

List of Approved Materials and Products

Alternates to the items in this list require the approval of the Mgr. Capital Projects & Inspections

		<i>Product</i>	<i>Manufacturer</i>	<i>Approved Model</i>	<i>Restrictions/Additional Specifications</i>
<b>26 56 01</b>	<b>Roadway Lighting</b>				
		Cobra Head Style Luminaires	<ul style="list-style-type: none"> <li>LED Roadway Lighting (LRL)</li> <li>American Electrical Lighting (AEL)</li> </ul>	<ul style="list-style-type: none"> <li>NXT Series</li> <li>Autobahn</li> </ul>	<ul style="list-style-type: none"> <li>LED</li> <li>3000K - Local Roads (bus routes are 4000k)</li> <li>4000k - Collector and Arterial Roads</li> <li>7 pin PEC connector</li> <li>Shorting cap</li> <li>Field Adjustable Driver required for Cobra Head style fixtures</li> <li>Wattages per design</li> <li>2 Tenon adaptors required for post top poles using Cobra Head Luminaires –                             <ul style="list-style-type: none"> <li>a) LRL Part# (FP-FTP-NXT-GY-06-LF)</li> <li>b) Valmont WCE Part# (WCE TEN-3.5-FIT-PC)</li> </ul> </li> </ul>
		Decorative Roadway Luminaires	<ul style="list-style-type: none"> <li>Phillips Lumec</li> <li>Architectural Area Lighting (AAL)</li> </ul>	<ul style="list-style-type: none"> <li>TR20</li> <li>Capella</li> <li>Domus</li> <li>CAND 1 / CAND 2</li> <li>Flex</li> </ul>	
		Pathway / MUP Lighting	<ul style="list-style-type: none"> <li>Lumca</li> <li>Cree</li> <li>Lithonia</li> <li>Phillips Lumec</li> </ul>	<ul style="list-style-type: none"> <li>CP0401-SLF</li> <li>ARE-EDG</li> <li>Aeris AS1-LED series</li> <li>TR20</li> <li>Capella</li> <li>Domus</li> <li>CAND 1 / CAND 2</li> </ul>	<ul style="list-style-type: none"> <li>LED</li> <li>4000K</li> <li>7 pin PEC connector</li> <li>Shorting cap</li> <li>Wattages per design plans</li> </ul>
		Photocell / Shorting Caps	<ul style="list-style-type: none"> <li>DTL (Dark to Light)</li> <li>Intermatic</li> </ul>	<ul style="list-style-type: none"> <li>DE 120 for 102V</li> <li>DE 124 for 120/240V</li> <li>DE 347 for 347V</li> <li>DE 480 for 480V</li> <li>P/N LED45652</li> </ul>	<ul style="list-style-type: none"> <li>Electronic c/w relay contacts</li> </ul>
		Poly/Conc Junction Boxes	<ul style="list-style-type: none"> <li>CIF Composites Inc</li> <li>Duralite</li> </ul>	Sizes: <ul style="list-style-type: none"> <li>17 x 30</li> <li>24 x 36</li> </ul>	<ul style="list-style-type: none"> <li>2 Sections max</li> <li>Plastic Junction Boxes Will Not Be Accepted</li> </ul>

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
					<ul style="list-style-type: none"> <li>• Round Junction Boxes will not be Accepted</li> </ul>
		Concrete Junction Boxes	<ul style="list-style-type: none"> <li>• AE Concrete</li> </ul>	<ul style="list-style-type: none"> <li>• TYPE 66 = T266</li> <li>• TYPE 37 = B937</li> <li>• TYPE C = 5686</li> </ul>	
		Poles / Arms	<ul style="list-style-type: none"> <li>• Valmont West Coast Engineering</li> <li>• Nova Pole</li> <li>• Lumec</li> </ul>		<ul style="list-style-type: none"> <li>• Galvanized and Powder Coated.</li> <li>• As per Design Drawings or Local Neighborhood Design Guidelines</li> </ul>
		Concrete Bases	<ul style="list-style-type: none"> <li>• AE Concrete</li> <li>• Langley Concrete</li> </ul>		<ul style="list-style-type: none"> <li>• Per MMCD / Refer to Supplementary Drawing SS-E7.3</li> </ul>
		Service Bases	<ul style="list-style-type: none"> <li>• Valmont West Coast Engineering</li> <li>• Nova Pole</li> </ul>		<ul style="list-style-type: none"> <li>• PER MMCD / Refer to Supplementary Drawing SS-E7.3</li> <li>• Galvanized and Powder Coated</li> <li>• Robust Tab For Padlock</li> </ul>
		Service / Electrical Panels	<ul style="list-style-type: none"> <li>• West Coast Electric</li> <li>• Valid</li> </ul>	<ul style="list-style-type: none"> <li>• Aluminum or Stainless Steel</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Supplementary Drawing SS-E7.3 and SS-E7.4</li> <li>• <b>Surge Protection Device required</b> for primary service. I<sub>max</sub> 50, 20kA, 120/240V, 50/60Hz. Must be installed within panel.</li> </ul>
		Conductor Tags	<ul style="list-style-type: none"> <li>• Panduit</li> </ul>	<ul style="list-style-type: none"> <li>• MP250-C TAGS</li> </ul>	<ul style="list-style-type: none"> <li>• On All Cables (Black Indelible Marker Pen)</li> </ul>
		Conduit	<ul style="list-style-type: none"> <li>• Various</li> </ul>	<ul style="list-style-type: none"> <li>• CSA C22.2 No. 211.2</li> </ul>	<ul style="list-style-type: none"> <li>• RPVC</li> </ul>
		Hydro Dip Service (RPVC Straps / Lag Bolts / Conduit Guard)	<ul style="list-style-type: none"> <li>• Various</li> </ul>	<ul style="list-style-type: none"> <li>• MMCD</li> </ul>	
		Fuse Holders (Pole Hand Holes)	<ul style="list-style-type: none"> <li>• Tron</li> </ul>	<ul style="list-style-type: none"> <li>• Tron HEB-AA c/w 2 L-Type Insulating Boots</li> </ul>	
		Fuse Holders (Junction Boxes)	<ul style="list-style-type: none"> <li>• Ideal</li> <li>• Buchanan</li> </ul>	<ul style="list-style-type: none"> <li>• 65 KIT Water Proof</li> </ul>	
		Fuses	<ul style="list-style-type: none"> <li>• Bussman</li> </ul>	<ul style="list-style-type: none"> <li>• 10-A Buss KTK</li> </ul>	
		Receptacles	<ul style="list-style-type: none"> <li>• Leviton</li> </ul>	<ul style="list-style-type: none"> <li>• Leviton Smartlock Pro Slim (WR) GFCI</li> </ul>	<ul style="list-style-type: none"> <li>• Or City Approved Corrosion Resistant Alternate</li> </ul>
		Cable Lubricant	<ul style="list-style-type: none"> <li>• Ideal</li> </ul>	<ul style="list-style-type: none"> <li>• Poly Water Dyna-Blue</li> </ul>	

