

BID OF SOUTHWIND GROUP INC.

BID PAGE

TERMS: Payment to be made as soon as possible after satisfactory acceptance of equipment.
Price quoted shall include all requested items including shipping and handling costs.

Timeframe for beginning work after Service Order issued: 2 WEEK

Total Cost of Pipe Replacement Project: \$ 17,970.00

SEVENTEEN THOUSAND NINE HUNDRED SEVENTY AND ^{NO}/₁₀₀₀

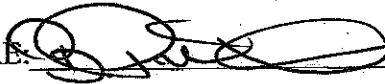
BY: B. PAUL GOLDEN DATE: 8-25-2011

TITLE: CHIEF ESTIMATOR

COMPANY: SOUTHWIND GROUP INC.

ADDRESS: 801 SOUTH GARFIELD # 103 TRAVERSE CITY MI.

PHONE: 231.944.2825

SIGNATURE: 

BID OF SOUTHWIND GROUP INC.

Bidder understands that the City reserves the right to accept any or all bids in whole or part and to waive irregularities in any bid in the best interest of the City. The bid will be evaluated and awarded on the basis of the best value to the City. The criteria used by the City may include, but will not be limited to: ability, qualifications, timeframe, experience, price, type and amount of equipment, accessories, options, insurance, permits, licenses, other pertinent factors and overall capability to meet the needs of the City. The City is sales tax exempt – Government.

Please direct ALL questions to: Scott Blair, OMI Project Manager, at 231-922-4922 prior to the bid being submitted.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Submitted by:


Signature

SOUTHWIND GROUP, INC.
Company Name

B. PAUL GOLDEN - CHIEF ESTIMATOR
Name and Title (Print)

801 SOUTH GARFIELD # 107
Company Address.

231-942-8598
Phone

231-947-2897
Fax

TRAVERSE CITY MI 49686
City, State, Zip

CORPORATION
Sole proprietorship/partnership/corporation

INDIANA
If corporation, state of corporation

SOUTHWIND GROUP, INC.
PLUMBING & MECHANICAL

231-947-2825
IN PC 89200065

BPAUL@SWGROUP.BIZ
801 SOUTH GARFIELD # 107
TRAVERSE CITY, MI 49686

231-947-2827 FAX
MI 81-10242

CURRENT AND RECENT PROJECTS

HOUGHTON LAKE AERATION IMPROVEMENTS

HOUGHTON LAKE PUMP STATION

HOUGHTON LAKE GRINDER AND BLOWER

EAST JORDAN BRIDGE CROSSING WATER MAIN

HARBOR SPRINGS WATER STORAGE TANK

GSD VALVE REPLACEMENT

GSD 54" INFLUENT METER STATIONS

BOB EVANS PETOSKEY

WALMART ELKHART

SOLD AND GRAB INC.
MATERIAL SPEC. OR EQUAL

LASCO[®]
Fittings, Inc.

NSF - pw

TECHNICAL DATA

SCHEDULE



PVC PIPE FITTINGS

Information contained in this publication is provided as a Preliminary Guide. Interpretation and application are functions of the user.

Schedule 80-PVC

Sales Offices in Major cities, Warehouses Nationwide



www.lascofittings.com

Service Centers
6131 Knot Avenue
Buena Park, CA 90620
714/690-9679
800/995-2726
Fax: 714/736-1780

4780 Holly Street, Unit A
Denver, CO 80216
303/388-7204
888/388-5450
Fax: 303/388-7199

3450 Vineland Road
Orlando, FL 32811
407/648-5955
800/437-3155
Fax: 407/649-7999

311 Richert
Wood Dale, IL 60191
630/860-7402
888/995-7414
Fax: 630/860-7416

3401 Pennsy Drive
Ardmore-Ardwick Ind'l Park
Landover, MD 20785
301/322-3377
800/882-5462
Fax: 301/772-1627

1600 Kelly Blvd, Suite 130
Carrollton, TX 75006
972/417-0073
800/642-8104
Fax: 972/417-9733

22473 72nd Ave South
Kent, WA 98031
235/872-0185
888/285-2726
888/395-221

Headquarters

414 Morgan Street, Brownsville, TN 38012
731/772/3180 - 800/776-2756 - Fax: 731/772-0835

Standards and Specifications

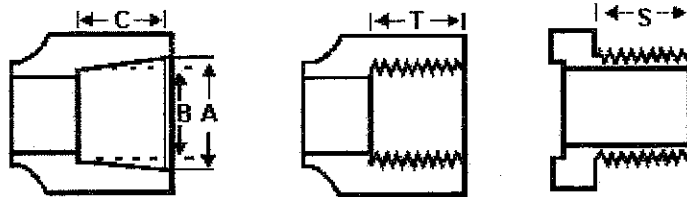
- ASTM D-2464** -- Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D-2467 -- Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
ASTM D-1784 -- Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
- MATERIAL** -- LASCO Schedule Fittings are produced from PVC Type I, Cell classification 12454-B. O-rings are produced of VITON. PVC Fittings are listed by NSF (National Sanitation Foundation).

ATTENTION!

DO NOT USE LASCO fittings for compressed air or gases.
DO NOT test PVC piping systems with compressed air or gases.
DO NOT use fittings with liquids not recommended by LASCO.
Modifications of fittings voids the warranty.

LIMITED WARRANTY

LASCO fittings are made from 100% virgin materials and are warranted to be free from manufacturing defects in materials and workmanship. They are warranted against rot, rust and electrolytic corrosion for a periods of 3 years from date of installation. If LASCO fittings prove defective due to manufacturing defects in material or workmanship during that period, the manufacturer will provide new replacement units of the same type and size. No remedy will be granted under this warranty if LASCO fittings are not used strictly in accordance with LASCO's directions with respect to use and storage of if the fittings have been modified in any way. THE MANUFACTURER'S LIABILITY UNDER EXPRESSED OR IMPLIED WARRANTY OR FOR ANY REASON IS LIMITED TO FURNISHING REPLACEMENT UNITS OR GRANTING CREDIT FOR DEFETIVE UNITS. NO LABOR EXPENSE OR CONSEQUENTIAL DAMAGES WILL BE PAID BY LASCO. THIS WARRANTY IS IN LIEU OF ALL OTHER GUARANTEES AND WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OR MERCHANTABILITY AND FITNESS FOR PURPOSE, EXCEPT FOR ANY WARRANTIES IMPLIED BY LAW FOR NONCOMMERCIAL CONSUMERS. ANY SUCH WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY.



Size	Pipe O.D.	A (entrance)		B (bottom)		C (socket) Depth (Min.)	T (thread) Female (Min.)	S (thread) Male (Min.)
		Min.	Max.	Min.	Max.			
1/4	0.552	0.548	0.556	0.532	0.540	0.625	0.540	0.460
3/8	0.687	0.683	0.691	0.667	0.675	0.750	0.540	0.460
1/2	0.848	0.844	0.852	0.832	0.840	0.875	0.690	0.620
3/4	1.058	1.054	1.062	1.042	1.050	1.000	0.700	0.620
1	1.325	1.320	1.330	1.305	1.315	1.125	0.860	0.790
1-1/4	1.67	1.665	1.675	1.650	1.660	1.250	0.900	0.790
1-1/2	1.912	1.906	1.918	1.888	1.900	1.375	0.900	0.840
2	2.387	2.381	2.393	2.363	2.375	1.500	0.950	0.840
2-1/2	2.889	2.882	2.896	2.861	2.875	1.750	1.300	1.260
3	3.516	3.508	3.524	3.484	3.500	1.875	1.390	1.320
4	4.518	4.509	4.527	4.482	4.500	2.125	1.470	1.420
6	6.647	6.636	6.658	6.603	6.625	3.000	-	-
8	8.655	8.640	8.670	8.595	8.625	4.000	-	-

Maximum Operating Pressure

Size	Maximum Operating Pressure (p.s.i.) at 73.4 F	
	Schedule 80 Socket Ends	Schedule 80 Threaded Ends
1/2	850	420
3/4	690	340
1	630	320
1 1/4	520	260
1 1/2	470	240
2	400	200
2 1/2	420	210
3	370	190
4	320	160
5	290	Not Recommended
6	280	Not Recommended
8	250	Not Recommended

Temperature Correction Factors

Operating Temperature (F)	PVC Pressure Rating Factor
75	1.00
80	0.90
90	0.75
100	0.62
110	0.50
115	0.45
120	0.40
125	0.35
130	0.30
140	0.22

Not recommended above 140 F. Based on water service. For more severe service, an additional correction factor may be required.

Physical Properties (Material) of LASCO PVC Fittings

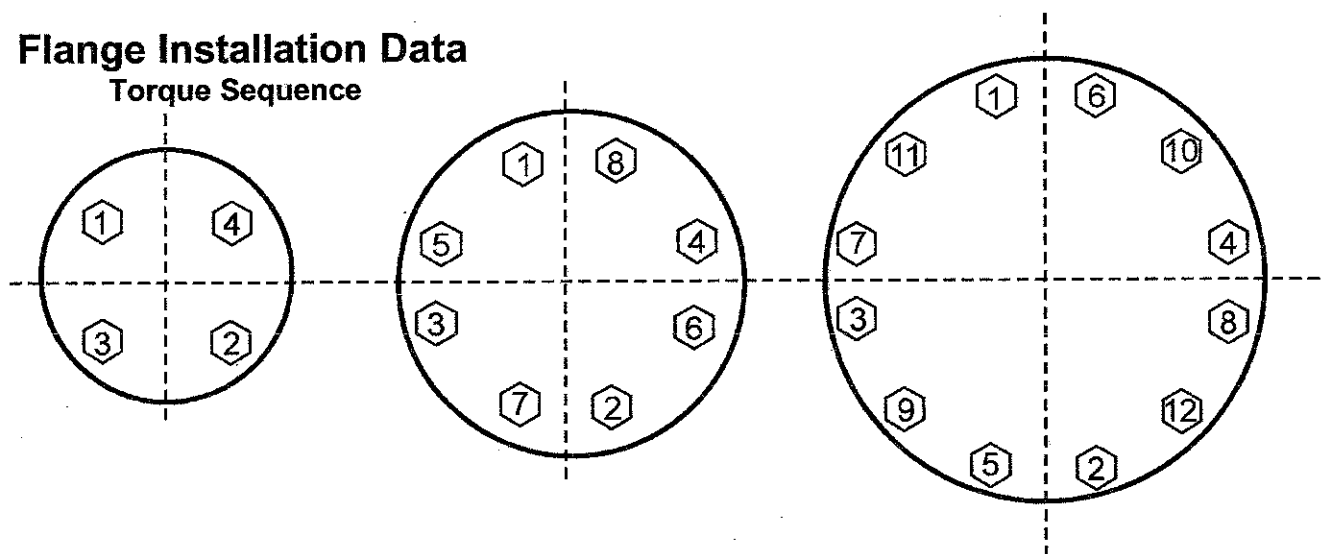
	Typical Values	ASTM Test Method
Mechanical		
Tensile Strength, psi at 73.4 F	7,000	D-638
Tensile Modulus, psi	400,000	D-638
Allowable Fiber Stress, psi at 73.4 F	2,000	-
Flexural Yield Strength, psi	13,000	D-790
Izod Impact, notched, ft. lbs./in. at 78 F	0.65 - 1.50	D-256
Durometer Hardness	77-83	D-2240
Thermal		
Coefficient of Thermal Conductivity, Cal. -Cm/Sec. Cm ² C	3.5 x 10 ⁻⁴	C-177
Coefficient of Linear Expansion, in./in./ C	6.4 x 10 ⁻⁵	D-696
*Flammability	AEB < 25mm ATB < 10 sec.	D-635

* Based on small-scale laboratory test intended to compare burring characteristics of products; does not imply that LASCO PVC fittings will not burn. All PVC pipe and fittings will burn under proper conditions and in a full-scale fire. Proper precautions must be taken.

