



# STANDARD DETAIL DRAWINGS

| Revision | Date          | Description of Revision | Approval   |
|----------|---------------|-------------------------|------------|
| 0        | November 2019 | Initial version         | Megan Pate |

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| MMCD  |        | City of Vancouver | Sheet Title      | Description                         |
|---|--------|-------------------|------------------|-------------------------------------|
| Retain                                      | Delete | Replace/Add       |                  |                                     |
| <b>Concrete &amp; Miscellaneous Details</b> |        |                   |                  |                                     |
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|   |        | C0.2              | Drawing Index    | Concrete & Miscellaneous Details    |
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|   |        | C2.2              | Sidewalks        | Commercial Sidewalk > 2.4m          |
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| Retain               | Delete | Replace/Add       |                 |  |
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|                      |        | C19.1             | Signage         | Parking Meter Sleeve                                       |
|                      |        | C19.2             | Signage         | Traffic Sign Sleeve  |
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|                      | CE1.2  | CE1.2             | Concrete Bases  | V1 & V2 Poured in Place Concrete Bases                     |
|                      | CE1.3  | CE1.3             | Concrete Bases  | V3, V4 & V5 Poured in Place Concrete Bases                 |
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|                        |        | G11.3             | Planting                | Median Planting  |
| <b>Roadworks</b>       |        |                   |                         |  |
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|                        |        | R2.1              | Typical Cross Section   | Residential (Light Duty) Street                                |
|                        |        | R2.2              | Typical Cross Section   | Higher-Zoned Street  |
|                        |        | R2.3              | Typical Cross Section   | Industrial, Arterial, & Bus Routes                             |
|                        |        | R2.4              | Typical Cross Section   | P.C.C. Base  |

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| Retain                             | Delete | Replace/Add       |                       |   |
|                                    |        | R2.5              | Typical Cross Section | Roads on Peat                                 |
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|                                    |        | R4.3              | Roads                 | Typical Arterial Left Turn Bay                |
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|                                    |        | R8.8              | Markings & Signage    | Typical Bus Lane Pavement Marking             |
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|                                    |        | R9.1              | Parking               | Typical Parking Meter Layouts                 |
| <b>Storm &amp; Sanitary Sewers</b> |        |                   |                       |   |
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|                                    |        | S0.2              | Drawing Index         | Storm & Sanitary Sewers                       |
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|                                    |        | S1.5              | Maintenance Holes     | Pressure Maintenance Hole                     |
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|                                    | S5     | S5.5              | Maintenance Holes     | Frame No. 7 for Cover No. 8                   |
|                                    |        | S5.6              | Maintenance Holes     | Frame No. 12 for Cover No. 1                  |
|                                    |        | S5.7              | Maintenance Holes     | Frame No. 13 for Cover No. 2                  |
|                                    |        | S5.8              | Maintenance Holes     | Frame No. 17                                  |
|                                    |        | S5.9              | Maintenance Holes     | Offset Ring Cover No. 19 and Cover No. 21     |
|                                    |        | S5.10             | Maintenance Holes     | Frame No. 18                                  |