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				<ul style="list-style-type: none"> <li>• Poly Water Aqua-Gel II</li> </ul>	
		Paint Color RAL Codes			<ul style="list-style-type: none"> <li>• Coquitlam Green-RAL 6028</li> <li>• Coquitlam Black-RAL 9005</li> <li>• Town Centre Brown-RAL 8014</li> <li>• Mallardville Grey-RAL 7024</li> </ul>
<b>Irrigation System</b>					
<b>2.1</b>	<b>Irrigation Pipe – PVC</b>			<ul style="list-style-type: none"> <li>• CSA Series 160 &gt;50mm</li> <li>• CSA Series 200 &lt;50mm</li> </ul>	Comply with CSA B137.3
	<b>Irrigation Pipe - HDPE</b>			<ul style="list-style-type: none"> <li>• SDR 17 &gt;50mm</li> <li>• SDR 11 &lt;=50mm</li> </ul>	Comply with ASTM D-1248 as a Type III, Class C, Category 5, Grade P34 material and with ASTM D-3350 as a 345434C cell material.
<b>2.2</b>	<b>Backflow Prevention Device</b>		<ul style="list-style-type: none"> <li>• Watts</li> </ul>	<ul style="list-style-type: none"> <li>• Model 007-QT</li> </ul>	
<b>2.3</b>	<b>Water Meter</b>		<ul style="list-style-type: none"> <li>• Sensus</li> <li>• Neptune</li> </ul>	<ul style="list-style-type: none"> <li>• Touch Read</li> <li>• Pro Read</li> </ul>	See City Website for Water Meter Specifications
<b>2.4</b>	<b>Water Meter Box</b>		<ul style="list-style-type: none"> <li>• Carson Series</li> <li>• AE Concrete</li> </ul>	<ul style="list-style-type: none"> <li>• 1419</li> <li>• Model 5686</li> </ul>	See City Website for Water Meter Specifications
<b>2.5</b>	<b>Electronic Control Valves</b>		<ul style="list-style-type: none"> <li>• Toro</li> </ul>		24 VAC Solenoid Actuated Globe Pattern
<b>2.6</b>	<b>Master Valve</b>		<ul style="list-style-type: none"> <li>• Toro</li> </ul>	<ul style="list-style-type: none"> <li>• 220 Series</li> </ul>	
<b>2.7</b>	<b>Pressure Regulating Modules</b>		<ul style="list-style-type: none"> <li>• Rain Bird</li> </ul>	<ul style="list-style-type: none"> <li>• PRS-Dial</li> </ul>	
<b>2.8</b>	<b>Automatic Controllers</b>		<ul style="list-style-type: none"> <li>• Toro</li> </ul>	<ul style="list-style-type: none"> <li>• Sentinel Satellite Controller</li> </ul>	
<b>2.9</b>	<b>Control Wire</b>	Wire	<ul style="list-style-type: none"> <li>• Paige Wire</li> </ul>	<ul style="list-style-type: none"> <li>• P7079D</li> </ul>	Common Wire to be 12-gauge Master Valve Wire to be 14-gauge
		Flow / pulse transmitter wiring	<ul style="list-style-type: none"> <li>• Belden</li> </ul>	<ul style="list-style-type: none"> <li>• PE39</li> </ul>	8mm Aluminum Polyester Shield Black HDPE Jacket
		Wire splice	<ul style="list-style-type: none"> <li>• 3M</li> </ul>	<ul style="list-style-type: none"> <li>• DBY connector</li> </ul>	

