

City of Saskatoon Standard Construction Drawings Effective April 30, 2025

To access the current drawings, please visit the City of Saskatoon specifications and standards website:

https://www.saskatoon.ca/business-development/development-regulation/specifications-standards/drawings

| Boulevards | |
|---|------------|
| Boulevard Tree Street Lighting Separate Sidewalk, Vertical Curb, and Gutter Details | 1020001002 |
| Boulevard Tree and Utility Placement Combined Sidewalk and Curb Details | 1020001003 |
| | |
| Curbs & Walks | |
| Full Heights Curbs and Gutters | 1020002001 |
| Curb on Asphalt | 1020002002 |
| Separate Dropped Curb Crossings | 1020002003 |
| 810mm Concrete Barrier Curb | 1020002004 |
| Separate Vertical Curb | 1020002005 |
| Crossing - Combined Sidewalk, 150mm Vertical Curb & Gutter | 1020002006 |
| Crossing - Combined Sidewalk, 200mm Vertical Curb & Gutter | 1020002007 |
| Crossing - Combined Sidewalk & 150mm Vertical Curb | 1020002008 |
| Crossing - Combined Sidewalk & 200mm Vertical Curb | 1020002009 |
| Crossing - Separate Sidewalk, Vertical Curb & Gutter | 1020002010 |
| Crossing - Separate Sidewalk & Vertical Curb | 1020002011 |
| Crossing - Combined Sidewalk, Rolled Curb & Gutter | 1020002012 |
| Curb Return Crossing - Separate Sidewalk & Vertical Curb | 1020002013 |
| Directional Crossing - Combined Sidewalk & Vertical Curb | 1020002014 |
| Directional Crossing - Separate Sidewalk & Curb | 1020002015 |
| Directional Crossing - Corner Location | 1020002016 |
| Crossing - Curb Detail - Perspective View | 1020002017 |
| Grade Construction for Curb and Gutter | 1020002018 |
| Grade Construction for Sidewalk, Curb and Gutter | 1020002019 |
| Grade Construction for Walkway & Separate Sidewalk | 1020002020 |
| Control Joints | 1020002021 |
| Dowel/Control Joint Location and Spacing | 1020002022 |



| Pedestrian Ramp - Details | 1020002023 |
|---|------------|
| ' | 1020002023 |
| Wide Pedestrian Ramp - Texture Details | |
| Pedestrian Ramp - Texture Details | 1020002026 |
| Pedestrian Ramp - Rolled Curb | 1020002027 |
| Typical Transition - Combined Sidewalk & Curb | 1020002028 |
| Combined Sidewalk, Vertical Curb & Gutter | 1020002029 |
| Combined Sidewalk, Rolled Curb & Gutter | 1020002030 |
| Separate Sidewalk | 1020002031 |
| Concrete Walkway | 1020002032 |
| Combined Sidewalk & Vertical Curb | 1020002033 |
| Precast Concrete Curb | 1020002035 |
| Combined Sidewalk, Reversed Vertical Curb & Gutter | 1020002036 |
| Reversed Curb and Gutter Detail | 1020002037 |
| Concrete Placement Rate of Moisture Loss Chart | 1020002038 |
| Separate Sidewalk Irrigation Sleeve | 1020002039 |
| Separate Sidewalk Bus Stop Detail | 1020002040 |
| Perpendicular Separate Sidewalk Ramp Details | 1020002041 |
| Rolled Curb & Sidewalk 1978 Style | 1020002042 |
| Gutter Patch Paving | 1020002049 |
| 3.0m Multi-Use Pathway Ramp Configurations | 1020002052 |
| 3000 Multi-Use Pathway Asphalt | 1020002055 |
| Roadway Sideslope Ramp Pedestrian Access Wheelchair Accessible | 1020002057 |
| Traffic Calming Curb Extensions At A T-Intersection (Collector & Local Streets) | 1020002062 |
| Traffic Calming Curb Extensions At A Mid-Block Crossing (Collector Streets) | 1020002064 |
| Traffic Calming Curb Extension Options (Collector or Local Streets) | 1020002065 |
| 150mm Vertical Curb & Gutter with Paver Lip | 1020002067 |
| Concrete Swale | 1020002069 |
| Cut-Through Median Detail Pedestrian/Cyclist Crossing | 1020002070 |
| Combined Sidewalk, Reversed Rolled Curb & Gutter | 1020002071 |
| Transition to 250mm Vertical Curb Approved for Use at Transit Stops | 1020002074 |
| Pedestrian Ramp Placement Local & Collector Intersections | 1020002075 |
| Pedestrian Ramp Placement Arterial Intersections | 1020002076 |
| Mountable Curb | 1020002077 |
| Traffic Calming Speed Hump Details | 1020002078 |
| Pedestrian Ramp 1978 Style Rolled Curb | 1020002079 |
| | |
| | |



| Fences | |
|--|------------|
| Chain Link Fence Details - 1.8m Fence | 1020004001 |
| Chain Link Fence Details - 1.2m Fence | 1020004002 |
| Chain Link Fence Details - Gate Detail | 1020004003 |
| Chain Link Fence Type A | 1020004005 |
| Chain Link Fence Type A | 1020004006 |
| | |
| Lanes | |
| Lane, Paved - Typical Lane Cross Section | 1020005002 |
| Residential Lane Dead-End Turnaround T-Type: Large Car | 1020005003 |
| Residential Lane Dead-End Turnaround T-Type: Light Single Unit | 1020005004 |
| Commercial Lane Dead-End Turnaround T-Type: Medium Single Unit | 1020005005 |
| Residential Lane Dead-End Turnaround L-Type: Large Car | 1020005006 |
| Lane, Paved - 2 Stage Construction | 1020005007 |
| | |
| Medians | |
| Splash Apron | 1020006001 |
| Mountable Median Tip | 1020006002 |
| Median Ramp | 1020006003 |
| 830 Median Barrier | 1020006005 |
| Traffic Calming Template Temporary Median Island | 1020006006 |
| | |
| Buried Utilities | |
| Utilities Placement Standards | 1020007001 |
| Utilities Placement Standards | 1020007002 |
| Utilities Placement Standards | 1020007003 |
| Utilities Placement Standards | 1020007005 |
| Typical Roadway Crossing Electrical Sleeve | 1020007006 |
| Typical Roadway Crossing Irrigation Sleeve | 1020007007 |
| Base/Ducting Installation - Typical Median Cross Section | 1020007008 |
| | |
| Streets | |
| Rubberized Asphalt Crack Sealant - Cross Section | 1020008001 |
| | |
| Surveying | 1000000 |
| Specifications for Survey Stakes | 1020009001 |
| Survey Tablet Marker Type 1 | 1020009002 |



Page 4 of 10

| COC Cum vou Mankan | 400000000 |
|--|------------|
| COS Survey Marker | 1020009003 |
| COS Survey Marker Casing | 1020009004 |
| COS Survey Marker Installation | 1020009005 |
| | |
| Catch Basins | |
| Storm Drainage Catch Basin for Tandem Installation | 1020010002 |
| 500mm Round Catch Basin Frame and Cover | 1020010003 |
| Catch Basin Frame and Cover Surface Inlet Model | 1020010004 |
| Catch Basin Frame and Cover Curb Inlet Model | 1020010005 |
| Rolled Curb Catch Basin | 1020010006 |
| Precast Reinforced Round Catch Basin | 1020010007 |
| Installation of Catch Basin Lead for Sidewalk Construction | 1020010009 |
| Hamilton Kent Pipe to Manhole Connector Specification Sheet | 1020010010 |
| Typical Catch Basin Conversion at Driveway or Crossing | 1020010012 |
| Curb Inlet Risers for Catch Basin Frame and Cover | 1020010013 |
| Curb Inlet Catch Basin Frame and Cover | 1020010014 |
| Roadway Subdrainage Pipe Connection to Catchbasin | 1020010015 |
| Vertical Curb 900mm Catch Basin Assembly Type K-1 | 1020010016 |
| Rolled Curb 900mm Catch Basin Assembly Type K-2 | 1020010017 |
| Surface Inlet 900mm Catch Basin Assembly Type K-3 | 1020010018 |
| Precast Monolithic 900mm Catch Basin Base | 1020010019 |
| Catch Basin Side Inlet Type K-1 | 1020010020 |
| Catch Basin Surface Inlet Grate Type K-1 | 1020010021 |
| Catch Basin Surface Inlet Frame Type K-1 | 1020010022 |
| Catch Basin Precast Slab Top Type K-1 | 1020010023 |
| Rolled Curb Catch Basin Grate Type K-2 | 1020010024 |
| Rolled Curb Catch Basin Frame Type K-2 | 1020010025 |
| Catch Basin Precast Collars Type K-2 | 1020010026 |
| Catch Basin Precast Slab Top Type K-2 | 1020010027 |
| Catch Basin Precast Slab Top Type K-3 | 1020010028 |
| | |
| Manholes | |
| Manhole Safety Platform | 1020011001 |
| Standard 1050mm Manhole for 200mm to 525mm Sanitary Sewers - | 1020011004 |
| For Rehabilitation Work Only | 1020011004 |
| Standard 1200mm manhole for 200mm to 600mm Sanitary Sewers | 1020011005 |
| With Drop Structure | |
| Standard 1200mm Manhole for 675mm to 900mm Sewers | 1020011006 |



| Drop Structure Manhole for Connection to Trunk Storm Sewers | 1020011008 |
|---|------------|
| Standard 1200mm Manhole for 200mm to 600mm Sewers | 1020011009 |
| Circular PVC Pipe Beddings | 1020011010 |
| Circular Concrete Pipe Beddings | 1020011011 |
| Concrete Manhole Collars | 1020011012 |
| Manhole Lifter Ring Details | 1020011013 |
| Rubber Manhole Adjustment Riser | 1020011014 |
| Manhole Rehabilitation Where Thickness of Concrete Below Invert Exceeds 125mm | 1020011016 |
| Manhole Rehabilitation Where Thickness of Concrete Below Invert Does Not Exceed 125mm | 1020011017 |
| Sewer Force Main Inspection Manhole | 1020011018 |
| Standard Lockable COS Manhole Frame & Cover For Public Properties | 1020011019 |
| Lock Wing & Spacers For Standard COS Manhole Covers | 1020011020 |
| Standard Lockable COS Manhole Frame & Cover for Private Properties | 1020011021 |
| TF-48 Beehive Grate | 1020011022 |
| TF-48 Beehive Frame | 1020011023 |
| Sanitary Sewer Manhole Drop Structure Between High Line and Low Line | 1020011024 |
| TF-101 Beehive Frame | 1020011025 |
| TF-101 Beehive Grate | 1020011026 |
| Standard Manhole Types for Large Sewers - Notes and Schedules | 1020011028 |
| Standard Manhole Types for Large Sewers - Sections and Details | 1020011029 |
| Standard Manhole Types for Large Sewers - Cast-In-Place Details | 1020011030 |
| Standard Storm Sewer Subdrain Detail - Crown Depth up to 2.3m | 1020011031 |
| Standard Storm Sewer Subdrain Detail - Crown Deeper than 2.3m | 1020011032 |
| Standard Low Profile Manhole Frame for Rehabilitation Work Only | 1020011034 |
| Internal Drop Structure At Sanitary Sewer Manhole | 1020011036 |
| Watermains | |
| Copper Dead End Water Main Flusher | 1020012001 |
| Reaction Blocking and Water Main Anchoring | 1020012002 |
| Fire Hydrant Standard Installation | 1020012003 |
| Square Hydrant Guard | 1020012004 |
| Pumped Drain Structure | 1020012005 |
| Manual Air Release C301/303 Pipe | 1020012006 |
| | |



| Typical Pipe Insulation | 1020012007 |
|--|------------|
| Welded Type Tapping Saddle for Large Diameter Steel Watermains | 1020012009 |
| Valve Anchoring Details for 300mm & Larger Valves | 1020012010 |
| Manual Air Release C905 Pipe | 1020012011 |
| Circular Hydrant Guard | 1020012012 |
| Water Circulator Service Connection | 1020012013 |
| Polyethylene Dead End Watermain Flusher | 1020012014 |
| Restraint Joints on C905 PVC Pipe | 1020012015 |
| Fire Hydrant Standard Locations | 1020012016 |
| Type 'C' Valve Box Top and Lid | 1020012017 |
| Type 'C' Lifter Rings | 1020012018 |
| Chlorine Injection Point | 1020012025 |
| | |
| Service Connections | |
| Typical Sewer & Polyethylene Water Service Connection | 1020013001 |
| Typical Sewer & Copper Water Service Connection | 1020013002 |
| Typical Duplex Water & Sewer Service Connection | 1020013003 |
| Interior Drop Structure at Sanitary Sewer Manhole | 1020013004 |
| Typical Sewer Service Cleanout | 1020013005 |
| Typical Sewer Tapping | 1020013007 |
| PVC Service Connection Riser Assembly | 1020013008 |
| 100mm Water Service Seasonal Connection | 1020013009 |
| 50mm Water Service Seasonal Connection | 1020013010 |
| Standard Curb Box | 1020013011 |
| Curb Box Cap | 1020013012 |
| 15mm Spindle Details | 1020013013 |
| 19mm Spindle Details | 1020013015 |
| PVC Service Connection Vertical Riser Assembly (Reconstruction Only) | 1020013016 |
| Recreational Vehicle Service Station with Sewage Disposal & Water Supply | 1020013020 |
| Cathodic Protection | |
| Multiple Impressed Current Anode Ground Bed Vertical | 1020014001 |
| Multiple Impressed Current Anode Ground Bed Horizontal | 1020014002 |
| maidple imprecede current / triode Crodina Bod Horizontal | 1020017002 |
| Traffic Signals | 100001001 |
| Traffic Signal Conduit Junction Box Installation | 1020016019 |



| Specifications for Pre-Cast Traffic Signal Pole Base | 1020016020 |
|--|------------|
| Specifications for Traffic Signal Corridor Pole | 1020016021 |
| Combination Street Light and Traffic Signal Pole | 1020016022 |
| Specifications for Traffic Signal Arms | 1020016023 |
| Specifications for Hand Hole Assembly | 1020016025 |
| Pre-Cast Pole Base Installation Details | 1020016029 |
| Trenching Installation Details | 1020016032 |
| Cast-In-Place Cabinet Base in Natural Ground Details | 1020016033 |
| Service Pedestal Installation Details | 1020016034 |
| Cast-In-Place Cabinet Base in Sidewalk Details | 1020016039 |
| | |
| Signage | |
| Adapter Plate for Roadside Guidesign | 1020017010 |
| Concrete Base for Roadside Guidesign | 1020017011 |
| I-Beam for Roadside Guidesign | 1020017012 |
| Bolt Assembly I-Beam to Adapter Plate for Ground Mounted Signs | 1020017013 |
| I-Beam for Median Guidesign | 1020017015 |
| Pavement Marking Test Section Sign Details | 1020017016 |
| Advance Warning Flasher Structure Pile and Anchor Bolt | 1020017017 |
| Temporary Sign Base | 1020017031 |
| Signage Typical Installation Depth Sign Post Base | 1020017054 |
| Signage Typical Sign Post Base Detail | 1020017055 |
| Signage Typical Installation Sign Post | 1020017056 |
| Signage Typical Installation Traffic Control Sign | 1020017057 |
| Signage Typical Installation Crosswalk | 1020017058 |
| | |
| Storm Sewer | |
| Grating for Concrete Endwall Pipe Dia. Up to 1200mm | 1020018001 |
| Grating for Concrete Endwall Pipe Dia. 1350mm to 1800mm | 1020018002 |
| Standard Handrail | 1020018003 |
| Standard Riprap Detail | 1020018004 |
| Storm Sewer Outfall | 1020018005 |
| Storm Sewer Outfall Reinforcement Details | 1020018006 |
| Handrail Details | 1020018007 |
| Standard Ditch Crossing Culvert Requirements | 1020018009 |
| Stormwater Storage Basin Cross Section | 1020018010 |
| | |
| | |



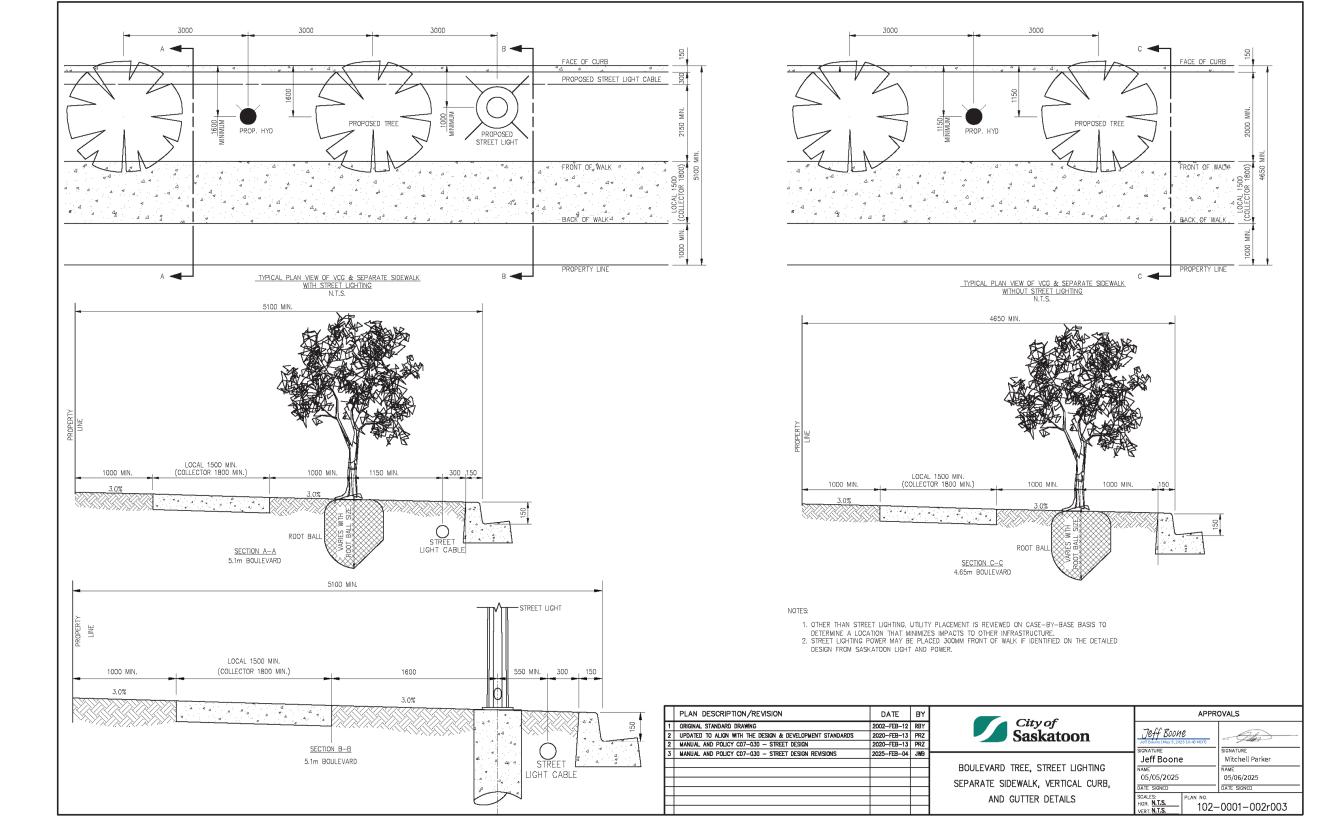
| Trenching | |
|---|-------------|
| Keying of Trench | 1020019001 |
| , 0 | |
| Berms | |
| Typical Berm Requirements | 1020021001 |
| | |
| Lot Drainage | |
| Easement Grading Back Yard | 1020022003 |
| Easement Grading Side Yard | 1020022004 |
| Drainage Swale Back of Lot, 1 of 2 | 1020022005 |
| Grade Markers Electrical Kiosk | 1020022006 |
| Drainage Swale Back of Lot, 2 of 2 | 1020022007 |
| Grade Markers Electrical Kiosk | 1020022008 |
| COS Lot Grade Markers Construction and Placement | 1020022009 |
| Drainage Improvement | 1020022010 |
| Side Yard Drainage Swale | 1020022012 |
| Lot Grading Transition Lot Type A/D & D/A | 1020022013 |
| Lot Grading Transition Lot Type D/C & C/D | 1020022014 |
| Lot Grading Transition Lot Type D/E & E/D | 1020022015 |
| Lot Grading Type A | 1020022016 |
| Lot Grading Type D | 1020022017 |
| Lot Grading Type C | 1020022018 |
| Lot Grading Type E | 1020022019 |
| Lot Grading Transition Lot Type C/E & E/C | 1020022021 |
| Side Yard Typical Concrete Drainage Swale | 1020022022 |
| Back Yard Typical Concrete Drainage Swale | 1020022023 |
| | |
| Sump Details | |
| Sump with Pumped Discharge to Surface | 1020025001 |
| Sump with Pumped Discharge to Storm Sewer | 1020025002 |
| Sump Pump Retrofit #1 | 1020025003 |
| Sump Pump Retrofit #2 with Pumped Discharge to Surface Plus | 1020025004 |
| Backflow Prevention | . 323323331 |
| | |
| Geometrics/Channelization | 400000044 |
| Bus Bay Turnout | 1020029014 |

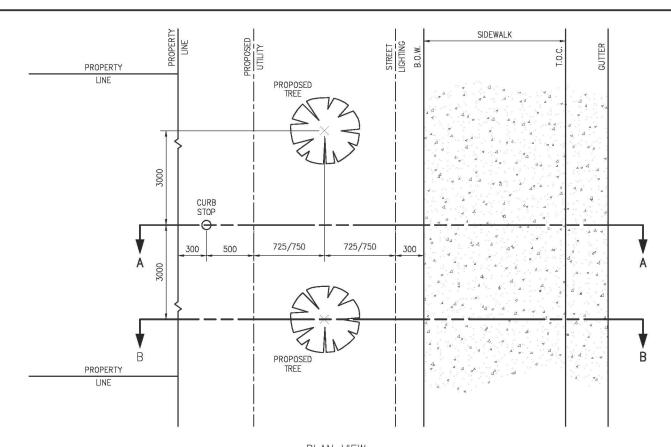


| Roundabout Functional Design Local Class 'A' | 1020029017 |
|---|------------|
| Roundabout Detailed Design Local Class 'A' | 1020029018 |
| Roundabout Sight Lines Design Local Class 'A' | 1020029019 |
| Roundabout Operating Speeds Design Local Class 'A' | 1020029020 |
| Roundabout Functional Design Collector Class 'A'/Local Class 'A' | 1020029021 |
| Roundabout Detailed Design Collector Class 'A'/Local Class 'A' | 1020029022 |
| Roundabout Sight Lines Design Collector Class 'A'/Local Class 'A' | 1020029023 |
| Roundabout Operating Speeds Design Collector Class 'A'/Local Class 'A' | 1020029024 |
| Design Vehicles for Arterials, Expressways, Freeways | 1020029026 |
| Standard Neighbourhood Entrances | 1020029027 |
| Design Vehicle for Collectors and Roundabouts | 1020029031 |
| Class B Arterial Staging Options | 1020029032 |
| Cul-De-Sac Parameters - Residential, Commercial and Industrial Roadways | 1020029035 |
| Typical Road and Back Lane Subdrainage Details | 1020029045 |
| Design Vehicle Side Load Garbage Truck | 1020029048 |
| Design Vehicle Firetruck (E-One Cyclone) | 1020029049 |
| Design Vehicle Articulating Bus | 1020029050 |
| Design Vehicle Medium Single Unit Truck (MSU) | 1020029051 |
| Design Vehicle Heavy Single Unit Truck (HSU) | 1020029052 |
| Cross-Sections On-Street Bike Lane (Non All Ages & Abilities) | 1020029053 |
| Cross-Sections Buffered Bike Lane (Non All Ages & Abilities) | 1020029054 |
| Cross-Sections Protected Bike Lane (All Ages & Abilities) | 1020029055 |
| Cross-Sections Raised Cycle Track (All Ages & Abilities) | 1020029056 |
| Cross-Sections Multi-Use Pathway (All Ages & Abilities) | 1020029057 |
| Indicative Cross-Section Lane | 1020029058 |
| Indicative Cross-Section Local | 1020029059 |
| Indicative Cross-Section Collector | 1020029060 |
| Indicative Cross-Section Arterial | 1020029061 |
| Indicative Cross-Section Freeway/Expressway | 1020029062 |
| Commercial and Downtown Streets with On-Street Parking on All Legs Corner Radius = 3m | 1020029063 |
| Local and Collector Streets with On-Street Parking on All Legs Corner Radius = 5m | 1020029064 |
| Industrial Streets Corner Radius = 15m | 1020029065 |
| Arterial - Arterial Intersection Unchannelized Layout | 1020029068 |
| Arterial - Arterial Intersection Channelized Layout | 1020029069 |

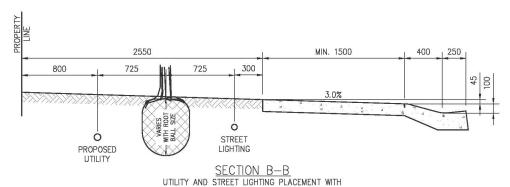


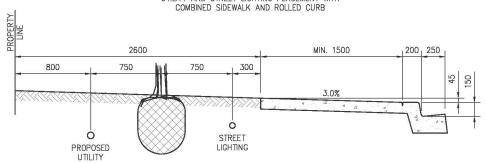
| Arterial Channelized Intersection 45 degree Entry Angle Lane Drop | 1020029070 |
|---|------------|
| Arterial Channelized Intersection High Entry Angle Lane Drop | 1020029071 |
| | |
| Pavement Markings | |
| Bike Stencil Bike Pavement Marking | 1020034001 |
| Bike Diamond Symbol Stencil Reserved Bike Lane Pavement Marking | 1020034002 |
| Bike Arrow Stencil Bike Direction Pavement Marking | 1020034003 |
| Sharrow Stencil Shared Bike Lane Pavement Marking | 1020034004 |
| Bike Ends Stencil Reserved Bike Lane Ends Pavement Marking | 1020034007 |
| Typical Pavement Markings Shared Bike Lane Sharrow Symbol Placement | 1020034008 |
| Typical Pavement Markings Reserved Bike Lane Reserved Bike Symbols Placement | 1020034009 |
| Two-Stage Turn Bike Box Bike Direction Pavement Marking | 1020034016 |
| Longitudinal Pavement Markings | 1020034017 |
| Transverse Pavement Markings | 1020034018 |
| Gore Marks | 1020034019 |
| Lane Line Dimensioning Practice | 1020034020 |
| Standard Specification Railway Crossing Symbol | 1020034021 |
| Street Fixtures | |
| Bicycle Stand Surface Mount Installation | 1020038001 |
| Bicycle Stand Sleeve Installation | 1020038002 |
| Water Meters | |
| Typical Large Water Meter Installation 75mm, 100mm, & 150mm Compound, Turbine Meters, & Aquamaster Magnetic Flowmeter | 1020039001 |
| Typical Small Water Meter Installation 19mm & 25mm (3/4" – 1"Meter) | 1020039002 |
| Typical Intermediate Water Meter Installation 38mm & 50mm (1 ½" – 2") | 1020039003 |
| Typical layout For Parallel Water Meters (NO BYPASS 38mm & 50mm) | 1020039004 |





PLAN VIEW
BOULEVARD TREE & UTILITY PLACEMENT WITH COMBINED WALK & ROLLED/VERTICAL CURB



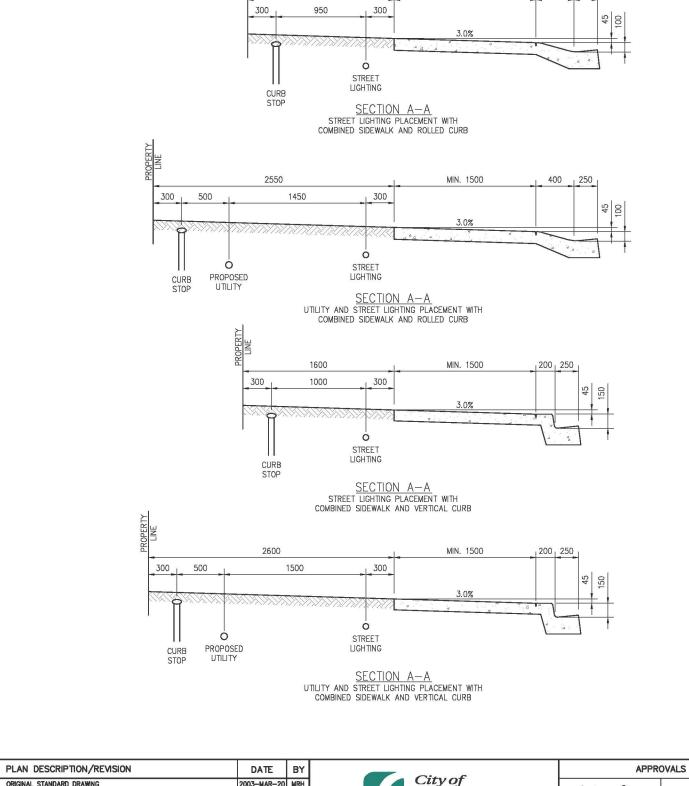


SECTION B-B
UTILITY AND STREET LIGHTING PLACEMENT WITH COMBINED SIDEWALK AND VERTICAL CURB

- 1. UTILITIES MAY BE PLACED IN THE ROADWAY ALONG 15.0m R.O.W. STREET FRONTS FOR LOOPING SYSTEMS
- AND WHEN REAR YARD CONSTRUCTION IS NOT AVAILABLE.

 ON 15.0m R.O.W. STREETS WITH 2.5m OR 3.0m BOULEVARDS, UTILITIES WILL BE PLACED ALONG THE LOT FLANKAGE IF REQUIRED, AND TREES WILL NOT BE PLANTED WHERE UTILITIES ARE PLACED ALONG FLANKAGE.

 JEF STREET LIGHTING IS NOT REQUIRED ON STREET FRONT THEN OTHER UTILITY MAY BE PLACED.



Saskatoon

BOULEVARD TREE AND UTILITY PLACEMENT

COMBINED SIDEWALK AND CURB DETAILS

SIGNATURE

Matt Jurkiewicz

Apr 30, 2020

102-0001-003r002

DATE SIGNED

Chelsea Lanning

Apr 22, 2020

DATE SIGNED

SCALES: HOR. N.T.S.

2003-MAR-20 MRH

2020-FEB-13 PRZ

2020-FEB-13 PRZ

ORIGINAL STANDARD DRAWING

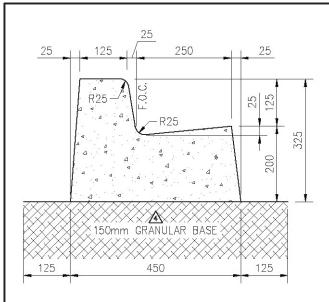
UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS

MANUAL AND POLICY CO7-030 - STREET DESIGN

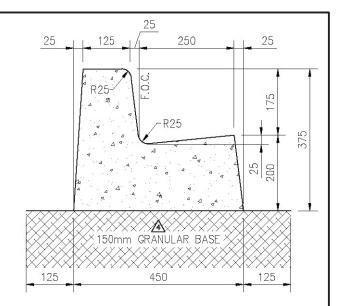
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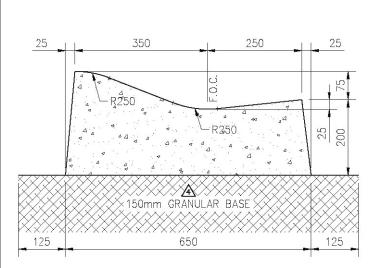
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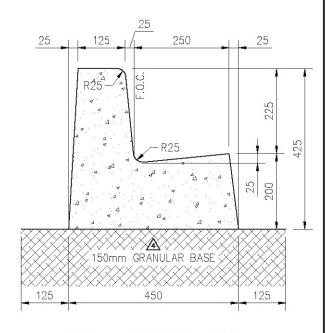
150mm VERTICAL C&G



200mm VERTICAL C&G



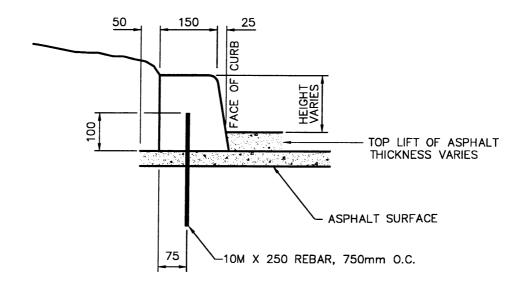
ROLLED CURB & GUTTER



250mm VERTICAL C&G
APPROVED FOR USE AT TRANSIT STOPS

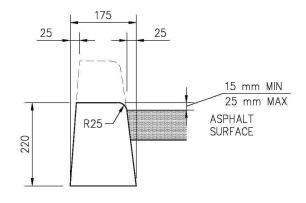
- CONCRETE STANDARD:
 32 MPa DURA-MIX CONCRETE
 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH TOP & FACE OF CURB AND GUTTER LONGITUDINALLY. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m

| Н | | | | | | |
|----------|--|-------------|----------|----------------------------------|-------------------------|-------------------|
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
| 1 | ORIGINAL STANDARD DRAWING | 1999-JUN-23 | RO | Cityof | ~ | > |
| 2 | REMOVED CONCRETE SWALE | 2012-DEC-14 | HLO | City of Saskatoon | Chris Duriez | Lan |
| 3 | ADDED 250mm VERTICAL CURB & GUTTER | 2020-JAN-31 | PRZ | Outstate Oil | | |
| 4 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-08 | DLH | | SIGNATURE | SIGNATURE |
| | | | | FULL LIFECULT OURDER WITH OUTTER | Chris Duriez | Maciej Jurkiewicz |
| \vdash | | | | FULL HEIGHT CURBS WITH GUTTER | NAME | NAME |
| Н | | | | | Jan 25, 2021 | Jan 25, 2021 |
| Н | | | | | DATE SIGNED | DATE SIGNED |
| \vdash | | | \vdash | | SCALES: PLAN NO. | |
| | | | | | HOR. 1:10 VERT. 1:10 | -0002-001r004 |

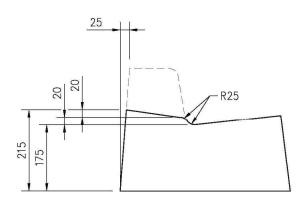


- 1. WHERE CURB IS PLACED ON TOP LIFT OF ASPHALT, THE TOTAL STRUCTURE HEIGHT WILL BE REDUCED TO MAINTAIN A 200mm FACE OF CURB. ALL OTHER DIMENSIONS TO REMAIN THE SAME.
- 2. CURB GRADE CAN BE ESTABLISHED INDEPENDENTLY OF THE BOTTOM LIFT ELEVATIONS.
- 3. CONTROL JOINTS EVERY 1500mm.
- 4. REBAR TO BE STAINLESS STEEL, EPOXY COATED, OR GALVANIZED. (EPOXY CAN NOT BE DRIVEN.)
- 5. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE, 5-8% AIR AS PER SPEC.
- 6. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 7. BROOM FINISH EXPOSED SURFACES LONGITUDINALLY.
- 8. BROOM OVER ALL CONTROL JOINTS.

| REVISIONS | CITY OF SASKATOON | APFROVED |
|---|-------------------------|--|
| 2 3 | INFRASTRUCTURE SERVICES | GENERAL MANAGER P. ENG. |
| DRAWN BY R. OTTENBREIT DATE FEBRUARY 1, 1999 | ENGINEER Oupdale | |
| CHECKED BY | CURB ON ASPHALT C-2 | SCALES: HOR. 1:10 VERT. 1:10 PLAN NO. 102-0002-002r001 |



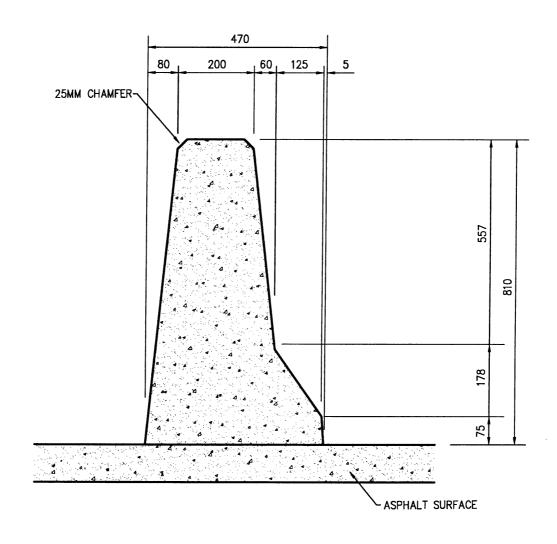
150mm SEPARATE CURB



VERTICAL CURB & GUTTER

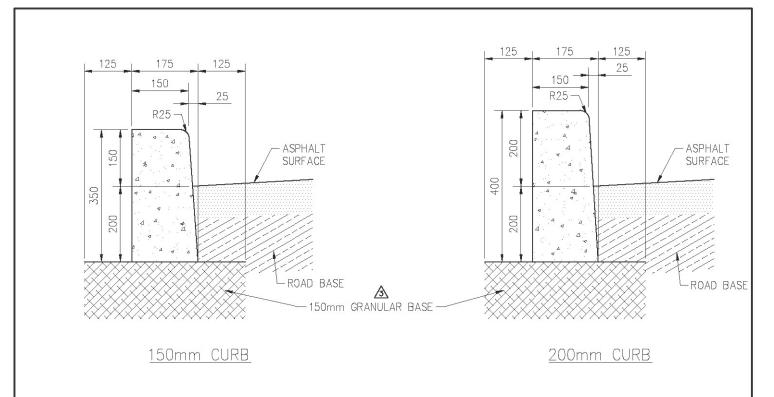
- CONCRETE STANDARD:
 MPa DURA-MIX CONCRETE
 S-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- BROOM FINISH TOP & FACE OF CURB AND GUTTER LONGITUDINALLY. BROOM OVER ALL CONTROL JOINTS.

