



VOLUME 3
DRAINAGE

DRAINAGE APPROVED PRODUCT LIST

JULY 2022

Drainage Approved Product List (DAPL)

Vol.	Section	Main Category	Sub-Category	Product	Model	Manufacturer	Additional Specifications/Standards Drawings/Remarks
3-01	8	Catch Basin	Stormwater Quality Device	CB Shield		CB Shield Inc.	Under evaluation ¹ - CB Shield is a catch basin insert that shields the sediment and grit found in the sump of the catch basin from being washed out (So far CB Shield has only developed shields for the DK-7 frame and cover with 900 mm barrel catch basin)
		Manhole	Oil-Grit Separator	Stormceptor		Imbrium Systems, Inc.	
				Jellyfish filter		Imbrium Systems, Inc.	Under evaluation
				SDD3		NEXT Stormwater Solutions	Under evaluation
				CDS		CONTECH Engineered Solutions LLC	
3-02	4	Control Structure	Valve	Water control gates on control manholes	SS 316, Series 60	Fontaine Aquanox	DR-02-04-01 - Typical Davit Base, Guard Rail and Hatch Layout on Control Structure
	5	LID	Geogrid	Combigrid 30/30		Naue GmbH & Co. KG	
				Geogrid	StrataGrid SG150		Strata
			Geomembrane	40 mil LLDPE waterproof barrier liner	Enviroflex Smooth LLDPE - 40 mil	Nillex	
			Grate	Neenah R-2563		Neenah Foundary	Under evaluation - Beehive Grate for LID only
			Junction Box	Duralite	Various sizes	Oldcastle Infrastructure	
				Oldcastle Polymer		Oldcastle Infrastructure	Under evaluation
				Synertech		Oldcastle Infrastructure	
				BULK		Channell Commercial Corporation	Under evaluation - All LID applications provided they meet load requirements of the specific location
				TRUE		Amphenol Corporation (Charles)	Under evaluation - All LID applications provided they meet load requirements of the specific location

¹ Products under evaluation shall be reviewed and accepted by EPCOR prior to installation on case by case basis.

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3-02	5	LID	Junction Box	Pro-Spec		NDS, Inc.	Under evaluation - Within bioretention and box planters only	
				VB-MAX		Rain Bird Corporation	Under evaluation - Within bioretention and box planters only	
			Soil Cell	Silva Cells		DeepRoot		
				Stratavault 30 series soil cells		Citygreen	Not load rated, review considering the location to be installed	
				Stratavault 40 series soil cells		Citygreen		
			Storage System	Armtec Hydrostor		Prinsco Inc.	Under evaluation	
Turf Reinforcement Mat	VMax 3 turf reinforcement matting	VMax SC250 Permanent TRM	North American Green					
3-03	2	Corrosion Protection	Coating	Neopoxy (Spray or hand application)	NPR-5304, NPR-5305	Neopoxy LLC.		
			Liner	Agru-Ultra Grip 13 mm anchor or Agru Sure-Grip 19 mm anchor		AGRU America, Inc.		
		Control/Station Structure	Anchor	Swivel Anchor	RACSW100C-316C (for the concrete mount) or RACSW100S-316 (for steel mount)		Honeywell Miller	DR-02-04-01 - Typical Davit Base, Guard Rail and Hatch Layout on Control Structure Zinc coated anchors for location that don't have H ₂ S or deicing salt environment
					SWS100C & SWS100S (for both concrete & steel mount)		Climbtech	DR-02-04-01 - Typical Davit Base, Guard Rail and Hatch Layout on Control Structure EPCOR Drainage prefers Miller. If miller is not available, Climbtech can be used. Zinc coated anchors for locations that don't have H ₂ S or deicing salt environment
3-04	2	Pump	Dry & Wet Well	Flygt N-Technology Water & Wastewater Pumps N-3000 SERIES		Xylem Water Solutions		
				Flygt Grinder Pumps M-3000 SERIES		Xylem Water Solutions		

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3-04	2	Pump	Dry & Wet Well	Flygt Concertor iPS		Xylem Water Solutions	Under evaluation (at current the concerter pumps are only functional with 400 V power, step down transformers are required (600 V to 400 V)
			Mixer	Flygt Single Speed Mixer Installed Model 4610.180		Xylem Water Solutions	
			Valve	Knife gate valve	316 stainless steel cartridge knife gate	Wey Victaulic	Single/double block and bleed lift station valves
				Valve cap with sewer or storm marking similar to water valve cap		Norwood Foundry	
		Corrosion Protection	Wet Well	Reactimine 760		Carboline	
				Spectrashield		CCI Spectrum, LLC	
				SewerGard 210 GL Glaze		Sauereisen, Inc./Clayburn Services Ltd.	
				Ceilcote 680 Primer, Ceilcote 664 Ceilgard		AkzoNobel	
				Ceilcote 610 Ceilpatch		AkzoNobel	
	Appendix A	Pump	Electrical	Regulator Level ENM-10 w/ 50m Cable		Xylem Water Solutions	
				Sensor Ultrasonic Level Multiranger 100		Siemens	
	3-06	10	Pipe	Insulation	Pipe insulators and spacers for bored undercrossings		Plainsman Manufacturing Inc.
12		Pipe	PVC	PVC PSM SDR14/SDR18 for sewer forcemains and trenchless applications		IPEX Inc.	CSA B137.3 Pipes for sewers shall not be blue colour
13/14		Pipe	Casing	Raci Spacers		Raci Spacers North America	Under evaluation
				Silvertip Casing Spacers (HD and CS); Silvertip ESP (pull-on) and ESW (wrap around) end seal		InfraChoice	
			Concrete	Reinforced circular concrete pipe and all related products, fittings, bends, reducers, increasers, plugs, caps, and radius pipe.		Lafarge Canada Inc. Proform Construction Products Inc.	CSA A257.2 with flexible rubber gasket joints to CSA A257.3