Schedule 80

Flange Installation Data

Torque Sequence



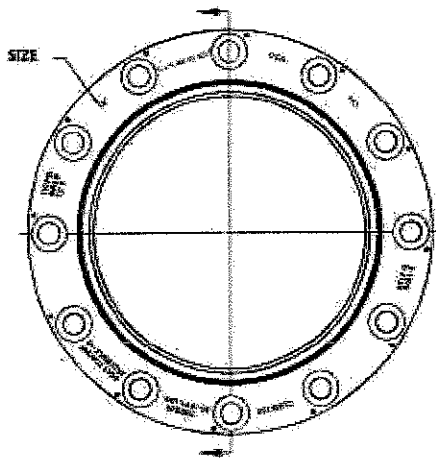
1. Recommended Gaskets: full face, 1/8 thick, elastomeric, 50-70 Shore A hardness.
2. Bolt threads should be well-lubricated.
3. Nut and bolt threads should be free-running during assembly.
4. Follow illustrated bolt-tightening Sequence.
5. Always use full size flat washers with bolts and nuts.

	Bolt Circle	No of	Bolt Size	Recommended
Size	Diameter	Bolts	(UNC x Length)	Torque
1/2	2.37	4	1/2 - 13 x 1-3/4	15-20
3/4	2.75	4	1/2 - 13 x 1-15/16	15-20
1	3.12	4	1/2 - 13 x 2	15-20
1-1/4	3.50	4	1/2 - 13 x 2-14	15-20
1-1/2	3.87	4	1/2 - 13 x 2-3/4	15-20
2	4.75	4	5/8 - 11 x 3	20-30
2-1/2	5.50	4	5/8 - 11 x 3-1/4	20-30
3	6.00	4	5/8 - 11 x 3-5/8	20-30
4	7.50	8	5/8 - 11 x 3-3/4	20-30
5	8.50	8	3/4 - 10 x 3-3/4	25-35
6	9.50	8	3/4 - 10 x 4-3/8	33-50
8	11.75	8	3/4 - 10 x 4-3/8	33-50
10	14.25	12	7/8 - 9 x 4-1/2	53-75
12	17.00	12	7/8 - 9 x 4-5/8	53-75

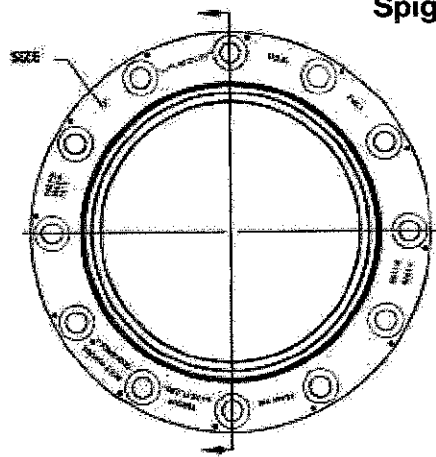
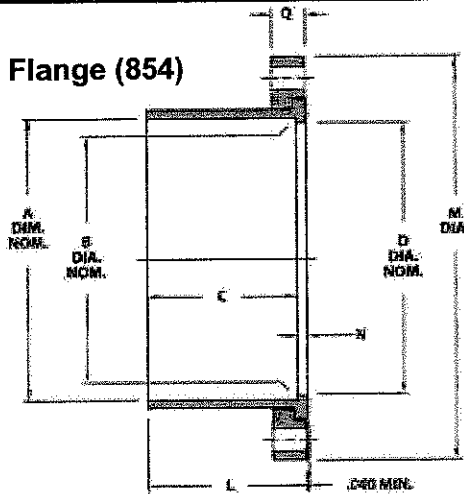
Note: Mating dimensions and configurations conform to ANSI B 16.5, Class 150 flanges. Socket diameters conform to ASTM D-2467. Recommended working pressure: 150 psi water at 73.4 F. Use primer and heavy-bodied PVC cement in accordance with ASTM D-2855.

Decimal Equivalents

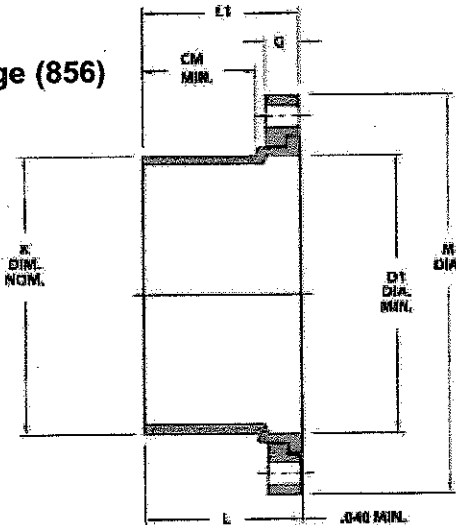
1/64 = 0.0156	13/64 = 0.2031	25/64 = 0.3906
1/32 = 0.0313	7/32 = 0.2188	13/32 = 0.4063
3/64 = 0.0469	15/64 = 0.2344	15/32 = 0.4688
1/16 = 0.0625	1/4 = 0.2500	1/2 = 0.5000
5/64 = 0.0781	17/64 = 0.2656	9/16 = 0.5625
3/32 = 0.0938	9/32 = 0.2813	5/8 = 0.6250
7/64 = 0.1094	19/64 = 0.2969	11/16 = 0.6875
1/8 = 0.1250	5/16 = 0.3125	3/4 = 0.7500
9/64 = 0.1406	21/64 = 0.3281	13/16 = 0.8125
5/32 = 0.1563	11/32 = 0.3438	7/8 = 0.8750



Socket Flange (854)



Spigot Flange (856)



Loose Ring Flange Dimensions:

Socket Flange Part No. Series 854-

Spigot Flange Part No. Series 856-

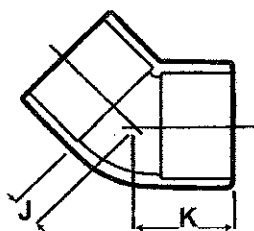
Size	A	B	C min	CM	D min	D1	L	L1	K	M	N	Q
3	3.516	3.492	1.875	1-31/32	3-1/4	3-1/4	2-1/32	3-9/32	3.495	7-1/2	5/32	1
4	4.518	4.491	2.250	2-1/4	4-1/4	4-1/4	2-15/32	3-23/32	4.495	9-7/16	5/32	1-3/16
5	5.583	5.553	2.625	3-1/32	5-5/16	5-9/32	2-27/32	4-1/2	5.564	10-1/32	3/16	1-7/32
6	6.647	6.614	3.000	4-1/32	6-13/32	6-11/32	3-1/4	5-19/32	6.635	11	9/32	1-5/16
8	8.655	8.610	4.000	4-17/32	8-11/32	8-3/8	4-17/32	6-3/16	8.631	13-17/32	9/32	1-13/32
10	10.780	10.735	5.000	5-1/2	10-15/32	10-1/2	5-13/16	7-9/32	10.75	16	3/8	1-1/2
12	12.780	12.735	7.000	6-1/16	12-1/2	12-15/32	7-17/32	9-15/16	12.75	19	1/2	1-5/8

Notes:

1. All fractional dimensions shown have tolerances +/- 1/16" (sizes 3-6); +/- 1/8" (sizes 8-12).
2. All three-place dimensions are within ASTM tolerances.

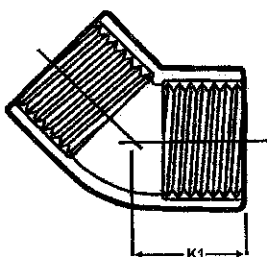
Loose Ring (Van Stone) Flanges conform to ANSI B16.5, Class 150. Socket diameters conform to ASTM D-2467. Recommended working pressure: 150 psi at 73.4 F.

Schedule 80



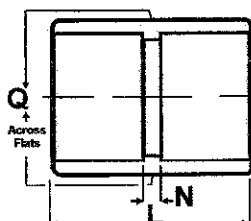
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Part No.	Size	J	K		
817-002	1/4	5/32	25/32		
817-003	3/8	3/16	15/16		
817-005	1/2	1/4	1 1/8		
817-007	3/4	5/16	1 5/16		
817-010	1	5/16	1.4375		
817-012	1 1/4	3/8	1 5/8		
817-015	1 1/2	7/16	1 13/16		
817-020	2	5/8	2 1/8		
817-025	2 1/2	11/16	2 7/16		
817-030	3	3/4	3 11/16		
817-040	4	1	3 1/4		
817-060	6	1 3/4	4 3/4		
817-080	8	2	6		



45 Deg Ell
flpt x flpt

Part No.	Size	K1		
819-005	1/2	0.75		
819-007	3/4	1		
819-010	1	1 1/8		
819-012	1 1/4	1.313		
819-015	1 1/2	1.438		
819-020	2	1.625		
819-025	2 1/2	1.938		
819-030	3	2.125		
819-040	4	2.625		

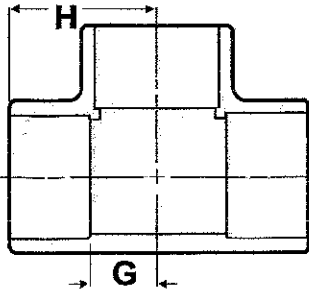


Coupling
slip x slip

Part No.	Size	L	N	Q	
829-002	1/4	1.3125	1/16	N/A	
829-003	3/8	1.5938	3/32	N/A	
829-005	1/2	1.8438	3/32	1 11/32	
829-007	3/4	2.0938	3/32	1 9/16	
829-010	1	2.3438	3/32	N/A	
829-012	1 1/4	2.5938	3/32	2 7/32	
829-015	1 1/2	2.8438	3/32	N/A	
829-020	2	3.0938	3/32	N/A	
829-025	2 1/2	3.6875	3/16	3 5/8	
829-030	3	3.9375	3/16	4 13/32	
829-040	4	4.6875	3/16	N/A	
829-060	6	6.25	1/4	N/A	
829-080	8	8.25	1/4	N/A	
829-101	3/4 x 1/2	1.9688			
829-131	1 x 3/4	2.2188			
829-168	1 1/4 x 1	2.4688			
829-212	1 1/2 x 1 1/4	2.7188			
829-251	2 x 1 1/2	2.9688			
829-338	3 x 2	3.5625			
829-422	4 x 3	4.3125			
829-532	6 x 4	5.5			
829-585	8 x 6	7.25			

Schedule 80

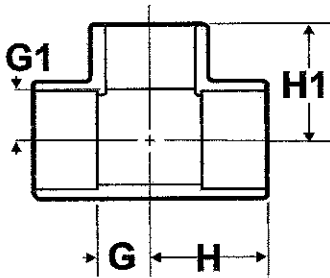
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Part No.	Size	G min	H min		
801-002	1/4	5/16	15/16		
801-003	3/8	3/8	1 1/8		
801-005	1/2	1/2	1 3/8		
801-007	3/4	9/16	1 9/16		
801-010	1	11/16	1 13/16		
801-012	1-1/4	7/8	2 1/8		
801-015	1-1/2	1	2 3/8		
801-020	2	1 1/4	2 3/4		
801-025	2-1/2	1 1/2	3 1/4		
801-030	3	1 13/16	3 11/16		
801-040	4	2 5/16	4 9/16		
801-060	6	3 1/2	6 1/2		
801-080	8	4 1/2	8 1/2		