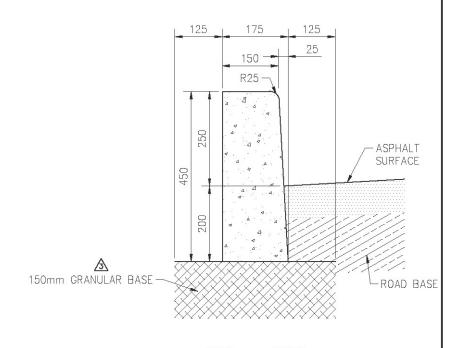
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | | APPROVALS |
|---|---|-------------|-----|--------------------------------|-------------------------|------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | | |
| 2 | ADDED MISSING DIMENSION AND UPDATED STANDARDS | 2023-JAN-13 | MLP | City of Saskatoon | 11/11 | Todd Grabowski |
| | | | | | 1 - | |
| | | | | | SIGNATURE | SIGNATURE |
| Г | | | | CEDADATE DRODDED OUDD ODOCCINO | Tim Bushman | Todd Grabowski |
| Г | | | | SEPARATE DROPPED CURB CROSSING | NAME | NAME |
| Н | | | | | Feb 20, 2024 | Feb 27, 2024 |
| Н | | | | | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PL | AN NO. |
| Н | | | | | HOR. 1:10 VERT. 1:10 | 102-0002-003r002 |
| _ | | | | , | VER 1. 1. 10 | |



- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. SILANE SEALER TO BE APPLIED TO BARRIER SURFACE
- 4. CONTROL JOINTS TO BE CONSTRUCTED AT 2.5M SPACINGS

| REVISIONS | CITY OF SASKATOON | APFROVED |
|--|-------------------------|---------------------------|
| 1 2 3 | INFRASTRUCTURE SERVICES | GENERÂL MANAGER P. ENG. |
| DRAWN BY R. OTTENBREIT DATE FEBRUARY 1, 1999 | 810MM CONCRETE | ENGINEER ENGINEER |
| CHECKED BY | BARRIER CURB | SCALES: HOR. 1:10 VERT |
| DAIL | [| PLAN NO. 102-0002-004r001 |

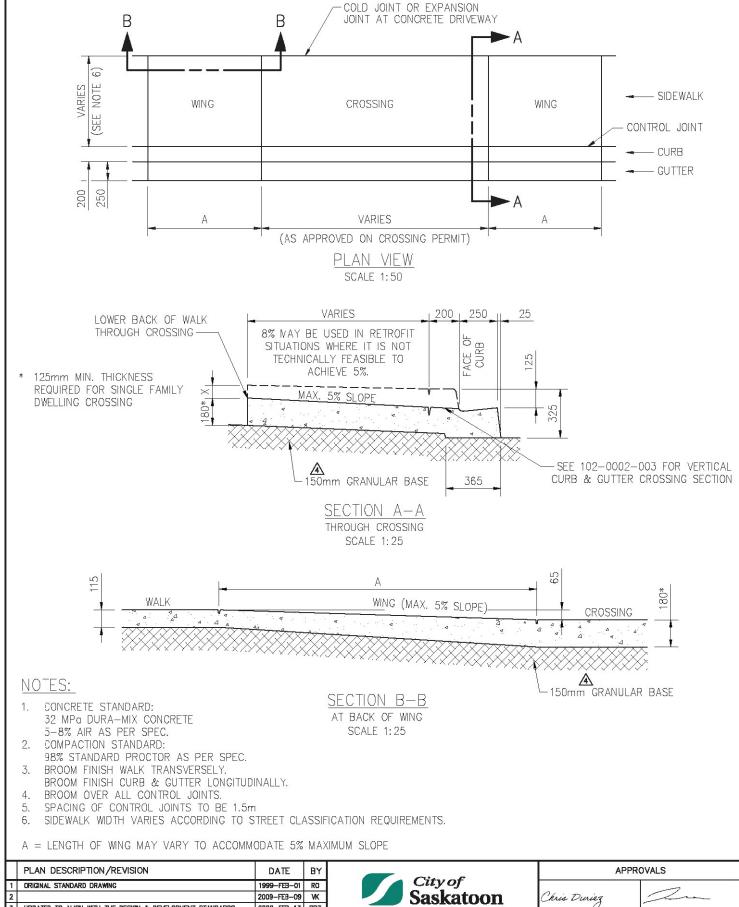




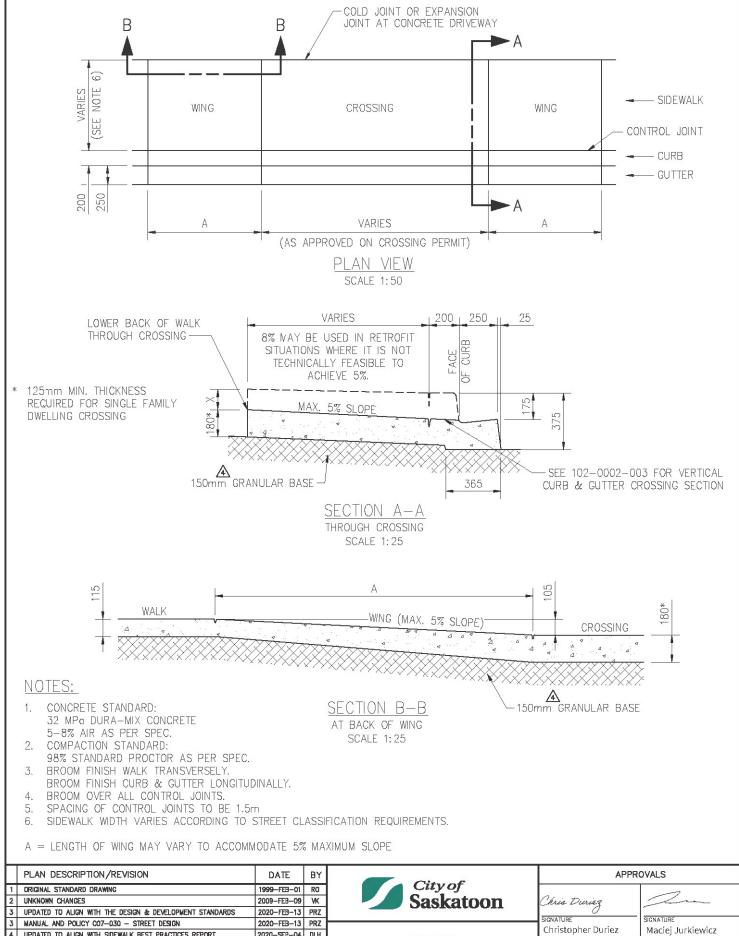
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH TOP & FACE OF CURB AND GUTTER LONGITUDINALLY. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5M

| 2 | 250i | mm | C | <u>URB</u> | |
|----------|------|-----|----|------------|-------|
| APPROVED | FOR | USE | АТ | TRANSIT | STOPS |

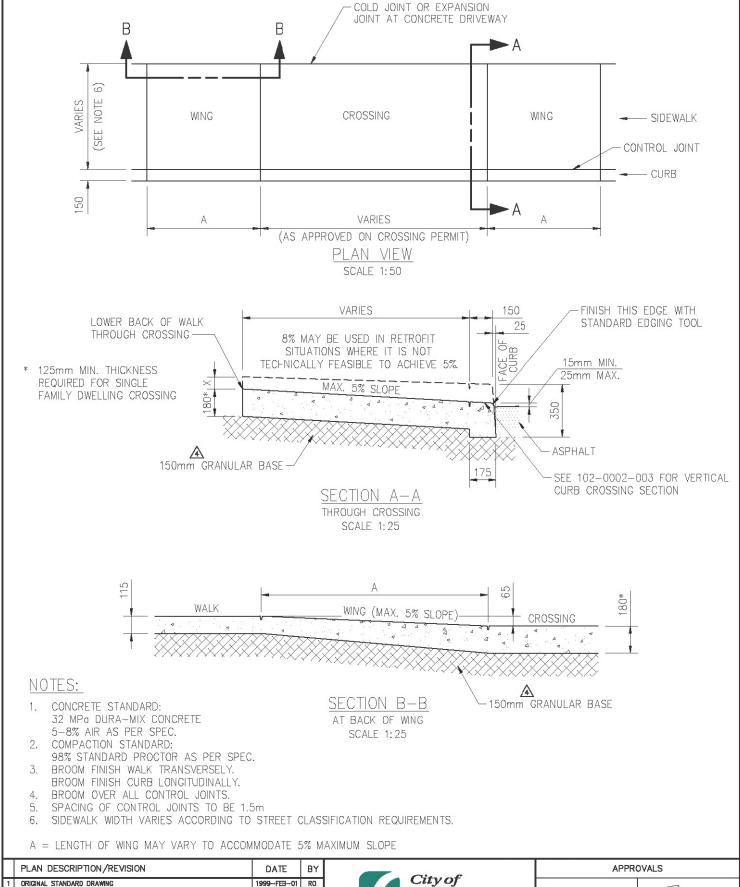
| L | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|--|-------------|-----|-------------------------|-------------------------|-------------------|--|
| Г | DRIGINAL STANDARD DRAWING | 1999-FEB-1 | RO | Cityof | 2000 | | |
| [| ADDED 200mm & 250mm CURBS | 2020-JAN-31 | PRZ | City of Saskatoon | Chris Durisz | Lan | |
| [| UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT 2 | 2020-OCT-08 | DLH | - Outstatto on | | | |
| Г | | | | | SIGNATURE | SIGNATURE | |
| Г | | | | | Christopher Duriez | Maciej Jurkiewicz | |
| Г | | | | | NAME | NAME | |
| h | | | | SEPARATE VERTICAL CURBS | Jan 25, 2021 | Jan 25, 2021 | |
| h | | | | SEPARATE VERTICAL CORBS | DATE SIGNED | DATE SIGNED | |
| H | + | | | | SCALES: PLAN NO. | 1 | |
| t | | | | | HOR. 1:10 VERT. 1:10 | -0002-005r003 | |



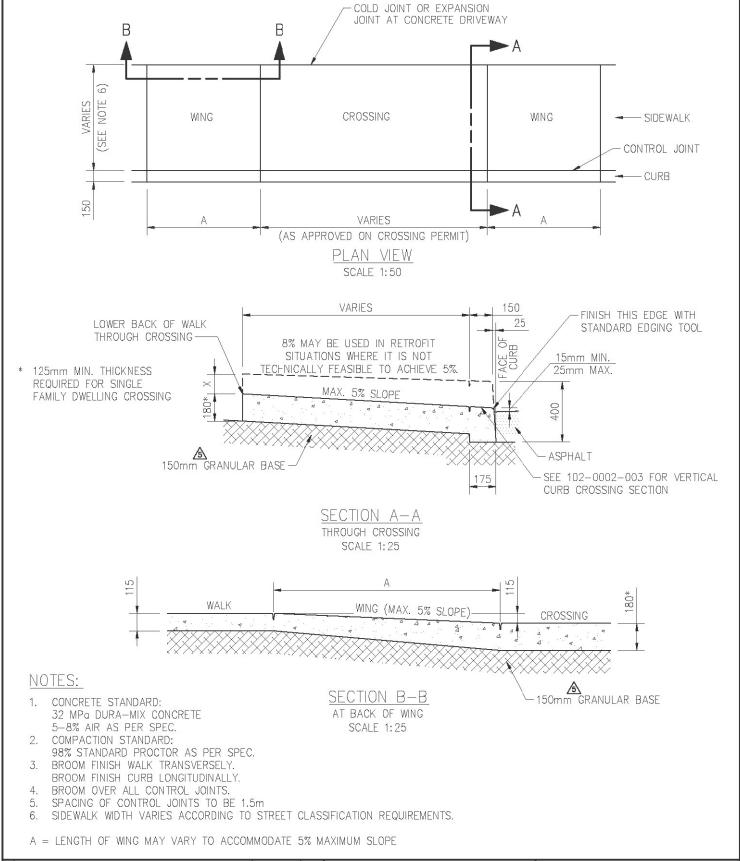
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|------|--|-------------|-----|------------------------------|---------------------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 0/ | |
| 2 | | 2009-FEB-09 | W | Saskatoon | Chris Duriez | - |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | | |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE Christopher Duriez | SIGNATURE |
| 4 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-02 | DLH | CROSSING | | Maciej Jurkiewicz |
| | | - | | CINOSSING | NAME | NAME |
| | | | | COMBINED SIDEWALK, | Jan 25, 2021 | Jan 25, 2021 |
| - 1- | | | | COMIDITALITY, | DATE SIGNED | DATE SIGNED |
| H | | | | 150mm VERTICAL CURB & GUTTER | SCALES: PLAN NO. | |
| L | | | | | vert. 102- | -0002-006r004 |



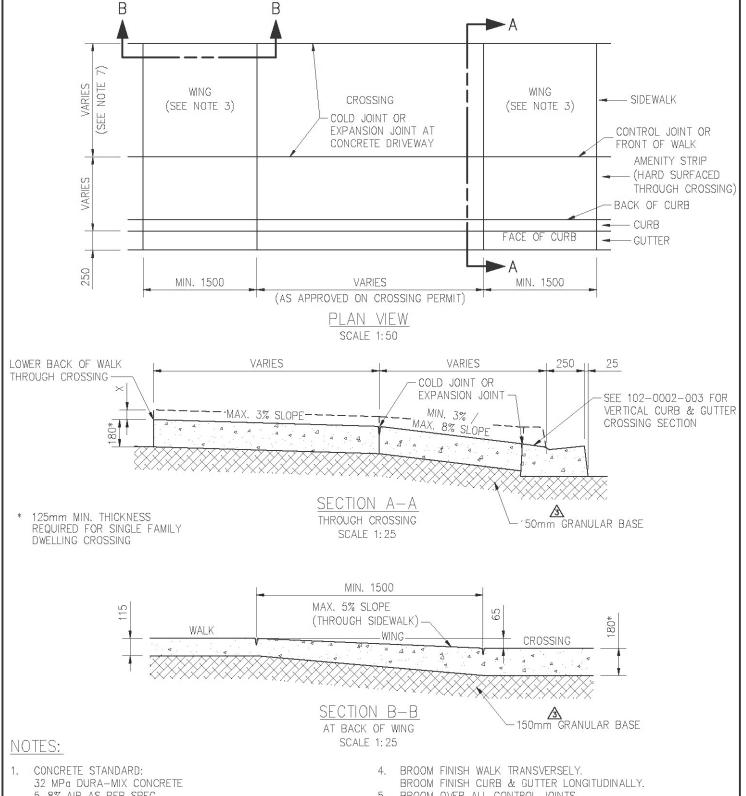
| L | PLAN DESCRIPTION/REVISION | DATE | BA | | APPR | UVALS |
|---|--|-------------|-----|------------------------------|--|-------------------|
| 1 | DRIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | State of the state | |
| 2 | UNKNOWN CHANGES | 2009-FEB-09 | ٧K | City of Saskatoon | Chris Duriez | Lan |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | | |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE Christopher Duriez | SIGNATURE |
| 4 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-04 | DLH | CROSSING | to the control of the | Maciej Jurkiewicz |
| | | | | CINOSSING | NAME | NAME |
| | | | | COMBINED SIDEWALK, | Jan 25, 2021 | Jan 25, 2021 |
| | | | | JOHNEL JOHNER, | DATE SIGNED | DATE SIGNED |
| | | | | 200mm VERTICAL CURB & GUTTER | HOR. AS NOTED PLAN NO. | |
| | | | | | VERT. 102- | -0002-007r004 |
| - | | | | | | |



| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|---------------------|--------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of Saskatoon | 3879 | |
| 2 | | 2009-FEB-09 | УK | Saskatoon | Chris Duriez | - |
| 3 | REVISED DETAILS AT FACE OF CURB | 2015-NOV-27 | HLO | | | |
| 4 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | SIGNATURE | SIGNATURE |
| 4 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | CROSSING | Christopher Duriez | Maciej Jurkiewicz |
| 5 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-04 | DLH | CROSSING | NAME | NAME |
| | | | | COMBINED SIDEWALK & | Jan 25, 2021 | Jan 25, 2021 |
| | | | | GOMBINES GISEWILL G | DATE SIGNED | DATE SIGNED |
| | | | | 150mm VERTICAL CURB | SCALES: PLAN NO. | |
| | | | | | vert. 102- | -0002-008r005 |

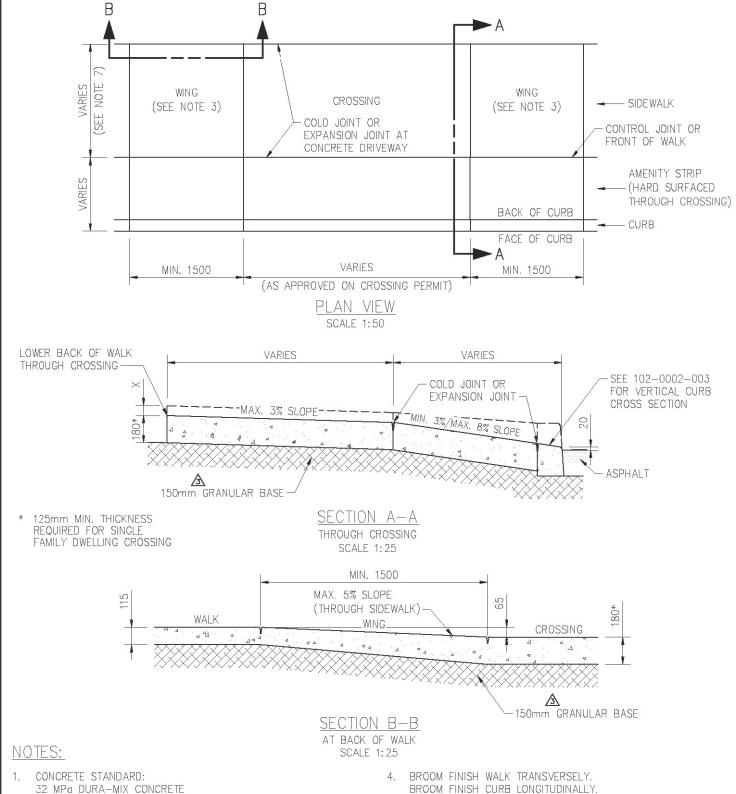


| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|--|-------------|-----|-----------------------|--------------------|-------------------|--|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | Cityof | 96990 0 | | |
| 2 | UNKNOWN CHANGES | 2009-FEB-09 | VK | City of Saskatoon | Chris Durisz | Lan | |
| 3 | REVISED DETAILS AT FACE OF CURB | 2015-NOV-27 | HLO | | | | |
| 4 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | SIGNATURE | SIGNATURE | |
| 4 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | CROSSING | Christopher Duriez | Maciej Jurkiewicz | |
| 5 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-04 | DLH | CKOSSING | NAME | NAME | |
| Г | | | | COMBINED SIDEWALK & | Jan 25, 2021 | Jan 25, 2021 | |
| Г | | | | COMBINES CIDENTIAL CO | DATE SIGNED | DATE SIGNED | |
| Г | | | | 200mm VERTICAL CURB | SCALES: PLAN NO. | | |
| | | | | | VERT. 102- | -0002-009r005 | |



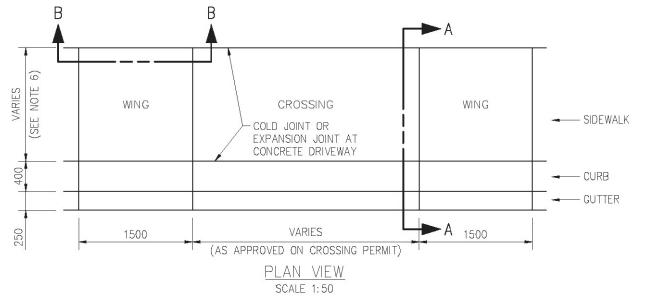
- 5-8% AIR AS PER SPEC.
- COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- WINGS MAY BE REQUIRED TO DEPRESS THE CROSSING AND TO
- BROOM OVER ALL CONTROL JOINTS.
- SPACING OF CONTROL JOINTS TO BE 1.5m.
- SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.
- REDUCE THE AMENITY STRIP HARD SURFACE SLOPE TO MAXIMUM. 8. SIDEWALK GRADE SHALL BE MAINTAINED THROUGH CROSSING.

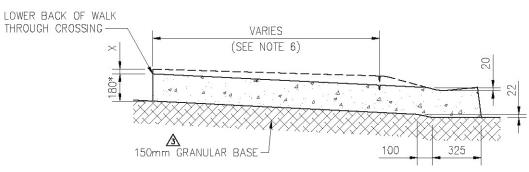
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|--|-------------|-----|------------------------|--------------------|-------------------|--|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | Cityof | ACCES. | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Durisz | Lan | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | | SIGNATURE | SIGNATURE | |
| | | | | CROSSING | Christopher Duriez | Maciej Jurkiewicz | |
| Г | | | | CINOSSING | NAME | NAME | |
| Г | | | | SEPARATE SIDEWALK. | Jan 25, 2021 | Jan 25, 2021 | |
| Н | | | М | SEI ANATE SIDEMALIN, | DATE SIGNED | DATE SIGNED | |
| Н | | | | VERTICAL CURB & GUTTER | SCALES: PLAN NO. | | |
| L | | | | | HOR. AS NOTED 102- | -0002-010r003 | |



- 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- COMPACTION STANDARD:
- 98% STANDARD PROCTOR AS PER SPEC.
- WINGS MAY BE REQUIRED TO DEPRESS THE CROSSING AND TO REDUCE THE AMENITY STRIP HARD SURFACE SLOPE TO MAXIMUM.
- BROOM OVER ALL CONTROL JOINTS.
- SPACING OF CONTROL JOINTS TO BE 1.5m.
- SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.
- 8. SIDEWALK GRADE SHALL BE MAINTAINED THROUGH CROSSING.

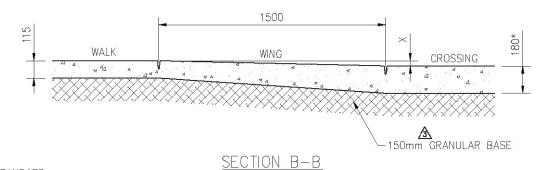
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
|----------|--|-------------|-----|----------------------|--|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-1 | RO | City of | Name of the Control o | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Durisz | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | 0 | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | | SIGNATURE | SIGNATURE |
| | | | | CROSSING | Christopher Duriez | Maciej Jurkiewicz |
| | | | | CROSSING | NAME | NAME |
| | | | | SEPARATE SIDEWALK | Jan 25, 2021 | Jan 25, 2021 |
| \vdash | | | | SEI AINATE SIDENALIN | DATE SIGNED | DATE SIGNED |
| Н | | | | & VERTICAL CURB | SCALES: PLAN NO. | |
| E | | | | | HOR. AS NOTED 102- | -0002-011r003 |





125mm MIN. THICKNESS REQUIRED FOR SINGLE FAMILY DWELLING CROSSING

SECTION A-A THROUGH CROSSING SCALE 1:25



AT BACK OF WING

SCALE 1:25

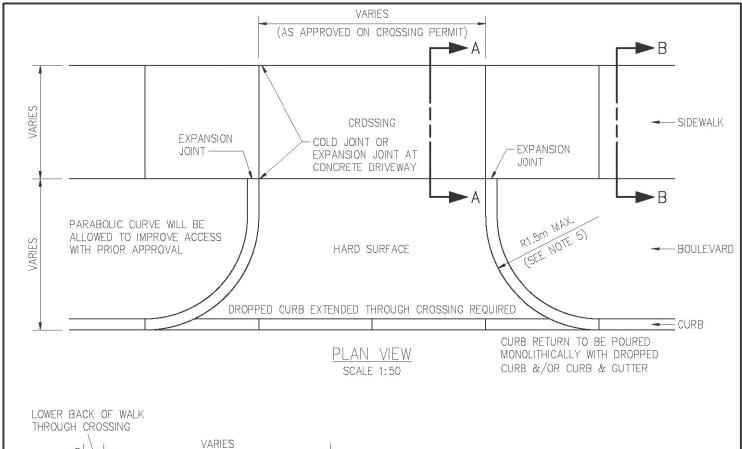
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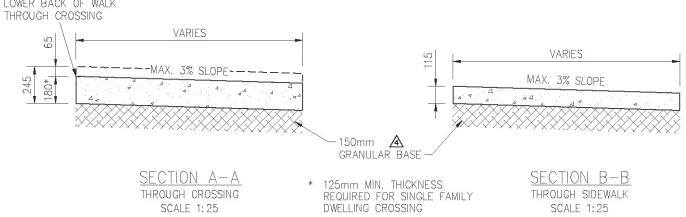
CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.

COMPACTION STANDARD:

- 98% STANDARD PROCTOR AS PER SPEC. BROOM FINISH WALK TRANSVERSELY.
- BROOM FINISH CURB & GUTTER LONGITUDINALLY.
- BROOM OVER ALL CONTROL JOINTS.
- SPACING OF CONTROL JOINTS TO BE 1.5m.
 SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.

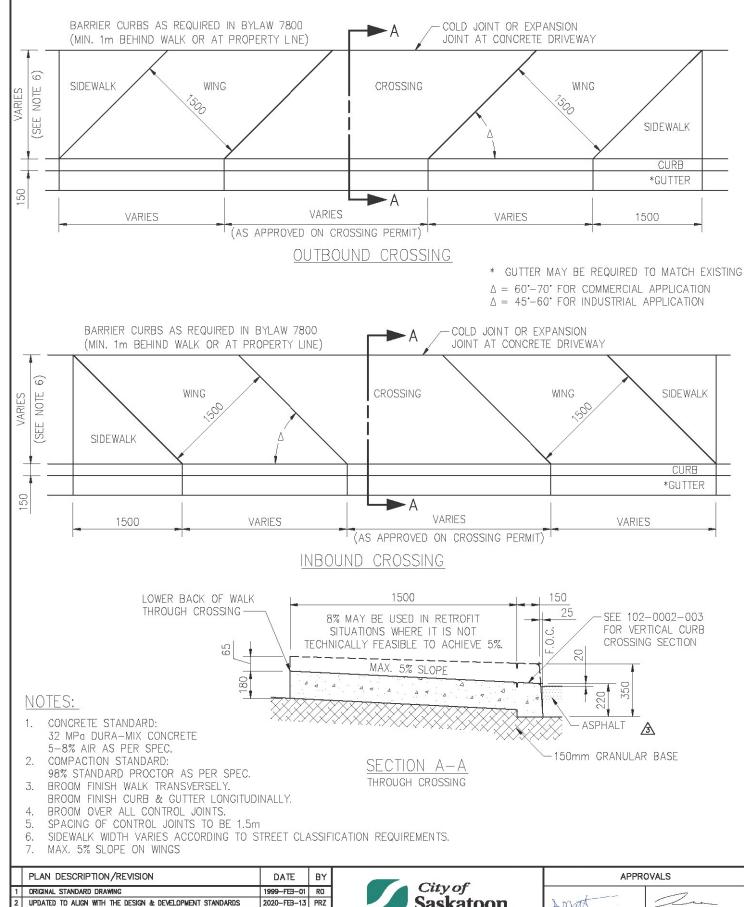
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
|---|--|-------------|-----|----------------------|--------------------|-------------------|
| Е | DRIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 1 | |
| 1 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Amath | Lan |
| 7 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | 0, | • Out 1 |
| 1 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | CDOCCINO | Shirley Matt | Maciej Jurkiewicz |
| Г | | _ | | CROSSING | NAME | NAME |
| Г | | | | COMBINED SIDEWALK, | Jan 25, 2021 | Jan 25, 2021 |
| h | | | | COMBINED SIDEWALK, | DATE SIGNED | DATE SIGNED |
| H | | | | ROLLED CURB & GUTTER | SCALES: PLAN NO. | |
| t | | | | | HOR. AS NOTED 102- | -0002-012r003 |



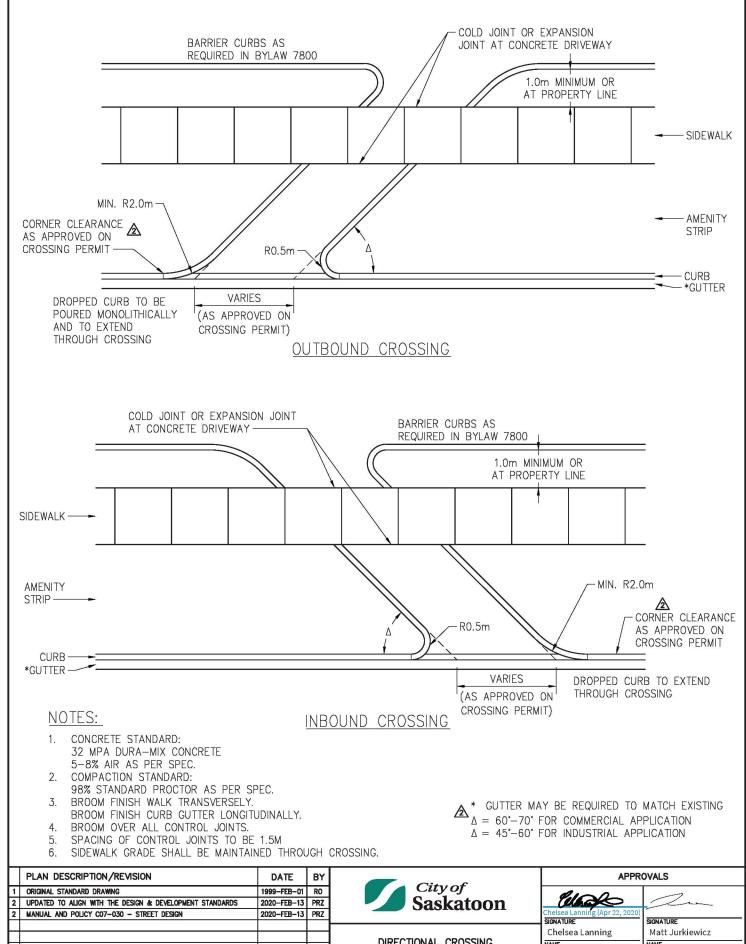


- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK TRANSVERSELY, BROOM FINISH CURB & GUTTER LONGITUDINALLY.
- 4. BROOM OVER ALL CONTROL JOINTS.
- 5. TRUCK SWEPT PATH ANALYSIS OR TRAFFIC IMPACT STUDY REQUIRED FOR APPROVAL OF LARGER CORNER RADIUS.
- SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.
- 7. CONCRETE SIDEWALK TO CONTINUE THROUGH CROSSING AND GRADE SHALL BE MAINTAINED THROUGH CROSSING.
- B. IF WINGS REQUIRED, MAX 5% SLOPE.