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						Inland Pipe Precon Manufacturing Ltd.	
3-06	13/14	Pipe	Coupling	Maxadaptor coupling		Maxadaptor	Under evaluation
			Fitting	Flexible coupling		Fernco Connectors Ltd.	ASTM D5926, ASTM C1173, CSA B602 Fernco couplers should be restrained wherever possible. In lift stations, Victaulic couplings with built in restraint is preferred.
				Shielded coupling			
				PVC PSM SDR35 Elbow, Tee, Wye, Bend, Long radius bend		IPEX Inc., Tigre	PVC PSM SDR35
				PSM SDR35 x Ultra-Rib adaptor		IPEX Inc.	
				Service connector - Inserta Tee		Inserta Tee	
				Service connector - Core-Bell insert type with rubber gasket sleeve and stainless steel clamp		Galaxy Plastics	
				Gasketted "strap-on" Tee (or Wye) saddle with two stainless steel clamps for PVC mains		IPEX Inc. Multi-Fittings Inc. Fernco Connectors Ltd.	
				HKT Service connector for 300 mm to 750 mm diameter concrete pipe only		Hamilton Kent	
				Sewer adapters for connecting to existing building service connections	PlumbQwik HKT (for concrete pipe)	Fernco Connectors Ltd. Hamilton Kent	ASTM D5926, ASTM C1173, CSA B602
			FRP/GRP	Centrifugally cast, glass-fiber-reinforced thermosetting, polymer mortar pipe		HOBAS Pipe USA, Inc.	ASTM D3262
			HDPE	HDPE			HDPE pipe is approved for forcemains and pipe busting applications only.
			Insulation	DOW HI-40 Styrofoam		The Dow Chemical Company	
			Polypropylene	ADS SaniTite HP: 300 - 1500 mm		ADS Canada Inc.	Under evaluation - For storm sewer only
PVC	Enviro-Tite SDR35 – up to 375 mm		IPEX Inc.	CSA-B182.2, Minimum Pipe Stiffness 320 kPa			
	Kor-Flo PVC Profile Pipe 200 - 900 mm		NAPCO Royal Pipe	Under evaluation - CSA-B182.4, Minimum Pipe Stiffness 320 kPa			

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3-06	13/14	Pipe	PVC	PVC PSM SDR35		IPEX Inc., Napco Royal, Northern Pipe Products, Next Polymers, Diamond Plastics	CSA B182.2
				Ultra-Rib PVC Profile Pipe 200 - 600 mm		IPEX Inc.	CSA-B182.4, Minimum Pipe Stiffness 320 kPa
				Ultra-X2 750 - 900 mm		IPEX Inc.	Under Evaluation - CSA-B182.4, Minimum Pipe Stiffness 320 kPa
	15	Pipe	Insulation	Pre-insulated pipes		Urecon Ltd.	
				Insulation Kits for Buried Fittings - Polymer coating	BL-75-20EP	Urecon Ltd.	
				Adhesive coated cross-linked polyethylene sleeve		Canusa-CPS nVent RAYCHEM	
				Insulation Foamed in Place		Portafoam®	
				Heat-shrink tape for sealing insulation half shells against moisture adaptable to flexible installations		Canusa-CPS nVent RAYCHEM	
				Asphalt mastic vapor barrier coating to waterproof exterior surfaces of half shells or sprayed in place foam	Bakor #110-14 Insul-Mastic #7505	Henry Company Innovative Manufacturing Inc.	
	17	Catch Basin	Catch Basin	Catch Basins and all related products: base slabs, flat caps, transitions, risers and grade rings.		Lafarge Canada Inc. Proform Construction Products Inc. S3 Precast / Tanks-A-Lot Inland Pipe Precon Manufacturing Ltd.	CSA A257.4
				Seal/Gasket	Kent-Seal		Hamilton Kent
		Manhole	Manhole ²	Manholes and All related products: base slabs, flat caps, transitions, risers, monolithic bases, tapered tops, drop connections, pre-benching, and grade rings.		Lafarge Canada Inc. Proform Construction Products Inc. S3 Precast / Tanks-A-Lot Inland Pipe Precon Manufacturing Ltd.	CSA A257.4

² Shop drawing of manholes for diameter ≥ 1500 mm should be reviewed and accepted by EPCOR prior to installation.