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<b>32 91 21S</b>	<b>• Topsoil and Finish Grading</b>				
<b>2.5</b>	<b><i>Growing Medium</i></b>		<ul style="list-style-type: none"> <li>• Fraser Richmond Bio-Cycle</li> <li>• BC Eco Soil Recycling Corp</li> <li>• YardWorks</li> <li>• Denbow</li> </ul>		
<b>2.7</b>	<b><i>Bark Mulch</i></b>		Answer Garden Products	• Nutri-Mulch	
<b>2.9</b>	<b><i>Misc. Products</i></b>	Root Barrier	Deep Root	• LB12-2	
		Adhesive	OSI Sealants	PL 200	
		Drain Mat	Nilex Geotextile	Nudrain WD/15	
		Filter Fabric	Nilex Geotextile	Nilex 4545	
<b>2.9</b>	<b><i>Structural Soil</i></b>	Soil	Answer Garden Products	Humus Builder	
		Structural Geotextile	Nilex Geotextile	Nilex 4553	
<b>32 92 19S</b>	<b><i>Hydraulic Seeding</i></b>				
<b>2.2</b>	<b><i>Seed Mix</i></b>	Perennial Rye		<ul style="list-style-type: none"> <li>• Elka II</li> <li>• Gator 3</li> <li>• Top Hat</li> <li>• Charismatic</li> <li>• All Star</li> <li>• Derby Supreme</li> </ul>	
		Fescues		<ul style="list-style-type: none"> <li>• Cindy</li> <li>• Longfellow II</li> <li>• Cindy Lou</li> <li>• Quatro</li> <li>• Shademaster II</li> </ul>	
		Kentucky Bluegrass		<ul style="list-style-type: none"> <li>• Shamrock</li> <li>• Boardway</li> <li>• Midnight</li> <li>• Julius</li> <li>• Allure</li> </ul>	
<b>3.5.3</b>	<b><i>Fertilizer</i></b>			• Evergrow 28-3-8	
<b>32 92 20</b>	<b><i>Seeding</i></b>				
<b>2.1.2</b>	<b><i>Seed Mix</i></b>	Perennial Rye		<ul style="list-style-type: none"> <li>• Elka II</li> <li>• Gator 3</li> <li>• Top Hat Charismatic</li> <li>• All Star</li> <li>• Derby Supreme</li> </ul>	
		Fescues		<ul style="list-style-type: none"> <li>• Cindy</li> <li>• Longfellow II</li> <li>• Cindy Lou</li> <li>• Quatro</li> <li>• Shademaster II</li> </ul>	

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		Kentucky Bluegrass		<ul style="list-style-type: none"> <li>• Shamrock</li> <li>• Boardway</li> <li>• Midnight</li> <li>• Julius</li> <li>• Allure</li> </ul>	
<b>32 93 01S</b>	<b>Planting of Trees, Shrubs and Ground Covers</b>				
<b>2.3</b>		Fertilizer	<ul style="list-style-type: none"> <li>• Agrico</li> </ul>	<ul style="list-style-type: none"> <li>• Evergro Tabs</li> </ul>	
<b>2.4</b>		Mulch	<ul style="list-style-type: none"> <li>• Yard Works</li> <li>• Eco-Soil</li> <li>• Fraser Richmond Bio-cycle</li> </ul>		Composted
<b>2.8</b>		Guying Wire	<ul style="list-style-type: none"> <li>• Tree Guy Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Arrow Anchor</li> </ul>	
<b>2.11</b>		Anti-desiccant	<ul style="list-style-type: none"> <li>• GSI Horticultural</li> </ul>	<ul style="list-style-type: none"> <li>• Moisturin</li> </ul>	
<b>2.12</b>		Flagging Tape		<ul style="list-style-type: none"> <li>• Indenti-Tape</li> </ul>	
<b>2.13</b>		Tree Trunk Protection	<ul style="list-style-type: none"> <li>• Deep Roots Products</li> </ul>	<ul style="list-style-type: none"> <li>• Arborgard</li> </ul>	
<b>2.16</b>		Tree Ties	<ul style="list-style-type: none"> <li>• Deep Roots Products</li> </ul>	<ul style="list-style-type: none"> <li>• Arbor Tie</li> </ul>	
<b>33 11 01</b>	<b>Waterworks</b>				
<b>2.2.1</b>	<b>Water Main Ductile Iron</b>	Ductile Iron	<ul style="list-style-type: none"> <li>• McWane Group</li> <li>• US Pipe</li> <li>• Canada Pipe</li> </ul>		CL 50 for all mains less than 400mm dia. and Pressure Class 350 for all mains 400mm dia or larger
<b>2.2.2</b>	<b>Water Main PVC</b>	PVC (C900)  PVCO (C909)	<ul style="list-style-type: none"> <li>• Ipex Royal Pipe Systems</li> <li>• Ipex</li> </ul>	<ul style="list-style-type: none"> <li>• Blue Brute</li> <li>• Bionax</li> </ul>	To AWWA C900 / C 905/ C 909 – 100 mm to 300 mm diameter DR18 min. Compliance with MMCD updated Section 33 11 01 2.2.2.2S for thickened bell and spigot pipe  All PVC/PVCO mains shall be pigmented blue. Nitro gasket shall be used when hydro carbon is encountered in surrounding soil.  PVC/PVCO to be used only where shown on approved construction drawings.
<b>2.2.3</b>	<b>Water Main HDPE</b>	HDPE	<ul style="list-style-type: none"> <li>• KWH Pipe</li> <li>• Performance Pipe</li> </ul>	<ul style="list-style-type: none"> <li>• Sclairpipe</li> <li>• DriscoPlex</li> </ul>	HDPE to be used only where shown on approved construction drawings.