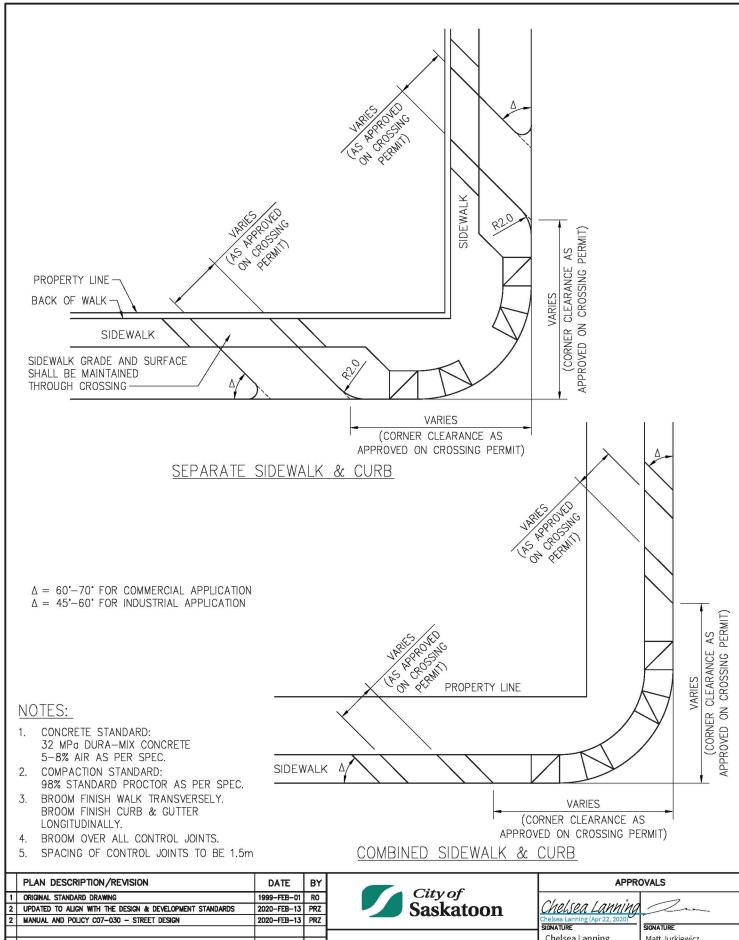
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|----|--|-------------|-----|--|------------------|-------------------|--|
| [1 | DRIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | | | |
| 2 | ADDED WAX RADIUS NOTE | 2016-MAY-06 | AMR | City of Saskatoon | Amath | Lun | |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | 0, | | |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE | SIGNATURE | |
| 4 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | CURB RETURN CROSSING | Shirley Matt | Maciej Jurkiewicz | |
| Г | | | | CURD RETURN CRUSSING | NAME | NAME | |
| Г | | | | SEPARATE SIDEWALK & VERTICAL CURB | Jan 25, 2021 | Jan 25, 2021 | |
| Г | | | | SELVINITE SIDENVIER & VERTIFICATE SOND | DATE SIGNED | DATE SIGNED | |
| r | | | | | SCALES: PLAN NO. | | |
| | | | | | VERT. 102- | -0002-013r004 | |



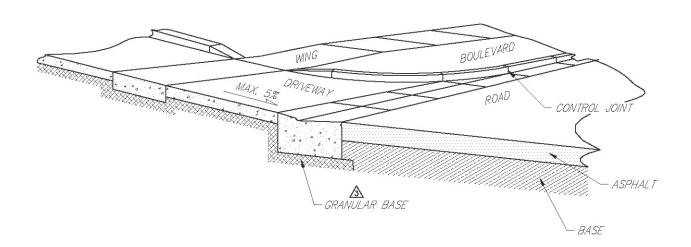
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|--|-------------|-----|-----------------------------------|------------------|-------------------|--|
| Г | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | , | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Amath | Lan | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | <u> </u> | | |
| 3 | UPDATED TO ALIGNE WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | | SIGNATURE | SIGNATURE | |
| Г | | | | DIRECTIONAL CROSSING | Shirley Matt | Maciej Jurkiewicz | |
| Г | | | | DIRECTIONAL CROSSING | NAME | NAME | |
| Г | | | | COMBINED SIDEWALK & VERTICAL CURB | Jan 25, 2021 | Jan 25, 2021 | |
| Г | | | | COMBINED SIDEWALK & VERTICAL CORD | DATE SIGNED | DATE SIGNED | |
| h | | | | | SCALES: PLAN NO. | | |
| L | | | | | VERT. 102- | -0002-014r003 | |



| PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|--|--|--|---|---|--|
| ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | RIOD | |
| UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | | |
| MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | Chelsea Lanning (Apr 22, 2020) | |
| | | | | | SIGNATURE |
| | | | DIDECTIONAL ODOCCINO | | Matt Jurkiewicz |
| | | | DIRECTIONAL CRUSSING | (1.0 (m)) | NAME |
| | | | CEDADATE CIDEWALK & CLIDD | Apr 22, 2020 | Apr 30, 2020 |
| | | | SEPARATE SIDEWALK & CORD | DATE SIGNED | DATE SIGNED |
| | | | | SCALES: PLAN NO. | |
| | | | | | -0002-015r002 |
| | ORIGINAL STANDARD DRAWING UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | ORIGINAL STANDARD DRAWING 1999-FEB-01 UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS 2020-FEB-13 | ORIGINAL STANDARD DRAWING 1999-FEB-01 RO UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS 2020-FEB-13 PRZ | ORIGINAL STANDARD DRAWING UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS MANUAL AND POLICY CO7-030 - STREET DESIGN 2020-FEB-13 PRZ DIRECTIONAL CROSSING SEPARATE SIDEWALK & CURB | ORIGINAL STANDARD DRAWING UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS 2020-FEB-13 PRZ MANUAL AND POLICY CO7-030 - STREET DESIGN DIRECTIONAL CROSSING SEPARATE SIDEWALK & CURB DATE SIGNED SCALES: PLAN NO. |

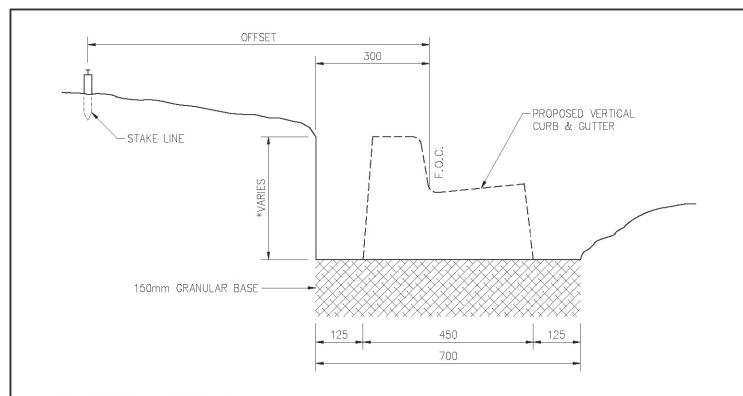


| L | PLAN DESCRIPTION/REVISION | DATE | BY | City | APPR | OVALS |
|---------|--|-------------|-----|----------------------|--------------------------------|-----------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 0/ /- / ' | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chelsea Lanning | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | Chelsea Lanning (Apr 22, 2020) | SIGNATURE |
| L | | | | | Chelsea Lanning | Matt Jurkiewicz |
| L | | | | DIRECTIONAL CROSSING | NAME | NAME |
| L | | | | DIRECTIONAL GROSSING | Apr 22, 2020 | Apr 30, 2020 |
| ┡ | | | | CORNER LOCATION | DATE SIGNED | DATE SIGNED |
| ┡ | | | | | SCALES: PLAN NO. | DATE SIGNED |
| \perp | | | | | 1.000 | -0002-016r002 |
| L | | | | | VERT | -0002-0101002 |

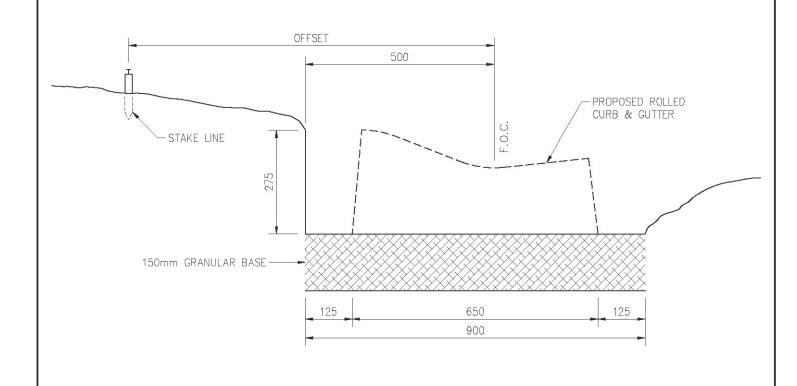


- SIDEWALK GRADE AND SURFACE SHALL BE MAINTAINED THROUGH DRIVEWAY.
 IF WINGS ARE REQUIRED, MAX 5% SLOPE.

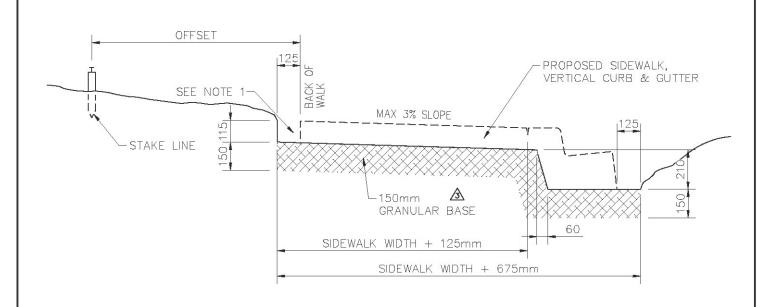
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|--|-------------|-----|----------------------|--------------------|---------------------|--|
| Г | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | www. | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Duriez | Lan | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-09 | DLH | | SIGNATURE | SIGNATURE | |
| Γ | | | | CDOCCINO | Christopher Duriez | Maciej Jurkiewicz | |
| Г | | | | CROSSING | NAME | NAME | |
| Г | | | | CURB DETAIL | Jan 25, 2021 | Jan 25, 2021 | |
| r | | | | COND DETAIL | DATE SIGNED | DATE SIGNED | |
| H | 1 | | | PERSPECTIVE VIEW | SCALES: PLAN NO. | Name and the second | |
| L | | | | Andrewski believe | HOR. N. I.S. 102- | -0002-017r003 | |

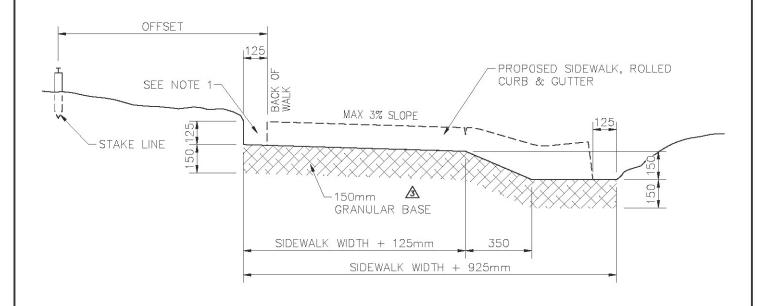


* 325mm WITH 150mm VERTICAL CURB 375mm WITH 200mm VERTICAL CURB



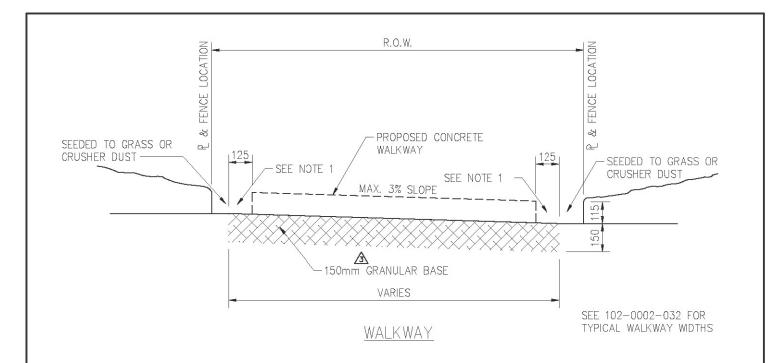
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|----------------------------|----|--------------------------------------|--|---|
| 2 | UPDATED NOTES UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 1999-JUN-23 2020-SEP-09 | | City of Saskatoon | Chris Durisz | SIGNATURE |
| | | | | GRADE CONSTRUCTION FOR CURB & GUTTER | Christopher Duriez NAME Jan 25, 2021 | Maciej Jurkiewicz NAME Jan 25, 2021 |
| _ | | | | | DATE SIGNED SCALES: HOR, 1:10 VERT. DATE SIGNED PLAN NO. 102- | DATE SIGNED -0002-018r002 |

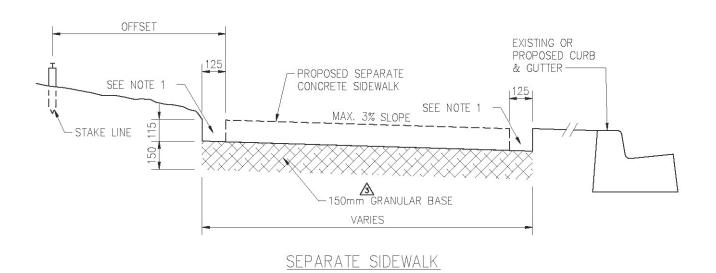




- TO BE BACKFILLED LEVEL WITH CONCRETE WALK AND COMPACTED WITH COMPACTION EQUIPMENT.
- 2. SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS

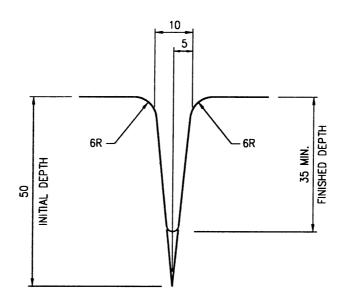
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|-------------------------|--------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-JUN-23 | RO | City of | 950000 | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Duriez | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | 0 | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-10 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | GRADE CONSTRUCTION FOR | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | GRADE CONSTRUCTION FOR | NAME | NAME |
| Г | | | | SIDEWALK. CURB & GUTTER | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | SIDEWALK, GOND & GOTTER | DATE SIGNED | DATE SIGNED |
| Г | | | | | SCALES: PLAN NO. | |
| | | | | | vert 102- | -0002-019r003 |



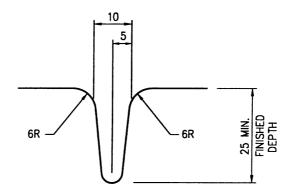


- TO BE BACKFILLED LEVEL WITH CONCRETE WALK AND COMPACTED WITH COMPACTION EQUIPMENT.
- 2. SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
|---|--|-------------|-----|------------------------------|---|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of Saskatoon | 35.00 mg 1 mg | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Duriez | - lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-11 | DLH | | SIGNATURE | SIGNATURE |
| | | | | GRADE CONSTRUCTION FOR | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | GRADE CONSTRUCTION FOR | NAME | NAME |
| Г | | | | WALKWAY & SEPARATE SIDEWALK | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | MALINIAI & SELANALE SIDEMALN | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| L | | | | | vert. 102- | -0002-020r003 |



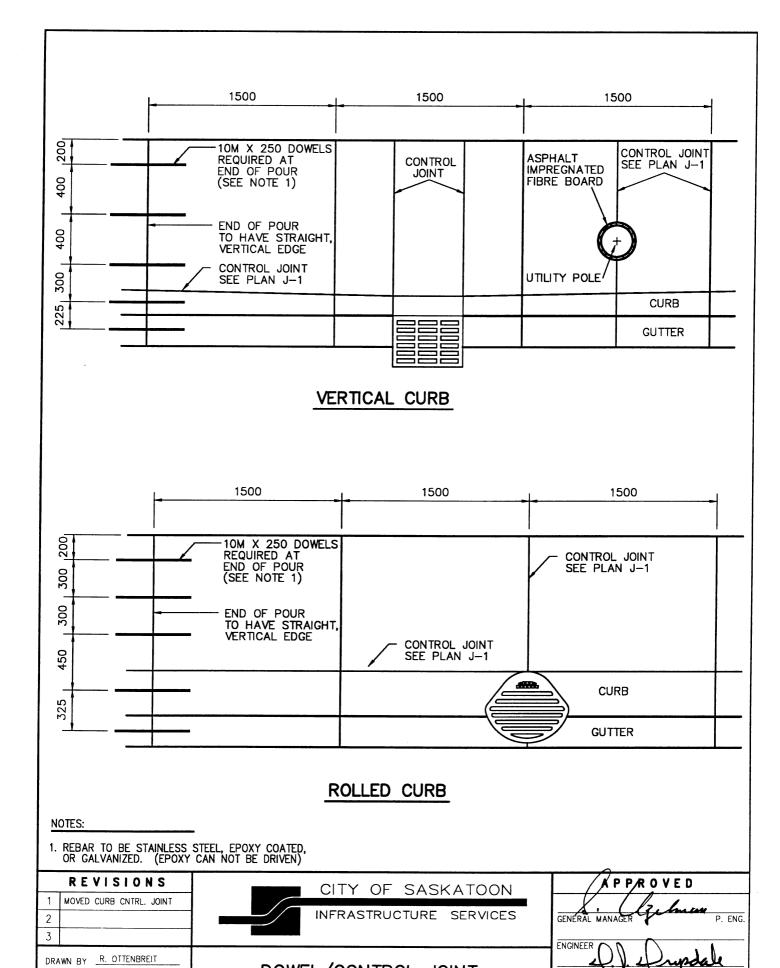
LONGITUDINAL CONTROL JOINT



TRANSVERSE CONTROL JOINT

TRANSVERSE CONTROL JOINTS MUST EXTEND ACROSS WALK & CURB, DOWN THE FACE OF CURB, AND ACROSS GUTTER

| REVISIONS | CITY OF SASKATOON | | A P P R O V E D | | |
|------------------------|-------------------------|------------|---------------------------|--|--|
| 1 | | | 6.6 | | |
| 2 | INFRASTRUCTURE SERVICES | | GENERAL MANAGER P. ENG. | | |
| 3 | | | | | |
| DRAWN BY R. OTTENBREIT | | | ENGINEER D. Driptelle | | |
| DATEFEBRUARY 1, 1999 | | | ENGINEER | | |
| CHECKED BY | CONTROL JOINTS | | SCALES : HOR. 1:1 VERT | | |
| DATE | J | <u> -1</u> | PLAN NO. 102-0002-021r001 | | |



DOWEL/CONTROL JOINT LOCATION & SPACING

FEBRUARY 1, 1999

DATE _

DATE

CHECKED BY _

ENGINEER

SCALES :

PLAN NO.

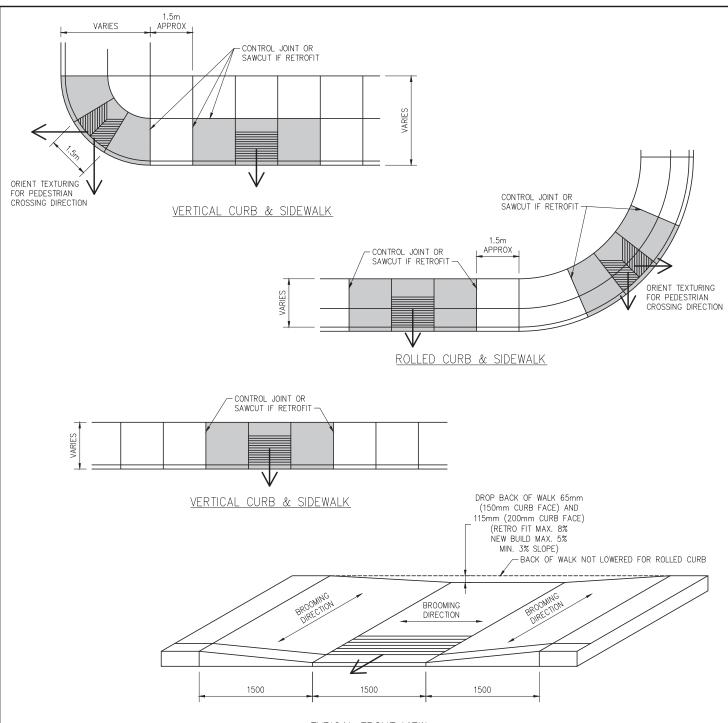
J-2

1: 30

VERT.

102-0002-022r001

HOR.



TYPICAL FRONT VIEW

NOTES:

- PEDESTRIAN RAMP STANDARDS TO COMPLY WITH:

 -ACCESSIBILITY STANDARD, SASK. HUMAN RIGHTS COMMISSION, AUGUST 14, 1980

 -BUILDING STANDARDS FOR HANDICAPPED, CURRENT VERSION OF NATIONAL BUILDING CODE

 2. SIDEWALK CONFIGURATIONS THAT DO NOT MATCH REQUIRE FIELD APPROXIC.

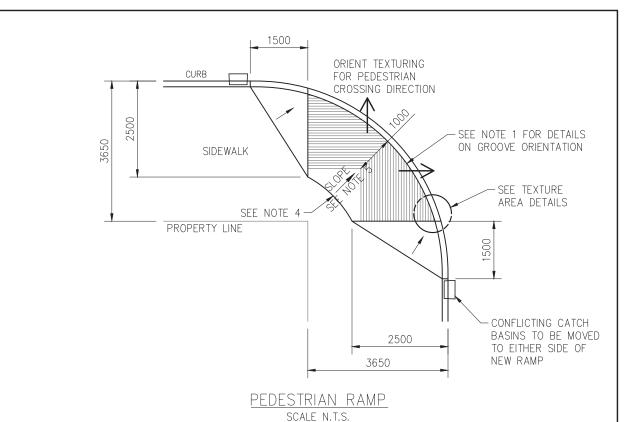
 3. BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.

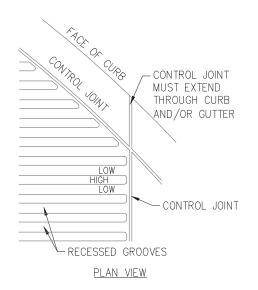
 4. BROOMING DIRECTION SHOULD BE PARALLEL TO THE CURB FOR THE PEDESTRIAN RAMPS AND PERPENDICULAR TO THE CURB FOR THE WINGS.

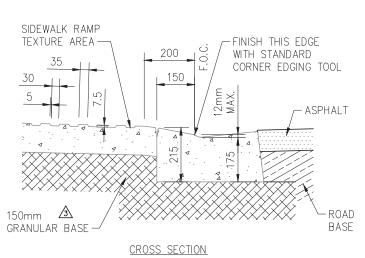
REFERENCE DRAWINGS:

- SEE 102-0002-026 FOR TEXTURE DETAILS
 REQUIRED ON ALL PEDESTRIAN RAMPS.
 SEE 102-0002-075 & 102-0002-076 FOR
 PEDESTRIAN RAMP PLACEMENT REQUIREMENTS

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----|--|-------------|-----|-------------------|---|-----------------------------------|
| Г | ORIGINAL STANDARD DRAWING | 1999-AUG-25 | RO | City of Saskatoon | Sapieha, Digitally signed by Sapieha, Katie | Jurkiewic Digitally signed by |
| | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | - Saskatoon | Matio Date: 2025.04.14 | Jurkiewicz, Matt Date: 2025.05.01 |
| [2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | 0 | - 0 |
| [3 | REVISED STANDARDS | 2024-DEC-02 | SJK | | SIGNATURE | SIGNATURE |
| Г | | | | PEDESTRIAN RAMP | | |
| Г | | | | PEDESTRIAN RAMP | NAME | NAME |
| Г | | | | DETAILS | | |
| Г | | | | DE ITALES | DATE SIGNED | DATE SIGNED |
| r | | | | | SCALES: PLAN NO. | |
| L | | | | | VERT 102- | -0002-023r003 |



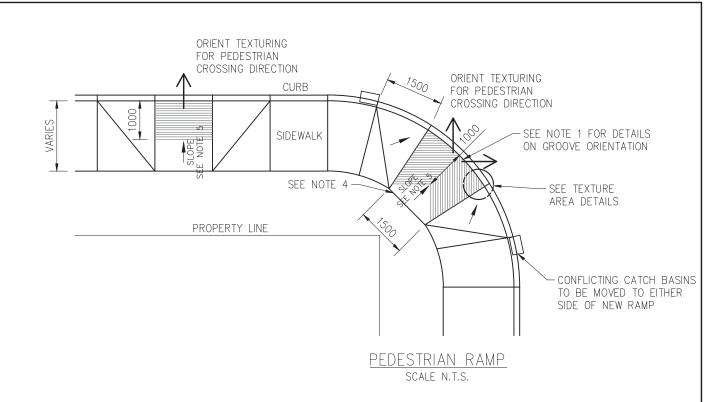


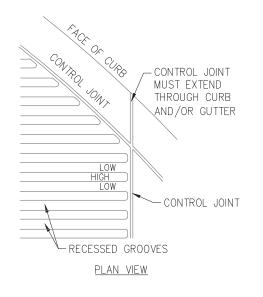


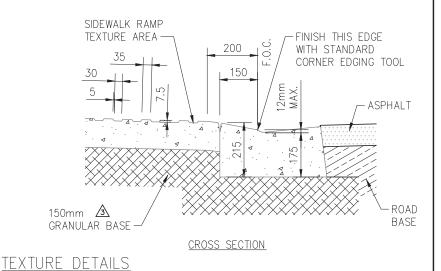
TEXTURE DETAILS
SCALE 1:15

- GROOVES ON TEXTURED AREA ARE TO BE PLACED PERPENDICULAR TO THE CROSSWALK LINES OR WHERE NO CROSSWALK EXISTS, PERPENDICULAR TO A LINE BETWEEN THE TWO PEDESTRIAN RAMPS.
- 2. CONTROL JOINT MUST INTERCEPT THE BOTTOM OF RECESSED GROOVES.
- 3. CONTROL JOINT MUST BE SLIGHTLY DEEPER THAN RECESSED GROOVES.
- 4. DROP BACK OF WALK AS PER DRAWING 102-0002-023.
- 5. RETROFIT MAX. 8%, NEW BUILD MAX. 5%, MIN. 3% SLOPE.

| ı | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|----------------------|---|--|
| Г | ORIGINAL STANDARD DRAWING 1 | 1999-AUG-25 | RO | City of Saskatoon | Sapieha, Digitally signed by Sapieha, Katie | Jurkiewic Digitally signed by Jurkiewicz, Matt |
| [| UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Date: 2025.04.14 | Date: 2025.05.01 |
| E | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | 00.29.49 =00 00 | / / |
| Г | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-0CT-08 | DLH | | SIGNATURE | SIGNATURE |
| 7 | REVISED NOTES 2 | 2024-NOV-28 | SJK | WIDE DEDECTRIAN DAMP | | |
| Г | | | | WIDE PEDESTRIAN RAMP | NAME | NAME |
| Г | | | | TEXTURE DETAILS | l | |
| Γ | | | | TEXTORE BETTIES | DATE SIGNED | DATE SIGNED |
| r | | | | | SCALES: PLAN NO. | |
| L | | | | | VERT 102- | -0002-025r004 |



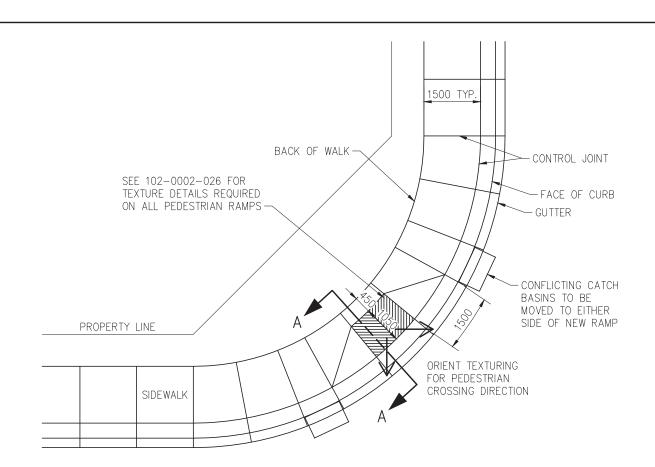




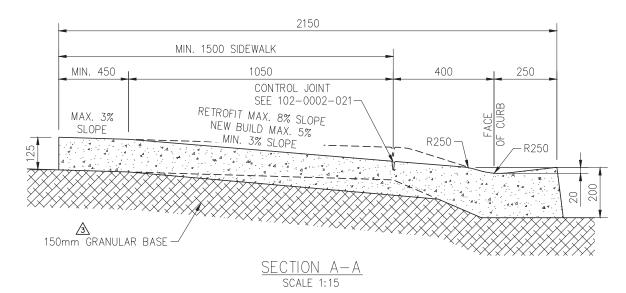
- 1. GROOVES ON TEXTURED AREA ARE TO BE PLACED PERPENDICULAR TO THE CROSSWALK LINES OR WHERE NO CROSSWALK EXISTS, PERPENDICULAR TO A LINE BETWEEN THE TWO PEDESTRIAN RAMPS.
- 2. CONTROL JOINT MUST INTERCEPT THE BOTTOM OF RECESSED GROOVES.
- 3. CONTROL JOINT MUST BE SLIGHTLY DEEPER THAN RECESSED GROOVES.
- 4. DROP BACK OF WALK AS PER DRAWING 102-0002-023.
- 5. RETROFIT MAX. 8%, NEW BUILD 5%, MIN. 3% SLOPE.
- 6. SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----------|--|-------------|-----|-----------------|------------------------------|---|
| 1 | ORIGINAL STANDARD DRAWING 1 | 1999-AUG-25 | RO | Cityof | Sapieha, Digitally signed by | Jurkiewi Digitally signed by Jurkiewicz, Matt |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS 2 | 2020-FEB-13 | PRZ | Saskatoon | Matic Date: 2025.04.14 | Date: 2025.05.01 |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN 2 | 2020-FEB-13 | PRZ | | // 08.20.00 =00 00 | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT 2 | 2020-0CT-08 | DLH | | SIGNATURE | SIGNATURE |
| 4 | REVISED NOTES 2 | 2024-NOV-28 | SJK | PEDESTRIAN RAMP | l | |
| Г | | | | PEDESTRIAN RAMP | NAME | NAME |
| Г | | | | TEXTURE DETAILS | l | |
| | | | | | DATE SIGNED | DATE SIGNED |
| \vdash | | | | | SCALES: PLAN NO. | |
| L | | | | | VERT 102- | -0002-026r004 |

SCALE 1:15



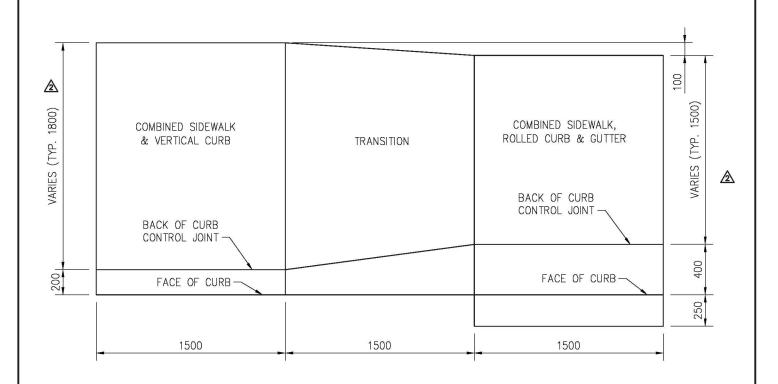
PEDESTRIAN RAMP SCALE 1:100



- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- COMPACTION STANDARD:
 98% STANDARD PROCTOR AS PER SPEC.

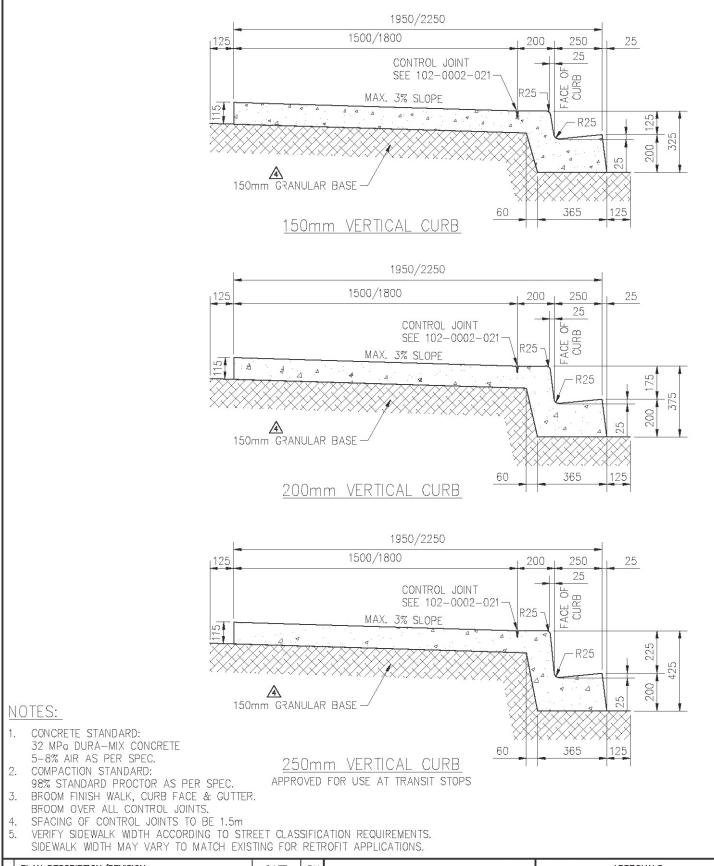
- 3. BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 5. SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|---|------------------------------------|--|
| Ε | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of Saskatoon | Sanjeha Digitally signed | Jurkiewic Digitally signed by Jurkiewicz, Matt |
| | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Date: 2025.04.14 | Date: 2025.05.01 |
| | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | 00:11:00 0000 | 10:20:20 0000 |
| Ę | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-0CT-07 | DLH | | SIGNATURE | SIGNATURE |
| [| REVISED STANDARDS | 2024-NOV-28 | SJK | PEDESTRIAN RAMP | | |
| Г | | | | PEDESTRIAN RAMP | NAME | NAME |
| Γ | | | | ROLLED CURB | | |
| Г | | | | *************************************** | DATE SIGNED | DATE SIGNED |
| T | | | | | SCALES: PLAN NO. HOR. AS NOTED 100 | |
| L | | | | | VERT. 102- | -0002-027r004 |

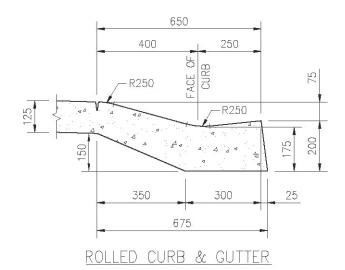


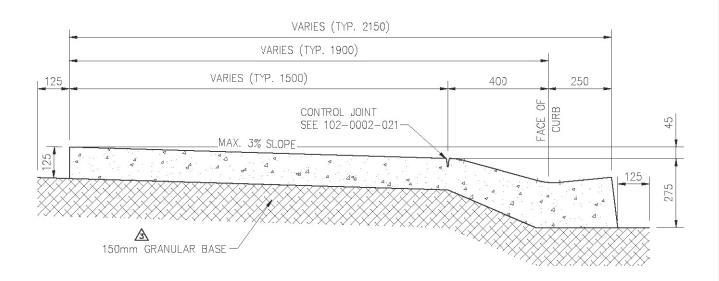
- 1. IN TRANSITIONS, ALWAYS LINE UP FACE OF CURB.
- 2. GUTTER & BACK OF WALK TRANSITIONS TO OCCUR OVER ONE PANEL.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|----------|---------------------------|--------------------------------|-----------------|
| | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 0/ /- / | |
| | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chelsea Lanning | Lu |
| | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | 0401440011 | Chelsea Lanning (Apr 22, 2020) | |
| L | | | | | SIGNATURE | SIGNATURE |
| Г | | | | TYDICAL TRANSITION | Chelsea Lanning | Matt Jurkiewicz |
| Г | | | | TYPICAL TRANSITION | NAME | NAME |
| r | | | | COMBINED SIDEWALK & CURB | Apr 22, 2020 | Apr 30, 2020 |
| h | | | | COMIDINED SIDEWALK & COND | DATE SIGNED | DATE SIGNED |
| H | | | \vdash | | SCALES: PLAN NO. | |
| t | | | | | HOR. 1:30 VERT. 102- | -0002-028r002 |



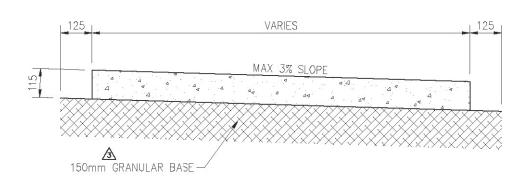
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|------------------------|-------------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | | |
| 2 | ADDED 250mm VERTICAL CURB | 2020-JAN-31 | PRZ | City of Saskatoon | Chris Duriez | Lan |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Outstate Oil | | |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE | SIGNATURE |
| 4 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-14 | DLH | COMBINED SIDEWALK. | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | COMIDINED SIDEWALK, | NAME | NAME |
| Г | | | | VERTICAL CURB & GUTTER | Jan 25, 2021 | Jan 25, 2021 |
| Н | | | | VERTICAL CORD & GOTTER | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| Н | | | | | HOR. 1:20 VERT. 102- | -0002-029r004 |





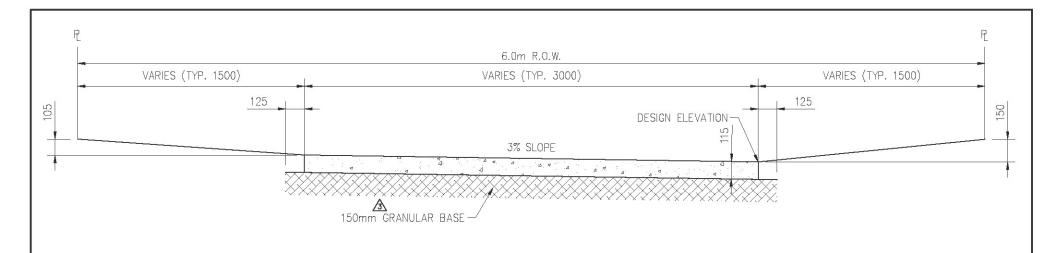
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK TRANSVERSELY. BROOM FINISH CURB & GUTTER LONGITUDINALLY.
- 4. BROOM OVER ALL CONTROL JOINTS.
- 5. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 6. SIDEWALK WIDTH MAY VARY TO MATCH EXISTING FOR RETROFIT APPLICATIONS.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----|--|-------------|-----|----------------------|----------------------|--|
| [1 | DRIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 1870cm 1 1 1 1 1 1 1 | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Duriez | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | - Judkutto 011 | 0 | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-15 | DLH | | SIGNATURE | SIGNATURE |
| Γ | | | | COMBINED SIDEWALK. | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | COMMINED SIDEWALK, | NAME | NAME |
| Г | | | | ROLLED CURB & GUTTER | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | М | NOLLED GOND & GOTTEN | DATE SIGNED | DATE SIGNED |
| h | | | | | SCALES: PLAN NO. | enconstant de la compania del compania de la compania del compania de la compania del compania de la compania del compania de la compania del compania d |
| t | | | | | VERT. 102- | -0002-030r003 |



- CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH SIDEWALK.
- 4. BROOM OVER ALL CONTROL JOINTS.
- SPACING OF CONTROL JOINTS TO BE 1.5m
 SIDEWALK WIDTH VARIES ACCORDING TO ROAD CLASSIFICATION REQUIREMENTS OR TO MATCH EXISTING FOR RETROFIT APPLICATIONS.

