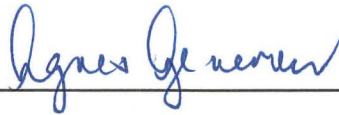


PUBLIC UTILITIES DEPARTMENT
CITY OF SAN DIEGO

APPROVED MATERIALS LIST
FOR WASTEWATER



AGNES GENEROSO
DEPUTY DIRECTOR

WASTEWATER COLLECTION



SURRAYA RASHID
DEPUTY DIRECTOR

ENGINEERING & PROGRAM MANAGEMENT



RANIA AMEN
ASSISTANT DIRECTOR
SYSTEM MANAGEMENT & OPERATIONS

May 2018

PUBLIC UTILITIES DEPARTMENT

CITY OF SAN DIEGO

APPROVED MATERIALS LIST

FOR MUNICIPAL SEWER

May 2018

SUBJECT	SPEC. REF	MANUFACTURER (Series/Model No.)	SELECTION	ADDITIONAL REQUIREMENTS
A. Sewer Pipes				
1. Vitrified Clay Extra Strength Pipe and Fittings	207-8 ASTM C 700	Pacific Clay Pipe	<input type="checkbox"/>	Plain End and Bell and Spigot Type Pipe
		Gladdin and McBean	<input type="checkbox"/>	
		Mission Clay	<input type="checkbox"/>	
2. PVC Sewer Pipe and Fittings— Gasket Joints 4 thru 15 inches diameter	207-17 ASTM D 3034 SDR-35	J-M	<input type="checkbox"/>	Green Bell
		CertainTeed	<input type="checkbox"/>	
		Vinyltech Corporation	<input type="checkbox"/>	Phoenix, Arizona Plant
		Northern Pipe Products	<input type="checkbox"/>	Fargo, North Dakota Plant
		Diamond Plastics Corporation	<input type="checkbox"/>	Casa Grande, Arizona (primary plant) Grand Island, Nebraska (secondary plant)
		North American Pipe Corporation	<input type="checkbox"/>	Yucca, Arizona (primary plant) Wichita Falls, Texas (secondary plant)

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Revised May 2018

SUBJECT	SPEC. REF	MANUFACTURER (Series/Model No.)	SELECTION	ADDITIONAL REQUIREMENTS
A. Sewer Pipes (cont.)				
3. PVC Sewer Pipe and Fittings—Gasket Joints 18 thru 36 inch diameter	207-17 ASTM F 679	J-M	<input type="checkbox"/>	*Up to 30-inch pipe
		CertainTeed	<input type="checkbox"/>	*Up to 30-inch pipe
		Vinyltech Corporation	<input type="checkbox"/>	Phoenix, Arizona Plant *18-inch pipe only
		Northern Pipe Products	<input type="checkbox"/>	Fargo, North Dakota Plant *up to 24-inch pipe
		Diamond Plastics Corporation	<input type="checkbox"/>	Casa Grande, Arizona (primary plant) Grand Island, Nebraska (secondary plant)
		North American Pipe Corporation	<input type="checkbox"/>	Yucca, Arizona (primary plant) Wichita Falls, Texas (secondary plant)
4. Fusible PVC Sewer Pipe—4 thru 36 inch diameter	*209-8 AWWA C900 (4"-12") AWWA C905 (14"-36")	Underground Solutions	<input type="checkbox"/>	Yucca, AZ Plant
5. Fiberglass Reinforced Polymer Mortar (FRPM) Sewer Pipe	207-20, ASTM D3262 (gravity sewer)	US Composite Pipe South - Flowtite (FRPM) Pipe	<input type="checkbox"/>	Zachary, Louisiana Plant *Resin: Only vinyl ester resin is approved. Use of any other resin is strictly prohibited.
6. Centrifugally Cast Fiberglass Reinforced Polymer Mortar (CCFRPM) Sewer Pipe	207-20, ASTM D3262 (gravity sewer)	Hobas Pipe USA	<input type="checkbox"/>	Houston, Texas Plant *Direct bury installations
7. Polymer Concrete Sewer Pipe (4 thru 36 inch diameter)	ASTM D6783	Meyer Polycrete Pipe	<input type="checkbox"/>	Zachary, Louisiana Plant *Resin: Only Dion Impact 9133-055 Epoxy Vinyl Ester Resin is approved. Use of any other resin is strictly prohibited. *Microtunneling and pipe jacking applications