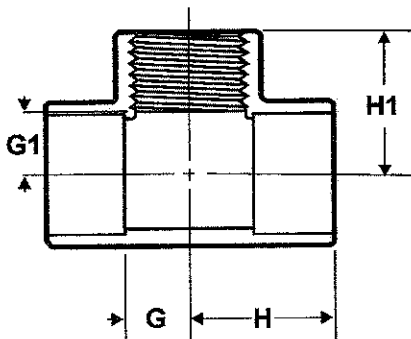
16"

Reducing Tee
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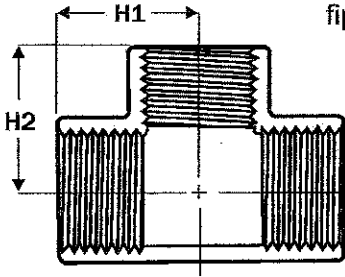
Part No.	Size	G	G1	H	H1
801-101	3/4 x 3/4 x 1/2	1/2	9/16	1.5	1.4375
801-130	1 x 1 x 1/2	1/2	11/16	1.625	1.5625
801-131	1 x 1 x 3/4	9/16	11/16	1.6875	1.6875
801-168	1-1/4 x 1-1/4 x 1	11/16	7/8	1.9375	2
801-210	1-1/2 x 1-1/2 x 3/4	9/16	1	1.9375	2
801-211	1-1/2 x 1-1/2 x 1	11/16	1	2.0625	2.125
801-212	1-1/2 x 1-1/2 x 1-1/4	7/8	1	2.25	2.25
801-247	2 x 2 x 1/2	1/2	1 1/4	2	2.125
801-248	2 x 2 x 3/4	9/16	1 1/4	2.0625	2.25
801-249	2 x 2 x 1	11/16	1 1/4	2.1875	2.375
801-250	2 x 2 x 1-1/4	7/8	1 1/4	2.375	2.5
801-251	2 x 2 x 1-1/2	1	1 1/4	2.5	2.625
801-290	2-1/2 x 2-1/2 x 1-1/4	7/8	1 1/2	2.625	2.75
801-291	2-1/2 x 2-1/2 x 1-1/2	1	1 1/2	2.75	2.875
801-292	2-1/2 x 2-1/2 x 2	1 1/4	1 1/2	3	3
801-337	3 x 3 x 1-1/2	1	1 13/16	2.875	3.1875
801-338	3 x 3 x 2	1 1/4	1 13/16	3.125	3.3125
801-420	4 x 4 x 2	1 1/4	2 5/16	3.5	3.8125
801-422	4 x 4 x 3	1 13/16	2 5/16	4.0625	4.1875
801-530	6 x 6 x 3	1 13/16	3 1/2	4.8125	5.375
801-532	6 x 6 x 4	2 5/16	3 1/2	5.3125	5.75
801-585	8 x 8 x 6	3 1/2	4 1/2	7.5	7.5

Tee
slip x slip x fipt



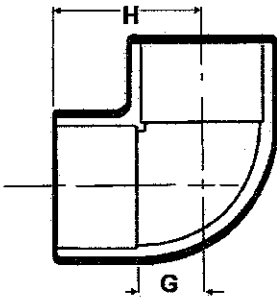
Part No.	Size	G	G1	H	H1
802-005	1/2	0.485	1/2	1.36	1.14
802-007	3/4	0.6	9/16	1.6	1.2125
802-010	1	0.69	11/16	1.815	1.4975
802-012	1-1/4	0.9	7/8	2.15	1.725
802-015	1-1/2	1.088	1	2.463	1.85
802-020	2	1.35	1 1/4	2.85	2.15
802-250	2 x 2 x 1-1/4	0.9	1 1/4	2.4	2.1
802-251	2 x 2 x 1-1/2	1.088	1 1/4	2.588	2.1
802-291	2-1/2 x 2-1/2 x 1-1/2	1.088	1 1/2	2.838	2.35

Tee
fipt x fipt x fipt



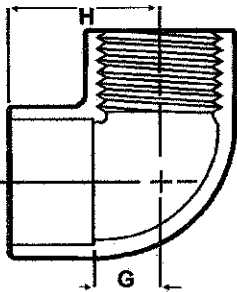
Part No.	Size	H1	H2		
805-002	1/4	0.812	0.812		
805-003	3/8	0.938	0.938		
805-005	1/2	1.125	1.125		
805-007	3/4	1.25	1.25		
805-010	1	1.5	1.5		
805-012	1-1/4	1.75	1.75		
805-015	1-1/2	1.938	1.938		
805-020	2	2.25	2.25		
805-025	2-1/2	2.688	2.688		
805-030	3	3.063	3.063		
805-040	4	3.625	3.625		

90 Deg Ell
slip x slip



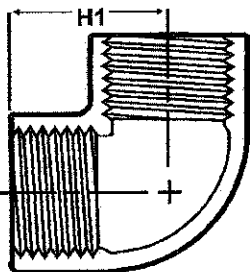
Part No.	Size	G	H		
806-002	1/4	5/16	15/16		
806-003	3/8	3/8	1 1/8		
806-005	1/2	1/2	1 3/8		
806-007	3/4	9/16	1 9/16		
806-010	1	11/16	1 13/16		
806-012	1 1/4	7/8	2 1/8		
806-015	1 1/2	1	2 3/8		
806-020	2	1 1/4	2 3/4		
806-025	2 1/2	1 1/2	3 1/4		
806-030	3	1 13/16	3 11/16		
806-040	4	2 5/16	4 9/16		
806-060	6	3 1/2	6 1/2		
806-080	8	4 1/2	8 1/2		

90 Deg Ell
slip x fipt



Part No.	Size	G	H		
807-005	1/2	1/2	1.14		
807-007	3/4	9/16	1.2125		
807-010	1	11/16	1.4975		
807-012	1 1/4	7/8	1.725		
807-015	1 1/2	1	1.85		
807-020	2	1 1/4	2.15		

90 Deg Ell
fipt x fipt



Part No.	Size	H1			
808-002	1/4	0.812			
808-003	3/8	0.938			
808-005	1/2	1.125			
808-007	3/4	1.25			
808-010	1	1.5			
808-012	1-1/4	1.75			
808-015	1-1/2	1.938			
808-020	2	2.25			
808-025	2-1/2	2.688			
808-030	3	3.063			
808-040	4	3.625			

**Traverse City Regional Wastewater Treatment Plant
Piping Replacement Project**

INTENT

The City of Traverse City is seeking to engage the services of a qualified firm to replace the Backpulse Line at the Wastewater Treatment Plant. The desired outcome is that the existing cement-coated ductile iron pipe be replaced with Schedule 80 PVC pipe.

BACKGROUND

The present Backpulse pipe conveys permeate (plant effluent produced with membranes) back to the membrane trains during Backpulse or cleaning cycles. Citric acid or sodium hypochlorite may be added in some membrane cleaning operations through injection points just upstream of the sections of pipe being replaced. The ductile iron pipe was installed in 2004 and has deteriorated as a result of contact with citric acid.

SCOPE

Contractor shall replace the approximately 80 feet of cement-coated ductile iron pipe, along with associated joints and connectors, with 10-inch diameter Schedule 80 PVC. (See attached drawings.) Contractor is responsible for removal and disposal of existing ductile iron pipe. Glued and/or flanged fittings are acceptable at joints, but the PVC pipe shall not be joined by cutting rings for Victaulic fittings. Contractor is responsible for ensuring that sufficient pipe hangers are installed/used to support the PVC pipe and its load at maximum flow.

COORDINATION

Contractor shall coordinate down time with the plant operator. Maximum down time duration in any single period is one week.

There will be a mandatory pre-bid meeting at the Wastewater Treatment Plant, 606 Hannah Street, Traverse City, on Thursday, August 11, 2011 at 10:00 a.m.

MINIMUM REQUIREMENTS

The specification shall be construed as minimum. Should manufacturer's current published data or specifications exceed these, such standards shall be considered minimum and furnished. All integral parts not specifically mentioned in the scope of these specifications which are necessary to provide a complete working unit shall be furnished.

SILENCE OF SPECIFICATIONS

The apparent silence of this specification and any supplemental specification as to any details or the omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only material of first quality and

correct type, size, and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement.

THE CITY OF TRAVERSE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS, WAIVE IRREGULARITIES, AND TO ACCEPT THE BIDS EITHER ON AN ENTIRE OR INDIVIDUAL BASIS THAT ARE IN THE BEST INTEREST OF THE CITY OF TRAVERSE CITY.

It is the intent of these specifications to describe a Wastewater Treatment Plant Piping Replacement Project. If the specifications requested do not exactly coincide with your equipment you may take exception and bid your equipment. All exceptions must be noted and fully explained on a separate sheet of paper.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT SCOTT BLAIR, OMI PROJECT MANAGER, AT THE WASTEWATER TREATMENT PLANT, AT 231-922-4922, BEFORE THE BID IS SUBMITTED.

Equipment must be in compliance with all applicable ANSI, OSHA, State and Federal Standards in effect at time of manufacture.

BID FORMS/EXCEPTIONS AND DEVIATIONS: The attached bid sheet MUST be used. If the bid sheet is not used your equipment will NOT BE considered. The bid sheet is to be completed, and submitted. Bids submitted must meet or exceed specifications.

Bidder - Please complete and return

BID SUMMARY

TITLE: Traverse City Regional Wastewater Treatment Plant Piping Replacement Project

DUE DATE: Thursday, August 25, 2011 at 2 PM

Having carefully examined the attached specifications and any other applicable information, the undersigned proposes to furnish all items necessary for and reasonably incidental to the proper completion of this bid. Bidder submits this bid and agrees to meet or exceed all requirements and specifications unless otherwise indicated in writing and attached hereto.

Bidder certifies that as of the date of this bid the Company or he/she is not in arrears to the City of Traverse City for debt or contract and is in no way a defaulter as provided in Section 152, Chapter XVI of the Charter of the City of Traverse City.

Bid forms are to be completed, including bid sheet, and submitted. Items not meeting specifications must be noted described fully. Additional sheets may be used and submitted with bid.

Bidder understands and agrees, if selected as the successful Bidder, to accept a purchase/service order and to provide proof of the required insurance.

Bidder is also required to submit, with the bid, the latest printed manufacturer's specifications and advertising literature on the equipment (including components) to be provided. Completed unit MUST be equipped in compliance with all applicable ANSI, OSHA standards and regulations in effect at time of manufacture. Bidder understands and agrees that all applicable federal, state and local codes, rules and regulations must be complied with.