Vol.	Section	Main Category	Sub-Category	Product	Model	Manufacturer	Additional Specifications/Standards Drawings/Remarks		
3-06	17	Manhole	Insert	Stainless Steel Manhole Insert to use with Type 6S cover on sanitary manholes to minimize inflow		Sealing Systems, Inc.	Under evaluation		
			Seal/Gasket	Tylox Superseal		Hamilton Kent			
				Kent Seal		Hamilton Kent	ASTM C990		
			Step	Galvanized Steel				A 25 mm diameter mild steel and deformed bar conforming to ASTM A615, hot bent at temperature of at least 870°C and galvanized in accordance with ASTM A123/A123M.	
				Aluminum	Model# 350	MSU Mississauga Ltd.		Minimum 20 mm diameter aluminium forged from 6061-T6, 6351-T6 or equal alloy having minimum tensile strength of 260 MPa.	
				MSA Latchways Vertical Ladder Lifeline System		MSA Safety Incorporated			
				Polyethylene Coated Aluminum	Model# 360	MSU Mississauga Ltd.			
			Pipe	Connector ³	Tylox Cobra style boot connector		Hamilton Kent		ASTM C923, to connect flexible pipe to manhole/catch basin
					Flat Top Adaptor		Hamilton Kent		ASTM C923, to connect profile pipe to manhole/catch basin
		Waterstop WS-30				Press-Seal Corporation		On a case by case basis subject to EPCOR prior approval	
		PSX: Direct Drive				Press-Seal Corporation			
		EconoSeal				Press-Seal Corporation		Under evaluation	
		A-LOK X-CEL				A-LOK Products, Inc.		Under evaluation	
		Waterstop				A-LOK Products, Inc.		On a case by case basis subject to EPCOR prior approval	
		Kor-N-Seal II				Trelleborg		Under evaluation	
18	Manhole/Catch Basin	Frame, covers, grates	Frames, covers, and grates for drainage manholes, catch basins and associated structures		D&L Foundry Inc. Norwood Foundry Limited	Standards drawings DR-06-18-01 to DR-06-18-12			

³ Sanded adapters, Fernco “donuts” and mortared connections for flexible pipe are not permitted.

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3-06	20	Pipe	Concrete	Precast reinforced concrete box sections and all related products: fittings, bends, reducers, increasers, plugs, caps, and radius boxes		Lafarge Canada Inc. Proform Construction Products Inc. S3 Precast / Tanks-A-Lot Inland Pipe Precon Manufacturing Ltd.	ASTM C1433
	26	Pipe	Liner	Nova Form PVC Liner: up to 750 mm		IPEX Inc.	
	29	Manhole	Waterproofing	Cementitious waterproofing Xypex		Xypex Chemical Corporation	
	Various	Manhole	Liner/Coating	Triplex Liner System	Triplex-11600, Triplex-6800, Triplex-5600, Triplex-4400	McNeil Technologies Inc.	
				Shotcrete application with some additives			Under evaluation
				Chimney Guard System		Quadex	Under evaluation
				Sprayroq	SprayShield Green #2	Sprayroq	Under evaluation
				GeoSpray		GeoTree	Under evaluation
	Pipe	Liner	Structural Glass Reinforced Plastic (GRP/FRP) lining systems		Channeline International Fiberglass Manufacturing L.L.C.		
	Miscellaneous	Concrete Repair	Sikacrete-08 SCC		Sika Canada Inc.		
			Planitop X		MAPEI Inc.		
		Grout	Non-shrink Sulphate resistant grout (Type HS)		Target Products Ltd.	ASTM C1107	
			MasterFlow – Metallic Non-Shrink Grout (Formerly Embeco)		Master Builders Solutions		
			Sikagrout-212 SR		Sika Canada Inc.		
			MME Flexible Resin		MME Multiurethanes		
		Protective Coating	Sikadur®-32 Hi-Mod		Sika Canada Inc.		
			Sikagard-75 Epocem		Sika Canada Inc.		
			Sika MT Primer		Sika Canada Inc.		
			Sikagard E.W.L. Trowel Grade		Sika Canada Inc.		
	Sikagard E.W.L. Bonding Agent			Sika Canada Inc.			

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3-06	Various	Miscellaneous	Waterproofing	Cementitious waterproofing Vandex		The Euclid Chemical Company	

Note:

1. If there are any product(s) that are being used in drainage projects but missing in the DAPL, please notify EPCOR Drainage Engineering at DRENG@epcor.com with product information and proof of installation in previous projects.
2. If consultants, contractors, manufacturers/suppliers propose to use new product(s) that are not listed in DAPL, please submit new product review request to DRENG@epcor.com per Section 4.0: Product Approval Procedure of Vol.3-05: Drawing Requirements, Approvals and Asset Acceptance/Transfer.