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B. Sewer Laterals				
1. Vitrified Clay Pipe	207-8 ASTM C-700	Gladdin and McBean	<input type="checkbox"/>	Plain End and Bell and Spigot Type Pipe
		Mission Clay	<input type="checkbox"/>	
2. PVC Pipe	207-17 ASTM D 2751	J-M	<input type="checkbox"/>	
		CertainTeed	<input type="checkbox"/>	
		Vinyltech	<input type="checkbox"/>	
3. ABS (Acrylonitrile-butadiene-styrene) Solid Wall Pipe	207-15 ASTM D 2751	Colby	<input type="checkbox"/>	
		Standard Plastics	<input type="checkbox"/>	
C. Sewer Fittings				
1. Vitrified Clay Fittings	207-8 ASTM C-700	Gladdin and McBean	<input type="checkbox"/>	Plain End and Bell and Spigot Type Pipe
		Mission Clay	<input type="checkbox"/>	
2. PVC Fittings	207-17 ASTM D-3034 or ASTM F 679 depending upon size	Vassallo	<input type="checkbox"/>	Shelby Township, Michigan
		Multi-Fittings	<input type="checkbox"/>	
		G.P.K.	<input type="checkbox"/>	
		J-M	<input type="checkbox"/>	
		Plastic Trends Inc: Series G (SDR 35), Series H (SDR 26), Series C pressure sewer (DR-18 Class C-900 or C-905)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3. ABS Fittings	207-15	U-Brand	<input type="checkbox"/>	

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D. Sewer Manhole Components				
1. Precast Manhole & Precast Base	ASTM C 478, 201-10	Mar-Con Products	<input type="checkbox"/>	San Marcos, California
		Oldcastle Precast, Inc	<input type="checkbox"/>	San Diego, CA Plant Riverside, CA Plants
		Olson Precast Company	<input type="checkbox"/>	Rialto, California
2. Manhole Covers and Frames		Pamrex & Pamtight (Pacific Pipeline Supply (or Pam Saint Gobain)	<input type="checkbox"/>	Saint Gobain Canalizaco, Ituana, Brazil Plant (All components shall be ductile iron.)
		National Casting (NC2531)	<input type="checkbox"/>	Trident Export Corporation 58, N.S. Road Liluah, Howrah 711 204, India Plant
E. Sewer Rehabilitation Products				
1. PE Solid Pipe	500-1.3	Chevron Plexco	<input type="checkbox"/>	Reno, Nevada Plant
		Chevron Phillips Driscopipe	<input type="checkbox"/>	Watsonville Plant
2. Cured-in-Place	500-1.4	Inliner-Fabric Tube: Polyester felt Resin: Dow Derakane 411 Vinyl Ester	<input type="checkbox"/>	Houston, Texas Plant Memphis, Tennessee Plant
		Insituform-Fabric Tube: Polyester felt Resin #1: Shell Epon 9215 epoxy Resin #2: Interplastics VE8319 Vinyl Ester	<input type="checkbox"/>	
		National Liner	<input type="checkbox"/>	Martinsville, Virginia
		Applied Felts Polyester felt AOC Vipel L704-Net-11 Isophthalic polyester resin or AOC Vipel L010-PPA Vinyl Ester resin	<input type="checkbox"/>	Perris, California Perris, California
3. Profiled PVC	500-1.5	Danby	<input type="checkbox"/>	Toronto, Canada Plant
4. Deformed Solid Wall PE	500-1.7	Hydroconduit	<input type="checkbox"/>	Roaring Springs, Texas Plant
		Uliner—Navacor Resin	<input type="checkbox"/>	Houston, Texas Plant

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SUBJECT	SPEC. REF	MANUFACTURER (Series/Model No.)	SELECTION	ADDITIONAL REQUIREMENTS
E. Sewer Rehabilitation Products (cont.)				
5. CCFRPM	500-1.8	Hobas Pipe	<input type="checkbox"/>	Birmingham, New York Plant Waco, Texas Plant
6. Folded Solid Wall PVC	500-1.10	America Plastic AMLiner Insituform Nupipe	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
7. Machine Spiral Wound PVC (November 2001)	500-1.13	RIB LOC	<input type="checkbox"/>	Gepps Gross, South Australia Plant
8. MultiPlexx Liner System, Type PVCP	500-2 Cured-In-Place Manhole Rehabilitation	Product: MultiPlexx Liner System by Terre Hill Composites MultiPlexx Liner System: Type/Model PVCP 20-28≥88 mils consisting of: PVC Liner: 20 mils PVC Polyester Fleece Backing: 10 oz/yd ² Fiberglass Backing: 18 oz/yd ² Resin: EPON 9215 at 0.0005 gallons per square foot of manhole area Epoxy: Application to substrate surface of manhole to be rehabilitated.	<input type="checkbox"/>	Manufacturing Plant Site: Terre Hill Composites, Division of Terre Hill Concrete Products, Terre Hill, Pennsylvania Resin: Manufactured by Resolution Performance Products Installers: Tejon Constructors, Inc.