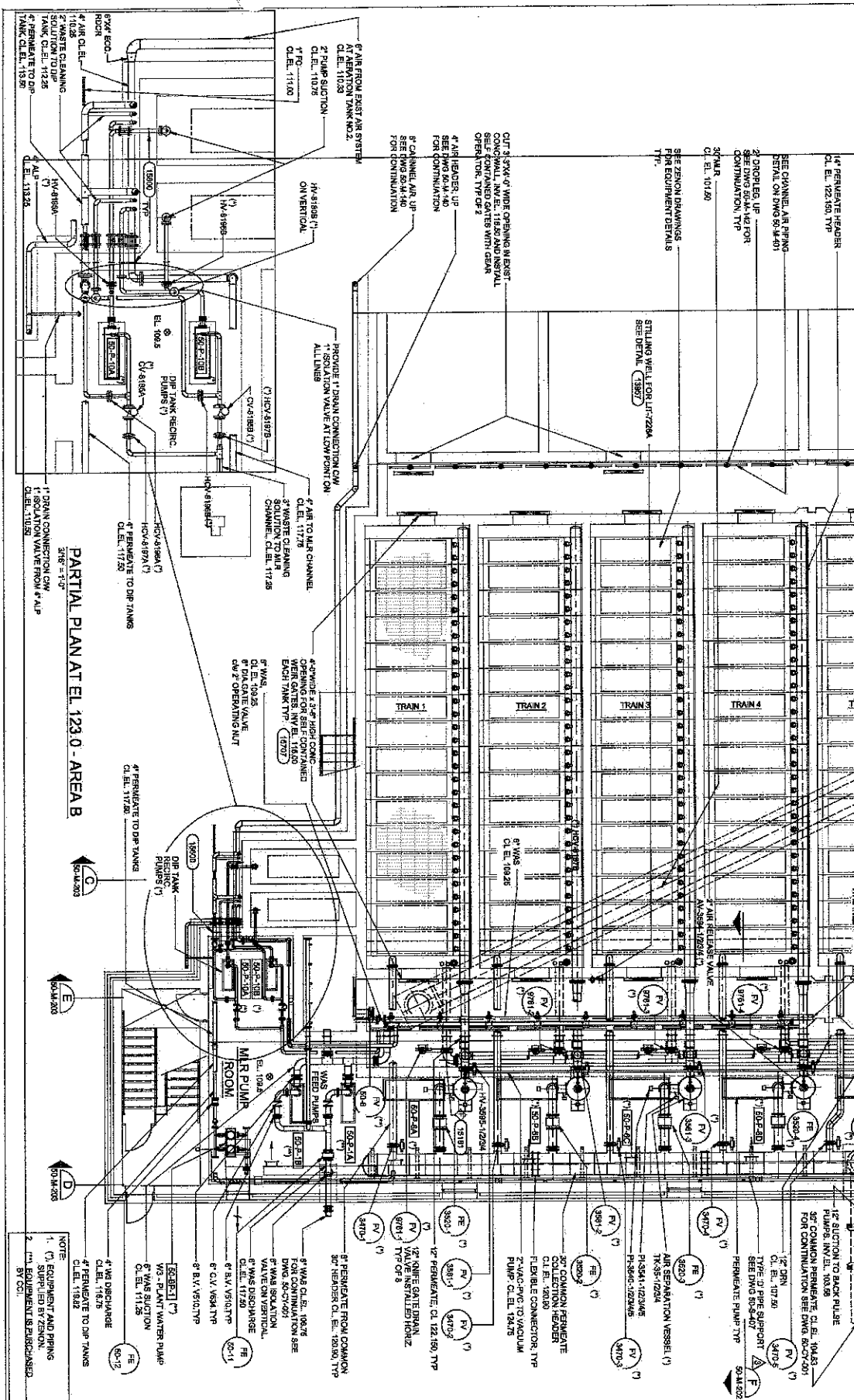
The Bidder shall comply with all applicable federal, state, local and building codes, laws, rules and regulations and obtain any required permits for this work.

Pre-delivery Inspection: Successful bidder shall make a complete inspection of vehicle (and/or equipment) to insure it meets specifications. Acceptance shall be subject to complete inspection and approval of the City.

Terms: Payment will be made as soon as possible after delivery/acceptance of equipment. Price quoted shall include all costs of providing equipment, delivery and any necessary installation.

The Bidder certifies that it is in compliance with the City's Nondiscrimination Policy as set forth in Administrative Order No. 47 and Chapter 605 of the City's Codified Ordinances.

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS CONDUCTED VISUAL GENERAL VERIFICATION OF THE COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY DISCREPANCIES OR OMISSIONS NOT INCORPORATED HEREIN AS A RESULT.

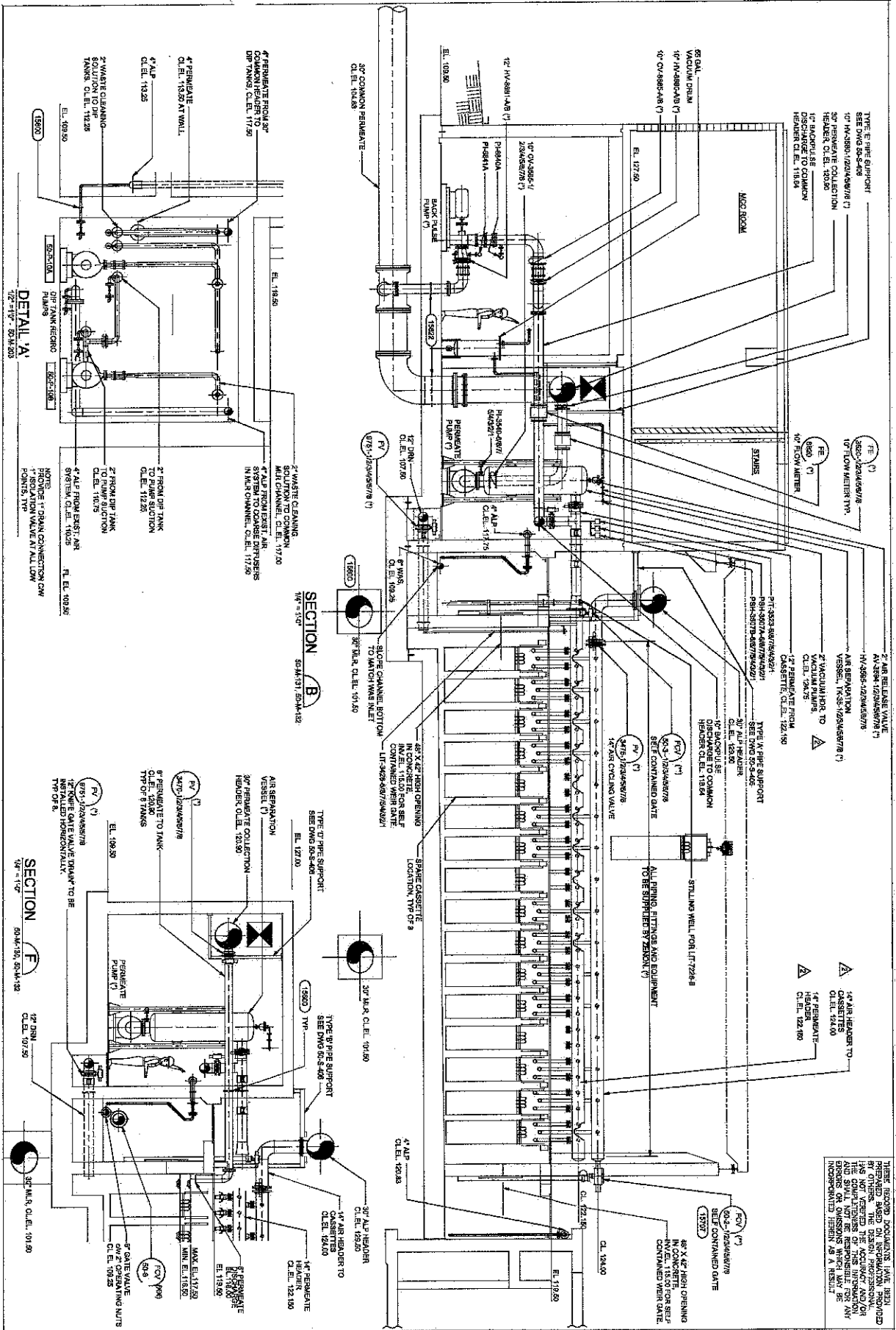


DESIGN	HAM	12/08/04	RECORD DRAWING	DATE	NO.
DR.	SHARADHAR	31/03/03	PIPING SUPPORTS	DATE	NO.
CHK.	HAM	05/02/03	PIPING MODIFICATIONS	DATE	NO.
APPV.	HAM	12/05/02	ISSUED FOR CONSTRUCTION	DATE	NO.
BY	APD		REVISION		



50 - MEMBRANE TANKS & PROCESS BUILDING
PARTIAL PLAN AT EL. 123.0 - AREA B
 TRAVERSE CITY REGIONAL WWTP IMPROVEMENTS
 GRAND TRAVERSE COUNTY, MICHIGAN

SHEET PKGS-3
 DWG 50-M-132
 DATE 12-06-02
 PROJ 2001525.01

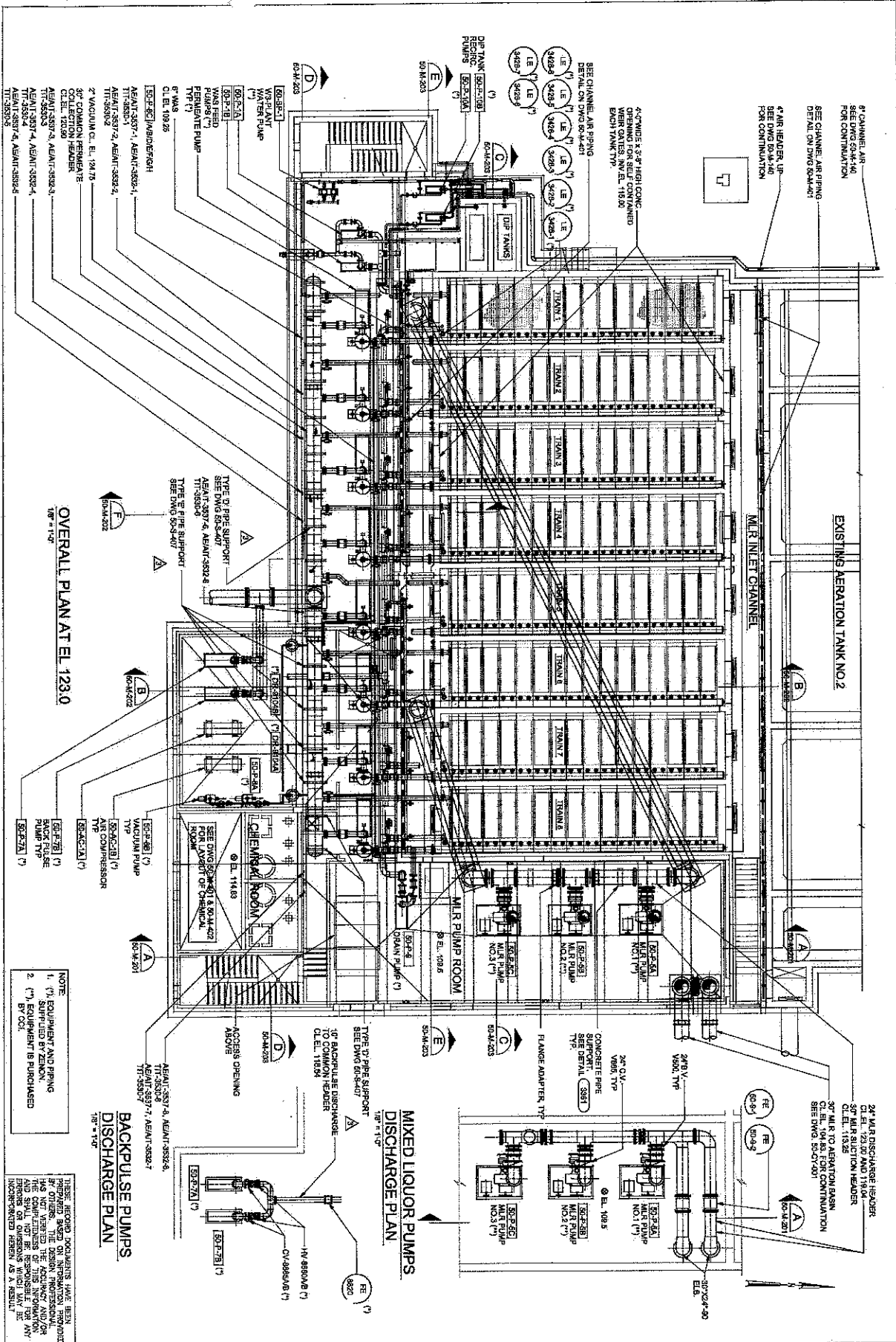


THESE RECORD DOCUMENTS HAVE BEEN PREPARED BY CH2M HILL AND ITS SUBSIDIARIES. CH2M HILL HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THE INFORMATION, DATA AND SMALL PRINT BEING REFERENCED TO ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT OF THE INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THE INFORMATION, DATA AND SMALL PRINT BEING REFERENCED TO ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT OF THE INFORMATION PROVIDED BY OTHERS.