		<i>Product</i>	<i>Manufacturer</i>	<i>Approved Model</i>	<i>Restrictions/Additional Specifications</i>
2.2.4.2/3	<b>Water Main Fitting Ductile Iron</b>	Ductile Iron Compact Ductile Iron	<ul style="list-style-type: none"> <li>Terminal City Iron Works</li> <li>Norwood Foundry</li> <li>Sigma Products</li> <li>Star Pipe Products</li> </ul>		<p>AWWA C 153 &amp; C110, cement mortar lined.</p> <p>Cast iron fittings are not acceptable</p>
2.2.10	<b>Tie Rod, Bolts/Nuts</b>				Type 304 Grade A stainless steel for all hardware
2.2.12	<b>Couplings and Flange Coupling Adapters</b>	Plain End Coupler	<ul style="list-style-type: none"> <li>Robar</li> <li>Smith-Blair</li> <li>Romac</li> <li>Mueller</li> <li>Ford</li> <li>EBBA Iron</li> </ul>	<ul style="list-style-type: none"> <li>Robar 1508</li> <li>Smith-Blair441</li> <li>Romac 501</li> <li>Mueller MRC</li> <li>Ford FC1</li> <li>EBBA 3800</li> </ul>	<p>Type 304 Grade A stainless steel for all hardware</p> <p>All couplings and flange adapters are to have a fusion epoxy coating.</p>
		Flanged Adapter	<ul style="list-style-type: none"> <li>Robar</li> <li>Smith-Blair</li> <li>Romac</li> <li>Mueller</li> <li>EBAA</li> <li>Clow</li> <li>Star Pipe Products</li> <li>Sigma</li> </ul>	<ul style="list-style-type: none"> <li>Robar 7504/7506</li> <li>Smith-Blair912</li> <li>Romac FCG</li> <li>Mueller</li> <li>EBAA Iron 1000</li> <li>Clow Series 40, DI</li> <li>Clow Series 90, PVC</li> <li>Star Series 400</li> <li>Sigmaflange</li> </ul>	<p>Type 304 Grade A stainless steel required for all hardware.</p> <p>All couplings and flange adapters are to have a fusion epoxy coating.</p>
		Restrained Flange Adaptors	<ul style="list-style-type: none"> <li>Romac</li> <li>Uniflange</li> <li>EBAA</li> <li>Star Pipe Products</li> </ul>	<ul style="list-style-type: none"> <li>Romac RFCA</li> <li>Uniflange RFAP</li> <li>EBAA 2100</li> <li>Super Flange Series 7200</li> </ul>	<p>Type 304 Grade A stainless steel required for all hardware.</p> <p>All restrained flange adapters are to have a fusion epoxy coating.</p>
		Repair Clamps	<ul style="list-style-type: none"> <li>Canpac</li> <li>Mueller</li> <li>Robar</li> <li>Clow</li> <li>Romac</li> <li>Cambridge Brass</li> </ul>	<ul style="list-style-type: none"> <li>Canpac CR-2</li> <li>Mueller 510</li> <li>Robar 5626</li> <li>Clow 200</li> <li>Romac SS2</li> <li>Teck Series 425, 825, 1625</li> </ul>	<p>Repair clamps shall be stainless steel.</p> <p>Type 304 Grade A stainless steel required for all hardware.</p>

		<i>Product</i>	<i>Manufacturer</i>	<i>Approved Model</i>	<i>Restrictions/Additional Specifications</i>
<b>2.2.13</b>	<b>Joint Restraint Ductile Iron Mains</b>		<ul style="list-style-type: none"> <li>• UniFlange Series 1400</li> <li>• EBAA Iron</li> <li>• Clow</li> <li>• Star Pipe Products</li> </ul>	<ul style="list-style-type: none"> <li>• UniFlange Series 1400</li> <li>• EBAA Iron 1100</li> <li>• Clow Tufgrip TDG</li> <li>• Split Stargrip Series 3100</li> </ul>	<p>All joint restraints shall have a pressure rating equal to the mainline pipe.</p> <p>All joint restraints are to have a fusion epoxy coating.</p> <p>Type 304 Grade A stainless steel required for all hardware.</p>
	<b>Joint Restraint PVC / PVCO Mains</b>		<ul style="list-style-type: none"> <li>• UniFlange</li> <li>• EBAA Iron</li> <li>• Star Pipe Products</li> </ul>	<ul style="list-style-type: none"> <li>• UniFlange Series 1300</li> <li>• UniFlange Series 1500</li> <li>• EBAA 1500</li> <li>• EBAA 1900</li> <li>• PVC Stargrip Series 4100</li> </ul>	<p>No wedge action type for PVC or PVCO pipes.</p> <p>Restraint systems for PVC or PVCO pipe shall be approved by the pipe manufacturer to not reduce the pipe recommended working pressure.</p> <p>All joint restraints are to have a fusion epoxy coating.</p> <p>Type 304 Grade A stainless steel required for all hardware.</p>
	<b>Restrained Joint Pipe Systems (PVC)</b>		<ul style="list-style-type: none"> <li>• Ipex</li> <li>• Royal</li> </ul>	<ul style="list-style-type: none"> <li>• Ipex Terrabrute</li> <li>• Royal Bulldog</li> <li>• Royal Cobra Lock</li> </ul>	Restrained pipe joint systems to be approved prior to use.
	<b>Restrained Joint Pipe Systems (DI)</b>		<ul style="list-style-type: none"> <li>• US Pipe</li> <li>• McWane</li> </ul>	<ul style="list-style-type: none"> <li>• Field Lok Gasket</li> <li>• SureStop Gasket</li> </ul>	Restrained pipe joint systems to be approved prior to use.
<b>2.3</b>	<b>Valves and Valve Boxes</b>	50mm – 300mm Resilient-seated Mainline Gate Valve	<ul style="list-style-type: none"> <li>• Mueller</li> <li>• Clow Canada</li> <li>• AVK</li> <li>• American Flow Control</li> <li>• Terminal City</li> </ul>	<ul style="list-style-type: none"> <li>• Mueller A2362</li> <li>• Clow 2639</li> <li>• AVK</li> <li>• AFC Series 2500</li> <li>• IBBM</li> </ul>	All valves shall have epoxy coated ductile iron body to AWWA C 509.
		375mm or greater Mainline Butterfly Valve	<ul style="list-style-type: none"> <li>• Pratt</li> <li>• Mueller</li> </ul>	<ul style="list-style-type: none"> <li>• Pratt Groundhog</li> <li>• Mueller Lionseal</li> </ul>	AWWA C 504 Class 150B
<b>2.3.5</b>	<b>Air Valve</b>		<ul style="list-style-type: none"> <li>• Apco</li> <li>• Val-Matic</li> <li>• Pratt</li> <li>• Crispin</li> </ul>	<ul style="list-style-type: none"> <li>• APCO 140C</li> <li>• Val-Matic 201C</li> <li>• Pratt UL</li> <li>• Crispin UL</li> </ul>	