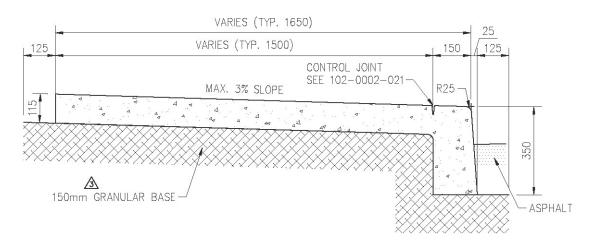
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|-------------------|--|-------------------|
| 1 | DRIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of Saskatoon | NOV 100 100 100 100 100 100 100 100 100 10 | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris During | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | - Judkutto 011 | | - |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-15 | DLH | | SIGNATURE | SIGNATURE |
| Γ | | | | SEPERATE SIDEWALK | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | SEPERATE SIDEWALK | NAME | NAME |
| Г | | | | | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | | DATE SIGNED | DATE SIGNED |
| Г | | | | | SCALES: PLAN NO. | 0000 074 007 |
| | | | | | VERT. 102- | -0002-031r003 |



- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 5. GUIDELINES FOR CONSTRUCTING WALKWAYS:
 - THE CONCRETE SLAB SHOULD BE 115mm THICK & 1.5m WIDE
 - THE WALKWAY SHOULD SLOPE THE SAME DIRECTION AS THE ADJACENT STREET GUTTER
- 6. EDGES OF WALKWAY R.O.W. ARE AT SAME ELEVATION.
- 7. ALTERNATE STRUCTURE MAY BE ASPHALT SURFACED. SEE PLAN 102-0002-055.
- 8. REMAINING R.O.W. SEEDED TO GRASS OR COMPACTED CRUSHER DUST

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|----------------------|-------------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of Saskatoon | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Durisz | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-15 | DLH | | SIGNATURE | SIGNATURE |
| | | | | CONCRETE WALKWAY | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | CONCRETE WALKWAT | NAME | NAME |
| г | | | | | Jan 25, 2021 | Jan 25, 2021 |
| Н | | | | | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| L | | | | | HOR. 1:25 VERT. 102- | -0002-032r003 |

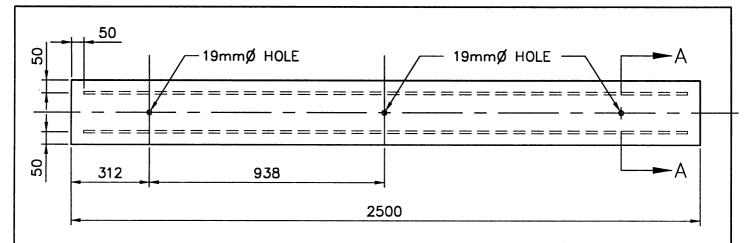
| | R | P. |
|----|-----|---------------------------------------|
| | | 3.0m R.O.W. |
| | 250 | 2500 250 |
| 55 | - | DESIGN ELEVATION 125 |
| + | | 3% SLOPE |
| Ť | | A A A A A A A A A A A A A A A A A A A |
| | 15 | 60mm GRANULAR BASE — |



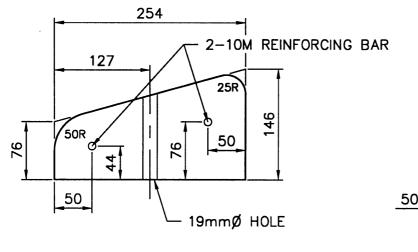
150mm VERTICAL CURB

- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD:
 - 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 5. VERIFY SIDEWALK WIDTH ACCORDING TO STREET CLASSIFICATION REQUIREMENTS. SIDEWALK WIDTH MAY VARY TO MATCH EXISTING FOR RETROFIT APPLICATIONS.

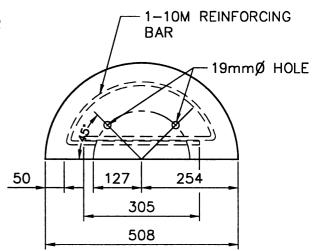
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|-----------------------|-------------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 1999-FEB-01 | RO | City of | 50000 | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Duriez | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-15 | DLH | | SIGNATURE | SIGNATURE |
| | | | | COMPINED CIDENTALIC B | Christopher Duriez | Maciej Jurkiewicz |
| | | | | COMBINED SIDEWALK & | NAME | NAME |
| | | | | VERTICAL CURB | Jan 25, 2021 | Jan 25, 2021 |
| Н | | | | VERTICAL CORB | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| E | | | | | HOR. 1:15 VERT. 102- | -0002-033r003 |



PLAN OF CURB SCALE 1:15



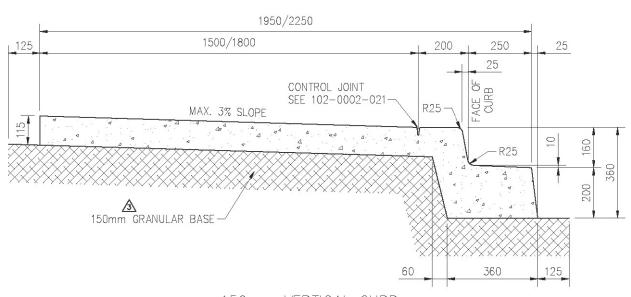
CURB SECTION A-A
SCALE 1:5



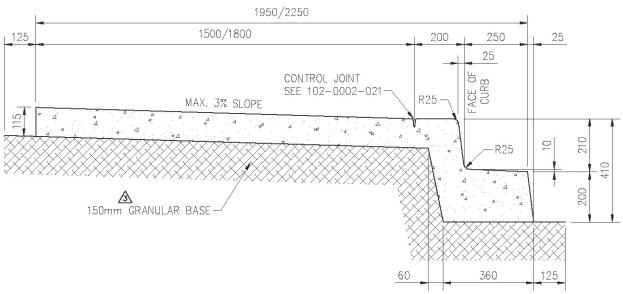
PLAN OF MEDIAN CURB END SCALE 1:10

- 1. CURBS SHALL BE SECURED TO THE FOUNDATION WITH DRIFT PINS, PINS SHALL BE 16mmØ x 381mm. EACH PIN SHALL HAVE A SHARPENED POINT AND NO HEAD.
- 2. IF REQUIRED, RADII, LARGER THAN 254mm, WILL BE SPECIFIED.
- 3. DIMENSIONS ARE IN MILLIMETERES.
- 4. MINOR VARIATIONS IN DIMENSIONS MAY BE TOLERATED AT THE DISCRETION OF THE ENGINEER.

| REVISIONS | APPROVED |
|------------|---|
| 2 | INFRASTRUCTURE SERVICES GENERAL MANAGER P. ENG. |
| 3 | Saskatoon |
| DRAWN BY | ENGINEER ENGINEER |
| CHECKED BY | PRECAST CONCRETE CURB SCALES : HOR. AS NOTED VERT |
| DATE | MISC. 324 PLAN NO. 102-0002-035r001 |



150mm VERTICAL CURB

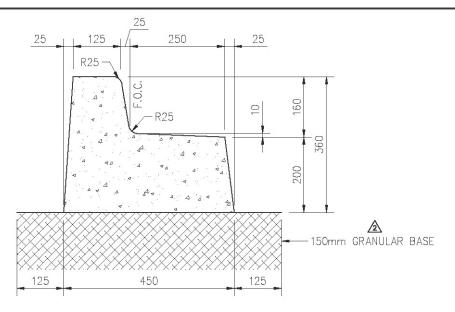


NOTES:

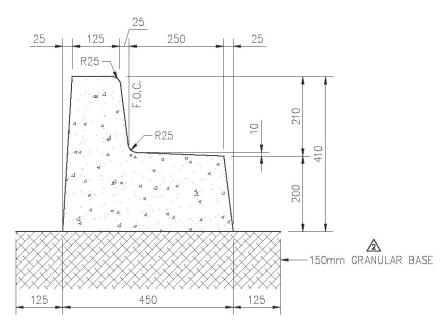
200mm VERTICAL CURB

- CONCRETE STANDARD:
 MPa DURA-MIX CONCRETE
 8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 5. VERIFY SIDEWALK WIDTH ACCORDING TO STREET CLASSIFICATION REQUIREMENTS. SIDEWALK WIDTH MAY VARY TO MATCH EXISTING FOR RETROFIT APPLICATIONS.

| L | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|----------------------------------|--------------------|-------------------|
| | ORIGINAL STANDARD DRAWING | 2000-JUL-10 | RK | City of | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Duriez | |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-15 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | COMBINED SIDEWALK, | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | COMIDINED SIDEWALK, | NAME | NAME |
| Г | | | | REVERSED VERTICAL CURB & GUTTER | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | HETEROED TERRITORE GORD & GOTTER | DATE SIGNED | DATE SIGNED |
| Г | | | | | SCALES: PLAN NO. | |
| L | | | | | vert. 102- | -0002-036r003 |



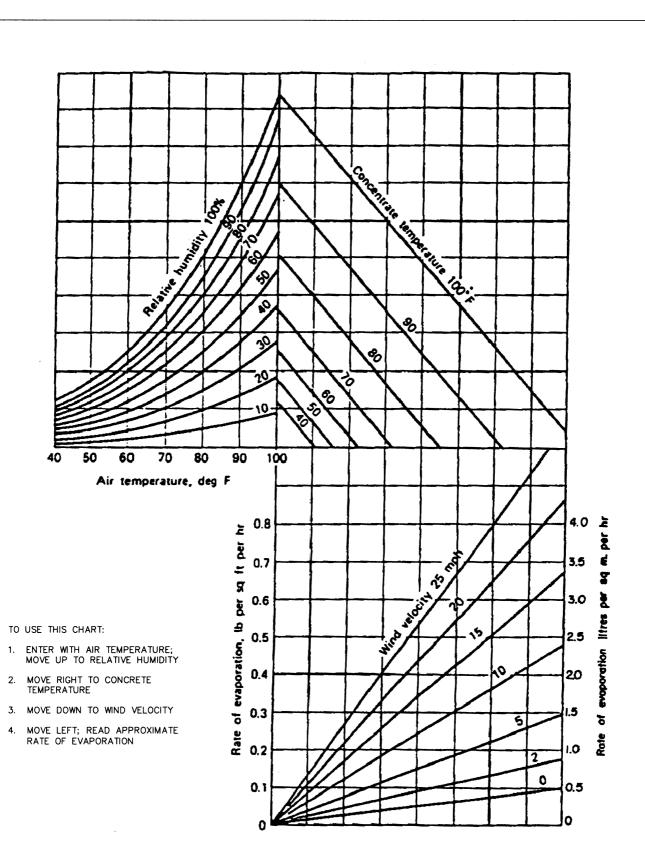
150mm VERTICAL CURB & GUTTER



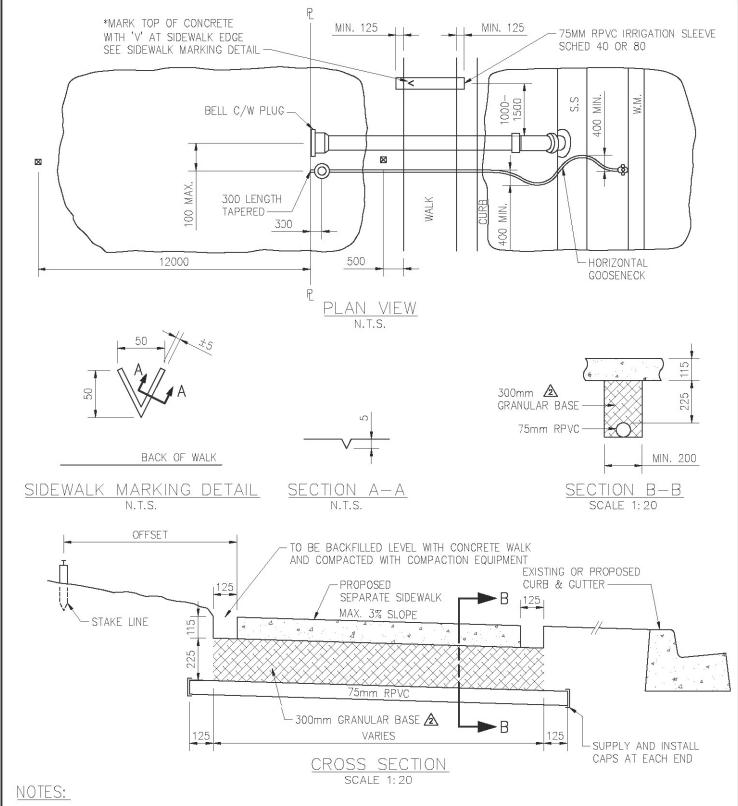
200mm VERTICAL CURB & GUTTER

- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH TOP & FACE OF CURB AND GUTTER LONGITUDINALLY.
- 4. BROOM OVER ALL CONTROL JOINTS.
- 5. SPACING OF CONTROL JOINTS TO BE 1.5m

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|-----------------------------------|-------------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2000-AUG-10 | RK | Cityof | 0.200 | |
| 2 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-23 | DLH | City of Saskatoon | Chris During | Lan |
| | | | | | DIGILITIES . | OID VATUES |
| | | | | | SIGNATURE | SIGNATURE |
| Г | | | | | Christopher Duriez | Maciej Jurkiewicz |
| Н | | | | VERTICAL CURB AND REVERSED GUTTER | NAME | NAME |
| H | | | | | Jan 25, 2021 | Jan 25, 2021 |
| Н | | | | | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| L | | | | | HOR. 1:10 VERT. 102- | 0002-037r002 |

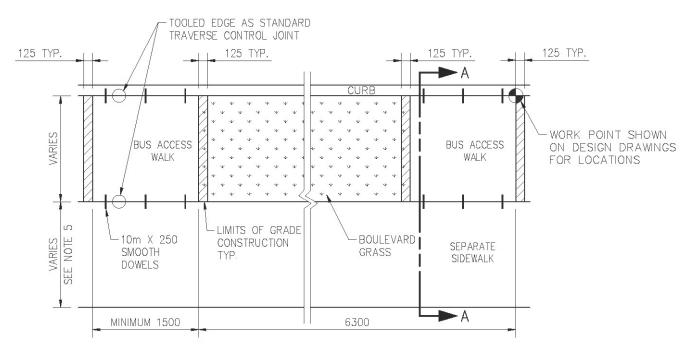


| R E V I S I O N S 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. FINGINEER |
|---|--|---|
| DRAWN BY R. OTTENBREIT DATE 02-09-26 CHECKED BY DATE | CONCRETE PLACEMENT RATE OF MOISTURE LOSS CHART | ENGINEER SCALES: HORN/A PLAN NO.1 02 - 0002 - 038r001 |

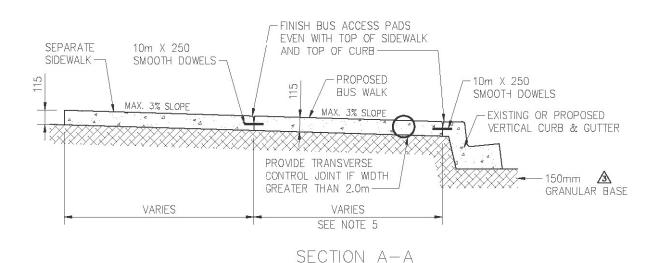


- 1. SLEEVE TO BE INSTALLED AHEAD OF SIDEWALK SUB-GRADE PREPARATION.
- 2. IRRIGATION SLEEVE REQUIRED AT EACH SERVICE CONNECTION OF EACH LOT WHERE SEPARATE SIDEWALK IS SHOWN.

| L | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|--------|----------------------|--------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2003-FEB-25 | AY | City of Saskatoon | 50000 | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Duriez | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-SEP-24 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | CEDADATE CIDENIALIA | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | \Box | SEPARATE SIDEWALK | NAME | NAME |
| Г | | | \Box | IRRIGATION SLEEVE | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | \Box | INNOATION SEEL VE | DATE SIGNED | DATE SIGNED |
| Г | | | \Box | | SCALES: PLAN NO. | |
| | | | | | VERT. 102- | -0002-039r003 |



PLAN VIEW SCALE 1:75

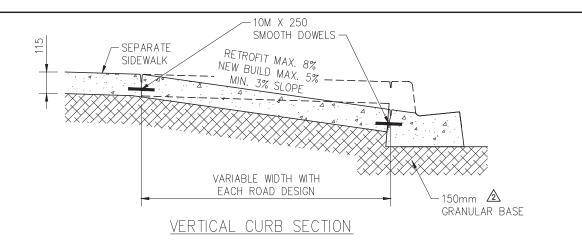


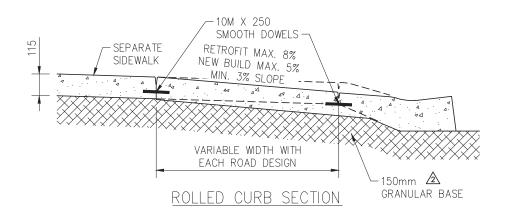
NOTES:

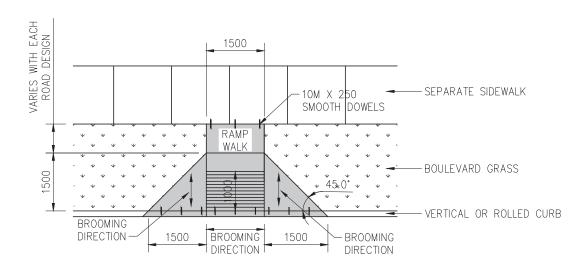
- 1. CONCRETE STANDARD: 32MPg DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. BROOM FINISH BUS WALK PARALLEL TO STREET.
- 3. LIMITS OF GRADE CONSTRUCTION TO BE BACKFILLED LEVEL WITH PAD AND COMPACTED WITH COMPACTION EQUIPMENT.
- 4. REBAR TO BE STAINLESS STEEL, EPOXY COATED, OR GALVANIZED (EPOXY CAN NOT BE DRIVEN).
- 5. VERIFY SIDEWALK WIDTH ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
|---|--|-------------|-----|----------------------|---|-------------------|
| Г | ORIGINAL STANDARD DRAWING | 2003-FEB-25 | AY | City of | All | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | City of Saskatoon | Chris Durisz | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Outstate Oil | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-OCT-20 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | SEPARATE SIDEWALK | Christopher Duriez | Maciej Jurkiewicz |
| Γ | | | | SEPARATE SIDEWALK | NAME | NAME |
| Г | | | | BUS STOP DETAIL | Jan 25, 2021 | Jan 25, 2021 |
| r | | | | DOS STOT BETAIL | DATE SIGNED | DATE SIGNED |
| h | | | | | SCALES: PLAN NO. | |
| t | | | | | VERT. 102- | -0002-040r003 |

SCALE 1:30







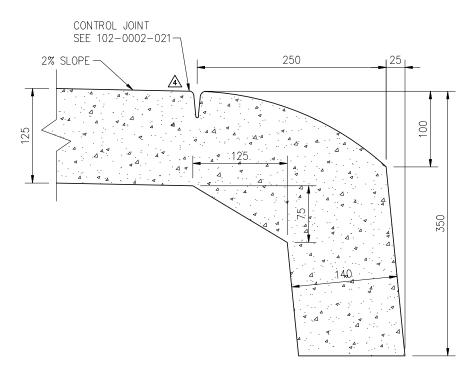
CURB & SIDEWALK PLAN VIEW

NOTES:

 REBAR TO BE STAINLESS STEEL, EPOXY COATED, OR GALVANIZED. (EPOXY CAN NOT BE DRIVEN).

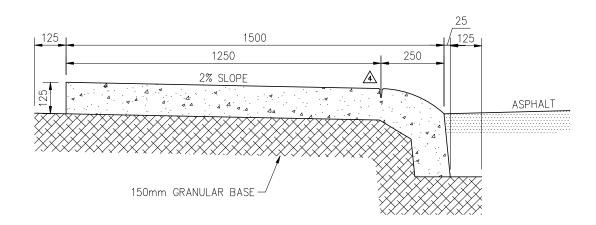
| \vdash | T. T. | | | | | |
|----------|--|-------------|-----|-------------------------|------------------------------|--|
| L | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
| 1 | ORIGINAL STANDARD DRAWING | 2003-FEB-27 | AY | City of Saskatoon | Sapieha, Digitally signed by | Jurkiewic Digitally signed by Jurkiewicz, Matt |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Date: 2025.04.14 | Date: 2025.05.01 |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | // 00:10:11 00 00 | 0 |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-0CT-05 | DLH | | SIGNATURE | SIGNATURE |
| 4 | REVISED STANDARDS | 2024-DEC-02 | SJK | PERPENDICULAR SEPARATE | l | |
| | | | | PERFENDICULAR SEPARATE | NAME | NAME |
| Г | | | | PEDESTRIAN RAMP DETAILS | | |
| Г | | | | | DATE SIGNED | DATE SIGNED |
| r | | | | | SCALES: PLAN NO. | 0000 044 004 |
| | | | | | VERT 102- | -0002-041r004 |

ROLLED CURB AND SIDEWALK 1978 STYLE EXCLUSIVELY FOR REPLACEMENTS



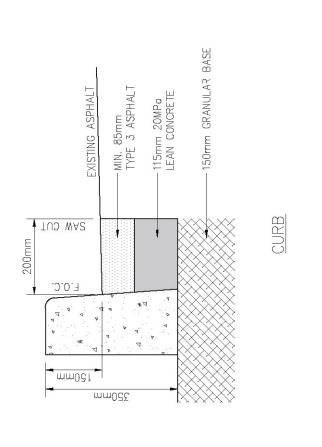
ROLLED CURB DETAIL

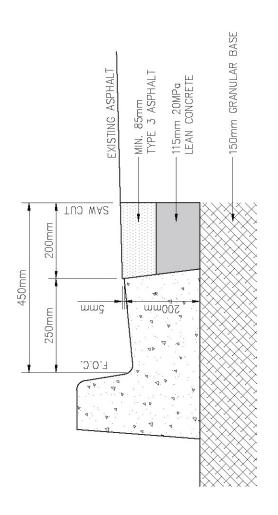
SCALE 1:5



- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD:
- 98% STANDARD PROCTOR AS PER SPEC.
- BROOM FINISH WALK AND CURB. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.

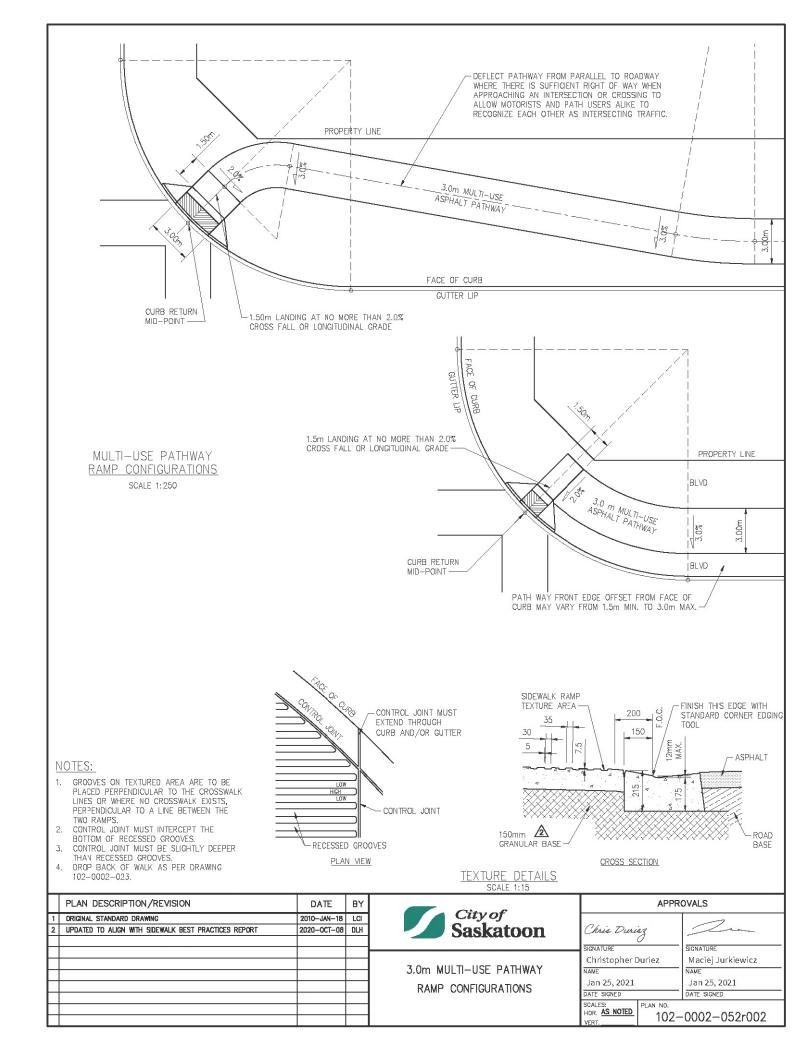
| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|------|-------------------------------|---------------------------------------|-------------------|
| | ORIGINAL STANDARD DRAWING 1 | 1978-MAY-30 | P.F. | City of Saskatoon | 1. / 14.14 | |
| 2 | UPDATED DRAWING TO AUTOCAD | 2015-NOV-26 | HLO | Saskatoon | Andy McMeekin | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT 2 | 2020-0CT-06 | DLH | Juditatio 011 | Andy McMeekin (May 3, 2021 11:04 MDT) | [<u>*</u> |
| 4 | ADDED CONTROL JOINT | 2021-FEB-03 | AR | | SIGNATURE | SIGNATURE |
| Г | | | | DOLLED CUDD & CIDEWALK | Andy McMeekin | Maciej Jurkiewicz |
| Г | | | | ROLLED CURB & SIDEWALK | NAME | NAME |
| H | | | | 1978 STYLE | May 3, 2021 | May 3, 2021 |
| H | | | | 1970 STILL | DATE SIGNED | DATE SIGNED |
| H | | | | FOR REPLACEMENT PURPOSES ONLY | SCALES: PLAN NO. | |
| L | | | | | HOR. 1:15 VERT 102- | 0002-042r004 |

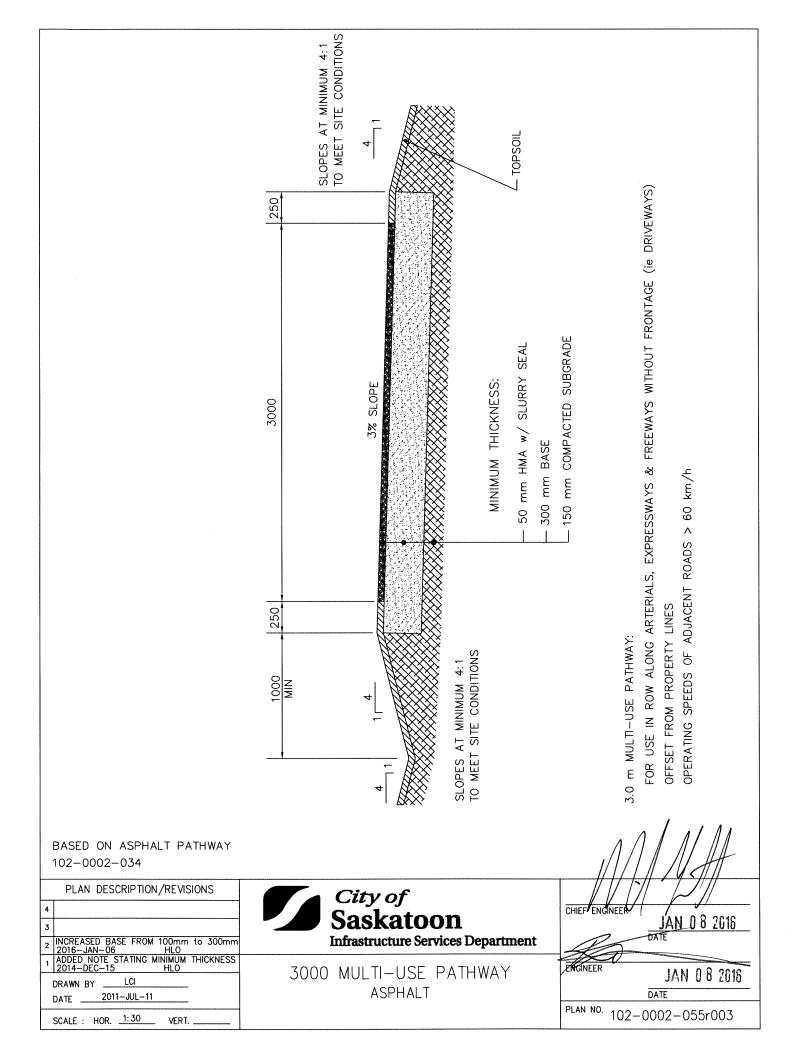




CURB & GUTTER

| _ | PLAN DESCRIPTION/REVISION | DATE | ВУ | 9 | APPR | APPROVALS |
|-----|--|-----------------|-----|---------------------|---------------------------------------|-------------------|
| _ | 1 DRIGNAL DRAWING | 2009—JAN—27 VK | ¥ | Curyof | | 1 |
| -4 | 2 ASPHALT DEPTH MIN. 85mm | 2014-DEC-15 HLD | 임 | Saskatoon | d | |
| 14) | 3 UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2021-FEB-10 DLH | DCH | THE CONTRACTOR | Shirley Matt (Feb 10, 2021 12:20 CST) | |
| _ | | | Ĺ | | SIGNATURE | SIGNATURE |
| _ | | | | | Shirley Matt | Maciej Jurkiewicz |
| _ | | | | GULLER PAICH PAVING | NAME | NAME |
| | | | | | Feb 10, 2021 | Feb 10, 2021 |
| | | | | | DATE SIGNED | DATE SIGNED |
| | | | | | SCALES: PLAN NO. | 100 010 0000 |
| | | | | | | 102-0002-049-r003 |
| J | | | ١ | | | |





| SIDEWALK RAMP GRADE CRITERIA * | | | | | | | |
|---|--|--|--|--|--|--|--|
| ADJACENT TO P | UBLIC ROW | | | | | | |
| MAXIMUM SIDEWALK GRADE ADJACENT TO ROADWAY | NO LIMIT IF IT FOLLOWS THE GRADE OF THE STREET | | | | | | |
| MAXIMUM CROSS SLOPE | 2% | | | | | | |
| NOT ADJACENT TO | PUBLIC ROW | | | | | | |
| MAXIMUM SIDEWALK RAMP GRADE WITHOUT RAILINGS | 5% (1V: 20H) | | | | | | |
| MAXIMUM RAMP GRADE WITH HANDRAILS AND LANDINGS | 8.3% (1V:12H) | | | | | | |

* PED FACILITIES (AASHTO) EXHIBIT 3-11 PG 63

EXAMPLE SHOWN: &

- 3.5:1 ROADWAY SIDE SLOPE
- 1.8m X 1.8m LEVEL LANDINGS / 3.0m X 3.6m AT SWITCHBACKS
- 9.0m HORIZONTAL RUNS PER 0.75m ELEVATION RISE (1V:12H) DOES NOT EXTEND TOE OF SLOPE
- BALANCE OF CUT AND FILL

-1.80m WIDE RAMP @ 5% TYPICAL 1.8m 5.25m LEVEL LANDING SWITCHBACK - LEVEL LANDING (3.0m X 3.6m TYPICAL) (1.8m X 1.8m TYPICAL) 1.8m SWK

9m

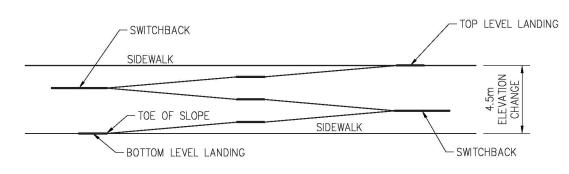
PLAN_VIEW &

REFERENCES:

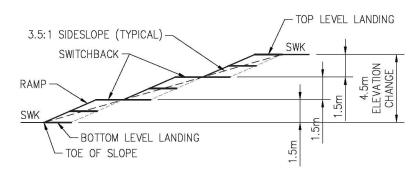
- GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES (AASHTO)
- AMERICANS WITH DISABILITIES ACT (ADA)
- STANDARDS FOR ACCESSIBLE DESIGN CAN/CSA-B651-12 🛕

NOTES: A

- 1. A WALKWAY WITH A SLOPE GENTLER THAN 5% (1:20) IS NOT CONSIDERED A RAMP AND MAY BE ANY LENGTH (CSA-B651-12).
- 2. RAMPS SHALL HAVE LEVEL LANDINGS AT THE TOP & BOTTOM OF EACH RUN AND ALSO WHERE THE RAMP CHANGES (CSA-B651-12 4.3.4.1) DIRECTION.
- 3. RAMP SLOPE SHALL NOT BE STEEPER THAN 8.3% (1V:12H) AND MAX HORIZ. LENGTH BETWEEN LANDINGS SHALL NOT EXCEED 9.0m (CSA-B651-12 4.3.1).
- MAXIMUM CROSS SLOPE SHALL BE 2% (CSA-B651-12).
- HANDRAIL REQUIREMENTS SEE NBCC-2010.