DESIGN	HAM	12/08/04	RECORD DRAWING	NO.	1
DESIGN	HAM	05/02/05	PIPING MODIFICATIONS ISSUED FOR CONSTRUCTION	NO.	2
DESIGN	HAM	12/08/05	REVISION	NO.	3
APPROVED	HAM				

CH2MHILL 50 - MEMBRANE TANKS & PROCESS BUILDING SECTIONS AND DETAIL
 TRAVERSE CITY REGIONAL WWTP IMPROVEMENTS
 GRAND TRAVERSE COUNTY, MICHIGAN

SHEET	PK050-9
DWG	50-M-202
DATE	12-08-02
PROJ.	2001525.01



DESIGN	D HAM	12/08/04	4	RECORD DRAWING
DRWN	D HAM	01/03/05	1	PIPING SUPPORTS
CHKD	D HAM	05/02/05	2	PIPING MODIFICATIONS
APPR	D HAM	12/06/05	3	ISSUED FOR CONSTRUCTION
NO.		DATE	REVISION	

CH2MHILL
 A Division of
 Bechtel Corporation
 Grand Traverse County, Michigan

50 - MEMBRANE TANKS & PROCESS BUILDING
OVERALL PLAN AT EL 123.0
 TRAVERSE CITY REGIONAL WWT/P IMPROVEMENTS
 GRAND TRAVERSE COUNTY, MICHIGAN

SHEET	PKG56-1
DWG	50-M-130
DATE	12-06-02
PRJW	20010205.01

Bidder understands that the City reserves the right to accept any or all bids in whole or part and to waive irregularities in any bid in the best interest of the City. The bid will be evaluated and awarded on the basis of the best value to the City. The criteria used by the City may include, but will not be limited to: ability, qualifications, timeframe, experience, price, type and amount of equipment, accessories, options, insurance, permits, licenses, other pertinent factors and overall capability to meet the needs of the City. The City is sales tax exempt – Government.

Please direct ALL questions to: Scott Blair, OMI Project Manager, at 231-922-4922 prior to the bid being submitted.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Submitted by:

Signature

Name and Title (Print)

Phone

Fax

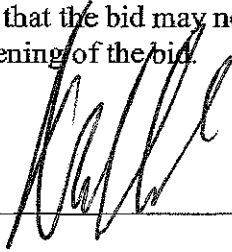
Company Name

Company Address

City,

State,

Zip



Nathan Heboer Owner

666-896-8414 666-896-8565

DHE Plumbing and Mechanical

5001 40th Ave

Hudsonville MI 49426

Sole proprietorship/partnership/corporation

MI

If corporation, state of corporation

BID PAGE

TERMS: Payment to be made as soon as possible after satisfactory acceptance of equipment. Price quoted shall include all requested items including shipping and handling costs.

Timeframe for beginning work after Service Order issued: Immediately

Total Cost of Pipe Replacement Project: \$ 13,800.00

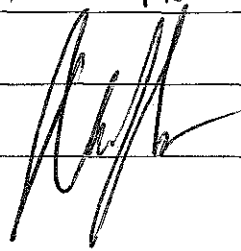
BY: Nate Heyker DATE: 8-24-201

TITLE: owner

COMPANY: DHE Plumbing and Mechanical

ADDRESS: 5001 40th Ave Hudsonville MI 49426

PHONE: 616-896-8414

SIGNATURE: 

Bidder - Please complete and return

BID SUMMARY

TITLE: Traverse City Regional Wastewater Treatment Plant Piping Replacement Project

DUE DATE: Thursday, August 25, 2011 at 2 PM

Having carefully examined the attached specifications and any other applicable information, the undersigned proposes to furnish all items necessary for and reasonably incidental to the proper completion of this bid. Bidder submits this bid and agrees to meet or exceed all requirements and specifications unless otherwise indicated in writing and attached hereto.

Bidder certifies that as of the date of this bid the Company or he/she is not in arrears to the City of Traverse City for debt or contract and is in no way a defaulter as provided in Section 152, Chapter XVI of the Charter of the City of Traverse City.

Bid forms are to be completed, including bid sheet, and submitted. Items not meeting specifications must be noted described fully. Additional sheets may be used and submitted with bid.

Bidder understands and agrees, if selected as the successful Bidder, to accept a purchase/service order and to provide proof of the required insurance.

Bidder is also required to submit, with the bid, the latest printed manufacturer's specifications and advertising literature on the equipment (including components) to be provided. Completed unit MUST be equipped in compliance with all applicable ANSI, OSHA standards and regulations in effect at time of manufacture. Bidder understands and agrees that all applicable federal, state and local codes, rules and regulations must be complied with.

The Bidder shall comply with all applicable federal, state, local and building codes, laws, rules and regulations and obtain any required permits for this work.

Pre-delivery Inspection: Successful bidder shall make a complete inspection of vehicle (and/or equipment) to insure it meets specifications. Acceptance shall be subject to complete inspection and approval of the City.

Terms: Payment will be made as soon as possible after delivery/acceptance of equipment. Price quoted shall include all costs of providing equipment, delivery and any necessary installation.

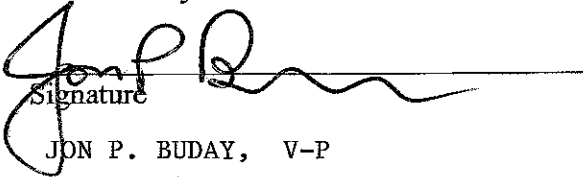
The Bidder certifies that it is in compliance with the City's Nondiscrimination Policy as set forth in Administrative Order No. 47 and Chapter 605 of the City's Codified Ordinances.

Bidder understands that the City reserves the right to accept any or all bids in whole or part and to waive irregularities in any bid in the best interest of the City. The bid will be evaluated and awarded on the basis of the best value to the City. The criteria used by the City may include, but will not be limited to: ability, qualifications, timeframe, experience, price, type and amount of equipment, accessories, options, insurance, permits, licenses, other pertinent factors and overall capability to meet the needs of the City. The City is sales tax exempt – Government.

Please direct ALL questions to: Scott Blair, OMI Project Manager, at 231-922-4922 prior to the bid being submitted.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Submitted by:


Signature

JON P. BUDAY, V-P

Name and Title (Print)

231-943-4114

Phone

231-943-4809

Fax

ANTHONY BUDAY INC., DBA A.B.I. MECHANICAL
Company Name

PO BOX 970

Company Address

TRAVERSE CITY MI 49685-0970

City,

State,

Zip

CORPORATION

Sole proprietorship/partnership/corporation

MICHIGAN

If corporation, state of corporation

BID PAGE

TERMS: Payment to be made as soon as possible after satisfactory acceptance of equipment.
Price quoted shall include all requested items including shipping and handling costs.

Timeframe for beginning work after Service Order issued: one week

Total Cost of Pipe Replacement Project: \$ 12,765.00
Twelve Thousand Seven Hundred Sixty-Five Dollars and no/100

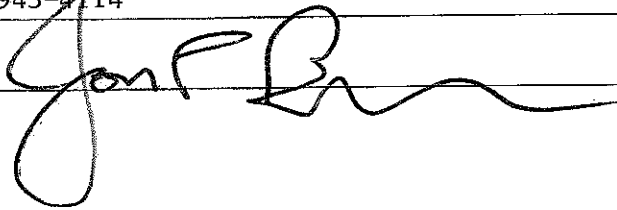
BY: Jon P. Buday DATE: 8/25/2011

TITLE: Vice-President

COMPANY: A.B.I. Mechanical

ADDRESS: P.O. Box 970 Traverse City MI 49685-0970

PHONE: 231-943-4714

SIGNATURE: 



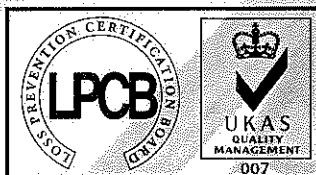
**PVC & CPVC
Schedule 80 Fittings,
Unions, Tank Adapters,
Expansion Joints
& Saddles**



**TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS**

April 8, 2011

SUPERSEDES ALL PREVIOUS EDITIONS



Quality Systems Certificate No. 293
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Assessed to ISO 9001: 2008

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Additional Technical Publications

THERMOPLASTIC VALVES • PRODUCT GUIDE & ENGINEERING SPECIFICATIONS	V-4
ACTUATED VALVES • PRODUCT GUIDE & ENGINEERING SPECIFICATIONS	AV-4
PVC SCHEDULE 40 FITTINGS • WEIGHTS & DIMENSIONS	40-4
CPVC CTS FITTINGS COPPER-TUBE-SIZE • WEIGHTS & DIMENSIONS	CTS-4
CPVC LABWASTE™ FITTINGS • TECHNICAL INFORMATION	LW-4
LXT FITTINGS & VALVES • WEIGHT & DIMENSIONS	LXT-4
THERMOPLASTIC FLANGES • TECHNICAL INFORMATION/WEIGHTS & DIMENSIONS	FL-4
PVC MOLDED DWV • TECHNICAL INFORMATION	MDWV-4
PVC INSERT FITTINGS FOR USE WITH POLYETHYLENE PIPE • WEIGHTS & DIMENSION	INS-4

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variations. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be ENGINEERED, INSTALLED and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

WARNING: Spears® Manufacturing Company DOES NOT RECOMMEND the use of thermoplastic piping products for systems to transport or store compressed air or gases, or the testing of thermoplastic piping systems with compressed air or gases, in above and below ground locations. The use of Spears® product in compressed air or gas systems automatically voids Spears® warranty for such products, and their use against our recommendation is entirely the responsibility and liability of the installer. Spears® Manufacturing Company will not accept responsibility for damage or impairment of its products, or other consequential or incidental damages caused by misapplication, incorrect assembly and/or exposure to harmful substances or conditions.

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR TEFLON PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing company recommends the use of Spears® BLUE 75™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

Viton® is registered trademark of DuPont Dow Elastomers.

Standards and Specifications

Molded Schedule 80 PVC products are manufactured to ASTM D 2467 for use with pipe manufactured to ASTM D 1785. Molded Schedule 80 CPVC products are manufactured to ASTM F 439 for use with pipe manufactured to ASTM F 441. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

Fabricated Schedule 80 PVC pressure fittings (part numbers ending with "F") are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. Schedule 80 CPVC fabricated fittings for use with pipe manufactured to ASTM F 441. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 80 PVC and CPVC products are manufactured from materials certified by NSF for use in potable water service.



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

Injection Molded Dimensions References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbow tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

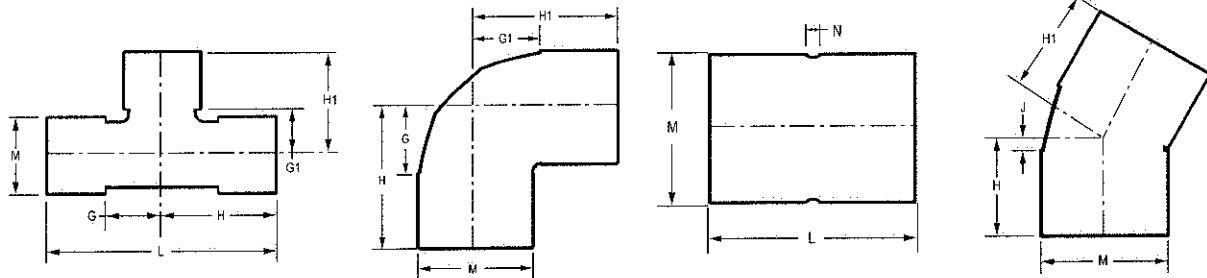
L = Overall length of fittings; ± 1/16 inch.
H = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows ± 1/4 inch, 14" & larger ± 3/4 inch; wyes ± 1/2 inch; tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.