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2.3.6	<b>Water Valve Box</b>	Nelson Box, 450mm length 150mm riser pipe with circular box	<ul style="list-style-type: none"> <li>Terminal City</li> <li>Dobney</li> <li>Westview</li> <li>Trojan</li> </ul>		Cover shall be marked with "Water".
2.3.7	<b>Curb Stop Box</b>		<ul style="list-style-type: none"> <li>Terminal City</li> <li>Dobney</li> <li>Westview</li> <li>Trojan</li> </ul>		Per Supplementary Specification Dwg. COQ-W2b
2.5	<b>Water Service Connection</b>	Type K Copper – 19mm to 75mm			ASTM B88M
2.5.3.2	<b>Saddles for Ductile Iron Mains</b>		<ul style="list-style-type: none"> <li>Robar</li> <li>Smith Blair</li> <li>Mueller</li> <li>Romac</li> <li>Cambridge Brass</li> </ul>	<ul style="list-style-type: none"> <li>Robar 2506</li> <li>Smith Blair 317</li> <li>Mueller DR2S</li> <li>Romac 202NS</li> <li>Teck Series 840X</li> </ul>	<p>Saddles required for service installation on all ductile iron mains.</p> <p>All saddles are to have a fusion epoxy coating.</p> <p>Type 304 Grade A stainless steel required for all hardware.</p>
2.5.3.3	<b>Saddles for PVC / PVCO Mains</b>		<ul style="list-style-type: none"> <li>Canpac</li> <li>Robar</li> <li>Cambridge Brass</li> <li>Mueller</li> </ul>	<ul style="list-style-type: none"> <li>Canpac SC2</li> <li>Robar 2506</li> <li>Teck Series 840X</li> <li>Mueller DR2S</li> </ul>	<p>Saddles required for service installation on all PVC / PVCO mains.</p> <p>All saddles are to have a fusion epoxy coating.</p> <p>Type 304 Grade A stainless steel required for all hardware.</p>
2.6	<b>Hydrant</b>		<ul style="list-style-type: none"> <li>Terminal City</li> <li>Canada Valve</li> <li>Clow Canada</li> <li>Mueller</li> </ul>	<ul style="list-style-type: none"> <li>TC C71P, TC-1, TC-20P</li> <li>"Century"</li> <li>M93 Brigadier</li> <li>Centurion</li> </ul>	<p>Must have Storz fitting on pumper port</p> <p>Refer to Supplementary Specifications for paint colors</p>
2.7	<b>Corporation Stop</b>		<ul style="list-style-type: none"> <li>Cambridge</li> <li>Ford</li> <li>Mueller</li> <li>AY-MacDonald</li> </ul>	<ul style="list-style-type: none"> <li>Cambridge 311</li> <li>Ford B1000</li> <li>Mueller B2500800N</li> <li>MacDonald 74700</li> </ul>	<p>Shall be full-port ball valve to 38 mm only.</p> <p>Shall be 300psi working pressure.</p> <p>Shall have large tee head.</p> <p>Use mainline gate valve for sizes &gt;38 mm</p>
2.7	<b>Curb Stop</b>		<ul style="list-style-type: none"> <li>Cambridge</li> <li>Ford</li> </ul>	<ul style="list-style-type: none"> <li>Cambridge 202</li> <li>Ford B44-</li> </ul>	<p>Shall be full-port ball valve to 50 mm with 90° turn stop.</p> <p>Use mainline gate valve</p>



		<i>Product</i>	<i>Manufacturer</i>	<i>Approved Model</i>	<i>Restrictions/Additional Specifications</i>
			<ul style="list-style-type: none"> <li>• Mueller</li> <li>• AY-MacDonald</li> </ul>	343G <ul style="list-style-type: none"> <li>• Mueller B25209</li> <li>• MacDonald 76100</li> </ul>	for larger sizes > 50mm
<b>33 30 01</b>	<b><i>Sanitary Sewers</i></b>				
<b>2.1</b>	<b>Concrete</b>				Not allowed
<b>2.2</b>	<b>PVC Pipe, Mainline Smooth Profile</b>	PVC SDR35	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• JM Eagle</li> </ul>		Sizes > than 600 mm to be approved by the Engineer
<b>2.3</b>	<b>Sanitary Service Connection</b>	PVC SDR28	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• JM Eagle</li> </ul>		Minimum size shall be 100mm
	<b>Inspection Chamber</b>	Inspection Chamber	<ul style="list-style-type: none"> <li>• Le-Ron</li> <li>• Pro-Line Fittings</li> <li>• Galaxy Plastics</li> </ul>		IC's shall have locking lid with gasket
	<b>Tees and Wyes</b>	PVC SDR35	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• Galaxy Plastics</li> <li>• GPK Products</li> </ul>		Manufactured wye fitting shall be used for all connections on new mains.
	<b>Sewer Couplers PVC – Other – Other</b>		<ul style="list-style-type: none"> <li>• Rollee</li> <li>• Fernco</li> </ul>	<ul style="list-style-type: none"> <li>• Rollee</li> <li>• Fernco</li> </ul>	Couplers (Shear band type) shall have appropriate adaptor gaskets to suit OD of pipe material being coupled
	<b>Sewer Couplers PVC – PVC</b>		<ul style="list-style-type: none"> <li>• Royal/Le-Ron</li> <li>• Pro-Line Fittings</li> <li>• Galaxy Plastics</li> </ul>		To be gasketed push on type
<b>33 34 01</b>	<b><i>Sewage Force mains</i></b>				
<b>2.2.4</b>	<b>Low-pressure Sewage Force mains</b>	HDPE with fusion welded joints	<ul style="list-style-type: none"> <li>• KWH</li> <li>• Performance Pipe</li> </ul>	<ul style="list-style-type: none"> <li>• Sclairpipe</li> <li>• DriscoPlex</li> </ul>	AWWA C906
	<b>Service Connections</b>	Wyes and Tees			Manufactured fitting shall be used for all connections on new mains.
<b>33 40 01</b>	<b><i>Storm Sewers</i></b>				
<b>2.1</b>	<b>Concrete Pipe</b>	Non-reinforced and Reinforced Concrete	<ul style="list-style-type: none"> <li>• Langley Concrete</li> <li>• Ocean Pipe</li> </ul>		