FRONT ELEVATION VIEW &



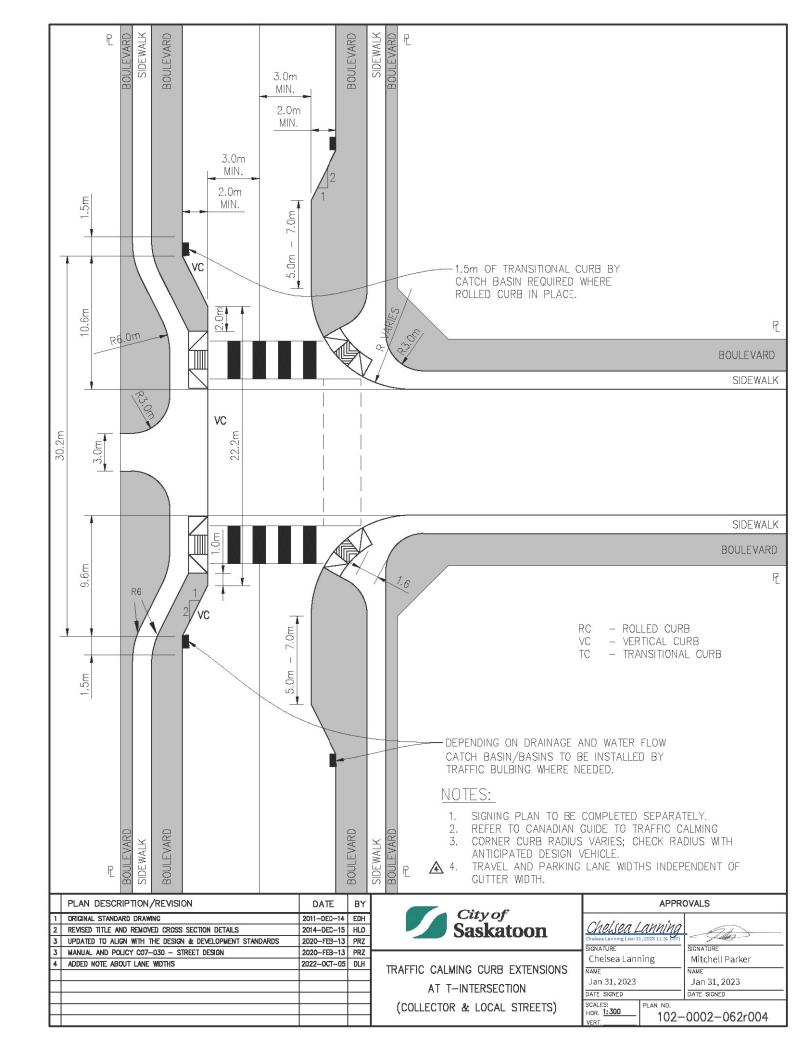
END ELEVATION VIEW

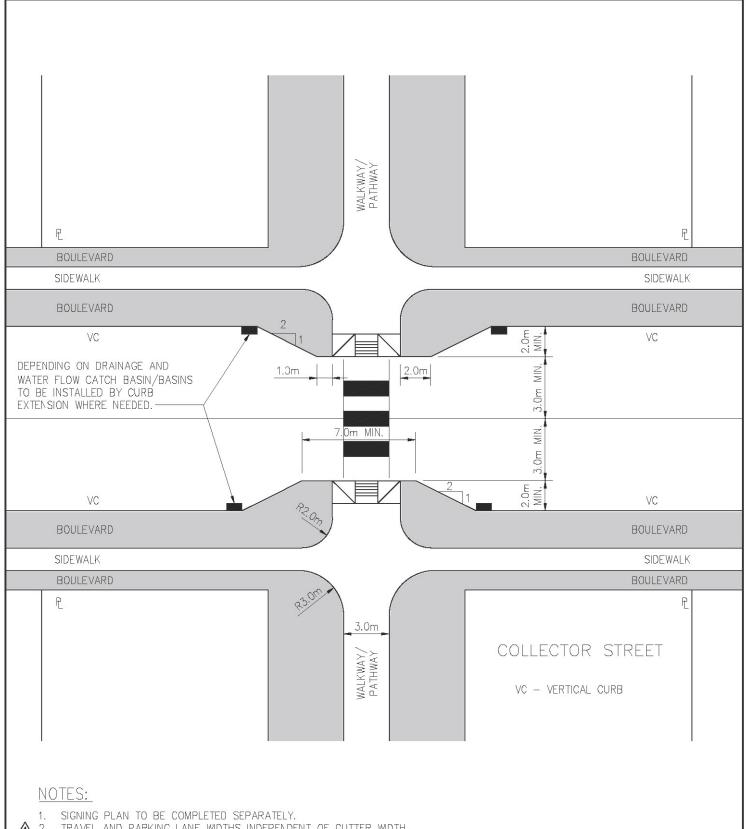
| | PLAN DESCRIPTION/REVISION | DATE | BY | |
|---|--|-------------|-----|---|
| 1 | ORIGINAL STANDARD DRAWING | 2013-OCT-09 | LCI | |
| 2 | UPDATED PLAN VIEW LENGTH | 2017-JAN-26 | | |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | Н |
| | | | | |
| | | | | |
| | | | | |
| | | | | ı |
| | | | | ı |
| | | | | |



ROADWAY SIDESLOPE RAMP PEDESTRIAN ACCESS ROUTE WHEELCHAIR ACCESSIBLE

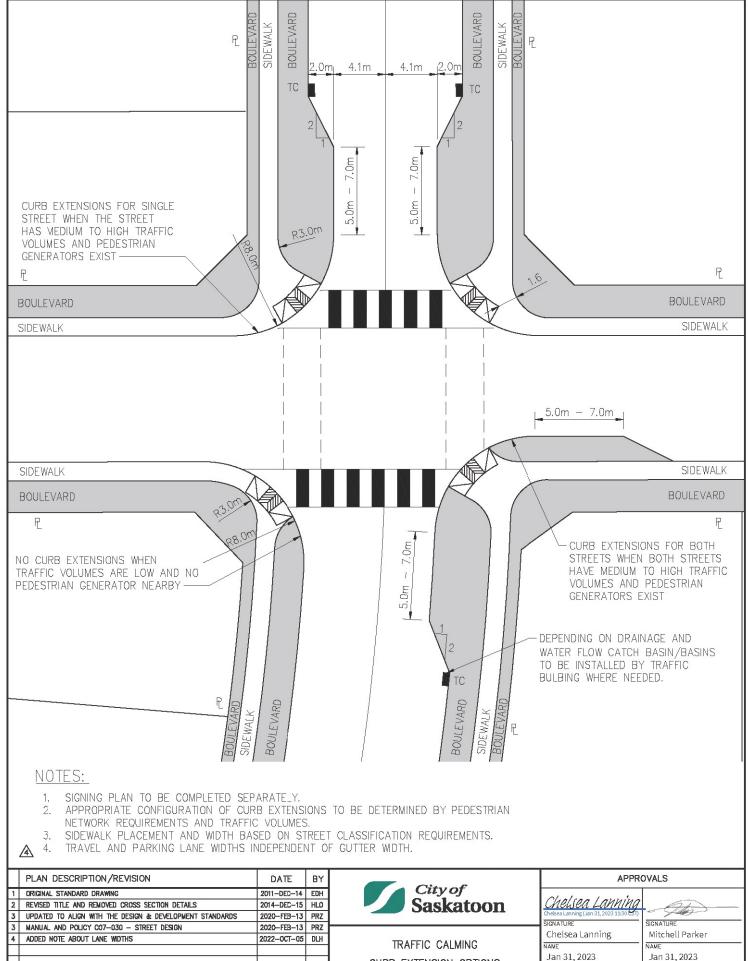
| | APPRO | OVALS |
|---------------------------------|------------------|------------------------------|
| Chelsea L Chelsea Lanning (A | | 2 |
| SIGNATURE Chelsea Lann | | SIGNATURE Matt Jurkiewicz |
| NAME Apr 23, 2020 | | NAME Apr 30, 2020 |
| DATE SIGNED | | DATE SIGNED |
| SCALES: HOR. 1:250 VERT. | PLAN NO. 102- | ·0002–057r003 |



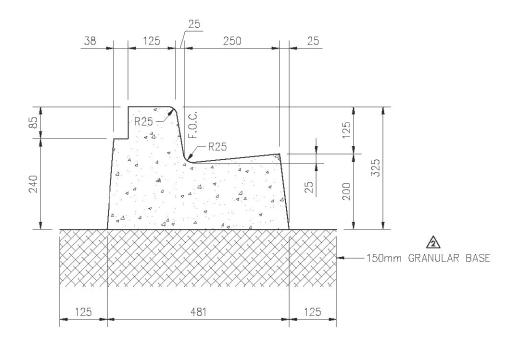


▲ 2. TRAVEL AND PARKING LANE WIDTHS INDEPENDENT OF GUTTER WIDTH.

| L | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|--|-------------|-----|---------------------------------|--|
| 1 | ORIGINAL STANDARD DRAWING | 2011-DEC-14 | EDH | City of Saskatoon | 0/ / / / |
| 2 | REVISED TITLE AND REMOVED CROSS SECTION DETAILS | 2014-DEC-15 | HLO | Saskatoon | Chelsea Lanning |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | | Chelsea Lanning (Jan 31, 2023 11:30 (ST) |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE SIGNATURE |
| 4 | ADDED NOTE ABOUT LANE WIDTHS | 2022-OCT-05 | DLH | TRAFFIC CALMING CURB EXTENSIONS | Chelsea Lanning Mitchell Parker |
| Г | | | | INAFFIC CALMING CORD EXTENSIONS | NAME NAME |
| Г | | | | AT A MID-BLOCK CROSSING | Jan 31, 2023 Jan 31, 2023 |
| Г | | | | ===== | DATE SIGNED DATE SIGNED |
| Г | | | | (COLLECTOR STREET) | SCALES: PLAN NO. HOR, 1:200 4.004 |
| | | | | | HOR. 1:200 102-0002-064r004 |



| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|-----|------------------------------|---|-----------------|
| 1 | ORIGINAL STANDARD DRAWING | 2011-DEC-14 | EDH | City of | 0/ / / / | |
| 2 | REVISED TITLE AND REMOVED CROSS SECTION DETAILS | 2014-DEC-15 | HLO | City of Saskatoon | Chelsea Lanning | - Other |
| 3 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Cubratoon | Chelsea Lanning (Jan 31, 2023 11:30 LST) | 7-47 |
| 3 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | SIGNATURE | SIGNATURE |
| 4 | ADDED NOTE ABOUT LANE WIDTHS | 2022-OCT-05 | DLH | TRAFFIC CALMING | Chelsea Lanning | Mitchell Parker |
| Г | | | | TRAFFIC CALIVING | NAME | NAME |
| Г | | | | CURB EXTENSION OPTIONS | Jan 31, 2023 | Jan 31, 2023 |
| Н | | | | CORD EXTENSION OF HORS | DATE SIGNED | DATE SIGNED |
| F | | | | (COLLECTOR OR LOCAL STREETS) | SCALES: HOR. 1:300 VERT. PLAN NO. 102- | -0002-065r004 |
| | | | | | | |

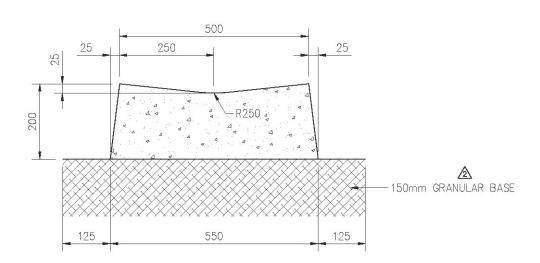


- CONCRETE STANDARD: 32MPa DURA-MIX CONCRETE 5-8% AIR AS PER COS SPEC.
- 2. COMPACTION STANDARD:

98% STANDARD PROCTOR AS PER COS SPEC.

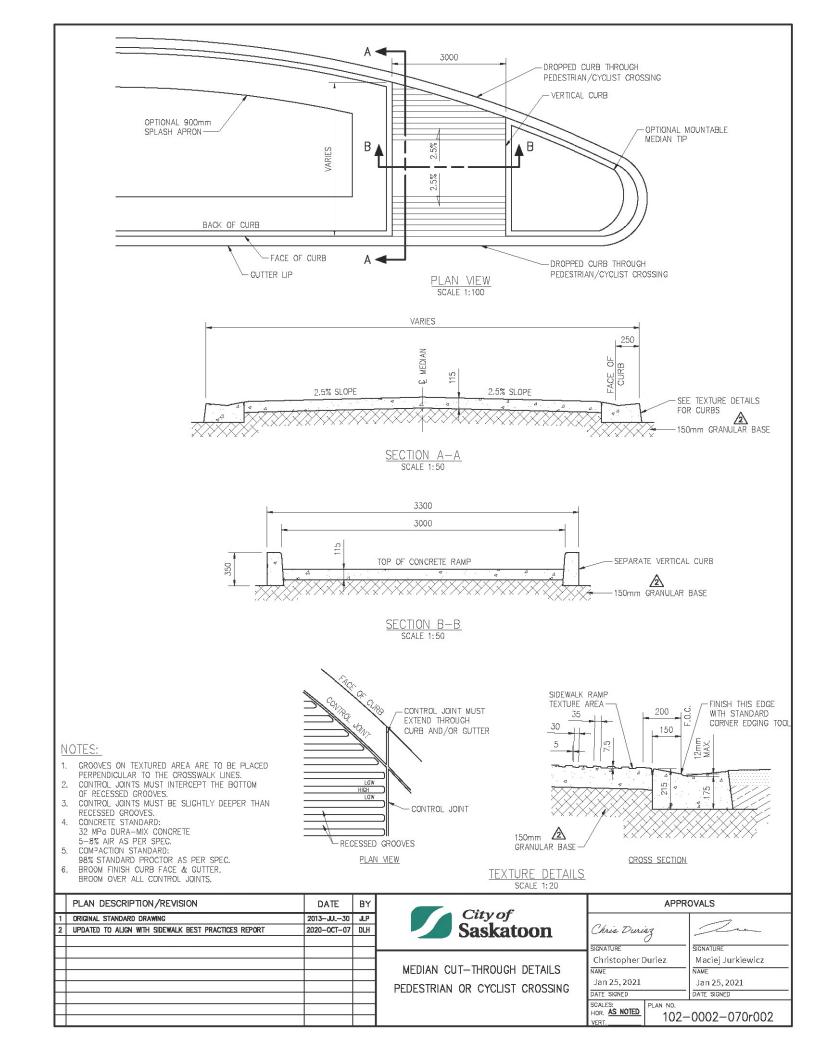
- 3. BROOM FINISH TOP & FACE OF CURB AND GUTTER LONGITUDINALLY. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- IF PAVER LIP IS NOT INTEGRALLY POURED IT MUST BE PINNED TO CURB & GUTTER AS PER STANDARD COS SPEC.

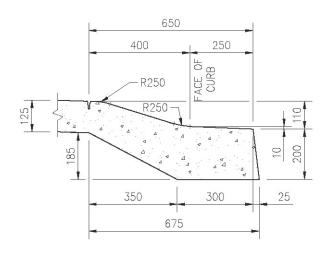
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | |
|----------|--|-------------|----------|------------------------------|--------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2014-DEC-15 | | City of Saskatoon | a . | |
| 2 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-OCT-06 | DLH | Saskatoon | Chris Duriez | Lan |
| \vdash | | | | | SIGNATURE | SIGNATURE |
| H | | | \vdash | | Christopher Duriez | Maciej Jurkiewicz |
| H | | | \Box | 150mm VERTICAL CURB & GUTTER | NAME | NAME |
| Г | | | | WITH PAVER LIP | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | WITT TAYER EN | DATE SIGNED | DATE SIGNED |
| | | | | | SCALES: PLAN NO. | 0000 007-000 |
| | | | | | VERT. 102- | -0002-067r002 |



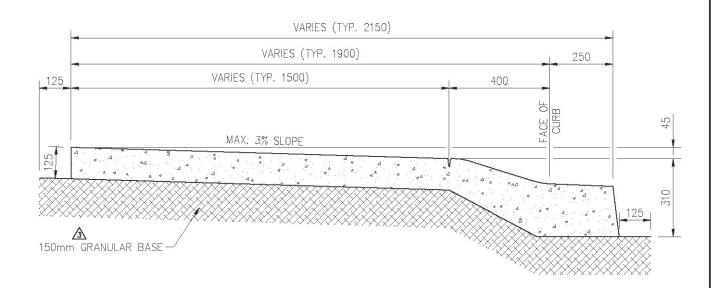
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC. 2. COMPACTION STANDARD:
- 98% STANDARD PROCTOR AS PER SPEC.
- BROOM FINISH TOP. BROOM OVER ALL CONTROL JOINTS. SPACING OF CONTROL JOINTS TO BE 1.5m.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|--|-------------|----------|----------------------|--------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2012-DEC-12 | HLD | City of | | |
| 2 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-OCT-06 | DLH | City of Saskatoon | Chris Duriez | Lan |
| L | | | \Box | | SIGNATURE | SIGNATURE |
| L | | | \Box | | Christopher Duriez | Maciej Jurkiewicz |
| L | | | | CONCRETE SWALE | NAME | NAME |
| H | | | - | 0011011212 0111122 | Jan 25, 2021 | Jan 25, 2021 |
| H | | | - | | DATE SIGNED | DATE SIGNED |
| H | | | \vdash | | SCALES: PLAN NO. | |
| H | | | - | | HOR. 1:10 102- | -0002-069r002 |
| Ш | | | | | VERT | 1111 1101002 |



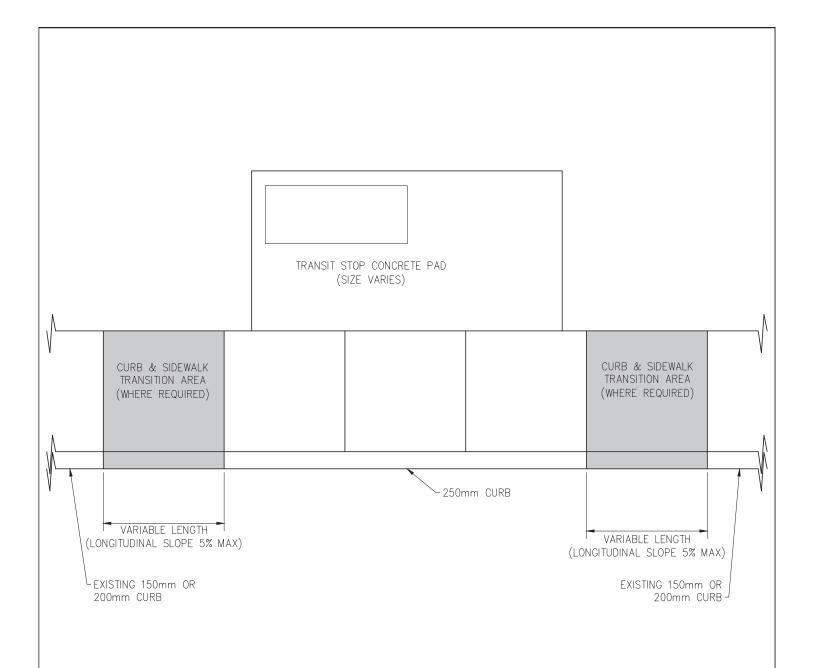


ROLLED CURB & REVERSED GUTTER



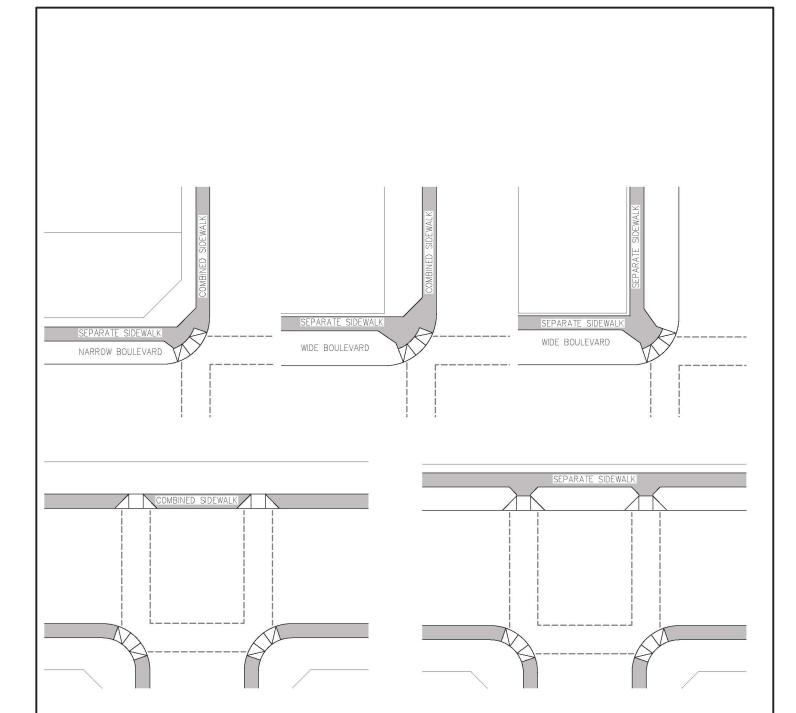
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK TRANSVERSELY. BROOM FINISH CURB & GUTTER LONGITUDINALLY.
- 4. BROOM OVER ALL CONTROL JOINTS.
- 5. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 6. VERIFY SIDEWALK WIDTH ACCORDING TO STREET CLASSIFICATION REQUIREMENTS. SIDEWALK WIDTH MAY VARY TO MATCH EXISTING FOR RETROFIT APPLICATIONS.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---------|--|-------------|-----|---------------------------------|--------------------|-------------------|
| | ORIGINAL STANDARD DRAWING | 2013-SEP-10 | KSD | City of Saskatoon | | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2020-FEB-13 | PRZ | Saskatoon | Chris Durisz | Lan |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2020-FEB-13 | PRZ | | | |
| 3 | UPDATED TO ALIGN WITH SIDEWALK BEST PRACTICES REPORT | 2020-OCT-06 | DLH | | SIGNATURE | SIGNATURE |
| Г | | | | COMBINED CIDENALIK DOLLED CLIDE | Christopher Duriez | Maciej Jurkiewicz |
| Г | | | | COMBINED SIDEWALK, ROLLED CURB | NAME | NAME |
| Г | | | | AND REVERSED GUTTER | Jan 25, 2021 | Jan 25, 2021 |
| Г | | | | AND REVENSED COTTER | DATE SIGNED | DATE SIGNED |
| \perp | | | | | SCALES: PLAN NO. | |
| t | | | | | NERT. 102- | -0002-071r003 |



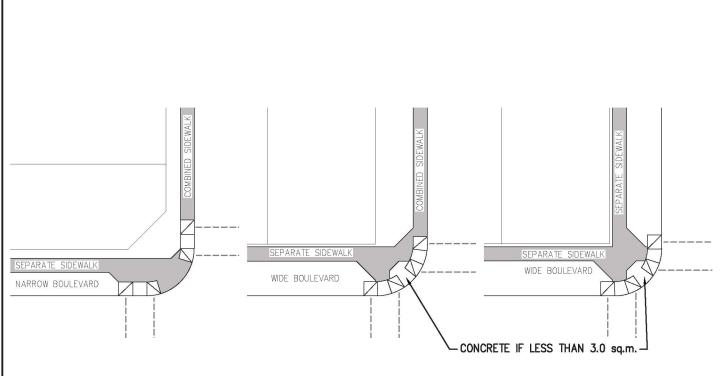
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- 3. BROOM FINISH WALK, CURB FACE & GUTTER LONGITUDINALLY.
- 4. BROOM OVER ALL CONTROL JOINTS
- 5. SPACING OF CONTROL JOINTS TO BE 1.5M

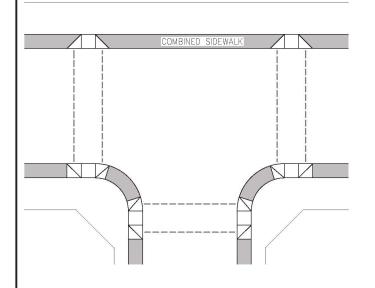
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----------|---------------------------|-------------|-----|-----------------------------------|---|---|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-31 | PRZ | City of Saskatoon | Sapieha, Digitally signed by Sapieha, Katie | Jurkiewi Digitally signed by Jurkiewicz, Matt |
| 2 | REVISED STANDARDS | 2024-NOV-28 | SJK | Saskatoon | Date: 2025.04.14 | CZ Matt Date: 2025.05.01 |
| L | | | | | 08:08:41 -06'00' | SIGNATURE 13:29:20 -06'00' |
| \perp | | | | | SIGNATURE | SIGNATURE |
| L | | | | TRANSITION TO 250mm VERTICAL CURB | NAME | NAME |
| \vdash | | | | | ··· | TV-SILE |
| \vdash | | | | APPROVED FOR USE AT TRANSIT STOPS | DATE SIGNED | DATE SIGNED |
| \vdash | | | | | SCALES: PLAN NO. | DATE GRONES |
| H | | | | | HOR. N.T.S. 102 | -0002-074r002 |
| L | | | | | VERT. N.T.S. | 0002 07 11 002 |

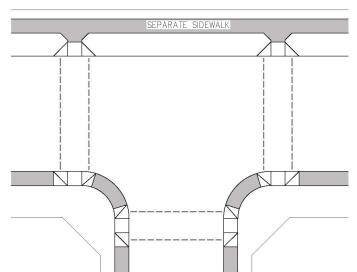


- 1. PEDESTRIAN RAMP TEXTURING TO BE DESIGNED AS PER DWG 102-0002-026.
- ALTERNATE CONFIGURATION MAY BE REQUIRED IN RETROFIT SITUATIONS.
- 2. 3. WHERE A PEDESTRIAN RAMP LOCATION CONFLICTS WITH A DRIVEWAY AT A T-INTERSECTION, ONE RAMP MAY BE SHIFTED NO MORE THAN 1.5m.
- PAVEMENT MARKINGS ARE NOT SHOWN, SEE DWG 102-0034-018.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|----------|---------------------------------|--|----------------------|
| F | ORIGINAL STANDARD DRAWING | 2019-SEP-17 | KAS | City of Saskatoon | Chelsea Lanning | |
| F | | | | Saskatoon | Chelsea Lanning (Apr 23, 2020) SIGNATURE | SIGNATURE |
| H | | | \vdash | DEDECTRIAN DAMP DI ACEMENT | Chelsea Lanning | Matt Jurkiewicz |
| L | | | | PEDESTRIAN RAMP PLACEMENT | NAME Apr 23, 2020 | NAME Apr 30, 2020 |
| ŀ | | | | LOCAL & COLLECTOR INTERSECTIONS | DATE SIGNED | DATE SIGNED |
| t | | | | | SCALES: PLAN NO. HOR, N.T.S. 100 | 0000 075-001 |
| L | | | | | VERT. 1UZ- | -0002-075r001 |



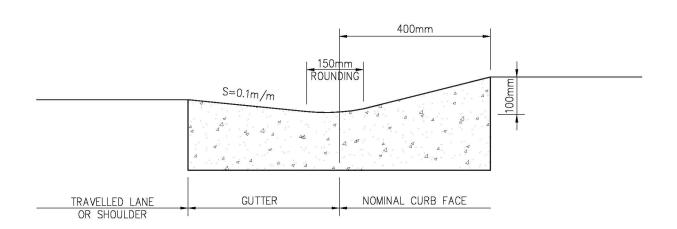




- PEDESTRIAN RAMP TEXTURING TO BE DESIGNED AS PER DWG 102-0002-026.
- 2. ALTERNATE CONFIGURATION MAY BE REQUIRED IN RETROFIT SITUATIONS.
- WHERE A PEDESTRIAN RAMP LOCATION CONFLICTS WITH A DRIVEWAY AT A T-INTERSECTION, ONE RAMP MAY BE SHIFTED NO MORE THAN 1.5m.

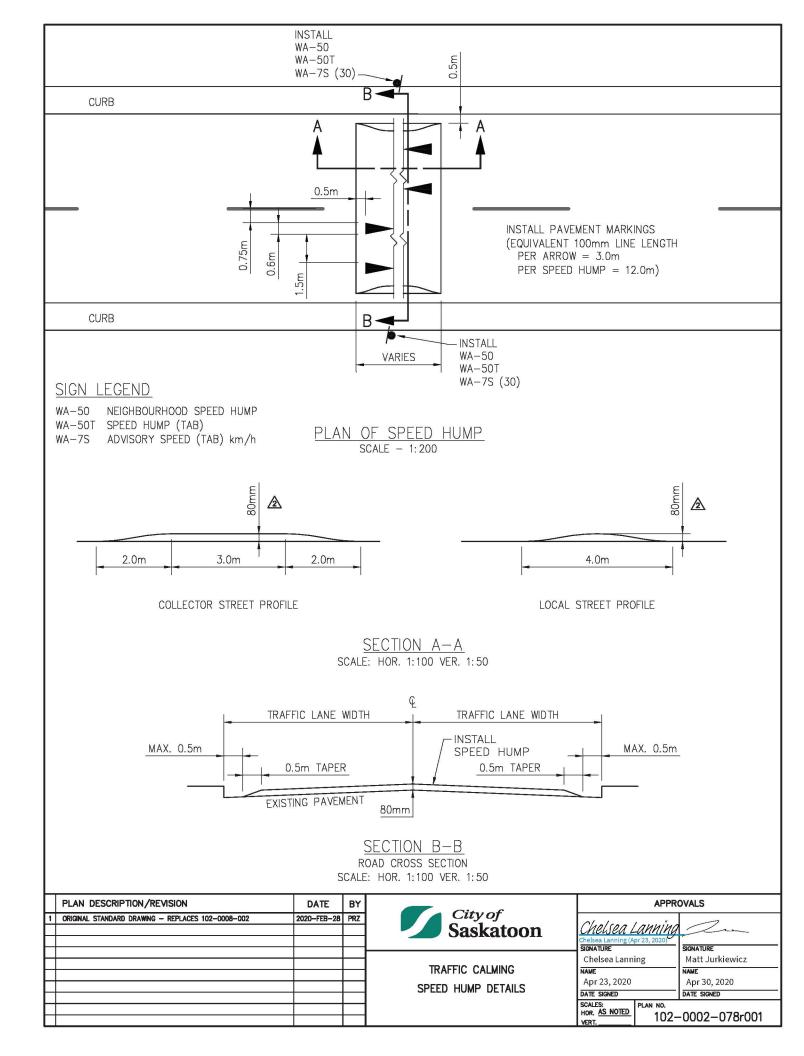
 LARGER RAMPS MAY BE REQUIRED IF ACCOMMODATING AAAA YOUNG FACILITIES.
- PAVEMENT MARKINGS ARE NOT SHOWN, SEE DWG 102-0034-018.

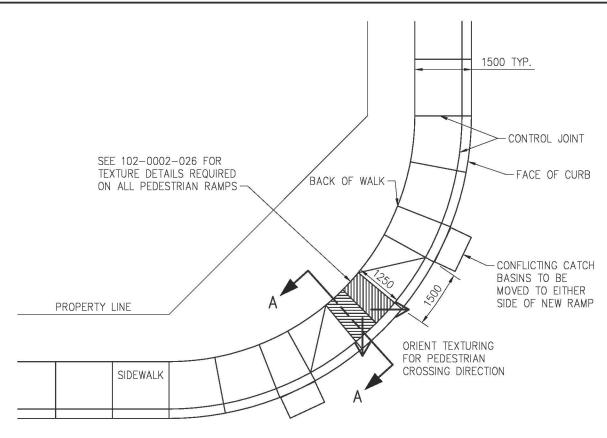
| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|-----|---------------------------|--|---------------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2019-SEP-17 | KAS | City of Saskatoon | Chelsea Lanning | 2 |
| H | | | | | Chelsea Lanning (Apr 23, 2020) | SIGNATURE |
| F | | | | PEDESTRIAN RAMP PLACEMENT | Chelsea Lanning | Matt Jurkiewicz |
| F | | | | ARTERIAL INTERSECTIONS | Apr 23, 2020 DATE SIGNED | Apr 30, 2020 DATE SIGNED |
| F | | | | | SCALES: HOR. N.T.S. VERT. PLAN NO. | -0002-076r001 |



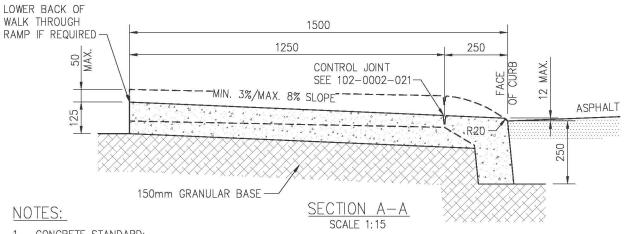
- MAY BE USED ON HIGH SPEED ROADWAY APPLICATIONS WHERE VERTICAL CURB IS NOT APPROPRIATE AND RIGHT-OF-WAY CANNOT ACCOMMODATE A RURAL CROSS—SECTION.
 MUST BE INSTALLED IN CONCERT WITH APPROPRIATE ROADSIDE
- SAFETY SYSTEMS.