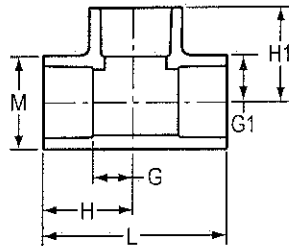
L = Overall length of fittings; ± 1/2 inch; 14" & larger ± 1 inch; wyes ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

Socket x Socket x Socket



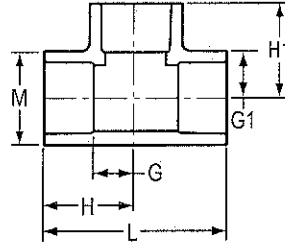
Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-002	801-002C	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04	.04
801-003	801-003C	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06	.06
801-005	801-005C	1/2	17/32	17/32	1-15/32	1-15/32	2-15/16	1-3/16	.11	.11
801-007	801-007C	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.16	.18
801-010	---	1	7/8	7/8	2	2	4	1-3/4	.27	---
---	801-010C	1	27/32	27/32	2	2	3-31/32	1-23/32	---	.29
801-012	801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.39	.40
801-015	801-015C	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.52	.57
801-020	801-020C	2	1-11/32	1-11/32	2-15/16	2-15/16	5-27/32	2-7/8	.80	.85
801-025	---	2-1/2	1-3/4	1-3/4	3-1/2	3-1/2	7-1/32	3-15/32	1.46	---
---	801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7	3-15/32	---	1.62
801-030	801-030C	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	4-3/16	2.16	2.43
801-040	801-040C	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.52	3.72

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



TEE

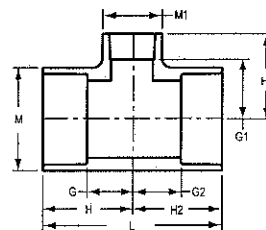
Socket x Socket x Socket (continued)



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-050	801-050C	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.03	6.47
801-050F	801-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	13.26	18.38
801-060	---	6	3-25/32	3-25/32	6-13/16	6-13/16	13-5/8	7-5/8	10.78	---
---	801-060C	6	4-1/32	4-1/32	7-3/32	7-3/32	14-5/32	7-19/32	---	12.19
801-080	801-080C	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.21	21.53
801-080F	801-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	22.84	30.91
801-100	801-100C	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	37.89	40.50
801-100F	801-100CF	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	39.82	51.41
801-120	801-120C	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	54.45	62.00
801-120F	801-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	67.13	83.37
801-140F	801-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	103.37	108.34
801-160F	801-160CF	16	13	13	21	21	42	17-11/16	144.87	144.86
801-180F	801-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	182.75	198.00
801-200F	801-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	284.24	249.75
801-240F	801-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	335.00	460.00

REDUCING TEE

Socket x Socket x Socket



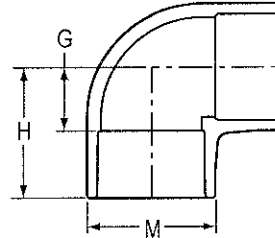
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-101	801-101C	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.14	.15
801-130	801-130C	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.20	.21
801-131	801-131C	1x1x3/4	23/32	27/32	23/32	1-27/32	1-27/32	1-27/32	3-11/16	1-11/16	1-3/8	.23	.24
801-157	---	1-1/4x1x3/4	11/16	1-1/16	5/8	1-15/16	2-1/16	1-7/8	3-13/16	2-1/8	1-7/16	.30	---
801-158	801-158C	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.33	.34
801-159	801-159C	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.39	.41
801-166 ¹	801-166C ¹	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/8	2-3/8	2-1/8	4-1/4	2-1/8	1-3/4	.42	.43

¹ Outlet sized with bushing

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES



90° ELBOW Socket x Socket



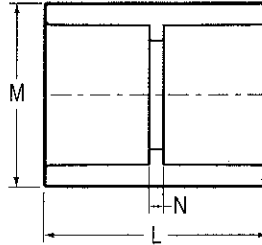
Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-002	806-002C	1/4	11/32	1	13/16	.03	.03
806-003	806-003C	3/8	15/32	1-1/4	31/32	.05	.05
806-005	806-005C	1/2	9/16	1-15/32	1-3/16	.08	.09
806-007	806-007C	3/4	5/8	1-11/16	1-7/16	.12	.12
806-010	806-010C	1	7/8	2	1-3/4	.20	.21
806-012	806-012C	1-1/4	1	2-9/32	1-31/32	.30	.31
806-015	806-015C	1-1/2	1-3/32	2-9/16	2-3/8	.39	.39
806-020	806-020C	2	1-13/32	2-15/16	2-7/8	.60	.66
806-025	806-025C	2-1/2	1-9/16	3-11/32	3-15/32	1.09	1.15
806-030	806-030C	3	2-1/32	3-31/32	4-3/16	1.57	1.67
806-040	806-040C	4	2-5/8	4-7/8	5-7/32	2.78	2.93
806-045F	---	4-1/2	6-1/2	9	5-5/8	4.58	---
806-050	806-050C	5	3	5-3/4	6-3/8	4.42	4.69
806-050F	---	5	5-1/2	8-1/2	6-5/16	6.23	---
---	806-050CF	5	6-9/16	9-9/16	6-5/16	---	12.04
806-060	---	6	3-3/4	6-3/4	7-19/32	7.47	---
---	806-060C	6	3-3/4	6-3/4	7-19/32	---	7.43
806-080	806-080C	8	4-3/4	8-3/4	9-3/4	14.31	15.83
806-080F	---	8	7-7/8	12-1/8	9-5/8	17.47	---
---	806-080CF	8	9-1/4	13-1/2	9-5/8	---	22.53
806-100	806-100C	10	5-25/32	11-11/32	12-1/16	28.19	28.74
806-100F	---	10	10	15-1/4	11-15/16	31.86	---
---	806-100CF	10	11-3/16	17-1/16	11-15/16	---	40.28
806-120	806-120C	12	6-7/8	13-7/16	14-5/16	43.94	47.93
806-120F	---	12	11-1/2	17-3/4	14-1/8	60.28	---
---	806-120CF	12	13-5/8	19-7/8	14-1/8	---	63.96
806-140F	---	14	13-1/2	20-1/2	15-1/2	82.49	---
---	806-140CF	14	16	23	15-1/2	---	86.72
806-160F	---	16	15-9/16	23-9/16	17-11/16	101.71	---
---	806-160CF	16	18-7/16	26-7/16	17-11/16	---	133.22
806-180F	---	18	17-11/16	26-11/16	19-7/8	167.49	---
---	806-180CF	18	20-7/8	29-7/8	19-7/8	---	175.62
806-200F	---	20	19-13/16	29-13/16	22-1/16	256.44	---
---	806-200CF	20	23-5/16	33-5/16	22-1/16	---	250.00
806-240F	---	24	24	36	26-7/16	403.66	---
---	806-240CF	24	28-1/4	40-1/4	26-7/16	---	---



PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

COUPLING (continued)

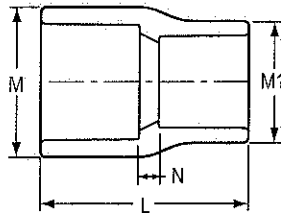
Socket x Socket



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
---	829-120CF	12	15-1/4	14-1/8	2-3/4	---	27.71
829-140	829-140C	14	14-7/16	15-5/8	3/8	29.70	28.11
829-140F	---	14	16-1/4	15-1/2	2-1/4	29.70	---
---	829-140CF	14	16	15-1/2	2	---	33.33
829-160F	829-160CF	16	18-5/8	17-11/16	2-5/8	42.38	42.93
829-180F	829-180CF	18	22	19-7/8	4	63.81	72.89
829-200F	829-200CF	20	23-3/4	22-1/16	3-3/4	86.58	99.56
829-240F	829-240CF	24	29-1/4	26-7/16	5-1/4	147.22	---

REDUCER COUPLING

Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-101	829-101C	3/4x1/2	1-31/32	1-13/32	1-3/16	7/32	.07	.07
829-130	829-130C	1x1/2	2-3/16	1-23/32	1-13/32	7/32	.11	.12
829-131	829-131C	1x3/4	2-13/32	1-23/32	1-13/32	1/4	.10	.10
829-166	829-166C	1-1/4x1/2	2-1/4	2-1/16	1-5/32	1/8	.14	.15
829-167	829-167C	1-1/4x3/4	2-19/32	2-3/32	1-5/8	3/8	.17	.18
829-168	829-168C	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17	.15
829-209	829-209C	1-1/2x1/2	2-27/32	2-11/32	1-3/16	19/32	.19	.20
829-210	829-210C	1-1/2x3/4	2-7/8	2-3/8	1-13/32	17/32	.21	.19
829-211	829-211C	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.26	.25
829-212	829-212C	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22	.23
829-247	829-247C	2x1/2	3-3/32	2-7/8	1-3/16	3/4	.29	.31
829-248	829-248C	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30	.32
829-249	829-249C	2x1	3-1/8	2-7/8	1-23/32	17/32	.33	.35
829-250	829-250C	2x1-1/4	3-11/32	2-7/8	2-3/32	19/32	.31	.33
829-251	829-251C	2x1-1/2	3-7/32	2-27/32	2-11/32	1/4	.30	.31
829-291	829-291C	2-1/2x1-1/2	3-11/16	3-1/2	2-11/32	9/16	.51	.51
829-292	829-292C	2-1/2x2	3-21/32	3-15/32	2-27/32	13/32	.48	.51
829-335	829-335C	3x1	4-7/16	4-1/8	2-7/8	1-7/16	1.00	1.04
829-337 ¹	829-337C ¹	3x1-1/2	4-13/32	4-5/32	2-7/8	1-3/16	.94	.96
829-338	829-338C	3x2	4	4-5/32	2-27/32	11/16	.68	.76



SPEARS® MANUFACTURING COMPANY

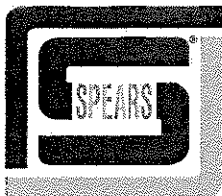
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15853 Olden Street • Sylmar, CA 91342

PO Box 9203 • Sylmar, CA 91392

(818) 364-1611 • <http://www.spearsmfg.com>

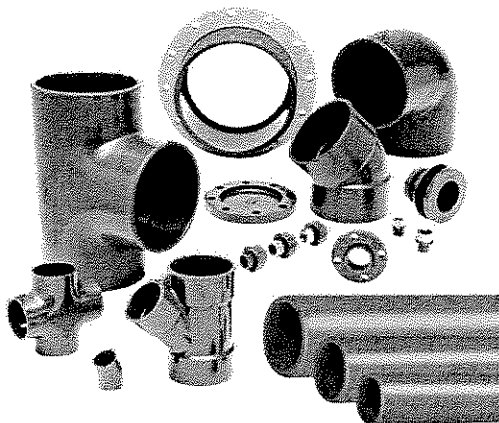




PVC SCHEDULE 80 FITTINGS AND PIPE

80-2-0610

Performance Engineered & Tested



SPEARS® Schedule 80 PVC product designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure obtaining the very best PVC fittings available.