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
2.2	<b>PVC Pipe, Mainline Smooth Wall</b>	PVC SDR35	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• JM Eagle</li> </ul>		Sizes > than 600 mm to be approved by the Engineer.
2.4	<b>HDPE Pipe, Mainline Open Profile</b>		<ul style="list-style-type: none"> <li>• Armtec</li> <li>• Hancor</li> </ul>	<ul style="list-style-type: none"> <li>• Armtec Boss 2000</li> <li>• Hancor Blue Seal</li> </ul>	Allowed on a case by case basis as approved by the Engineer.
2.6	<b>Service Connections</b>	PVC SDR28	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• JM Eagle</li> </ul>		Minimum size shall be 150mm.
	<b>Tees and Wyes</b>	PVC SDR35	<ul style="list-style-type: none"> <li>• IPEX</li> <li>• Royal</li> <li>• Galaxy Plastics</li> <li>• GPK Products</li> </ul>		Manufactured wye fitting shall be used for all connections on new mains.
		Insertable Tee	<ul style="list-style-type: none"> <li>• Inserta Tee</li> </ul>		Insertable tee only permitted for connections to existing PVC and Concrete mains which are 375mm mains or larger.
	<b>Inspection Chamber</b>	Inspection Chamber	<ul style="list-style-type: none"> <li>• Le-Ron</li> <li>• Pro-Line Fittings</li> <li>• Galaxy Plastics</li> </ul>		IC's shall have locking lid with gasket
<b>33 44 01</b>	<b>Manholes and Catchbasins</b>				
2.1	<b>Precast Manhole Sections</b>	Manhole base and riser section	<ul style="list-style-type: none"> <li>• Langley Concrete</li> <li>• Ocean Pipe</li> <li>• Diamond Concrete</li> </ul>		
2.1.7	<b>Manhole Frames and Covers</b>	Ductile Iron for Arterial Roads	<ul style="list-style-type: none"> <li>• Westview Sales</li> <li>• Dobney</li> </ul>	<ul style="list-style-type: none"> <li>• TR 724</li> <li>• C Series</li> </ul>	Manhole frame shall be secured to the concrete manhole lid with 3 12 mm diameter redi-rods and appropriate Hilti anchors and nuts No cast or ductile iron adjusting grade rings permitted
2.1.7	<b>Manhole Frame and Cover</b>	Cast Iron per MMCD for Non-arterial Roads	<ul style="list-style-type: none"> <li>• Dobney Foundry</li> <li>• Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>• C Series</li> <li>• TR18</li> </ul>	Refer to Supplementary Standard Drawing COQ-S16 for required lettering on Manhole Covers for sanitary and storm sewers, including in fish habitat areas. Shall be compatible and interchangeable with existing City of Coquitlam castings.

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
<b>2.1.7</b>	<b>Low-profile Frame and Covers</b>				Use of 100mm low profile frames and cover to be approved by the Engineer
	<b>2.1.13 Catch Basin and Other Castings</b>	CB Frame	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B24</li> <li>TR24</li> </ul>	Top Inlet Catch Basin – MMCD Standard Drawing S11
		CB Grate	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B23</li> <li>TR23R&amp;L</li> </ul>	Top Inlet Catch Basin – MMCD Standard Drawing S11
		CB Frame – Side Inlet Assembly	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B39A</li> <li>TR39A</li> </ul>	Refer to Supplementary Standard Drawings COQ-S11A – Side Inlet Catch Basin Assembly
		CB Grate – Side Inlet Assembly	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B39</li> <li>TR39</li> </ul>	Refer to Supplementary Standard Drawings COQ-S11A – Side Inlet Catch Basin Assembly
		Curb Inlet	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B24FTH</li> <li>TR24C</li> </ul>	
		Lawn Basin Grate (600mm Barrel)	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>B22A</li> <li>TR22</li> </ul>	Lawn Drains – MMCD Standard Drawing S12
		Lawn Basin Grate (300mm Barrel)	<ul style="list-style-type: none"> <li>Dobney Foundry</li> <li>Westview Sales Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>D2A</li> <li>TR12</li> </ul>	Lawn Drains – MMCD Standard Drawing S12
<b>03 30 20</b>	<b>Concrete Walks, Curbs and Gutter</b>				
		Cast-in-Place Tactile panel	<ul style="list-style-type: none"> <li>Access Tile</li> <li>Amor-Tile</li> </ul>	<ul style="list-style-type: none"> <li>ACC-R-2x4</li> <li>ADA-C-2448</li> </ul>	See Supplementary Drawing COQ-C9E
<b>34 41 13</b>	<b>Traffic Signal</b>				
		Polymer Concrete Junction Boxes	<ul style="list-style-type: none"> <li>CIF Composites Inc</li> <li>Duralite</li> </ul>	Sizes: <ul style="list-style-type: none"> <li>17 x 30</li> <li>24 x 36</li> </ul>	2 Sections max Plastic Junction Boxes Will Not Be Accepted Round Junction Boxes Will Not Be Accepted
		Concrete Junction Boxes/Vaults	<ul style="list-style-type: none"> <li>AE Concrete</li> </ul>	<ul style="list-style-type: none"> <li>SP635-1.3.3 (4040 Service Box)</li> <li>Type 66=T266</li> <li>Type 37=B937</li> <li>Type C =5686</li> </ul>	Refer to Supplementary Drawing SS-E2.5
		Poles / Arms	<ul style="list-style-type: none"> <li>Valmont West Coast Engineering</li> <li>Nova Pole</li> </ul>		Galvanized and Power Coated (See Roadway Lighting Section for Paint Codes)