| MMCD              |        | City of Vancouver | Sheet Title                        | Description  |
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|                   |        | S5.11             | Maintenance Holes                  | Offset Ring Cover No. 20                             |
|                   |        | S5.12             | Maintenance Holes                  | Bolt Down Cover & Frame                              |
|                   | S6     | S6.1              | Sewer Cleanouts                    | Details  |
|                   | S7     | S7.1              | Services                           | Connections and Catch Basin Details                  |
|                   |        | S7.2              | Services                           | Connections and Catch Basin Details                  |
|                   |        | S7.3              | Services                           | Construction Details                                 |
|                   |        | S7.4              | Services                           | Services in Peat Areas                               |
|                   | S8     |                   | Services                           | Storm Sewer Service Connection                       |
|                   | S9     | S9.1              | Inspection Chambers                | 100mm to 375mm Sewer Connections                     |
|                   | S10    |                   | Inspection Chambers                | 250mm to 375mm Storm Sewer Connection                |
|                   | S11    | S11.1             | Catchbasins                        | Installation & Connection                            |
|                   |        | S11.2             | Catchbasins                        | Precast Concrete Catchbasin                          |
|                   |        | S11.3             | Catchbasins                        | Precast Concrete Curb Inlet Catchbasin               |
|                   |        | S11.4             | Catchbasins                        | Precast Concrete Percolating Catchbasin              |
|                   |        | S11.5             | Catchbasins                        | Precast Concrete Percolating Catchbasin Installation |
|                   |        | S11.6             | Catchbasins                        | Catchbasin Frame No. 30                              |
|                   |        | S11.7             | Catchbasins                        | Catchbasin Grating No. 31                            |
|                   |        | S11.8             | Catchbasins                        | Twin Inlet Catch Basin Frame                         |
|                   |        | S11.9             | Catchbasins                        | Typical Offset Sump Basin                            |
|                   |        | S11.10            | Catchbasins                        | Temporary Sectional Concrete Catchbasin              |
|                   |        | S11.11            | Catchbasins                        | Sectional Concrete Catchbasin Grating No. 32         |
|                   |        | S11.12            | Catchbasins                        | Catchbasin Trapping Hood No. 1A                      |
|                   |        | S11.13            | Catchbasins                        | Catchbasin Trapping Hoods No. 9 & 9A                 |
|                   |        | S11.14            | Catchbasins                        | Lifting Eyes   |
|                   |        | S11.15            | Catchbasins                        | Frame No. 3 & Cover No. 4                            |
| S12               |        |                   | Catchbasins                        | Lawn Drains  |
| S13               |        |                   | Culverts                           | Storm Sewer Inlet with Safety Grillage               |
| S14               |        |                   | Culverts                           | Concrete Block Endwall                               |
| S15               |        |                   | Culverts                           | Driveway Culvert with Concrete Block Endwalls        |
|                   |        | S16.1             | Twin Sewers                        | Vertical Separation                                  |
|                   |        | S16.2             | Twin Sewers                        | Vertical Separation                                  |
|                   |        | S17.1             | Forcemains                         | Inline Valve   |
|                   |        | S17.2             | Forcemains                         | Valve Box  |
|                   |        | S17.3             | Forcemains                         | Valve Box Lid  |
|                   |        | S17.4             | Forcemains                         | Cleanout Maintenance Hole                            |
|                   |        | S17.5             | Forcemains                         | In-Line Connection to 150mm & 200mm Forcemains       |
|                   |        | S17.6             | Forcemains                         | Connection Details for 75mm & 100mm Forcemains       |
|                   |        | S18.1             | Inspection                         | Mandrel & Proving Ring                               |
|                   |        | S19.1             | Wet Tapping                        | Nozzle for Wet Tapping Metro Van. Interceptor        |
|                   |        | S20.1             | Datum Planes                       | Historic City of Vancouver Datum Planes              |
|                   |        | S20.2             | Datum Planes                       | City of Vancouver Datum Planes                       |
| <b>Waterworks</b> |        |                   |                                    |  |
|                   | W0     | W0.1              | Drawing Index                      | Waterworks   |
|                   |        | W0.2              | Drawing Index                      | Waterworks   |
|                   | W1     | W1.1              | Thrust Blocks for Horizontal Bends | Caps, Plugs, Tees & 90° Elbows                       |
|                   |        | W1.2              | Thrust Blocks for Horizontal Bends | 45° Elbows & 22.5° Elbows                            |
|                   |        | W1.3              | Thrust Blocks for                  | 11.25° Elbows  |