Full 1/4" Through 12" Availability

Spears® comprehensive line of PVC injection molded fittings and extruded pipe offers a variety of configurations in sizes 1/4" through 12". Schedule 80 fittings are manufactured to ASTM D 2467 and pipe is produced to ASTM D 1785. Spears® exclusive CL150 Flanges are produced in sizes 1/2" - 18" with ANSI B16.5 bolt patterns, plus numerous Unions, Saddles, Transition and Specialty fittings in a variety of sizes.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings and pipe never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140° F (60° C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

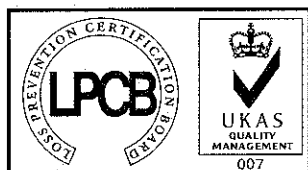
Extra large, hard-to-find, and custom configurations are fabricated from NSF Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity; see SPEARS® THERMOPLASTIC VALVES PRODUCT GUIDE & ENGINEERING SPECIFICATIONS (V-4).



Quality Systems Certificate No. 293
Corporate Facilities, Sylmar, CA
Assessed to ISO 9001: 2008

Sample Engineering Specifications

All PVC Schedule 80 pipe and fittings shall be produced by Spears® Manufacturing Company from PVC Type I, cell classification 12454, conforming to ASTM Standard D 1784. All PVC injection molded Schedule 80 fittings and extruded pipe shall be Certified for potable water service by NSF International. All Schedule 80 fittings shall be manufactured in strict compliance to ASTM D 2467 and Schedule 80 pipe shall be manufactured in strict compliance to ASTM D 1785. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings. All PVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5 and rated for a maximum internal pressure of 150 psi, non-shock at 73° F.

PROGRESSIVE PRODUCTS FROM SPEARS® INNOVATION & TECHNOLOGY

Visit our web site: www.spearsmfg.com

PVC Thermoplastic Pipe Temperature Pressure De-Rating

To determine the maximum internal pressure rating at an elevated temperature, simply multiply the pipe pressure rating at 73° F by the percentage specified for the desired temperature.

System Operating Temperature ° F (° C)	73 (23)	80 (27)	90 (32)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)
PVC	100%	90%	75%	62%	50%	40%	30%	22%

NOTE: Valves, Unions and Specialty Products have different elevated temperature ratings than pipe.

Typical Material Properties

Properties	ASTM Test Method	PVC
Mechanical Properties, 73°F		
Specific Gravity, g/cm ³	D 792	1.41
Tensile Strength, psi	D 638	7,200
Modulus of Elasticity, psi	D 638	440,000
Compressive Strength, psi	D 695	9,000
Flexural Strength, psi	D 790	13,200
Izod Impact, notched, ft-lb / in	D 256	.65
Thermal Properties		
Heat Deflection Temperature, ° F at 66 psi	D 648	165
Thermal Conductivity, BTU / hr / sq ft / ° F / in	C 177	1.2
Coefficient of Linear Expansion, in / in / ° F	D 696	3.1 x 10 ⁻⁵
Flammability		
Limited Oxygen Index, %	D 2863	43
UL 94 Rating	94V-0	
Other Properties		
Water Absorption, % 24 hr.	D 570	.05
Industry Standard Color	White / Dark Gray	
ASTM Cell Classification	D 1784	12454
NSF Potable Water Approved	YES	


PVC Chemical Resistance

PVC is generally inert to most mineral acids, bases, salts and paraffinic hydrocarbon solutions. For more information on PVC chemical resistance refer to the Chemical Resistance of Rigid Vinyls Based on Immersion Test, published by the GEON® company.


NOT FOR USE WITH COMPRESSED AIR OR GASES

Spears® Manufacturing Company DOES NOT RECOMMEND the use of thermoplastic piping products for systems to transport or store compressed air or gases, or the testing of thermoplastic piping systems with compressed air or gases in above and below ground locations. The use of our product in compressed air or gas systems automatically voids any warranty for such products, and its use against our recommendation is entirely the responsibility and liability of the installer.

WARNING: DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY.



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 (818) 364-1611 • www.spearsmfg.com



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 Sylmar (Los Angeles), CA 91342
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 Fax (818) 367-3014

ROCKY MOUNTAIN
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 Denver, CO 80238
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 Fax (303) 375-9546

UTAH
 5395 West 1520 South
 Salt Lake City, UT 84104
 (303) 371-9430 • (800) 777-4154
 Fax (303) 375-9546

SOUTHEAST
 4205 Newpoint Pl., Suite 100
 Lawrenceville (Atlanta), GA 30043
 (678) 985-1263 • (800) 662-6326
 Fax (678) 985-5642

MIDWEST
 1 Gateway Ct., Suite A
 Bollingbrook (Chicago), IL 60440
 (630) 759-7529 • (800) 662-6330
 Fax (630) 759-7515

NORTHWEST
 4103 C St. NE Suite 200
 Auburn (Seattle), WA 98002
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SOUTH CENTRAL
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 Flower Mound, TX 75028
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 Fax (469) 528-3001

NORTHEAST
 590 Industrial Dr., Suite 100
 Lewisberry (Harrisburg), PA 17339-9532
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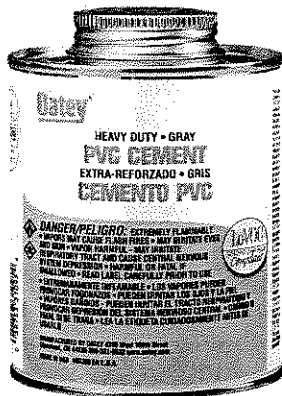
TECHNICAL SPECIFICATION

HEAVY DUTY GRAY PVC SOLVENT CEMENT

Page 1 of 2



TECHNICAL SPECIFICATION: Oatey Heavy Duty Gray PVC Solvent Cement is recommended for solvent welding all schedules and classes of PVC pipe and fittings up to 12" diameter, and non-pressure applications up to 18" with interference fit. Heavy Duty Gray PVC Solvent Cement can be used for potable water, sewer and drain, waste and vent systems. This product is compliant with California South Coast Air Quality Management District (SCAQMD) Rule 1168 and Ozone Transport Commission (OTC) regulations for Volatile Organic Compound emission levels. **Note: This product is not for use in a system using or being tested by compressed air or gases.**



INGREDIENTS (CAS Number)

Acetone(67-64-1)
Amorphous Silica (112945-52-5)
Cyclohexanone (108-94-4)
Gray Colorant (N/A)
Methyl Ethyl Ketone (78-93-3)
PVC Resin (9002-86-2)
Tetrahydrofuran (109-99-9)

LISTINGS



NSF Standard 61
for PW, DWV, SEWER



IAPMO Listed

PHYSICAL/CHEMICAL PROPERTIES

Appearance	Gray Liquid
Viscosity	min. 1600 cps @ 73° F ± 2° F
Density	7.86 ± 0.2 lbs/gallon
Lap Shear Strength (minimum per ASTM Standards)	
2 hours	250 psi
16 hours	500 psi
72 hours	900 psi
Set Up Time	
30° F to 50° F	4 – 5 minutes
50° F to 70° F	2 – 3 minutes
70° F to 90° F	1 – 2 minutes
Shelf Life	3 years from manufacture date

Meets ASTM Standard D 2564

Maximum VOC per SCAQMD 1168/316A or BAAQMD
Method 40: 510 g/L

PRODUCT NUMBER	SIZE	PACK	CARTON WEIGHT
31093	4 oz.	24	9 lbs.
31094	8 oz.	24	16 lbs.
31095	16 oz.	24	31 lbs.
31105	32 oz.	12	29 lbs.
31118	Gallon – Wide Mouth	6	54 lbs.



4700 W. 160th St.
Cleveland, OH 44135
1-800-321-9532
1-800-321-9535
www.oatey.com

TECHNICAL SPECIFICATION

HEAVY DUTY GRAY PVC SOLVENT CEMENT

Page 2 of 2



DIRECTIONS FOR USE

Read all directions carefully before using this product.

- Do not breathe vapors. Use only in well ventilated area. If forced air ventilation is used, be sure it does not cause a fire hazard from solvent vapors. If adequate ventilation cannot be provided, wear a NIOSH-approved respirator for organic solvents.
- Do not use or store near heat, sparks, or flames. Do not smoke, eat or drink when using. Do not take internally. Vapors may accumulate in low places and may ignite explosively.
- Store and use at temperatures between 40°F and 110°F. At temperatures outside of this range, special care must be taken to prepare good joints and prevent exposures to solvents.
- Stir or shake before using; if jelly-like, don't use. Keep container closed when not in use.
- Avoid eye and skin contact - wear safety glasses with side shields and wear rubber gloves.
- Do not thin.

1. Square pipe ends and remove all burrs and dirt.
2. Check dry fit of pipe and fitting. Pipe should easily go 1/3 of the way into the fitting. If the pipe bottoms, it should be snug.
3. Use a suitable applicator at least 1/2 the size of the pipe diameter. For larger size pipe systems use a natural bristle brush or roller.
4. Clean pipe and fitting with a listed primer.
5. Apply liberal coat of cement to pipe to the depth of the socket; leave no uncoated surface.
6. Apply a thin coat of cement to inside of fitting; avoid puddling of cement. Puddling can cause weakening and premature failure of pipe or fitting. Apply a second coat of cement to the pipe.
7. Assemble parts QUICKLY. Cement must be fluid. If cement surface has dried, recoat both parts.
8. Push pipe FULLY into fitting using a 1/4 turning motion until pipe bottoms.
9. Hold pipe and fitting together for 30 seconds to prevent pipe push-out - longer at low temperatures. Wipe off excess.
10. Allow 15 minutes for good handling strength and 2 hours cure time at temperatures above 60°F before hydrostatic pressure testing up to 180 psi. Longer cure times may be required at temperatures below 60°F or with pipe diameters over 3". DO NOT TEST WITH AIR.

This product is not for use with caustic or acidic chemical solutions. Consult Oatey Technical Department for more information.

PRECAUTIONS

Read all information carefully before using this product.

DANGER: EXTREMELY FLAMMABLE. VAPORS MAY CAUSE FLASH FIRES. MAY IRRITATE EYES AND SKIN. VAPOR HARMFUL. MAY IRRITATE RESPIRATORY TRACT AND CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. HARMFUL OR FATAL IF SWALLOWED.

May cause irritation to eyes, skin, and nose, throat, and respiratory tract. May cause coughing, sore throat, difficulty breathing, headache, dizziness, nausea. Long term repeated overexposures to solvents may cause damage to the brain, nervous system, reproductive system, respiratory system, mucous membranes, liver, and kidneys.

KEEP OUT OF REACH OF CHILDREN.

FIRST AID: If swallowed, **DO NOT INDUCE**

VOMITING. Drink water and call a doctor or poison control center immediately. This product may be aspirated into the lungs and cause chemical pneumonitis, a potentially fatal condition. If contact with eyes, flush with water for 15 minutes and seek medical attention if irritation persists. If contact with skin, flush with water and then use baby oil or Oatey Hand Cleaner to remove residue. If inhaled and ill feelings develop, get fresh air and obtain medical attention if ill feelings persist. **FOR EMERGENCY FIRST AID INSTRUCTIONS CALL 1-877-740-5015.**

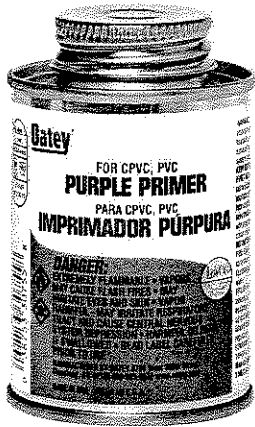
FIRE: Use dry chemical, foam, or carbon dioxide extinguisher. Water spray may be applied to reduce potential vapors or for cooling. Burning liquid extinguished with water will float and may re-ignite on surface of water. **SPILLS:** Remove all sources of ignition and ventilate area. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with absorbent material. Put absorbent material in covered, labeled metal containers. Dispose of in accordance with local regulations.