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | VALS |
|---|---------------------------|-------------|-----|-------------------|----------------------|----------------|-----------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-20 | PRZ | Cityof | 0/./. | , . | |
| L | | | | City of Saskatoon | Chelsea I | anning | |
| L | | | | | Chelsea Lanning (A | | SIGNATURE |
| H | | | | | Chelsea Lan | ning | Matt Jurkiewicz |
| H | | | | MOUNTABLE CURB | NAME | | NAME |
| H | | | | | Apr 23, 2020 | | Apr 30, 2020 |
| H | | | | | DATE SIGNED | | DATE SIGNED |
| Г | | | | | SCALES: HOR, 1:10 | PLAN NO. | 0000 077 004 |
| Е | | | | | VERT. | 102- | 0002-077r001 |



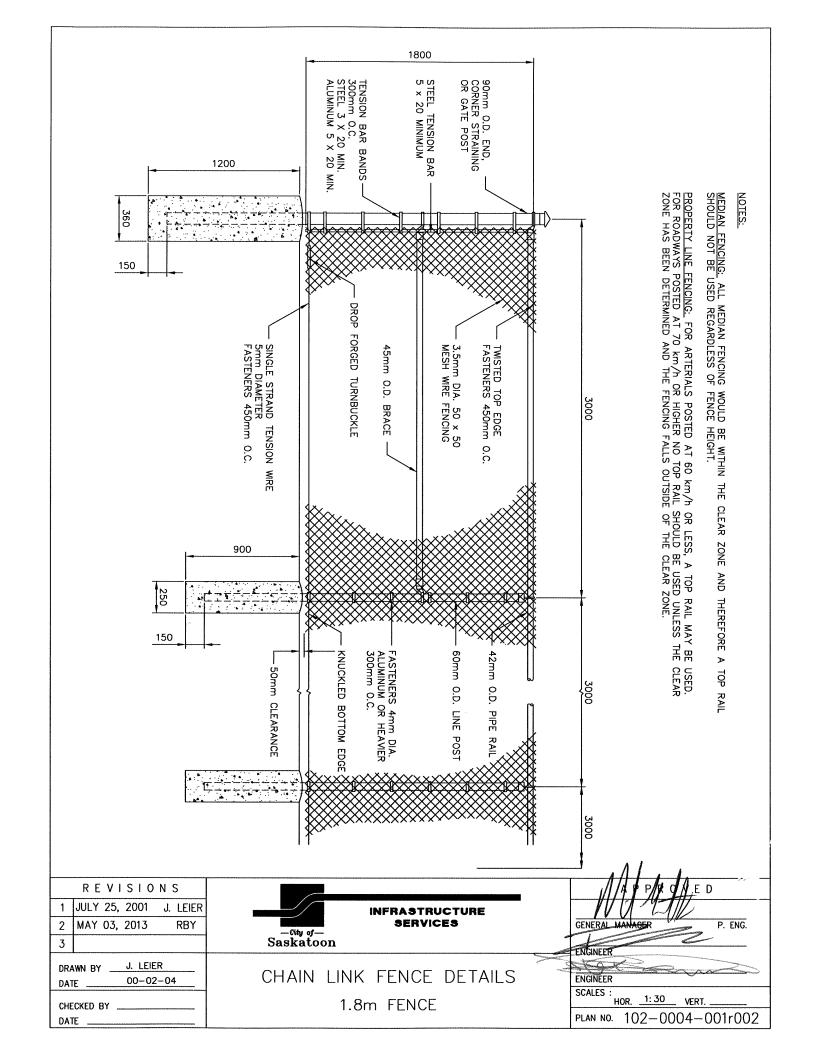


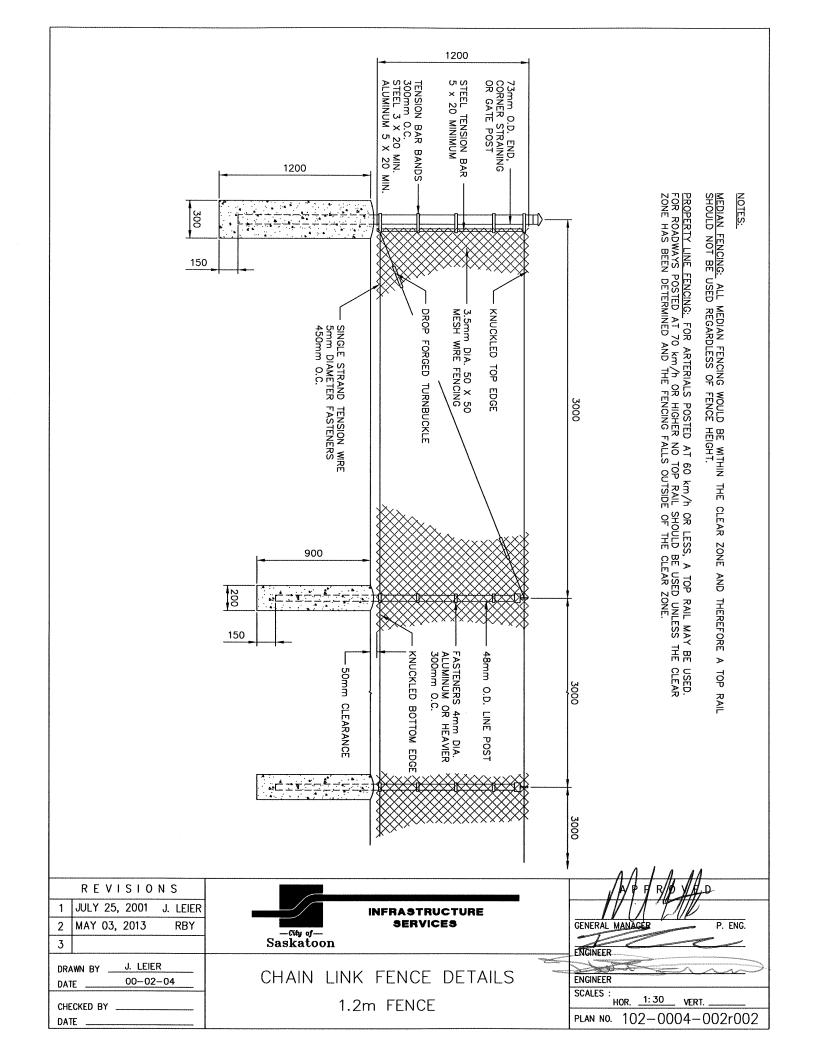
PEDESTRIAN RAMP SCALE 1:100

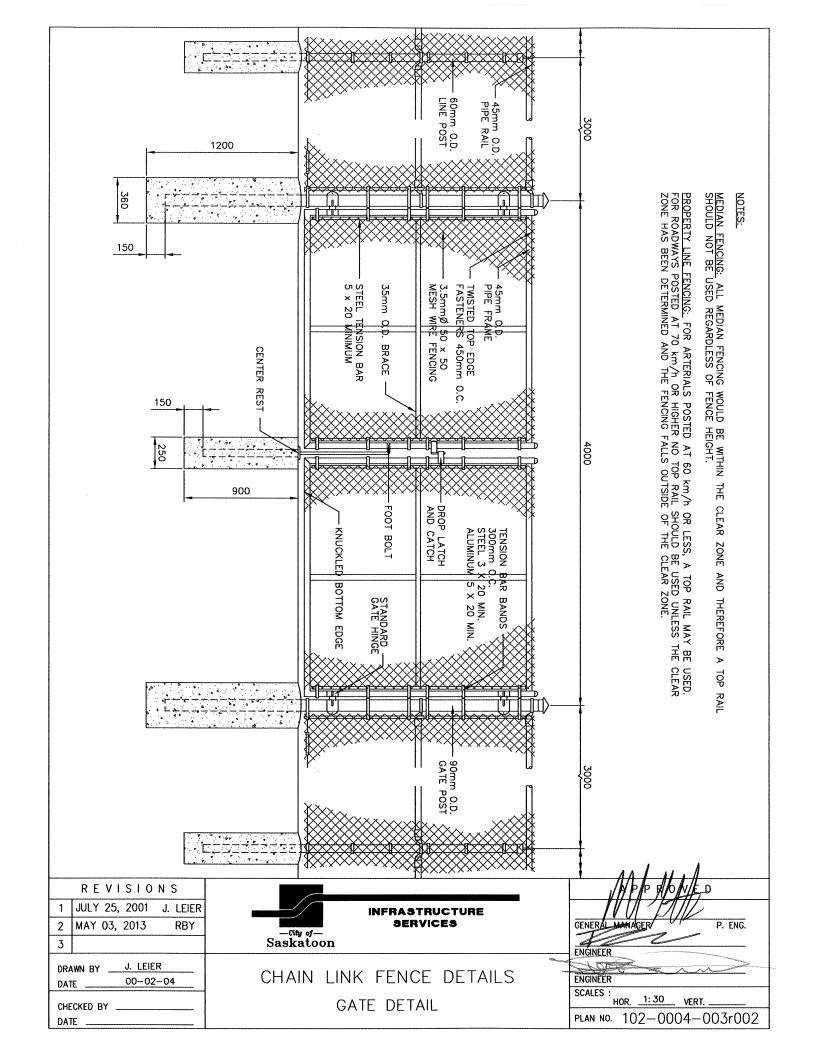


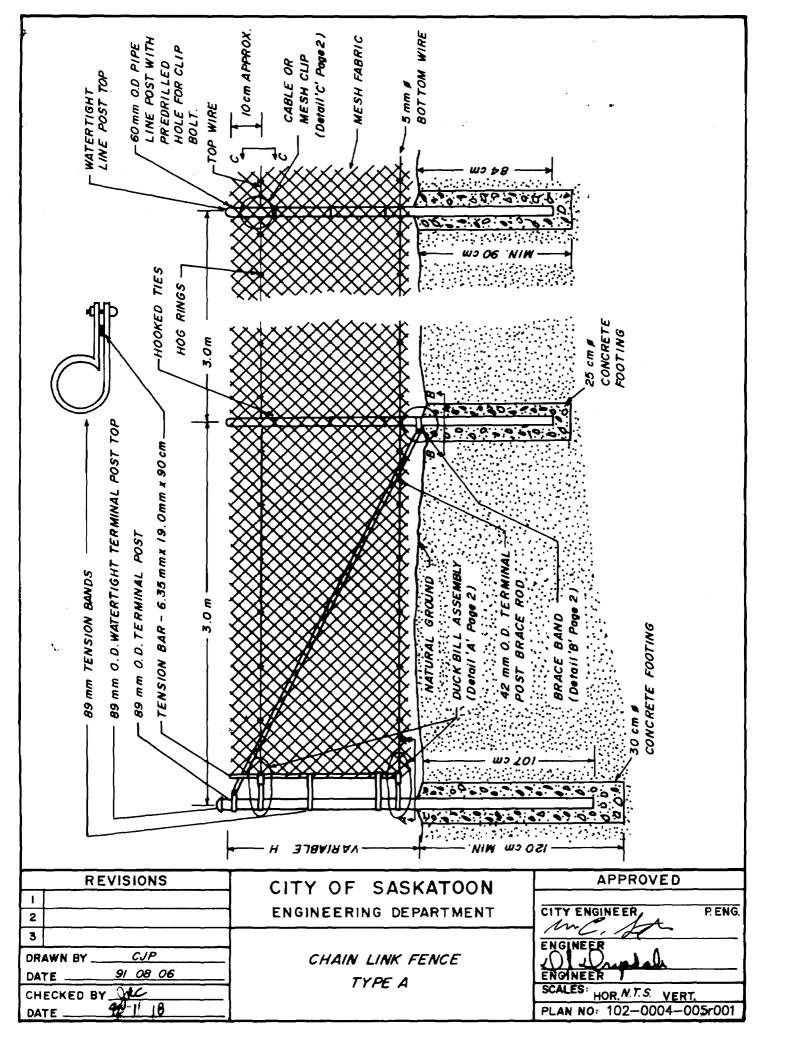
- 1. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 2. COMPACTION STANDARD: 98% STANDARD PROCTOR AS PER SPEC.
- BROOM FINISH WALK, CURB FACE & GUTTER. BROOM OVER ALL CONTROL JOINTS.
- 4. SPACING OF CONTROL JOINTS TO BE 1.5m.
- 5. SIDEWALK WIDTH VARIES ACCORDING TO STREET CLASSIFICATION REQUIREMENTS.

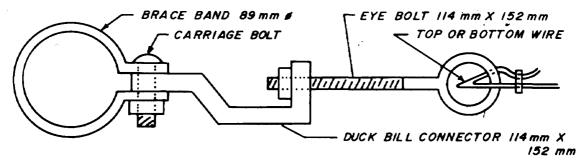
| | PLAN DESCRIPTION/REVISION | DATE | BY | City | APPROVALS | | |
|---|-----------------------------|-------------|---------------|-------------------------------|--|-------------------|--|
| | ORIGINAL STANDARD DRAWING 2 | 2021-FEB-03 | AR | Cityof | 1. 1. 14.14.15 | | |
| | | | | City of Saskatoon | Andy McMeekin Andy McMeekin (May 3, 2021 11:03 MDT) | Lu | |
| L | | | $\overline{}$ | | Andy McMeekin (May 3, 2021 11:03 MDT) SIGNATURE | SIGNATURE | |
| ⊢ | | | - | | Andy McMeekin | Maciej Jurkiewicz | |
| ⊦ | + | | \vdash | PEDESTRIAN RAMP | NAME | NAME | |
| Н | - | | | 4070 OTA E DOLLED OUDD | May 3, 2021 | May 3, 2021 | |
| H | + | | - | 1978 STYLE ROLLED CURB | DATE SIGNED | DATE SIGNED | |
| H | + | | - | FOR REPLACEMENT PURPOSES ONLY | SCALES: PLAN NO. | | |
| t | | | \Box | | HOR. AS NOTED 102- | -0002-079r001 | |



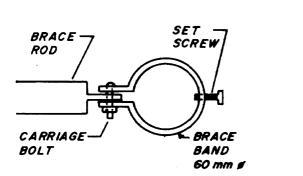


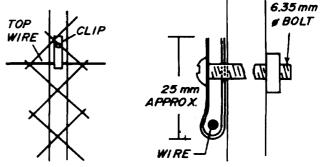






DETAIL 'A' - DUCK BILL ASSEMBLY





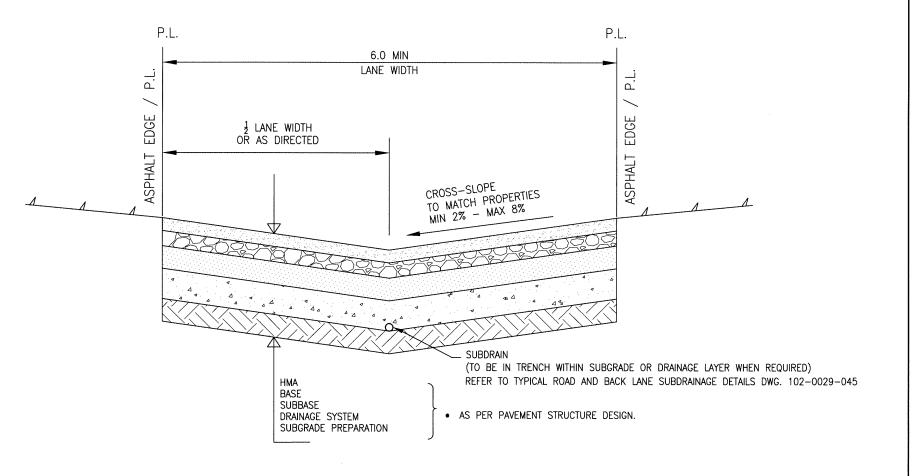
DETAIL 'B' - BRACE BAND

DETAIL 'C' - CABLE OR MESH CLIP

NOTE S:

- I. MAXIMUM SPACING BETWEEN BRACING SHALL BE 150 METRES.
- 2. TOP WIRE ONLY IS TO BE THREADED THROUGH CLIPS WITH MESH ATTACHED TO WIRE.
- 3. CHAIN LINK FABRIC SHALL BE FASTENED AT NOT MORE THAN 35 cm ON LINE POSTS AND NOT MORE THAN 45 cm ON THE TOP AND BOTTOM WIRE.
- 4. TOP WIRE WILL BE 6.4 mm 7 STRAND GUY WIRE, GRADE 50.
- 5. ALL MATERIALS AND INSTALLATION TO MEET STANDARD SPECIFICATION FOR . SUPPLY AND ERECTION OF CHAIN LINK FENCE.

| REVISIONS | CITY OF SASKATOON | APPROVED |
|---------------|----------------------------|---|
| 2 | ENGINEERING DEPARTMENT | CITY ENGINEER PENG |
| 3 DRAWN BY | CHAIN LINK FENCE TYPE A | ENGINEER |
| DATE 97 11 18 | | SCALES: HOR. N.T.S. VERT. PLAN NO: 102-0004-006r001 |

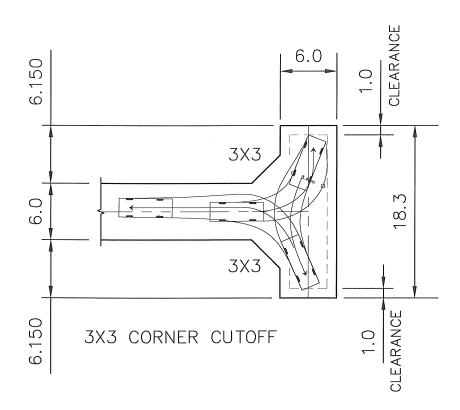


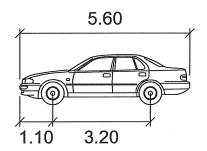
NOTE:

- BACK LANES WILL BE COMPRISED OF THE SAME STRUCTURE AS THE LOCAL ROADWAY CLASSIFICATION WITHIN THE ROAD GROUP AS OUTLINED IN THE PAVEMENT DESIGN GUIDE.
- DRAINAGE AGGREGATE TO BE ENVELOPED BY NON-WOVEN GEOTEXTILE FOR SUBDRAIN OR FULL DRAINAGE LAYER.
- SUBDRAIN TO BE CONNECTED TO CATCHBASIN AS PER DRAWING 102-0010-015 OR TEE INTO ADJACENT ROADWAY SUBDRAIN PIPE.



SCALE IN METRES





P meters

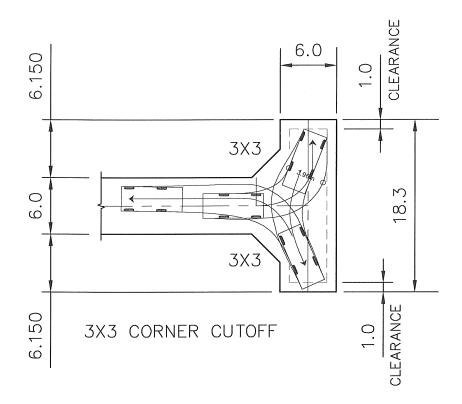
Width : 2.00
Track : 2.00
Lock to Lock Time : 6.00
Steering Angle : 36.2

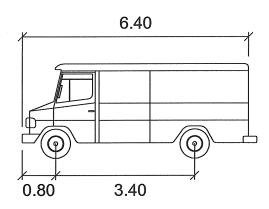
Steering Angle : 36.2

Vd: 1999 TAC LARGE CAR

VEHICLE PATH: ONE STEERING REVERSAL

| PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|----------------------------|---|--|
| 4 XXX XXX 3 2 | City of Saskatoon Infrastructure Services Department | <u>Chalabardiner</u> GENERALMANAGER |
| DRAWN BY | RESIDENTIAL LANE DEAD—END TURNAROUND T—TYPE DESIGN VEHICLE: LARGE CAR | ENGINEER PLAN NO. 102-0005-003r001 |





LSU meters

Width : 2.60

Track : 2.60

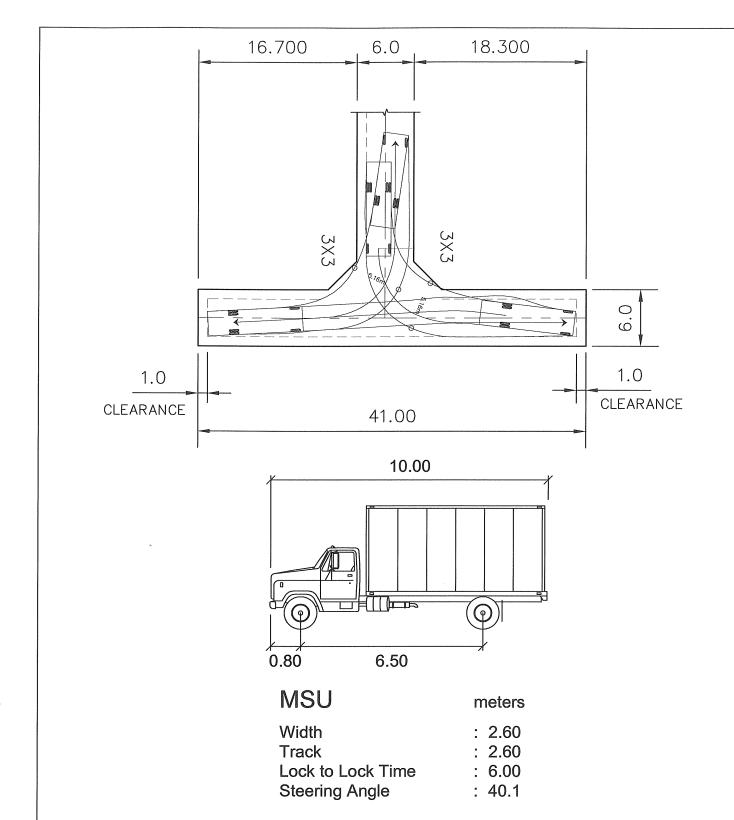
Lock to Lock Time : 6.00

Steering Angle

Vd: 1999 TAC (LSU) LIGHT SINGLE UNIT VEHICLE PATH: ONE STEERING REVERSAL

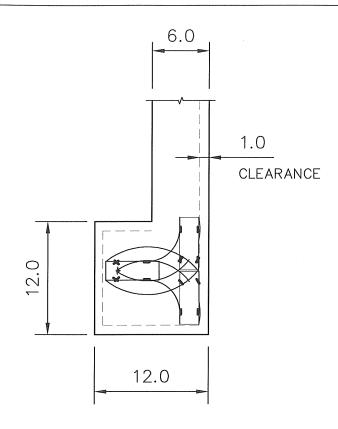
| | PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|---|---------------------------------|------------------------------------|---------------------------|
| 4 | XXX XXX | City of Saskatoon | 1 |
| 3 | | | angelakardene |
| 2 | | Infrastructure Services Department | GENERAL MANAGER |
| 1 | | RESIDENTIAL LANE DEAD-END | |
| | DRAWN BYLCI | TURNAROUND T-TYPE | Share with |
| | DATE2010-JAN-12 | | ENGINEER |
| | SCALE : HOR. <u>1:400</u> VERT. | DESIGN VEHICLE: LIGHT SINGLE UNIT | PLAN NO. 102-0005-004r001 |

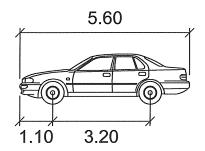
: 40.8



Vd: 1999 TAC (MSU) MEDIUM SINGLE UNIT VEHICLE PATH: ONE STEERING REVERSAL

| | PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|---|--------------------------------|--|---------------------------|
| 4 | XXX XXX | City of Saskatoon | du 000 l-0 -1 |
| 2 | | Infrastructure Services Department | GENERAL MANAGER |
| 1 | DRAWN BY DATE2010-JAN-12 | COMMERCIAL LANE DEAD-END TURNAROUND T-TYPE | ENGINEER DAC |
| | SCALE : HOR. <u>1:400</u> VERT | DESIGN VEHICLE: MEDIUM SINGLE UNIT | PLAN NO. 102-0005-005r001 |





P meters

Width : 2.00
Track : 2.00
Lock to Lock Time : 6.00
Steering Angle : 36.2

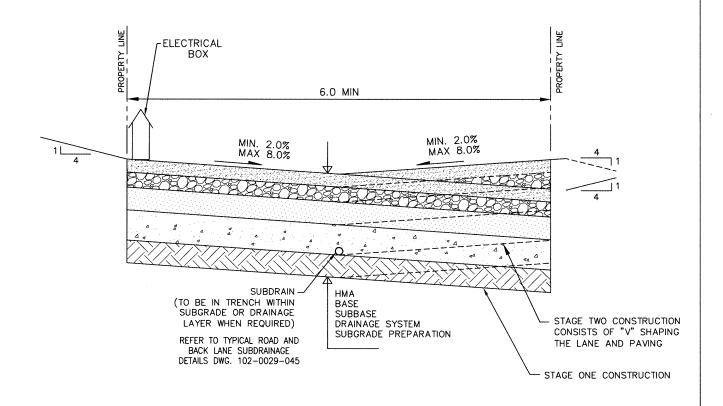
Steering Angle : 36.2

Vd: 1999 TAC LARGE CAR

VEHICLE PATH: ONE STEERING REVERSAL

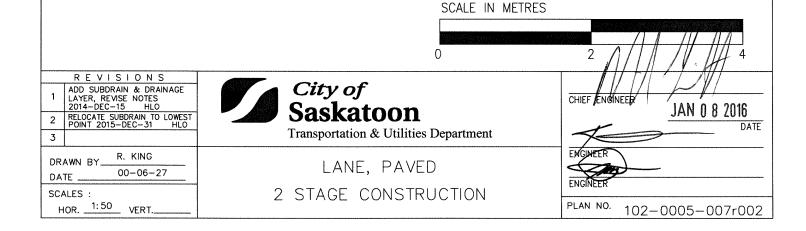
WHEELS ROTATED TO MAX STREERING ANGLE FROM STOPPED CONDITION

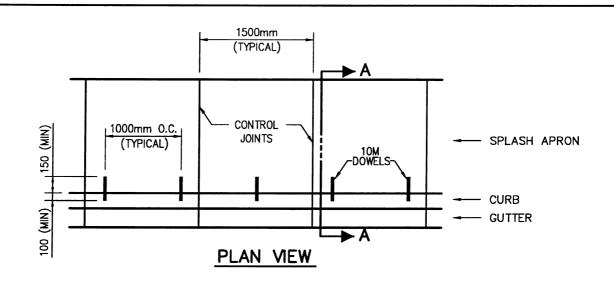
| PLAN DESCRIPTION/REVISIONS | Ca City of | APPROVED |
|----------------------------|---|-------------------------------------|
| 4 XXX XXX 3 | City of Saskatoon | Angela Condiner |
| 2 | Infrastructure Services Department | GENERAL MANAGER |
| DRAWN BY | RESIDENTIAL LANE DEAD—END TURNAROUND L—TYPE DESIGN VEHICLE: LARGE CAR | ENGINEER PLAN NO. 102-0005-006r001 |

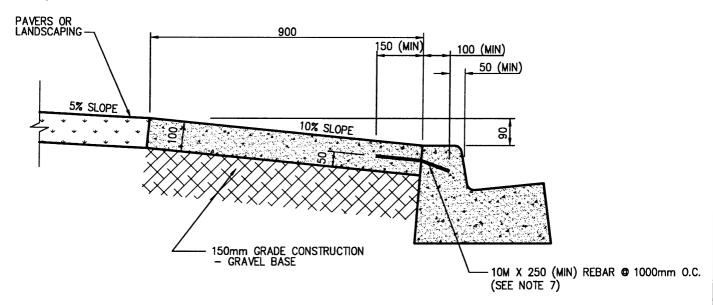


NOTE:

- BACK LANES WILL BE COMPRISED OF THE SAME STRUCTURE AS THE LOCAL ROADWAY CLASSIFICATION WITHIN THE ROAD GROUP AS OUTLINED IN THE PAVEMENT DESIGN GUIDE. DRAINAGE AGGREGATE TO BE ENVELOPED BY NON-WOVEN GEOTEXTILE FOR SUBDRAIN OR
- FULL DRAINAGE LAYER.
- SUBDRAIN TO BE CONNECTED TO CATCHBASIN AS PER DRAWING 102-0010-015 OR TEE INTO ADJACENT ROADWAY SUBDRAIN PIPE.





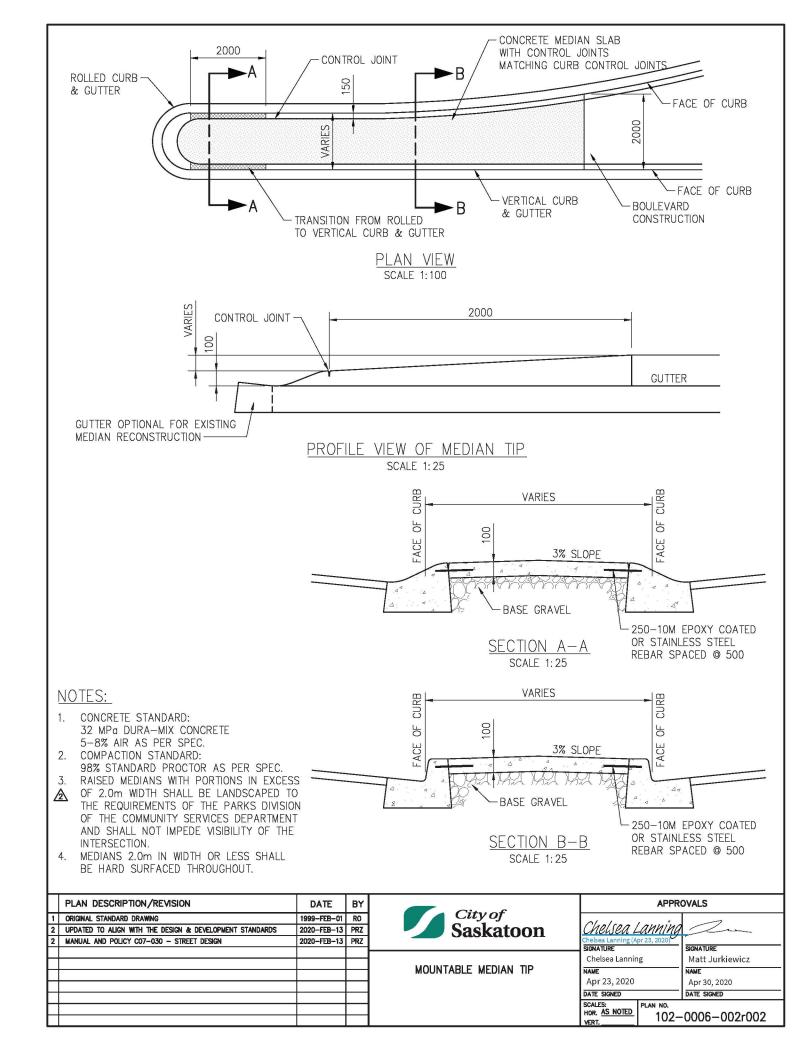


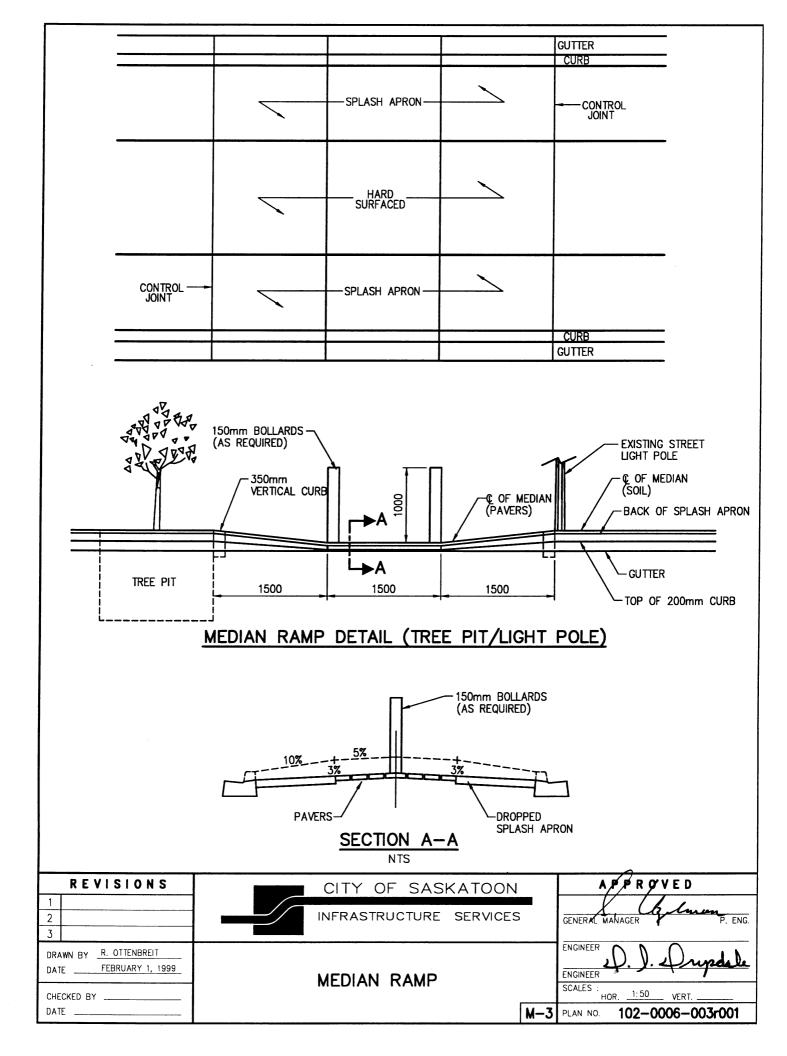
SECTION A-A

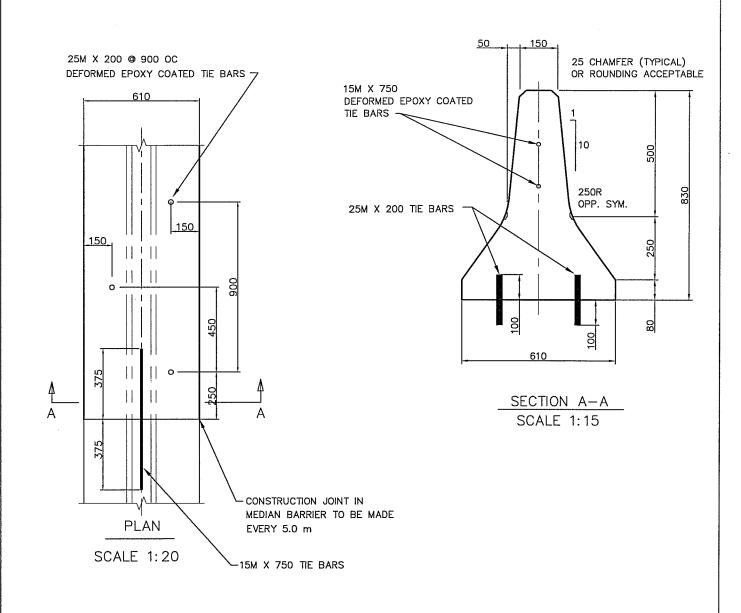
NOTES:

- PROVIDE CONTROL JOINTS EVERY 1500mm TO MATCH CONTROL JOINTS ON CURBING.
- 2. DOWELS TO BE 10M, PLACED 1.0m O.C.
- 3. BACKFILL CURB AND COMPACT SUBGRADE TO 98% STANDARD PROCTOR.
- 4. FOR EXISTING CURB, DRILL AND INSERT DOWELS. FOR NEW CONSTRUCTION INSERT DOWELS WHEN CASTING THE CURB.
- 5. 150mm GRANULAR BASE COMPACTED TO 98% STANDARD PROCTOR.
- 6. CONCRETE STANDARD: 32 MPa DURA-MIX CONCRETE 5-8% AIR AS PER SPEC.
- 7. REBAR TO BE STAINLESS STEEL, EPOXY COATED, OR GALVANIZED. (EPOXY CAN NOT BE DRIVEN)

| REVISIONS | CITY OF SASKATOON | A P P R O V E D |
|--|-------------------------|---------------------------|
| 2 3 | INFRASTRUCTURE SERVICES | GENERAL MANAGER P. ENG. |
| DRAWN BY R. OTTENBREIT DATE FEBRUARY 1, 1999 | SPLASH APRON | ENGINEER ENGINEER SCALES: |
| DATE | M-1 | PLAN NO. 102-0006-001r001 |







NOTE: ALTERNATE CROSS SECTIONS IN GENERAL COMPLIANCE WITH DIMENSIONS WILL BE CONSIDERED BY THE ENGINEER

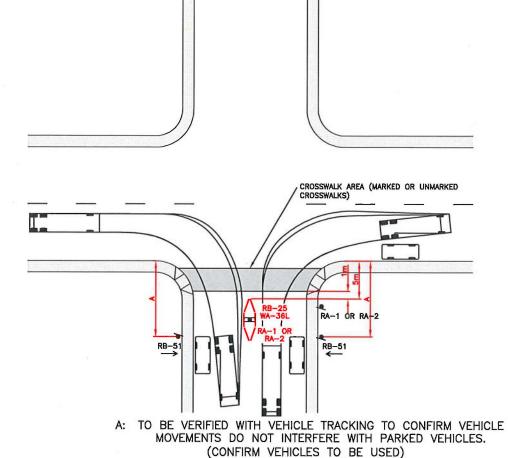
INSTALL LIGHT POLE BASES AND CONDUITS PRIOR TO SLIPFORMING

SLIPFORM OVER TOP OF POLE BASES. ONCE MACHINE IS PAST, IMMEDIATELY REMOVE CONCRETE OVER POLES BASE AND CLEAN THOROUGHLY

MEDIAN BARRIER SLOPED END TREATMENT

AS PER COS BARRIER TRANSITION 102-0002-044r001_UKN.DWG

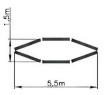
| PLAN DESCRIPTION/REVISIONS 4 XXX XXX 3 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
|--|--|------------------------------------|
| DRAWN BY | 830 MEDIAN BARRIER SLIP-FORMED CONCRETE | ENGINEER PLAN NO. 102-0006-005r001 |



NOTE:

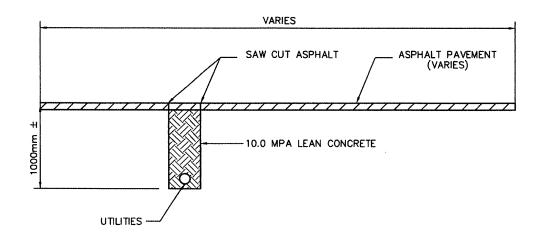
- SIGNAGE RB-25 SHOULD BE DOUBLE SIDED AND INSTALLED IN CENTRE OF MEDIAN.
 ALIGNMENT WITH EXISTING STOP & YIELD SIGN SHOULD BE REVIEWED. WHEN INSTALLING A STOP OR YIELD SIGN ON THE MEDIAN ISLAND, CONSIDER SIGN POSITION IN RELATION TO THE STOP OR YIELD SIGN LOCATED ON THE BOULEVARD.
 MEDIAN SHOULD NOT BE INSTALLED OVER MANHOLES OR UTILITY VAULTS.
 MEDIAN SHOULD NOT OBSTRUCT PEDESTRIAN CROSSWALK.

TEMPORARY MEDIAN DETAIL



| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED |
|--|--|---------------------------|
| , , , , , , , , , , , , , , , , , , , | City of Saskatoon Transportation | Mathan Bunds |
| DRAWN BYSJK DATE2019-MAY-22 | TRAFFIC CALMING TEMPLATE TEMPORARY MEDIAN ISLAND | ENGINEER |
| SCALE : HOR. <u>1:500</u> VERT. <u>1:500</u> | | PLAN NO. 102-0006-006r001 |

TYPICAL ASPHALT CUT 0 - <300mm CUT

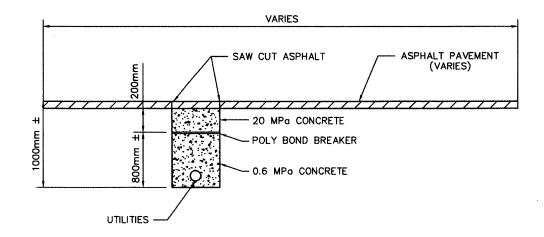


- * ASPHALT SHALL BE PLACED AT 75mm THICK OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER.
- * IF EXISTING ASPHALT IS GREATER THAN 75mm, ASPHALT MUST BE PLACED IN TWO LIFTS.
- * ALL EXCAVATED MATERIAL TO BE HAULED AWAY.
- ALL UTILITY CONSTRUCTION AND MAINTENANCE ACTIVITY INVOLVING EXCAVATION IN A CITY STREET OR LANE RIGHT—OF WAY MUST BE REPORTED TO THE CONSTRUCTION & DESIGN DIVISION CITY OF SASKATOON.
- 2. REPAIRS/RESTORATION OF THE STREET/LANE SURFACE SHALL BE DONE AS SHOWN.

| SURFACE SH | ALL BE DONE AS SHOWN. | MMA |
|---|---------------------------------------|---|
| R E V I S I O N S 1 MRH 03-12-22 2 HLO 06-01-20 3 HLO 07-02-28 | City of Saskatoon | CHIEF ENGINEER JAN 0 8 2016 |
| 4 REVISED DIVISION NAME 2015-DEC-01 HLO DRAWN BY RAV | Transportation & Utilities Department | ENGINEER LAN 0 0 2010 |
| DATE98-11-06 SCALES: HOR. NTS VERT | UTILITIES PLACEMENT STANDARDS | JAN 0 8 2016 DATE PLAN NO. 102-0007-001r005 |

TYPICAL STREET

300mm - 1000mm CUT



* ASPHALT SHALL BE PLACED AT 75mm THICK OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER.