| MMCD   |        | City of Vancouver | Sheet Title          | Description                                |
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|        |        |                   | Horizontal Bends     |  |
|        |        | W2a.1             | Services             | 20mm & 25mm                                |
|        |        | W2a.2             | Services             | 40mm & 50mm                                |
|        |        | W2a.3             | Services             | 100mm & Larger                             |
|        | W2a    | W2a.4             | Services             | Definitions                                |
|        |        | W2a.5             | Services             | HDPE Service (MJ)                          |
|        |        | W2a.6             | Services             | HDPE Service (Flange)                      |
|        |        | W2a.7             | Services             | HDPE Service (Flange Wet Tap)              |
|        |        | W2a.8             | Services             | HDPE Service (MJ Wet Tap)                  |
|        | W2b    |                   | Services             | Valve Box                                  |
|        |        | W2c.1             | Meters (Chamber)     | 20mm-50mm                                  |
|        | W2c    | W2c.2             | Meters (Chamber)     | 75mm-200mm (Lid Fully Removable)           |
|        |        | W2c.3             | Meters (Chamber)     | 75mm-200mm (Maintenance Hole Access)       |
|        |        | W2d.1             | Meters (Indoor)      | 20mm-50mm                                  |
|        | W2d    | W2d.2             | Meters (Indoor)      | 75mm-200mm (Bypass Above Mainline)         |
|        |        | W2d.3             | Meters (Indoor)      | 75mm-200mm (Bypass Adjacent to Mainline)   |
|        |        | W2e.1             | Meters (Residential) | 25mm Meter on 40mm Service                 |
|        | W2e    | W2e.2             | Meters (Residential) | 40mm Meter on 50mm Service                 |
|        |        | W2e.3             | Meters (Residential) | 20mm Meter Retrofitted on 20mm Service     |
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|        |        | W3.2              | Gate Valves          | Locations                                  |
|        | W4     | W4.1              | Fire Hydrants        | Locations                                  |
|        |        | W4.2              | Fire Hydrants        | Details                                    |
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|        |        | W5.2              | Sampling Stations    | Details                                    |
|        | W6     | W6.1              | Air Valves           | Installation in Boulevard                  |
|        |        | W6.2              | Air Valves           | Vent Stacks                                |
|        | W7     |                   | Air Valves           | 100mm Valve                                |
|        | W8     | W8.1              | Blowoffs             | Under Traffic Load                         |
|        |        | W8.2              | Blowoffs             | For Boulevard or Sidewalk                  |
|        | W9     | W9.1              | Blowdowns            | 150mm Blowdown into Maintenance Hole       |
|        |        | W9.2              | Blowdowns            | 150mm Fire Hydrant Blowdown                |
|        | W10    |                   | Chamber Drains       | Waterworks Chamber Drain                   |
|        |        | W11.1             | Pipe                 | Main Lowering Detail                       |
|        |        | W11.2             | Pipe                 | Landscaping Restrictions                   |
|        |        | W11.3             | Pipe                 | Crossing over High-Voltage Electrical Duct |
|        |        | W12.1             | Appurtenances        | Temporary End Caps                         |
|        |        | W13.1             | Castings             | Meter Box Frame No. 5                      |
|        |        | W13.2             | Castings             | Meter Box Lids No. 4 & 5                   |
|        |        | W13.3             | Castings             | Meter Box Frame No. 6                      |
|        |        | W13.4             | Castings             | Meter Box Lid No. 6                        |
|        |        | W13.5             | Castings             | Meter Box Frame No. 7                      |
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|        |        | W14.1             | Castings             | Maintenance Hole Frame No. WW1             |
|        |        | W14.2             | Castings             | Maintenance Hole Cover No. WW1             |
|        |        | W14.3             | Castings             | Maintenance Hole Cover No. 2               |
|        |        | W15.1             | Castings             | Telescopic Valve Box                       |
|        |        | W15.2             | Castings             | Telescopic Valve Box Lid                   |

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| Retain                     | Delete | Replace/Add       |                     |  |
|                            |        | W15.3             | Castings            | Special Telescopic Valve Box Lid                             |
|                            |        | W15.4             | Castings            | Special Telescopic Valve Box Lid Lettering                   |
|                            |        | W16.1             | Castings            | Cast Iron Lid for PVC Service Box                            |
|                            |        | W16.2             | Castings            | Type A Service Box   |
|                            |        | W17.1             | Joint Harness       | Details  |
|                            |        | W17.2             | Joint Harness       | Tie Bolts & Stud Diameters                                   |
|                            |        | W18.1             | Backflow Preventers | Construction Water Service Backflow Preventer                |
|                            |        | W19.1             | Chambers            | 20mm, 25mm, 40mm, & 50mm Meter Boxes                         |
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|                            |        | W19.3             | Chambers            | 75mm & 100mm Compound Meters Top Section                     |
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|                            |        | W19.5             | Chambers            | 75mm & 100mm Compound Meters Bottom Section                  |
|                            |        | W19.6             | Chambers            | Fireline Meter Bottom Section                                |
|                            |        | W19.7             | Chambers            | Fireline Meter Top Section                                   |
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|                            |        | W19.9             | Chambers            | Valve Box Base   |
|                            |        | W20.1             | Water Fountains     | Space Requirements   |
|                            |        | W20.2             | Water Fountains     | Draining to a Rock Pit                                       |
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| <b>Cathodic Protection</b> |        |                   |                     |  |
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|                            |        | W106.3            | Cathodic Protection | Electrical Bonding Straps                                    |
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|                            |        | W106.5            | Cathodic Protection | Standard Insulating Couplings & Joints                       |
|                            |        | W106.6            | Cathodic Protection | Standard Insulating Couplings & Joints                       |
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|                            | W108   |                   | Cathodic Protection | Standard Test Station  |
|                            | W109   |                   | Cathodic Protection | Isolation Test Station                                       |
|                            | W110   |                   | Cathodic Protection | Sacrificial Anode Station at Isolation Test Point            |
|                            | W111   |                   | Cathodic Protection | Standard Sacrificial Anode Station                           |
|                            | W112   |                   | Cathodic Protection | Sacrificial Anode Station with Lateral or Service Connection |
|                            | W113   |                   | Cathodic Protection | Foreign Utility Test Station                                 |
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|                            |        | W120.2            | Cathodic Protection | Railway Crossing Installation                                |