		<i>Product</i>	<i>Manufacturer</i>	<i>Approved Model</i>	<i>Restrictions/Additional Specifications</i>
		Concrete Bases	<ul style="list-style-type: none"> <li>• AE Concrete</li> <li>• Langley Concrete</li> </ul>		For Concrete service bases refer to Supplemental Drawing SS-E7.3
		Service Bases	<ul style="list-style-type: none"> <li>• Valmont West Coast Engineering</li> <li>• Nova Pole</li> </ul>		Refer to Supplemental Drawings SS-E7.3 and SS-E7.4 Robust Tab for Padlock
		Service / Electrical Panels	<ul style="list-style-type: none"> <li>• West Coast Electric</li> <li>• Valid</li> </ul>	Aluminum or Stainless Steel.	Refer to Supplemental Drawing SS-E7.3 <b>Surge Protection Device required</b> for primary service. I <sub>max</sub> 50, 20kA, 120/240V, 50/60Hz. Must be installed within panel.
		Vehicle Signal Heads	<ul style="list-style-type: none"> <li>• Econolite</li> </ul>	<ul style="list-style-type: none"> <li>• Polycarbonate Yellow Body Colour</li> </ul>	C/W Cowl Visors or as indicated on Contract Dwgs.
		Backboards	<ul style="list-style-type: none"> <li>• Econolite</li> </ul>	<ul style="list-style-type: none"> <li>• Aluminum, Yellow Powder Coat</li> </ul>	All Primary Vehicle Signal Heads Front Face with 3M Diamond Grade as indicated on Contract Drawings Optional for Secondary Signal, as indicated on contract drawings.
		Pedestrian & Countdown Signal Heads	<ul style="list-style-type: none"> <li>• Econolite</li> <li>• Eagle</li> </ul>		MoT Specifications (Aluminum) <ul style="list-style-type: none"> <li>• 300mm Square c/w Aluminum Peak Visors</li> <li>• Color of Heads, Visors and Brackets to Match Pole</li> </ul>
		Vehicle LED Signals	<ul style="list-style-type: none"> <li>• Dialight</li> </ul>	Dialight P/N: <ul style="list-style-type: none"> <li>• Red P/N: 433-1210-003XL15</li> <li>• Yellow P/N: 433-3230-901XL15</li> <li>• Green P/N: 433-2220-001XL15</li> </ul>	300mm Round Color Tinted Lens. Clear lens required for bi-modal signal modules P/N: 4306370-001
		Pedestrian LED Signals	<ul style="list-style-type: none"> <li>• Dialight Top Section – Walk /Don't Walk</li> <li>• Bottom Section – Countdown</li> </ul>	Dialight P/N: <ul style="list-style-type: none"> <li>• P/N: 430-6772-001X</li> <li>• P/N: 430-7773-001X</li> </ul>	ITE Specifications 300mm Square
		Photocells / Shorting Caps			See Roadway Lighting Section

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
		Cobra Head Style Luminaires (LED)	• LED Roadway Lighting (LRL)	• NXT Series	<ul style="list-style-type: none"> <li>• LED</li> <li>• 4000k</li> <li>• 7 pin PEC connector</li> <li>• Shorting cap</li> <li>• Wattages per design plans</li> </ul>
			• American Electrical Lighting (AEL)	• Autobahn Series	
		Advanced Accessible Pedestrian Station (AAPS)	• Polara	• Navigator EZ Comm	• IN2 System
		Audible Pedestrian Signals (APS)	• Novax	• DS102A-3W APS P/N: PLS001188	Enclosure to match pole colour
		Pedestrian or Cyclist Push Button	• Polara	• Bulldog BDLM2-Y	2 wire system
		PED Push Button Plate	• Greenlite Traffic	• GEL239 (R or L)	Black Symbol on White Background
		Cyclist Push Button Plate	• Greenlite Traffic	• GEL240 (R or L)	Black Symbol on White Background
		Cyclist / Ped Combo Sign Unit	• Greenlite Traffic		Black Symbol on White Background
		Signal Cable	• Texcan	• IMSA 7C, 12C, 19C & 25C No. 14 Stranded Copper	
		Signal Detector Loop Homerun Cable	• Texcan	• IMSA Spec. 50-2 2C No. 14 Stranded Copper	
		Individual Conductor	• Texcan	• RW90 Stranded Copper	Size and Color as per Plans
		Cable Lubricant	• IDEAL	<ul style="list-style-type: none"> <li>• Poly Water Dyna-Blue</li> <li>• Poly Water Aqua-Gel II</li> </ul>	
		Conduit	• Various	• CSA C22.2 NO. 211.2	RPVC
		Conductor Tags	• Panduit	• MP250-C Tags	On all Cables (Black indelible marker pen)
		Fuse Holders ( <u>Pole Hand Holes</u> )	• Tron	• Tron Heb-AA c/w 2 L-type Insulating Boots	
		Fuse Holders ( <u>Junction Boxes</u> )	<ul style="list-style-type: none"> <li>• Ideal</li> <li>• Buchanan</li> </ul>	• 65 KIT Water Proof	
		Fuses	• Bussman	• 10-A Buss KTK 600V	Amperage and Rating as per Plans