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E. Sewer Rehabilitation Products (cont.)				
9. Raven 405 Epoxy Lining System	500-2	Product: Raven 405 Epoxy Liner Systems by Raven Lining Systems, Inc. Raven 405 is a solvent-free 100% solids, extra high-build epoxy which can be applied over 200 mils in a single application. Light blue is the standard color when applied. Theoretical coverage averages 40 ft ² per gallon at 40-mil thickness.	<input type="checkbox"/>	Raven 405 Epoxy is manufactured by Raven Lining Systems, Inc. Plant is located at 1024 North Lansing Avenue, Tulsa, Oklahoma 74106 Product shall be applied by an applicator approved and certified by Raven Lining Systems.
10. Zebron Epoxy 9000/Polyurethane 386 Lining System	500-2	Zebron Low Temperature Epoxy 9000 Primer, and Polyurethane 386. The average coverage of Zebron Polyurethane 386 (a 100 percent solids, high-build polyurethane) is 12 ft ² per gallon at thickness of 125 mils in one coat. Epoxy 9000 is a 100 percent solids, moisture tolerant, capable of spray application of 5 mils thickness in one continuous coat.	<input type="checkbox"/>	The Low Temperature Epoxy 9000 is manufactured by a third party. However, Polyurethane 386 is Zebron's proprietary product. Zebron Epoxy 9000 and Polyurethane 386 are processed at: 1141 N Cosby Way Units H, I & J Anaheim, CA 92806 (800) 824-4214
11. Utilithane Epoxy-Polyurethane	500-2	Prime Coatings Incorporated Utilithane 1600 Polyurethane and Utilithane 900 Low Temperature Epoxy are proprietary products of Prime Coatings Inc. This product is spray applied using airless spray equipment. Utilithane 1600 is dense polyurethane with no VOCs, and Utilithane 900 Epoxy is a two component product formulated as a "Fast-Set" or "Slow-Set".	<input type="checkbox"/>	Address of Prime Coatings Inc. is: P.O. Box 3056 Tustin, California PlantA 92781 Phone (714) 963-9583 Email: utilithane@sbcglobal.net Website: www.utilithane.com

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E. Sewer Rehabilitation Products (cont.)				
12. Sancon 100 Polyurethane	500-2	Sancon 100 Epoxy Primer and Sancon 100 Polyurethane spray applied liner manufactured by PTM&W Industries at 10640 South Painter Ave, Santa Fe Springs, CA 90670 This product is spray applied using airless spray equipment	<input type="checkbox"/>	Sancon Engineering Inc. 5841 Engineer Dr Huntington Beach, California Plant 92649 (714) 891-2323 (800) 726-2664
13. Saueresin SewerGard No. 210X Epoxy Lining System	500-2	Saueresin SewerGard No. 210X Epoxy Lining System	<input type="checkbox"/>	Pittsburg, PA Plant
14. PVC Sheet Lining Systems	500-2	Ameron T-Lock and Arrow-Lock	<input type="checkbox"/>	Brea, CA Plant
15. Tophat Lateral Connection Sealing System		Cosmic Tophat Lateral Connection Sealing System	<input type="checkbox"/>	Kasten, Austria Plant *Only ATLAC E-NOVA RE 3475 Vinyl Ester Resin with ECR fiberglass mat is approved.
F. Miscellaneous				
1. Flexible Couplings		Smith-Blair 441 Rockwell APAC (331,323,335), (CDC-EC) DFW Plastics, Inc.	<input type="checkbox"/> <input type="checkbox"/>	
2. Transition Gaskets	ASTM D 1869	Newby Rubber, Inc.	<input type="checkbox"/>	
3. High-Deflection Couplings 4 thru 12 inches diameter		CertainTeed	<input type="checkbox"/>	
4. Flexible Saddles (Wyes)		DFW Plastics, Inc.	<input type="checkbox"/>	
5. Transition Coupling with Shear Shield	ASTM C 1173	Mission Rubber Company, Flex-Seal ARC with 304SS shear band	<input type="checkbox"/>	Mission Rubber Company 1660 Leeson Lane Corona, CA 92878-2349 1-800-854-9991

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F. Miscellaneous (cont.)				
6. Repair Couplings		Fenco Inc Series 5000 RC (Repair Coupling) with 316 stainless steel nut and bolt clamps (with 300 stainless steel sheer ring) Series 1000 RC (Repair Coupling) with 301 stainless steel worm gear clamps (with 300 stainless steel sheer ring) Joints Coupling Inc Banded Calder Repair Couplings	<input type="checkbox"/> <input type="checkbox"/>	Davison, Michigan Plant El Monte, CA Plant
7. Casing Spacers, End Seals, Pipe Penetration Seals	212-3	BWM Company (SS-8 for carrier pipe up to 24 inches, SS-12 for carrier pipe greater than 24 inches, ESW, ESPO, SSPS, CPS)	<input type="checkbox"/>	Forest City, NC Plant

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