.00	103.875	5.0	104.070	4.875	0.558	-----	-----	2°	8.0'	24740	Q
96	2400	C	O-Ring	C	9.75	115.50	103.970	5.0	104.132	5.0	0.492	-----	-----	2°	8.0'	26993	G
102	2550	D	O-Ring	B	9.50	121.00	110.470	5.0	110.632	4.875	0.602	-----	-----	2°	8.0'	27731	Q
108	2700	D	O-Ring	B	10.00	128.00	116.875	5.0	116.975	4.875	0.622	-----	-----	2°	8.0'	30892	Q
114	2850	D	O-Ring	A	9.50	133.00	122.721	6.0	122.890	5.813	0.622	-----	-----	2°	8.0'	30716	Q
120	3000	D	O-Ring	A	10.00	140.00	128.721	6.0	128.890	5.813	0.622	-----	-----	2°	8.0'	34034	Q
120	3000	D	O-Ring	A	10.00	140.00	129.234	6.0	129.398	6.0	0.494	-----	-----	1.83°	8.0'	34034	G
126	3150	D	O-Ring	A	10.50	147.00	135.734	6.0	135.898	6.0	0.494	-----	-----	1.83°	8.0'	37522	G
132	3300	E	288-4G	C	12.75	157.50	140.889	6.0	141.649	6.0	0.500	-----	-----	2°	8.0'	48317	Q
132	3300	D	O-Ring	A	11.00	154.00	141.471	6.0	141.641	5.813	0.622	-----	-----	2°	8.0'	41181	Q
132	3300	D	O-Ring	A	11.00	154.00	142.234	6.0	142.398	6.0	0.494	-----	-----	1.83°	8.0'	41181	G
132	3300	D	O-Ring	A	11.00	154.00	142.170	7.0	142.000	7.0	0.749	-----	-----	1.83°	8.0'	41181	V
144	3600	D	O-Ring	A	12.00	168.00	154.625	8.25	155.228	8.125	0.632	-----	-----	2°	8.0'	49009	C
144	3600	D	O-Ring	A	12.00	168.00	155.290	7.0	155.487	7.0	0.500	-----	-----	2°	8.0'	49009	Q

All Pipe Is Manufactured And Tested In Accordance With Current ASTM C-14, ASTM C-76 Or ASTM C-655 Specifications As Required w/ASTM C-443 Joints.

All Gaskets and O-Rings Meet ASTM C-443 Requirements.

All Gasket and O-Ring Materials Meet ASTM C-361 Requirements.

Install Reinforced Concrete Pipe per ASTM C-1479 - Standard Practice for Installation of Precast Concrete Sewer.



401 Kelton St Bay City, MI 48706		12"Ø - 144"Ø Reinforced Concrete Pipe Joint Details							
5281 Lansing Rd Charlotte, MI 48813		2701 Chicago Dr SW Wyoming, MI 49519							
4950 White Lake Rd Clarkston, MI 48346		3756 Centennial Rd Sylvania, OH 43560		Date 11 May 16	Revised	Rev. No.	Drawn By BmG	Scale NTS	01.01c