A fire or explosion may result if dry granular calcium hypochlorite is used to disinfect plastic piping systems and is exposed to organic vapors found in solvent cements, cleaners or primers. Do not disinfect piping system with dry granules. Do not store dry granular calcium hypochlorite near solvent cements, cleaners or primers. **DO NOT REUSE EMPTY CONTAINER. KEEP OUT OF REACH OF CHILDREN.**

Refer to material safety data sheet for more information.

Before purchase and use of a product, review the product application and be certain the product, installation and use will be in compliance with any applicable codes and regulations.

TECHNICAL SPECIFICATION: Oatey Purple Primer is a purple-tinted primer recommended for use with PVC and CPVC pipe and fittings. Purple Primer is formulated to remove dirt and oil from the surface of the piping, as well as soften the piping in preparation for solvent welding. Purple pigment provides verification that primer has been applied to the pipe surface. This product is compliant with California South Coast Air Quality Management District (SCAQMD) Rule 1168 and Ozone Transport Commission (OTC) regulations for Volatile Organic Compound emission levels. **Note: This product is not for use in a system using or being tested by compressed air or gases.**



INGREDIENTS (CAS Number)

- Acetone (67-64-1)
- Cyclohexanone (108-94-1)
- Methyl Ethyl Ketone (78-93-1)
- Tetrahydrofuran (109-99-9)
- Red Dye (4477-79-6)
- Violet Dye (81-48-1)

LISTINGS



NSF Standard 61
for PW, DWV, SEWER



IAPMO Listed

Meets ASTM Standard F 656

PHYSICAL/CHEMICAL PROPERTIES

Appearance Purple Liquid
Density 6.97 ± 0.2 lbs/gallon
Shelf Life 3 years from manufacture date

Maximum VOC per SCAQMD 1168/316A or BAAQMD
Method 40: 550 g/L

PRODUCT NUMBER	SIZE	PACK	CARTON WEIGHT
30755	4 oz.	24	8 lbs.
30756	8 oz.	24	14 lbs.
30757	16 oz.	24	25 lbs.
30758	32 oz.	12	24 lbs.
30759	Gallon	6	46 lbs.



4700 W. 160th St.
Cleveland, OH 44135
1-800-321-9532
1-800-321-9535
www.oatey.com

TECHNICAL SPECIFICATION

PURPLE PRIMER

Page 2 of 2



DIRECTIONS FOR USE

Read all directions carefully before using this product.

• Do not breathe vapors. Use only in well ventilated area. If forced air ventilation is used, be sure it does not cause a fire hazard from solvent vapors. If adequate ventilation cannot be provided, wear a NIOSH-approved respirator for organic solvents. • Do not use or store near heat, sparks, or flames. Do not smoke, eat or drink when using. Do not take internally. Vapors may accumulate in low places and may ignite explosively. • Store and use at temperatures between -15°F and 110°F. • Keep container closed when not in use. • Avoid eye and skin contact - wear safety glasses with side shields and wear rubber gloves. • **HANDLE WITH CARE! WILL STAIN MOST MATERIALS AND SURFACES.** • Do not thin.

1. Square pipe ends and remove all burrs and dirt.
2. Check dry fit of pipe and fitting. Pipe should easily go 1/3 of the way into the fitting. If the pipe bottoms, it should be snug.
3. Use a suitable applicator at least 1/2 the size of the pipe diameter. For larger size pipe systems use a natural bristle brush or roller.
4. Apply thoroughly to outside surface of the pipe to the depth of the fitting and inside of the fitting socket.
5. Use appropriate solvent cement for the pipe being joined. **DO NOT TEST WITH AIR.**

This product is not for use with caustic or acidic chemical solutions. Consult Oatey Technical Department for more information.

PRECAUTIONS

Read all information carefully before using this product.

DANGER: EXTREMELY FLAMMABLE. VAPORS MAY CAUSE FLASH FIRES. MAY IRRITATE EYES AND SKIN. VAPOR HARMFUL. MAY IRRITATE RESPIRATORY TRACT AND CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. HARMFUL OR FATAL IF SWALLOWED.

May cause irritation to eyes, skin, and nose, throat, and respiratory tract. May cause coughing, sore throat, difficulty breathing, headache, dizziness, nausea. Long term repeated overexposures to solvents may cause damage to the brain, nervous system, reproductive system, respiratory system, mucous membranes, liver, and kidneys. **KEEP OUT OF REACH OF CHILDREN.**

FIRST AID: If swallowed, **DO NOT INDUCE VOMITING.** Drink water and call a doctor or poison control center immediately. This product may be aspirated into the lungs and cause chemical pneumonitis, a potentially fatal condition. If contact with eyes, flush with water for 15 minutes and seek medical attention if irritation persists. If contact with skin, wash with soap and water. If inhaled and ill feelings develop, get fresh air and obtain medical attention if ill feelings persist. **FOR EMERGENCY FIRST AID INSTRUCTIONS CALL 1-877-740-5015.**

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Refer to material safety data sheet for more information.

Before purchase and use of a product, review the product application and be certain the product, installation and use will be in compliance with any applicable codes and regulations.



MECHANICAL CONTRACTORS

CORPORATE RESOLUTION

I, the undersigned Corporate Secretary of ANTHONY BUDAY, INC., a Michigan corporation, duly organized and existing under the laws of the State of Michigan, having its principal place of business at 1289 S M-37 P.O. Box 970, Traverse City, Michigan, hereby certify that the following is a true statement of the resolution adopted by the Board of Directors of said corporation held on May 27, 1977 at 3:00 p.m., at which a quorum was present and acting throughout. I further certify that the resolutions reflected in said minutes are still in full force and effect.

"RESOLVED", That all contracts, leases, deeds, mortgages, or other documents relating to the regular business of the Corporation shall be executed in the Corporation's name by its President or his duly authorized agent or such other officer from time to time authorized by the Board.

IN WITNESS WHEREOF, I hereunto subscribe my name this 11th day of July, 1988.

A handwritten signature in black ink, appearing to read 'Anthony Buday', is written over a horizontal line.

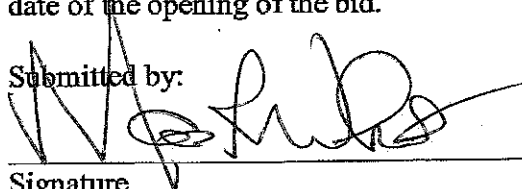
Anthony Buday, Corporate Secretary

Bidder understands that the City reserves the right to accept any or all bids in whole or part and to waive irregularities in any bid in the best interest of the City. The bid will be evaluated and awarded on the basis of the best value to the City. The criteria used by the City may include, but will not be limited to: ability, qualifications, timeframe, experience, price, type and amount of equipment, accessories, options, insurance, permits, licenses, other pertinent factors and overall capability to meet the needs of the City. The City is sales tax exempt – Government.

Please direct ALL questions to: Scott Blair, OMI Project Manager, at 231-922-4922 prior to the bid being submitted.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Submitted by:


Signature

Maurice R. White, President
Name and Title (Print)

231-941-1215
Phone

231-941-5007
Fax

D&W Mechanical
Company Name

1266 Industry Drive, Suite A
Company Address

Traverse City, MI 49696
City, State, Zip

Corporation
Sole proprietorship/partnership/corporation

Michigan
If corporation, state of corporation

BID PAGE

TERMS: Payment to be made as soon as possible after satisfactory acceptance of equipment.
Price quoted shall include all requested items including shipping and handling costs.

Timeframe for beginning work after Service Order issued: 1 1/2 weeks

Total Cost of Pipe Replacement Project: \$20,489.00

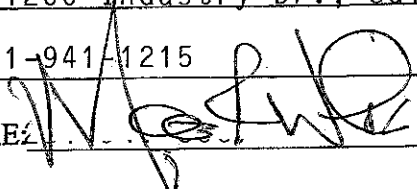
BY: Maurice R. White DATE: August 25, 2011

TITLE: President

COMPANY: D&W Mechanical

ADDRESS: 1266 Industry Dr., Suite A. Traverse City, MI 49696

PHONE: 231-941-1215

SIGNATURE: 

Bidder - Please complete and return

BID SUMMARY

TITLE: Traverse City Regional Wastewater Treatment Plant Piping Replacement Project

DUE DATE: Thursday, August 25, 2011 at 2 PM

Having carefully examined the attached specifications and any other applicable information, the undersigned proposes to furnish all items necessary for and reasonably incidental to the proper completion of this bid. Bidder submits this bid and agrees to meet or exceed all requirements and specifications unless otherwise indicated in writing and attached hereto.

Bidder certifies that as of the date of this bid the Company or he/she is not in arrears to the City of Traverse City for debt or contract and is in no way a defaulter as provided in Section 152, Chapter XVI of the Charter of the City of Traverse City.

Bid forms are to be completed, including bid sheet, and submitted. Items not meeting specifications must be noted described fully. Additional sheets may be used and submitted with bid.

Bidder understands and agrees, if selected as the successful Bidder, to accept a purchase/service order and to provide proof of the required insurance.

Bidder is also required to submit, with the bid, the latest printed manufacturer's specifications and advertising literature on the equipment (including components) to be provided. Completed unit MUST be equipped in compliance with all applicable ANSI, OSHA standards and regulations in effect at time of manufacture. Bidder understands and agrees that all applicable federal, state and local codes, rules and regulations must be complied with.

The Bidder shall comply with all applicable federal, state, local and building codes, laws, rules and regulations and obtain any required permits for this work.

Pre-delivery Inspection: Successful bidder shall make a complete inspection of vehicle (and/or equipment) to insure it meets specifications. Acceptance shall be subject to complete inspection and approval of the City.

Terms: Payment will be made as soon as possible after delivery/acceptance of equipment. Price quoted shall include all costs of providing equipment, delivery and any necessary installation.

The Bidder certifies that it is in compliance with the City's Nondiscrimination Policy as set forth in Administrative Order No. 47 and Chapter 605 of the City's Codified Ordinances.

Bidder understands that the City reserves the right to accept any or all bids in whole or part and to waive irregularities in any bid in the best interest of the City. The bid will be evaluated and awarded on the basis of the best value to the City. The criteria used by the City may include, but will not be limited to: ability, qualifications, timeframe, experience, price, type and amount of equipment, accessories, options, insurance, permits, licenses, other pertinent factors and overall capability to meet the needs of the City. The City is sales tax exempt – Government.

Please direct ALL questions to: Scott Blair, OMI Project Manager, at 231-922-4922 prior to the bid being submitted.

Bidder agrees that the bid may not be withdrawn for a period of thirty (30) days from the actual date of the opening of the bid.

Submitted by:



Signature

Darrell Boerema - President

Name and Title (Print)

616-538-3231

Phone

616-538-2797

Fax

Franklin Holwerda Company

Company Name

2509 29th Street SW

Company Address

Wyoming

City,

MI

State,

49519

Zip

Corporation

Sole proprietorship/partnership/corporation

Michigan

If corporation, state of corporation

BID PAGE

TERMS: Payment to be made as soon as possible after satisfactory acceptance of equipment. Price quoted shall include all requested items including shipping and handling costs.

Timeframe for beginning work after Service Order issued: 2 weeks

Total Cost of Pipe Replacement Project: \$ 18,484.00

BY: Darrell Boerema DATE: 8-25-11

TITLE: President

COMPANY: Franklin Holwerda Company

ADDRESS: 2509 29th Street SW Wyoming, MI 49519

PHONE: 616-538-3231

SIGNATURE: 