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
		Hydro Dip Service (RPVC Straps, Lag Bolts & Conduit Guard)	<ul style="list-style-type: none"> <li>• Various</li> </ul>	<ul style="list-style-type: none"> <li>• MMCD</li> </ul>	
		Overhead Adjustable Bracket	<ul style="list-style-type: none"> <li>• Olson Aluminum Castings</li> </ul>	<ul style="list-style-type: none"> <li>• Sky-Bracket</li> </ul>	C/W Stainless Steel Hardware
		Side Mount Brackets	<ul style="list-style-type: none"> <li>• Greenlite Traffic</li> </ul>	<ul style="list-style-type: none"> <li>• GEL 189G</li> </ul>	C/W Stainless Steel Hardware
		Illuminated Street Name Signs	<ul style="list-style-type: none"> <li>• Greentop Lighting</li> <li>• Temple Edge Lit</li> <li>• Valid</li> </ul>	<ul style="list-style-type: none"> <li>• Clear Lexan Panels</li> <li>• 3M 4090T – sheeting (translucent)</li> <li>• 3M ElectroCut 1175 blue film</li> <li>• 9" letter height (suffix 4")</li> <li>• Clearview font - 3W</li> <li>• Upper and lower case lettering</li> </ul>	Mounting hardware: CANBRAC for vertical installation or PELCO for hangar assembly SE-5015-42-PNC
		Illuminated Pedestrian Signs	<ul style="list-style-type: none"> <li>• Greentop Lighting</li> <li>• Valid</li> </ul>	<ul style="list-style-type: none"> <li>• MMCD</li> </ul>	<ul style="list-style-type: none"> <li>• Optional 300mm yellow LED signals and enclosures, as indicated on contract drawings.</li> <li>• Provided with Signal mounting hardware.</li> <li>•</li> </ul>
		Traffic Controller	<ul style="list-style-type: none"> <li>• Econolite</li> </ul>	<ul style="list-style-type: none"> <li>• Cobalt</li> </ul>	Supplied by City at Projects Expense
		Traffic Cabinet	<ul style="list-style-type: none"> <li>• Econolite</li> </ul>	<ul style="list-style-type: none"> <li>• P44DD</li> <li>• MSX</li> </ul>	Supplied by City at Projects Expense
		Uninterruptable Power Supply (UPS)	<ul style="list-style-type: none"> <li>• Alpha Technologies</li> </ul>	<ul style="list-style-type: none"> <li>• FXM-1100</li> </ul>	Supplied by City at Projects Expense
		UPS Cabinet c/w Indicator Light	<ul style="list-style-type: none"> <li>• Valid</li> </ul>	<ul style="list-style-type: none"> <li>• KSD481716PG - CQ</li> </ul>	Supplied and Installed by City at Projects Expense
		Fire Hall Controller	<ul style="list-style-type: none"> <li>• Novax</li> </ul>	<ul style="list-style-type: none"> <li>• PLS000874 / PLS000877</li> </ul>	Supplied by City at Projects Expense
		Special Crosswalk Controller	<ul style="list-style-type: none"> <li>• Novax</li> </ul>	<ul style="list-style-type: none"> <li>• PLS 000635 / PLS 000859</li> </ul>	Supplied by City at Projects Expense
		Traffic Video Detection System	<ul style="list-style-type: none"> <li>• Econolite</li> </ul>	<ul style="list-style-type: none"> <li>• Autoscope</li> <li>• Power Cable</li> </ul>	Supplied by City at Projects Expense: <ul style="list-style-type: none"> <li>• Autoscope Vision</li> <li>• Econolite P/N CBL 1175-011</li> </ul>

		<b>Product</b>	<b>Manufacturer</b>	<b>Approved Model</b>	<b>Restrictions/Additional Specifications</b>
			<ul style="list-style-type: none"> <li>Miovision</li> </ul>	<ul style="list-style-type: none"> <li>Traffic Link Detection</li> </ul>	Supplied by City at Projects Expense: <ul style="list-style-type: none"> <li>SmartView 360 Camera</li> <li>Smart Sense</li> <li>Smart Link</li> <li>TrafficLink Antenna</li> <li>Mount P/N: 33120519</li> <li>Cat5e cable w/drain</li> </ul>
		PTZ Cameras	<ul style="list-style-type: none"> <li>Pelco</li> </ul>	<ul style="list-style-type: none"> <li>Spectra Enhanced IP</li> <li>HPOE</li> <li>CAT5e Ethernet cable</li> <li>Mounting Hardware</li> <li>Surge Protection</li> <li>Product Registration</li> </ul>	P/N S6230EG1 PE-POE75U1UP Two runs of CAT5e cables required: One for the Ethernet connection, and the 2 <sup>nd</sup> for optional inputs (cabinet door switch) Confirm with City regarding mount type: <ul style="list-style-type: none"> <li>Paramount PP350</li> <li>OR:</li> <li>2 piece mount – PA402 and IWM Series.</li> <li>Sky-Bracket (if required)</li> </ul> DITEK Corp. (Product code DTK-PVPIP) Registration Update code for Camera Addition – DS Control Point
		EV Pre-emption System	<ul style="list-style-type: none"> <li>Emtrac</li> </ul>	<ul style="list-style-type: none"> <li>Priority Detector Card – ST 9283</li> <li>Antenna</li> <li>Antenna Cable (LMR240DB)</li> <li>Mounting Bracket</li> <li>BNC Connectors</li> </ul>	Supplied by City at Projects Expense
		Radio Communication Equipment	<ul style="list-style-type: none"> <li>Encom</li> </ul>	<ul style="list-style-type: none"> <li>Commpak BB 5.8</li> <li>Cable – CAT5e</li> </ul>	Supplied by City at Projects Expense
		Paint Color RAL Codes			<ul style="list-style-type: none"> <li>Coquitlam Green-RAL 6028</li> <li>Coquitlam Black-RAL 9005</li> <li>Town Centre Brown-RAL 8014</li> </ul>