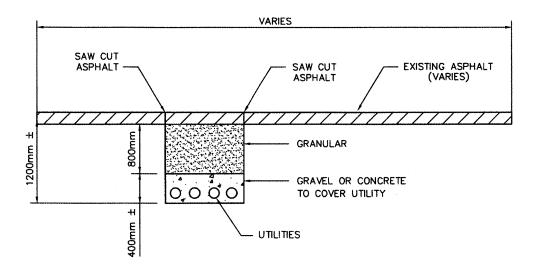
MAMA

- * IF EXISTING ASPHALT IS GREATER THAN 75mm, ASPHALT MUST BE PLACED IN TWO LIFTS.
- * ALL EXCAVATED MATERIAL TO BE HAULED AWAY.
- ALL UTILITY CONSTRUCTION AND MAINTENANCE ACTIVITY INVOLVING EXCAVATION IN A CITY STREET OR LANE RIGHT—OF WAY MUST BE REPORTED TO THE CONSTRUCTION & DESIGN DIVISION CITY OF SASKATOON.
- 2. REPAIRS/RESTORATION OF THE STREET/LANE SURFACE SHALL BE DONE AS SHOWN.

| R E V I S I O N S 1 MRH 03-12-22 2 HLO 06-01-20 3 HLO 07-02-28 4 REVISED DIVISION NAME 2015-DEC-01 HLO | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 0 8 2016 DATE |
|--|---|---|
| DRAWN BY RAV DATE 98-11-06 SCALES: HOR. NTS VERT. | UTILITIES PLACEMENT STANDARDS | JAN 0 8 2016 DATE PLAN NO. 102-0007-002r005 |

TYPICAL STREET

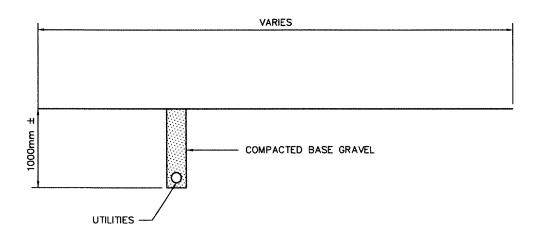
300mm - 1000mm CUT



- * ASPHALT SHALL BE PLACED AT 75mm THICK OR MATCH EXISTING THICKNESS WHICHEVER IS GREATER. IF EXISTING ASPHALT IS GREATER THAN 75mm, ASPHALT MUST BE PLACED IN TWO LIFTS.
- * THE STREET BASE GRAVEL SHALL BE PLACED IN 150 MM LIFTS (MAXIMUM) AND COMPACTED TO 100 PERCENT OF STANDARD PROCTOR DENSITY AT EXISTING FIELD MOISTURE CONTENT.
- * COMPACTION TEST REPORTS MUST BE PROVIDED REPORTS CAN BE FAXED TO 975-2971.
- * ALL EXCAVATED MATERIAL TO BE HAULED AWAY.
- ALL UTILITY CONSTRUCTION AND MAINTENANCE ACTIVITY INVOLVING EXCAVATION IN A CITY STREET OR LANE RIGHT—OF WAY MUST BE REPORTED TO THE CONSTRUCTION & DESIGN DIVISION CITY OF SASKATOON.
- 2. REPAIRS/RESTORATION OF THE STREET/LANE SURFACE SHALL BE DONE AS SHOWN.

| SURFACE SH | HALL BE DONE AS SHOWN. | MAH |
|--|---------------------------------------|-----------------------------|
| R E V I S I O N S 1 MRH 03-12-22 | City of | |
| 2 HLO 06-01-20 | City of Saskatoon | CHIEF ENGINEER JAN 0 8 2016 |
| 3 HLO 07-02-28 | Transportation & Utilities Department | PATE PATE |
| 4 REVISED DIVISION NAME 2015-DEC-01 HLO | Transportation & Clinics Department | |
| DRAWN BY | UTILITIES PLACEMENT STANDARDS | JAN 0 8 2016 |
| SCALES : HOR. NTS VERT. | | PLAN NO. 102-0007-003r005 |

TYPICAL GRAVEL LANE

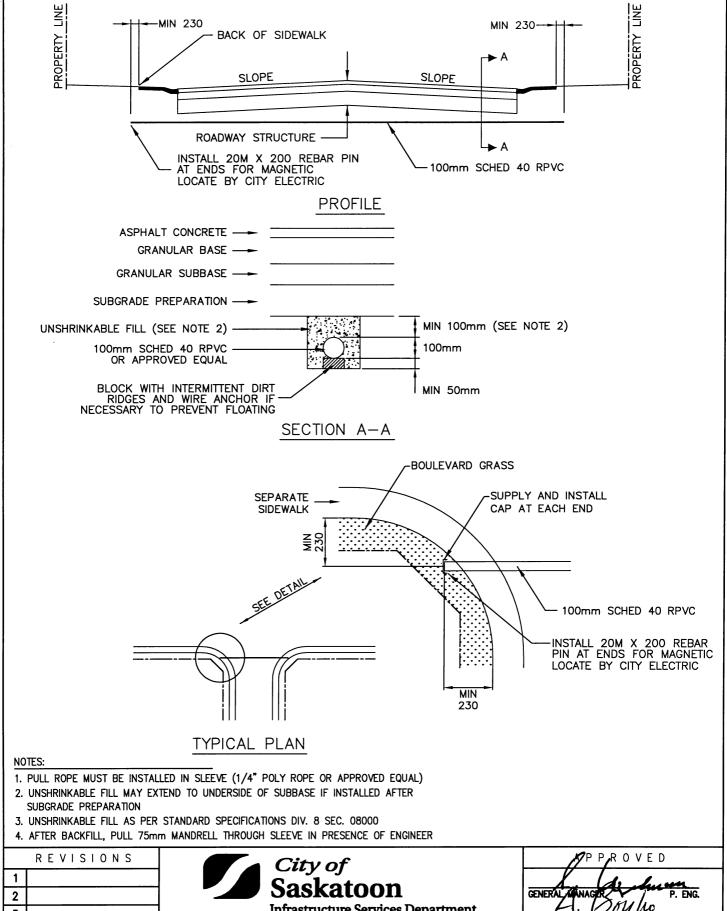


- * FILL BASE GRAVEL SHALL BE PLACED IN 150MM LIFTS (MAXIMUM) AND COMPACTED TO 95 PERCENT OF STANDARD PROCTOR DENSITY AT EXISTING FIELD MOISTURE CONTENT.
- * ALL EXCAVATION MATERIAL IS TO BE HAULED TO AN APPROVED DISPOSAL SITE AWAY FROM THE CONSTRUCTION AREA.

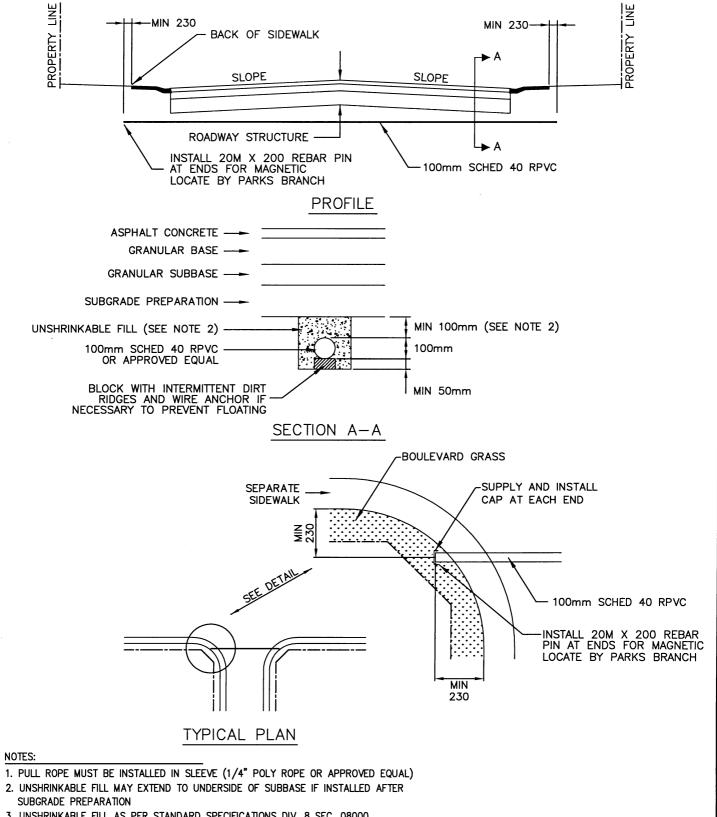
- ALL UTILITY CONSTRUCTION AND MAINTENANCE ACTIVITY INVOLVING EXCAVATION IN A CITY STREET OR LANE RIGHT—OF WAY MUST BE REPORTED TO THE CONSTRUCTION & DESIGN DIVISION CITY OF SASKATOON.
- 2. REPAIRS/RESTORATION OF THE STREET/LANE SURFACE SHALL BE DONE AS SHOWN.

| | | 111-11 /4/111 |
|--|---------------------------------------|---------------------------|
| REVISIONS | City of | |
| 1 CC 02-04-08 | City of Saskatoon | CHIEF ENGINEER |
| 2 HLO 06-01-20 | | JAN 0 8 2016 |
| 3 REVISED DIVISION NAME 2015-DEC-01 HLO | Transportation & Utilities Department | DATE |
| DRAWN BY | UTILITIES PLACEMENT STANDARDS | JAN 0 8 2016 DATE |
| SCALES: HOR. NTS VERT. | | PLAN NO. 102-0007-005r003 |

MI NA

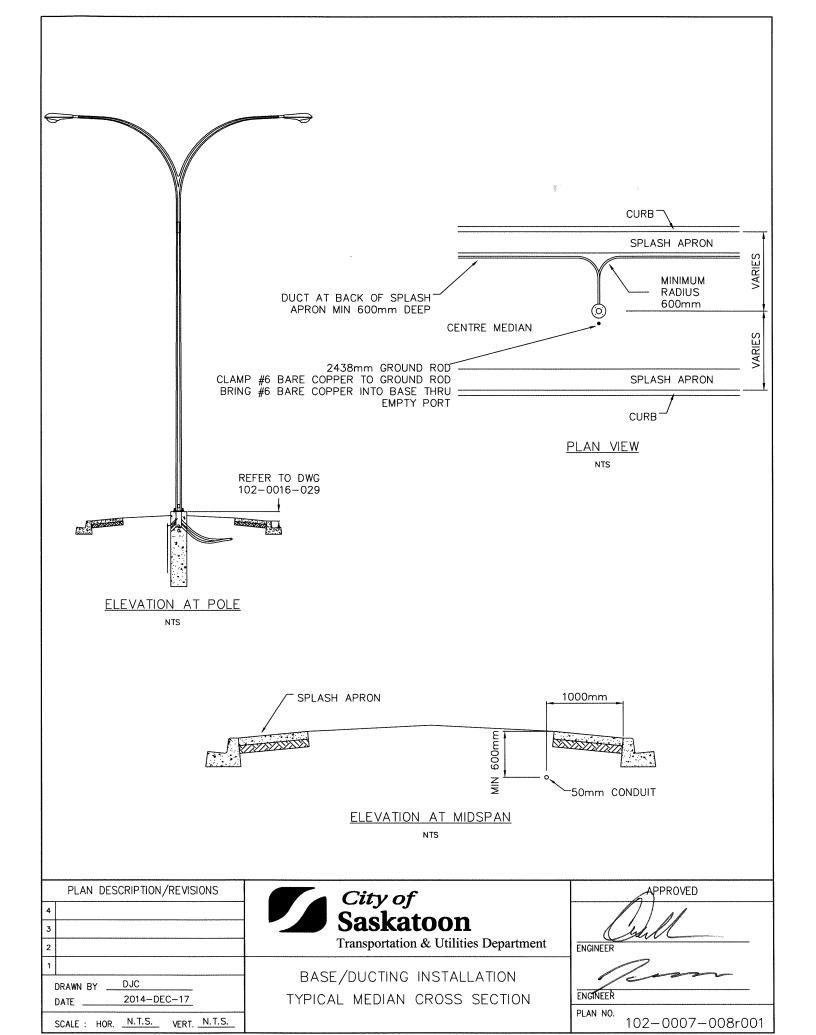


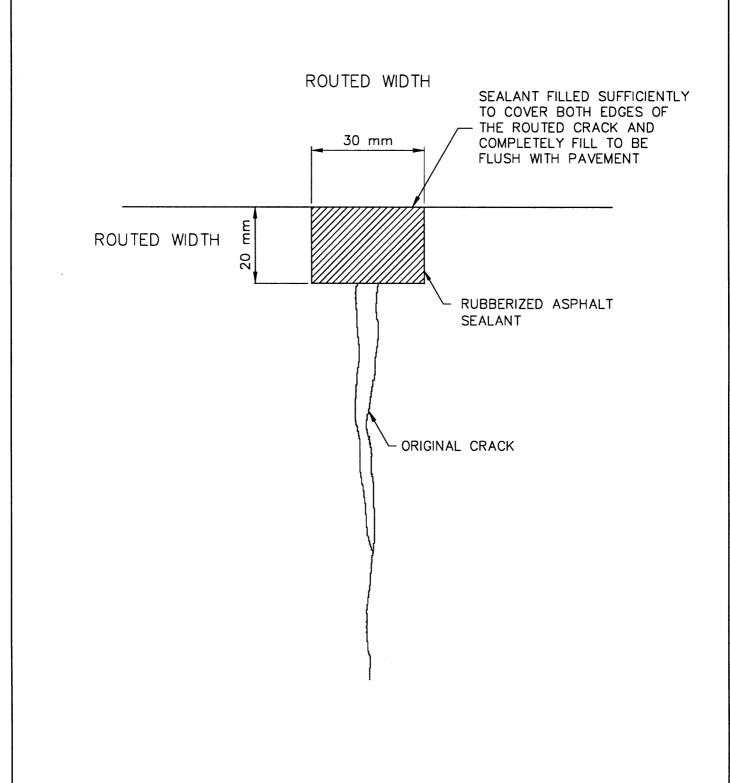




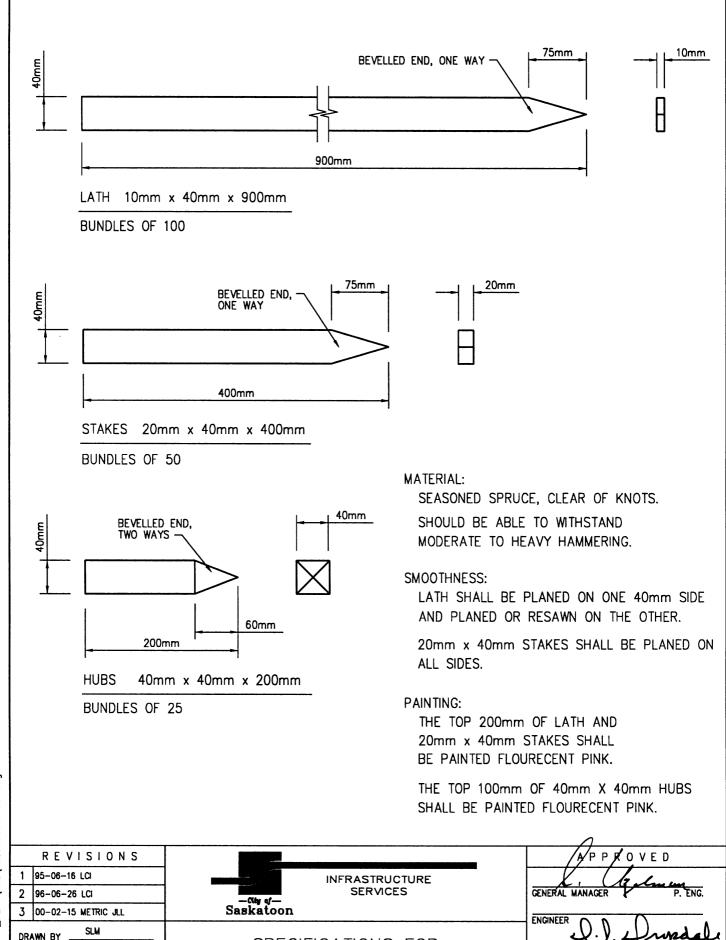
- 3. UNSHRINKABLE FILL AS PER STANDARD SPECIFICATIONS DIV. 8 SEC. 08000
- 4. AFTER BACKFILL PULL 75mm MANDRELL THROUGH SLEEVE IN PRESENCE OF ENGINEER

| 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAC MANAGER P. ENG. DIGNEER |
|------------------------|--|---|
| DRAWN BY A. YOUNG DATE | TYPICAL ROADWAY CROSSING IRRIGATION SLEEVE | ENGINEER SCALES: HOR. NTS PLAN NO. 102-0007-007r001 |





| R E V I S I O N S 1 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL MANAGER P. ENG. |
|----------------------|--|--|
| DRAWN BY | CROSS SECTION FOR RUBBERIZED ASPHALT CRACK SEALANT | ENGINEER SCALES: HOR. NTS VERT. PLAN NO. 102-0008-001r001 |



SPECIFICATIONS FOR

SURVEY STAKES

ENGINEER

SCALES :

1:5

PLAN NO. 102-0009-001r001

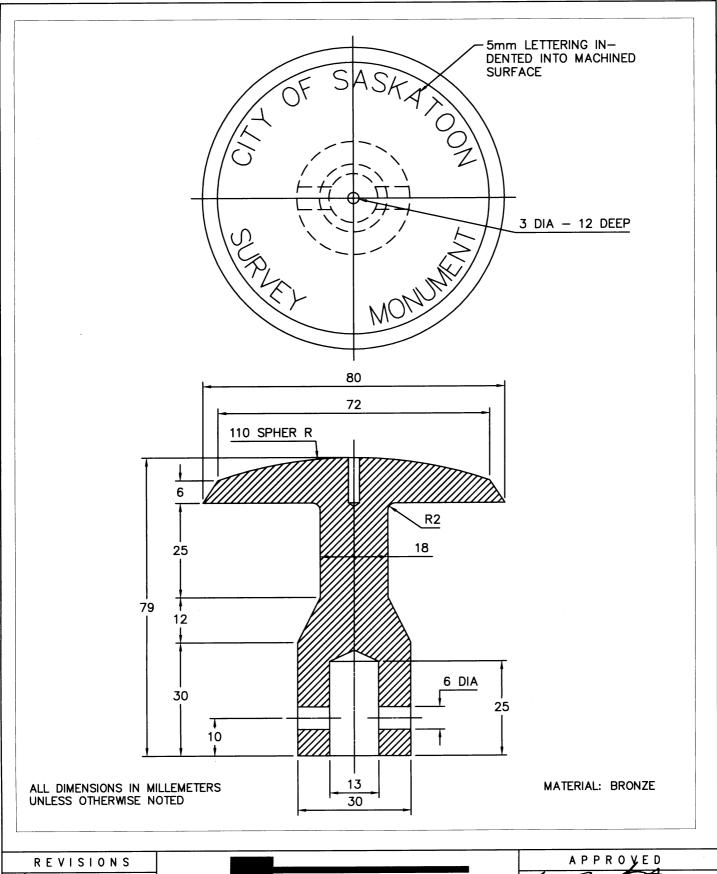
H: \IS_LIBRARY_DEPT\102\1020009001r001.dwg

DATE

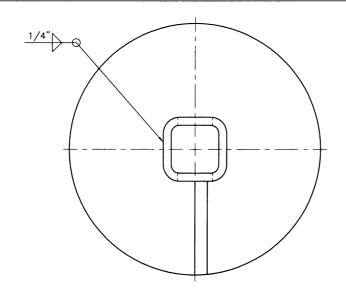
DATE

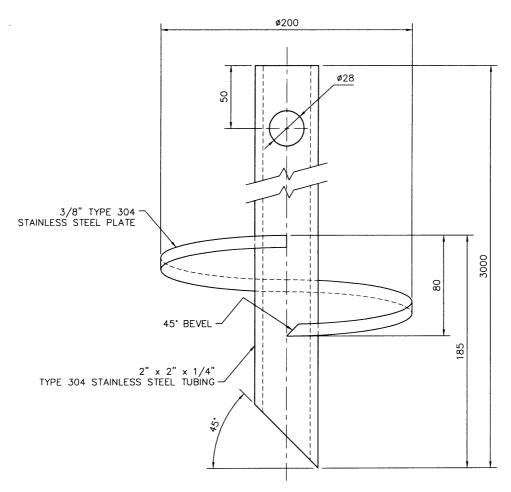
CHECKED BY

92-04-02

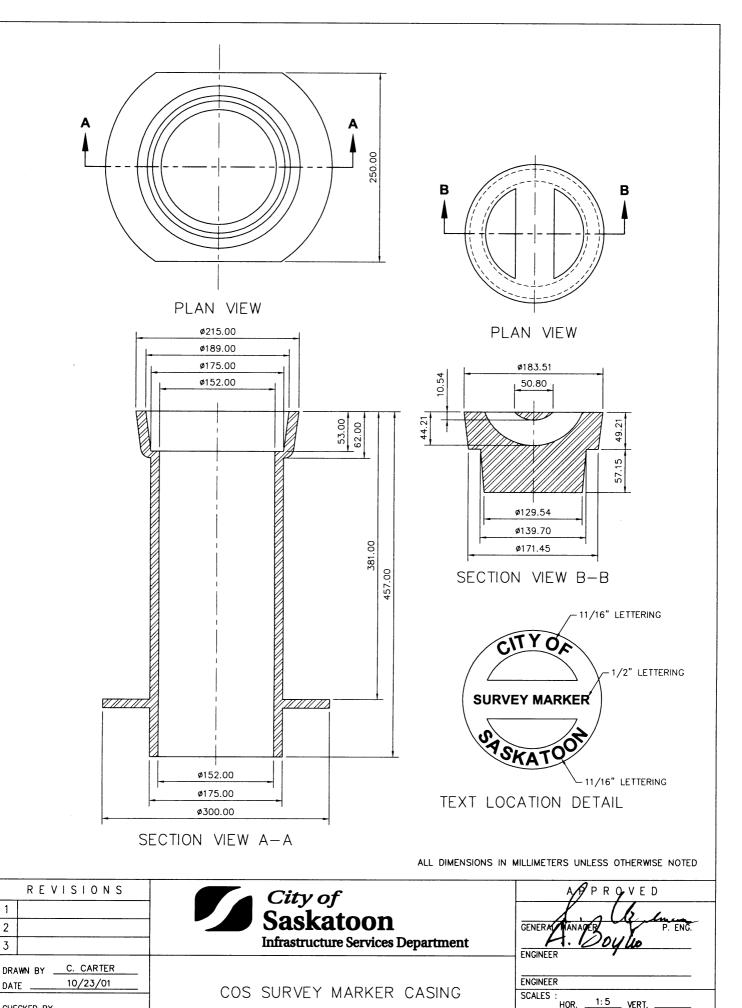


| R E V I S I O N S 1 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL MANAGED P. ENG. ENGINEER |
|----------------------|-----------------------------------|---|
| DRAWN BY | SURVEY TABLET MARKER TYPE 1 | ENGINEER SCALES: HOR. 1:1 VERT. 1:1 PLAN NO. 102-0009-002r001 |





| R E V I S I O N S 1 DIM 70mm to 80mm CC 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER ENGINEER ENGINEER |
|---|--|--|
| DRAWN BY C. CARTER DATE 10/16/01 CHECKED BY DATE | COS SURVEY MARKER | ENGINEER SCALES: HOR. 1:3 PLAN NO. 102-0009-003r001 |



PLAN NO. 102-0009-004r001

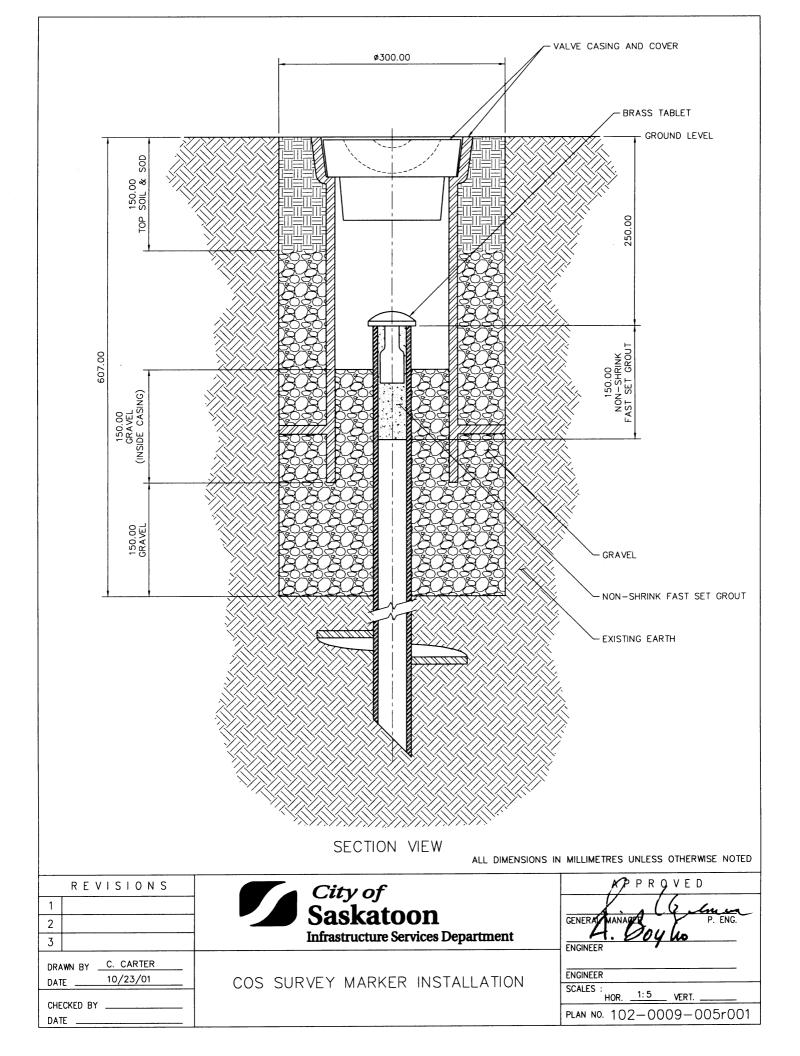
1 2

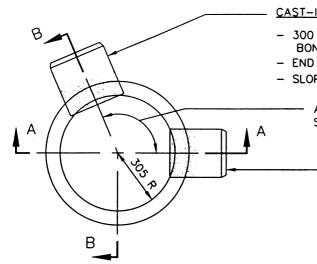
3

DATE

DATE

CHECKED BY





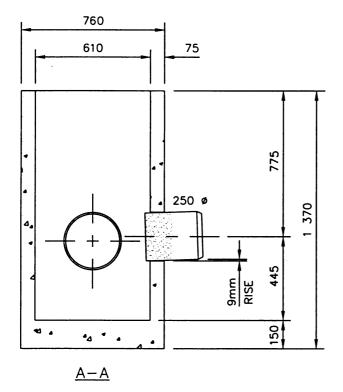
CAST-IN-PLACE CB OUTLET

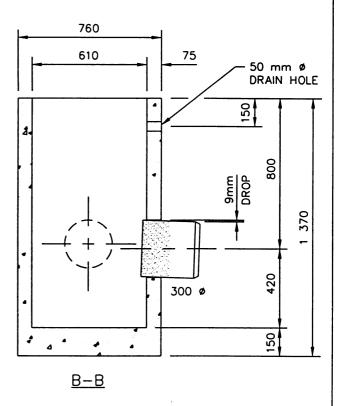
- 300 mm Ø x 300 mm LONG SDR35 PVC C/W BONDED EXTERIOR GROUT COAT
- END BEVELLED TO PVC PIPE SPECIFICATIONS
- SLOPED FOR DISCHARGE AT 3% GRADE

ANGLE OF DISCHARGE PIPE TO BE SPECIFIED PRIOR TO MANUFACTURE

CAST-IN-PLACE CB INLET

- 250 mm Ø x 300 mm LONG SDR35 PVC C/W BONDED EXTERIOR GROUT COAT
- END BEVELLED TO PVC PIPE SPECIFICATIONS
- SLOPED FOR INTAKE AT 3% GRADE

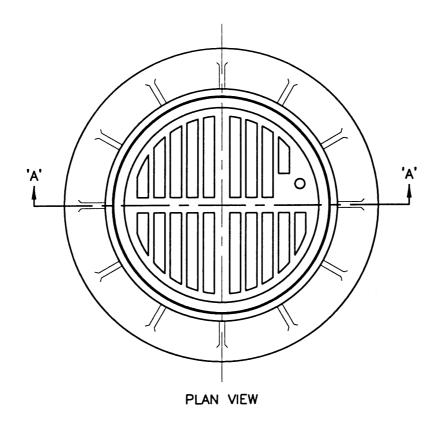


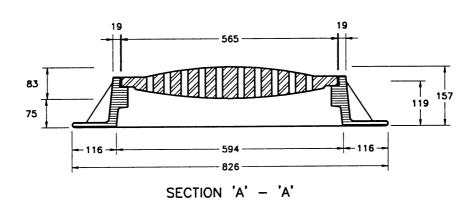


SPECIFICATIONS

- MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPECIFICATIONS C-478 & ALL CURRENT REVISIONS.
- MINIMUM CONCRETE STRENGTH SHALL BE 27.6 MPa IN 28 DAYS.
- REINFORCING STEEL FOR BASE SHALL BE 10 M REINFORCING RODS PLACED 150 mm O.C. EACH WAY.
- ALL CONCRETE SHALL BE PLACED MONOLITHICALLY.

| R E V I S I O N S 1 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL JANAGER P. ENG. ENGINEER |
|--------------------------|---|--|
| DRAWN BYMJ DATE 99-01-27 | STORM DRAINAGE CATCH BASIN | ENGINEER |
| CHECKED BY | (FOR TANDEM INSTALLATION) | SCALES : HOR. 1:20 VERT PLAN NO. 102-0010-002r001 |

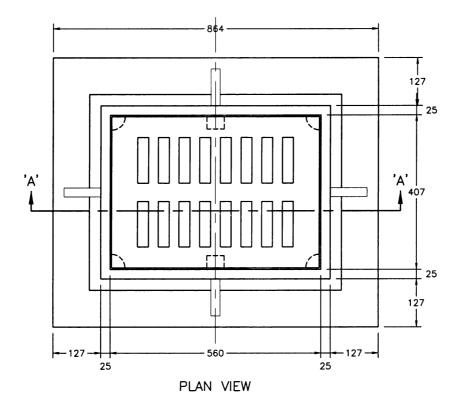


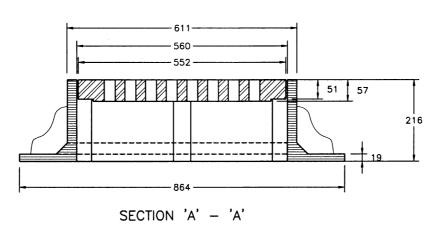


SPECIFICATIONS:

THE CASTINGS SHALL BE TRUE TO PATTERN AND FREE FROM CRACKS, GAS HOLES, FLAWS, AND EXCESSIVE SHRINKAGE. SURFACES OF THE CASTINGS SHALL BE FREE FROM BURNT ON SAND AND SHALL BE REASONABLY SMOOTH. RUNNERS, RISERS, FINS, AND OTHER CAST ON PIECES SHALL BE REMOVED. IN OTHER RESPECTS THE CASTINGS SHALL CONFORM TO WHATEVER POINTS MAY BE AGREED UPON BETWEEN THE MANUFACTURER AND THE ENGINEER.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED OVED REVISIONS CITY OF SASKATOON P. ENG. PUBLIC WORKS **GENÉRA** 2 3 ENGINEER 500mm ROUND CATCH BASIN DRAWN BY ENGINEER 99-02-18 DATE SCALES : FRAME AND COVER 1:10 VERT. CHECKED BY . 102-0010-003r001 PLAN NO. DATE

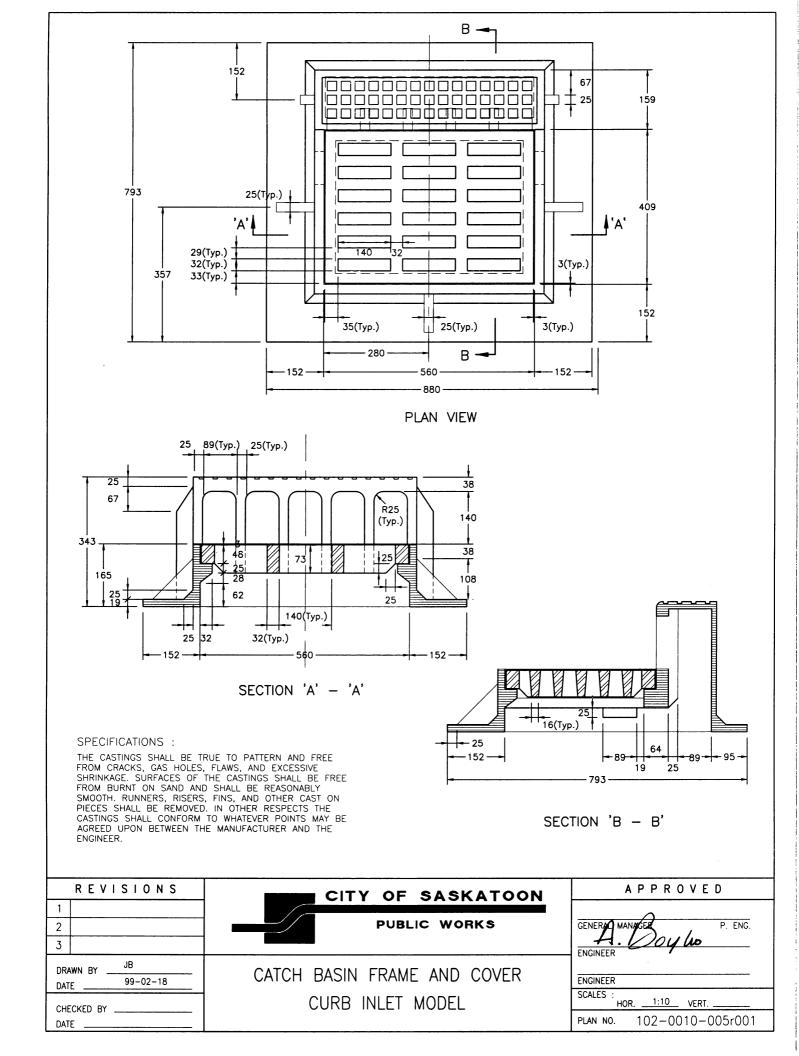


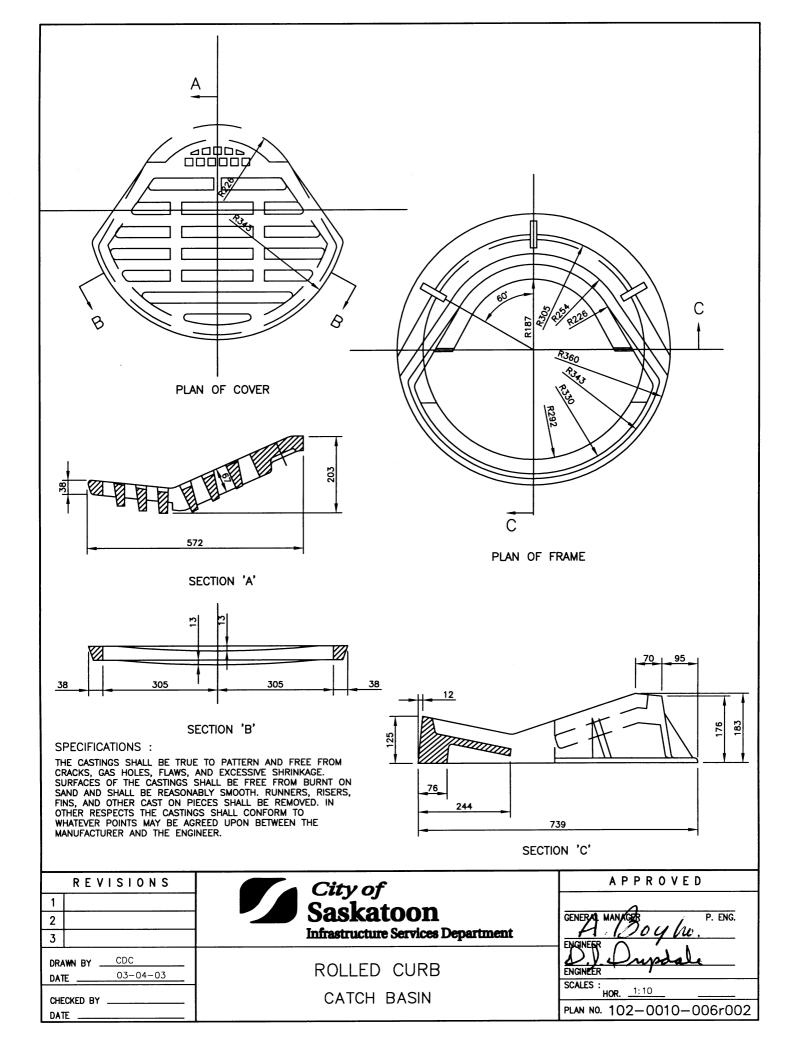


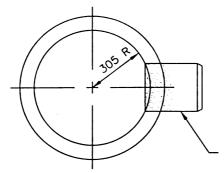
SPECIFICATIONS:

THE CASTINGS SHALL BE TRUE TO PATTERN AND FREE FROM CRACKS, GAS HOLES, FLAWS, AND EXCESSIVE SHRINKAGE. SURFACES OF THE CASTINGS SHALL BE FREE FROM BURNT ON SAND AND SHALL BE REASONABLY SMOOTH. RUNNERS, RISERS, FINS, AND OTHER CAST ON PIECES SHALL BE REMOVED. IN OTHER RESPECTS THE CASTINGS SHALL CONFORM TO WHATEVER POINTS MAY BE AGREED UPON BETWEEN THE MANUFACTURER AND THE ENGINEER.

| REVISIONS | CITY OF SASKATOON | APPROVED |
|-----------|---|--|
| 1 2 3 | PUBLIC WORKS | GENERAL MANAGER 2 P. ENG. ENGINEER |
| DRAWN BY | CATCH BASIN FRAME AND COVER SURFACE INLET MODEL | ENGINEER SCALES: HOR1:10 VERT PLAN NO. |

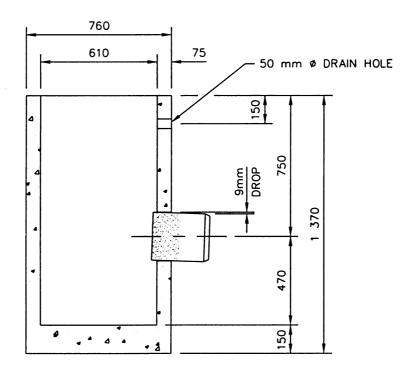






CAST-IN-PLACE CB OUTLET

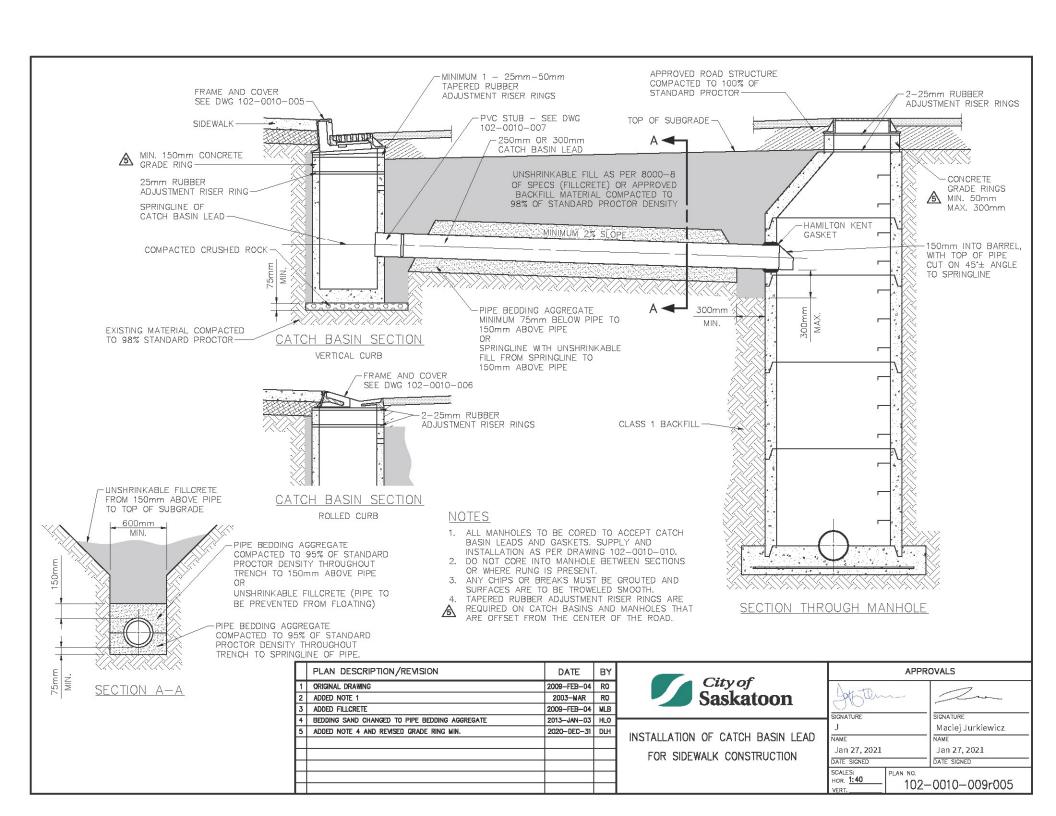
- 250 mm Ø x 300 mm LONG SDR35 PVC C/W BONDED EXTERIOR GROUT COAT
- END BEVELLED TO PVC PIPE SPECIFICATIONS
- SLOPED FOR DISCHARGE AT 3% GRADE



SPECIFICATIONS

- MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPECIFICATIONS C-478 & ALL CURRENT REVISIONS.
- MINIMUM CONCRETE STRENGTH SHALL BE 27.6 MPa IN 28 DAYS.
- REINFORCING STEEL FOR BASE SHALL BE 10 M REINFORCING RODS PLACED 150 mm O.C. EACH WAY.
- ALL CONCRETE SHALL BE PLACED MONOLITHICALLY.

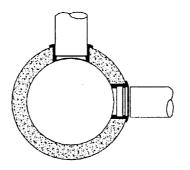
| | REVISIONS | | | KPP/ROVED |
|------------|------------------------|--------------------|-----------|---------------------------|
| 1 | REDRAWN 98-03-04 | INFRASTRUCTURE | | Li la lange |
| 2 | | SERVICES | | GENERAL MANAGER) P. ENG. |
| 3 | | Saskatoon | | ENGINEER ENGINEER |
| DRA DAT | WN BY MJ F 98-03-04 | PRECAST REINFORCED |) | ENGINEER |
| CHE | CKED BY | ROUND CATCH BASIN | | SCALES : HOR. 1:20 VERT. |
| DAT | | | 08020-DID | PLAN NO. 102-0010-007r001 |



INSTALLATION

Insert connector into pre-formed hole in concrete pipe, or manhole, ensuring that flanged face is flush with exterior concrete wall. Clean any dirt or debris from the end of the PVC pipe and then thoroughly lubricate the exterior using Tylox® pipe gasket lubricant.

Insert PVC pipe into connector. On pipe to pipe connector ensure that end of pipe is flush with internal stop within connector



MATERIALS

HKT connectors are available in the following materials:

• Isoprene/SBR Blend

Other compounds available as special order.

Please consult your Hamilton Kent agent for your specific requirements.

PHYSICAL PROPERTIES

| Physical Test | ASTM | Requirements |
|--|-------|--------------|
| Hardness | D2240 | 47 ± 5 |
| Tensile | D412 | 2000 (Min.) |
| Elongation | D412 | 450% |
| Compression Set | D395B | 15 (Max.) |
| Air Oven Aging, Tensile (% of original) | D573 | 15 (Max.) |
| Air Oven Aging, Elongation (% of original) | D572 | 20 (Max.) |
| Durometer Change, Low Temperature. | D2240 | +3 |
| Water Aging (% Weight Change) | D471 | -0 to +10 |
| Ozone Resistance | D1149 | No Cracks |

SPECIFICATIONS

HKT connectors are manufactured to meet the material requirements of the following specifications:

- ASTM C923
- ASTM C443
- CSA Å257

Other specifications may be available as special order. Please consult your Hamilton Kent agent for your specific requirements.

AVAILABLE SIZES & DIMENSIONS

| . Pi | VC ipe ize | Core (Nominal) | Cored Hole Dia. Range | Main Pipe Dia. Range (HKP-PP) |
|------|------------------|-------------------|--------------------------|-------------------------------------|
| mm | in | in | in | in |
| 100 | 4 | 5 | 4.960 - 5.010 | 12 – 30 |
| 150 | 6 | 7 | 6.995 – 4.055 | 12 – 30 |
| 200 | 8 | 10 | 10.055 - 10.145 | 12 – 30 |
| 250 | 10 | 12 | 12.040 - 12.130 | 12 – 30 |
| 300 | 12 | 14 | 14.025 - 14.115 | 18 – 30 |
| 375* | 15* | 18 | 17.975 – 18.070 | Not Available |

* 375mm (15") not available in HKT-PP

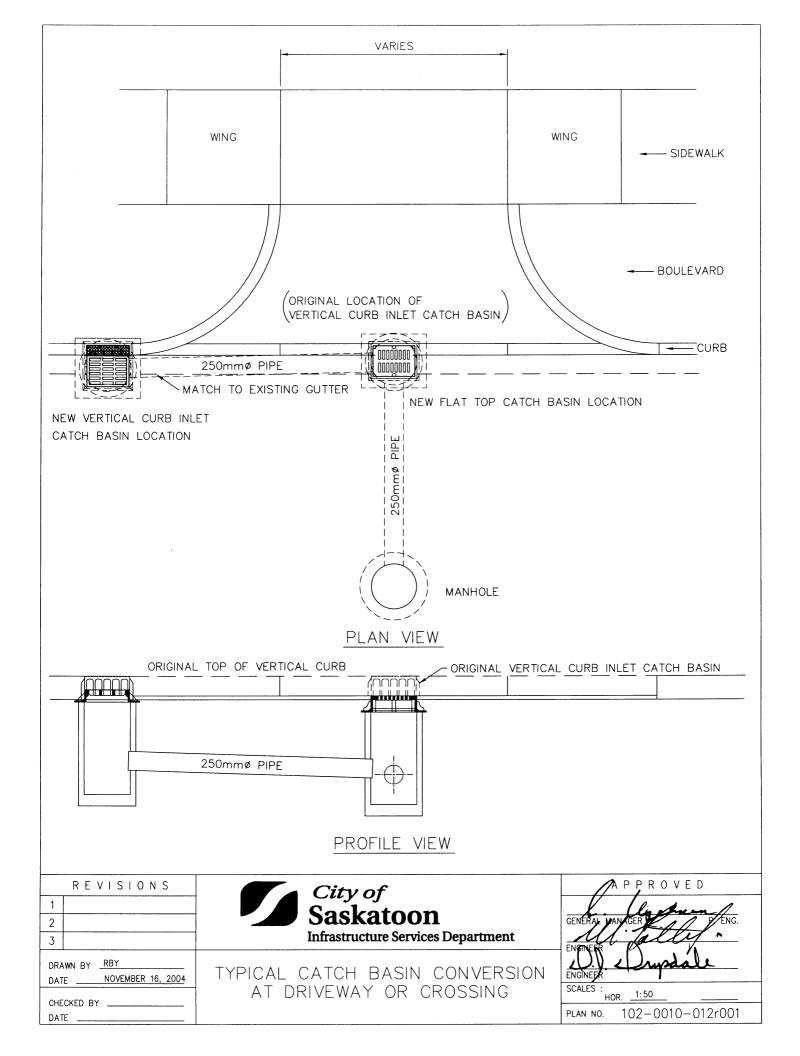


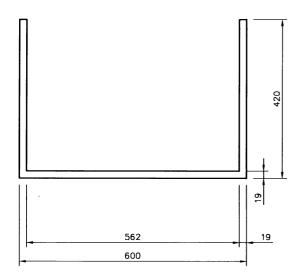
Hamilton Kent

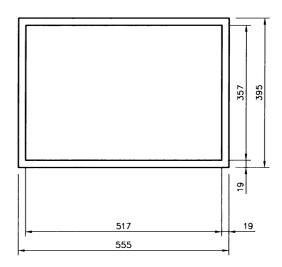
77, Carlingview Drive
Toronto, Ontario, Canada. M9W 5J6
Phone (800) 268-8479
Fax (888) 674-6960
Web-Site www.hamiltonkent.com
E-mail sales@hamiltonkent.com

Lit_TSS_0306_ER1

| R E V I S I O N S 1 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGERY P. ENG. ENGINEER |
|---|---|--|
| DRAWN BY HLO DATE 06-01-27 CHECKED BY DATE | HAMILTON KENT PIPE TO MANHOLE CONNECTOR SPECIFICATION SHEET | ENGINEER SCALES: HOR PLAN NO. 102-0010-010r002 |







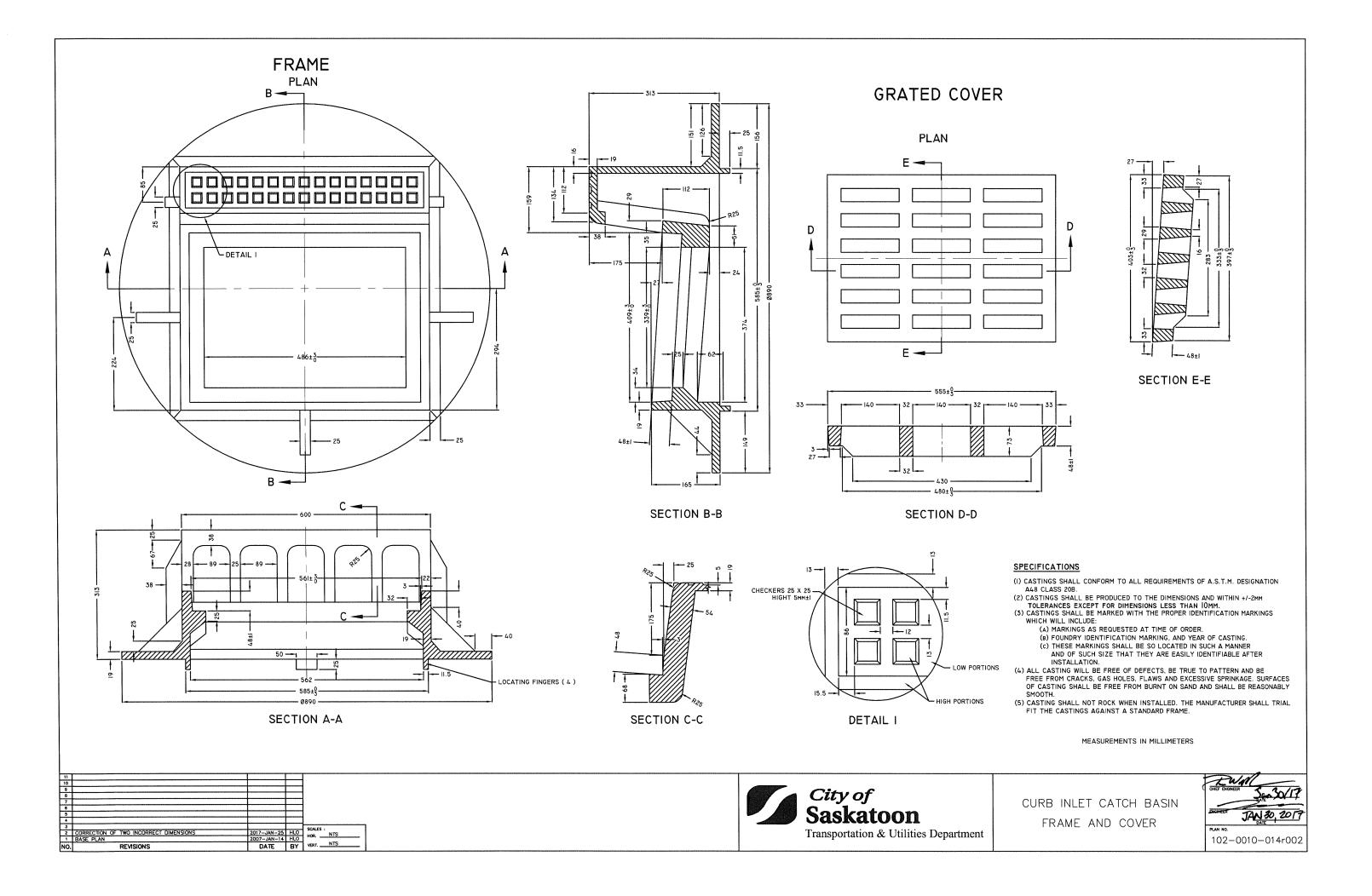
OUTSIDE RISER SA

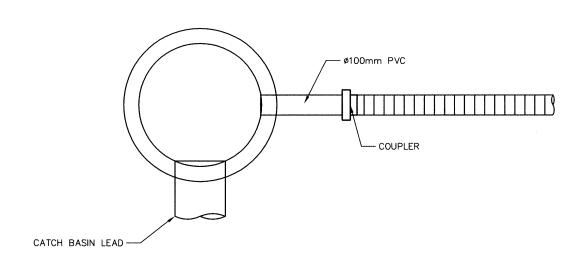
INSIDE RISER

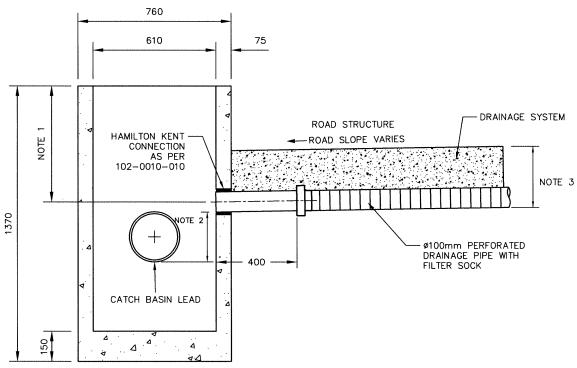
NOTE:

- RISERS TO CONFORM WITH DRAWING 102-0010-005: CATCH BASIN FRAME AND COVER, CURB INLET MODEL.
- RISERS TO BE MANUFACTURED WITH CSA G40.21-M GRADE 300W 19mm (₹") PLATE STEEL
- FULL WELDED CORNERS, GROUNDED SMOOTH
- WELDS TO BE FREE OF VOIDS AND FLUX
- NO PAINTING REQUIRED

| REVISIONS 1 CHANGED DIMENSIONS 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. |
|---------------------------------------|--|---|
| DRAWN BY | CURB INLET RISERS FOR | ENGINEER Daniel Drok sun 25/05 ENGINEER |
| CHECKED BY | CATCHBASIN FRAME AND COVER | SCALES: HOR. 1:10 PLAN NO. 102-0010-013r002 |



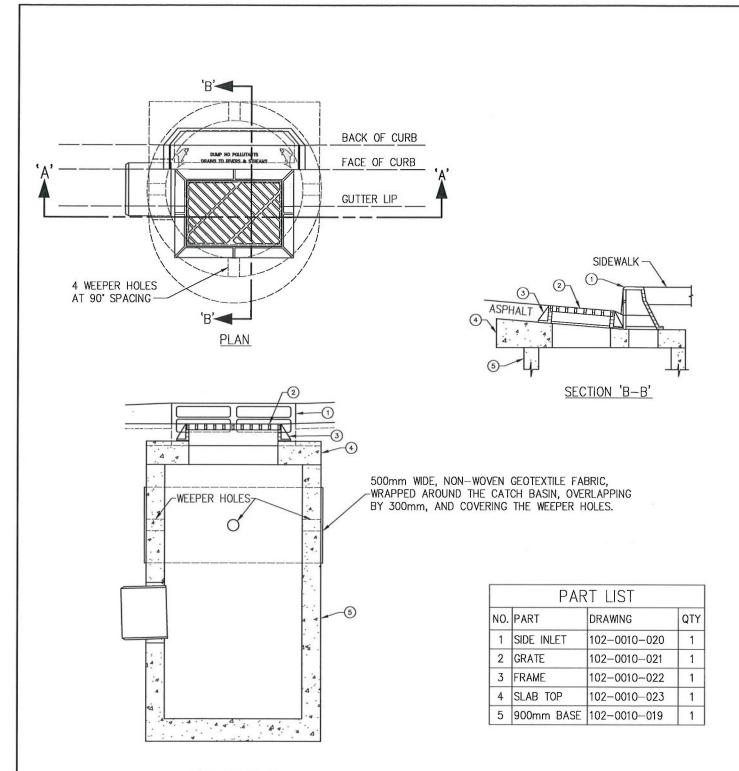




- 1) HEIGHT VARIES -- DEPENDENT ON PAVEMENT STRUCTURAL DESIGN
- 2) THE INVERT FOR THE CATCH BASIN LEAD IS TO BE A MINIMUM 50mm LOWER THAN THE INVERT OF THE DRAINAGE LEAD
- 3) EDGE DRAIN OR DRAINAGE LAYER AS PER 102-0029-045

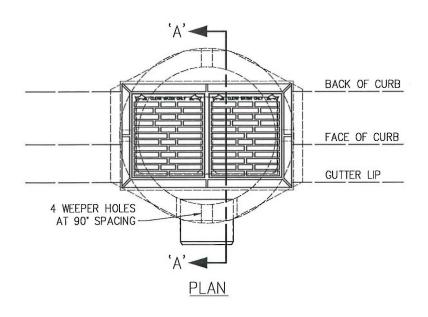
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

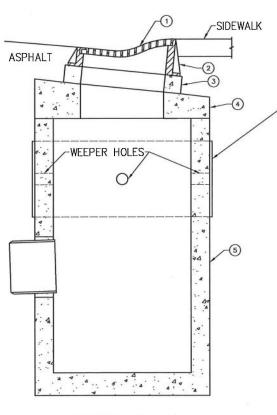
| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 0 8 2016 Date |
|---|---|-----------------------------------|
| 1 DRAINAGE PIPE MOVED TO LOWEST POINT IN ROAD STRUCTURE 2015-DEC-01 HLO DRAWN BYDJC DATE2014-DEC-09 | ROADWAY SUBDRAINAGE PIPE CONNECTION TO CATCH BASIN | ENGINEER JAN 0 8 2018 DATE |
| SCALE : HOR. N.T.S. VERT. N.T.S. | | PLAN NO. 102-0010-015r002 |



SECTION 'A-A'

| | PLAN DESCRIPTION/REVISION | DATE | BY | City of | APPROVALS |
|---|---------------------------|-------------|-----|---|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of Saskatoon | Co Ch SCHATURE SCHATURE |
| | | | | VERTICAL CURB 900mm CATCH BASIN ASSEMBLY TYPE K-1 | ANNE COLE Matt Jurkiewice The Cole T |



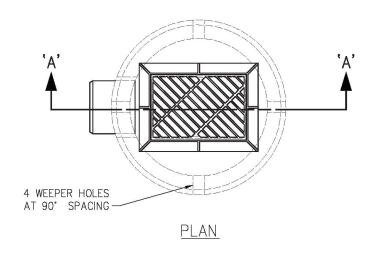


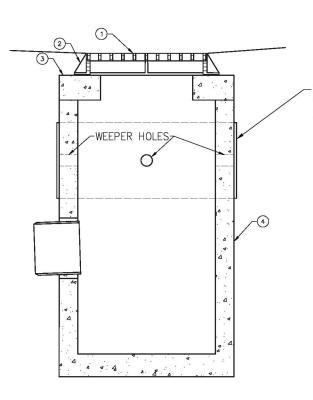
500mm WIDE, NON-WOVEN GEOTEXTILE FABRIC, -WRAPPED AROUND THE CATCH BASIN, OVERLAPPING BY 300mm, AND COVERING THE WEEPER HOLES.

| | PART LIST | | | | | | | | |
|-----|------------|--------------|-----|--|--|--|--|--|--|
| NO. | PART | DRAWING | QTY | | | | | | |
| 1 | GRATE | 102-0010-024 | 2 | | | | | | |
| 2 | FRAME | 102-0010-025 | 1 | | | | | | |
| 3 | COLLAR | 102-0010-026 | 1 | | | | | | |
| 4 | SLAB TOP | 102-0010-027 | 1 | | | | | | |
| 5 | 900mm BASE | 102-0010-019 | 1 | | | | | | |

SECTION 'A-A'

| PLAN DESCRIPTION/REVISION | DATE | BY | City of | APPROVALS |
|-----------------------------|-------------|-----|---|---|
| 1 ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | Saskatoon | C. Ch SIGNATURE SIGNATURE |
| | | | ROLLED CURB 900mm CATCH BASIN ASSEMBLY | NAME SIGNED AND THE SIGNED AND THE SIGNED AND THE SIGNED |
| | | | TYPE K-2 | SCALES: HOR. N.T.S. VERT. N.T.S. 102-0010-017r001 |



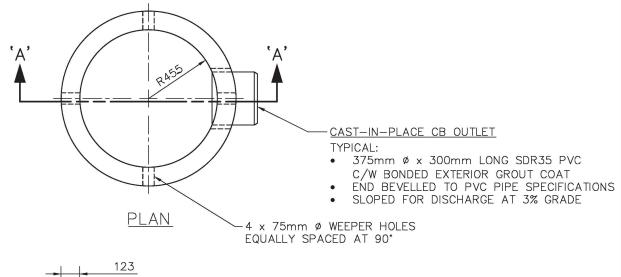


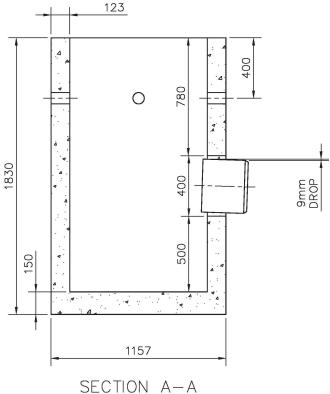
-500mm WIDE, NON-WOVEN GEOTEXTILE FABRIC, WRAPPED AROUND THE CATCH BASIN, OVERLAPPING BY 300mm, AND COVERING THE WEEPER HOLES.

| | PART LIST | | | | | | | |
|-----|------------|--------------|-----|--|--|--|--|--|
| NO. | PART | DRAWING | QTY | | | | | |
| 1 | GRATE | 102-0010-021 | 1 | | | | | |
| 2 | FRAME | 102-0010-022 | 1 | | | | | |
| 3 | SLAB TOP | 102-0010-028 | 1 | | | | | |
| 4 | 900mm BASE | 102-0010-019 | 1 | | | | | |

SECTION 'A-A'

| _ | | | | | | | |
|----------|---|-------------|----------|--------------------------------------|--------------|----------|-------------------|
| | PLAN DESCRIPTION/REVISION | DATE | BY | City of S | | APPR | OVALS |
| П | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of | | | |
| 2 | CORRECTED DRAWING NUMBERS FOR GRATE AND FRAME | 2021-MAR-25 | DLH | City of Saskatoon | | c1 | 1 |
| | | | | 011011110011 | Co | he | |
| Г | | | | | SIGNATURE | | SIGNATURE |
| Н | | | | | Anna Cole | | Maciej Jurkiewicz |
| Н | + | | | SURFACE INLET | NAME | | NAME |
| Н | + | | | ACCUMENTATION OF THE PARTY ACCUMENTS | Mar 25, 2021 | | Mar 25, 2021 |
| Н | + | | | 900mm CATCH BASIN ASSEMBLY | DATE SIGNED | | DATE SIGNED |
| Н | + | | \vdash | TYPE K-3 | SCALES: | PLAN NO. | |
| \vdash | | | \vdash | 111216 | HOR. N.T.S. | 102- | -0010-018r002 |
| Ш | | | | | VERT. N.T.S. | 102 | 0010 0101002 |





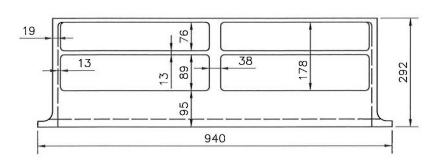
(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

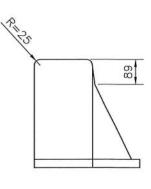
- MANUFACTURED TO ASTM C478 & CSA 257.4
- CEMENT: SULPHATE RESISTANT TYPE: TYPE HS (TYPE 50) TO CSA A3001 OR TYPE V TO ASTM C150
- CONCRETE COMPRESSIVE STRENGTH: 30 MPa AT 28 DAYS

 AIR CONTENT: 4 TO 7% EXCEPT WHERE NO—SLUMP CONCRETE IS USED

 REINFORCING STEEL: DEFORMED BARS TO CSA G30.18, fy = 400MPa

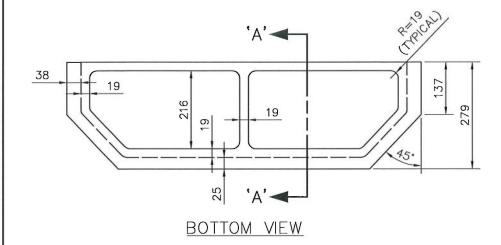
| | PLAN DESCRIPTION/REVISION | DATE | BY | City | APPR | OVALS |
|----------|--|-------------|-----|------------------------|------------------|-------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of | | |
| 2 | CHANGED CAST-IN-PLACE OUTLET SIZE TO 375mm | 2021-DEC-09 | DLH | City of Saskatoon | 0 (1 | //- |
| | | | | | Co he | <u></u> |
| | | | | | SIGNATURE | SIGNATURE |
| Г | | | | DDEGACT MONOUTUR | Anna Cole | Maciej Jurkiewicz |
| Г | | | | PRECAST MONOLITHIC | NAME | NAME |
| Н | | | | 900mm CATCH BASIN BASE | Dec 9, 2021 | Dec 9, 2021 |
| Н | | | | 900mm CATCH BASIN BASE | DATE SIGNED | DATE SIGNED |
| \vdash | | | | | SCALES: PLAN NO. | |
| \vdash | | | | | HOR. N.T.S. 102- | -0010-019r002 |
| Ц | | | | | VERT. N.T.S. | 0010 0101002 |

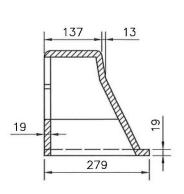




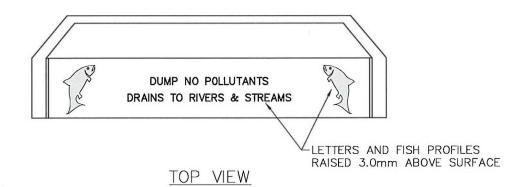
FRONT VIEW

END VIEW





SECTION 'A-A'



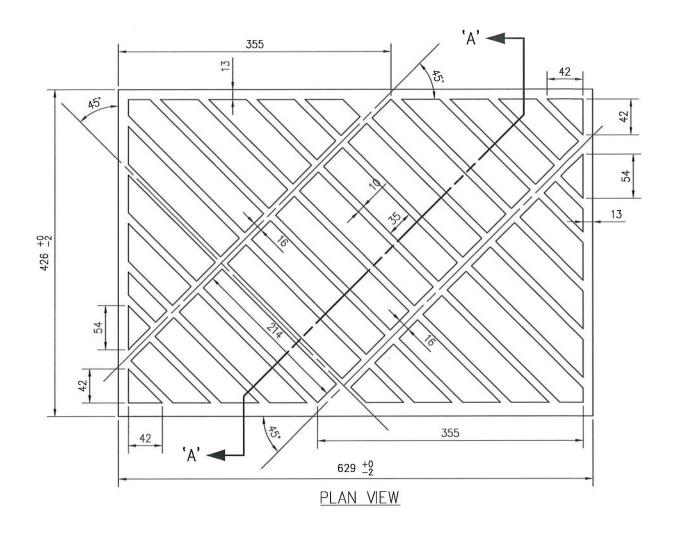
(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

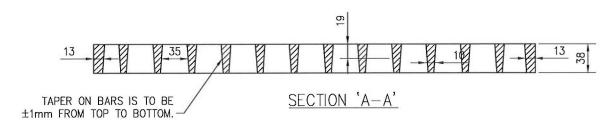
- DUCTILE IRON TO CONFORM TO A.S.T.M. A536, GRADE 80-55-06
- MASS = 86 KILOGRAMS ±5%
- COATED CASTING ACCEPTED ONLY WHEN REQUIRED BY CITY.

NOTES:

1. GRATE OPEN AREAS $FRONT = 0.124m^{2}$ $BOTTOM = 0.159m^{2}$

| PLAN DESCRIPTION/REVISION | DATE | BY | Giv. 6 | APPROVALS |
|-----------------------------|-------------|-----|------------------------------------|--|
| 1 ORIGINAL STANDARD DRAWING | 2020-FEB-11 | DLH | City of Saskatoon | SIGNATURE SIGNATURE |
| | | | CATCH BASIN SIDE INLET TYPE K-1 | NAME OLE MONTH TWY PRINTS NAME - FEB - ZOZO EB 2 0 2020 DATE SIGNED DATE SIGNED |
| | | | | SCALES: HOR. N.T.S. PLAN NO. 102-0010-020r001 |





1. GRATE OPEN AREA = 0.1706m

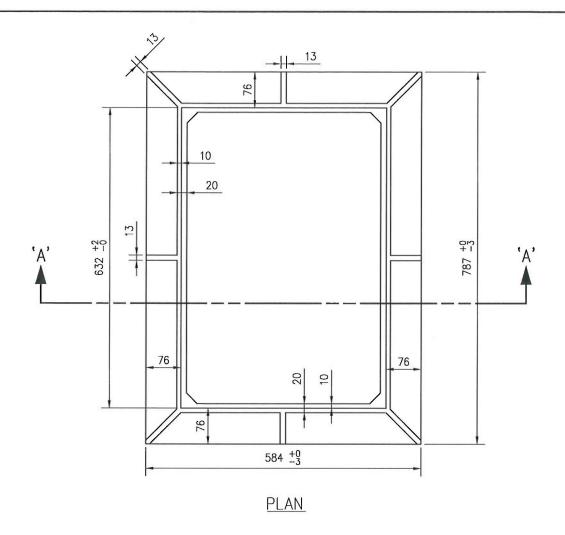
MATERIAL SPECIFICATIONS

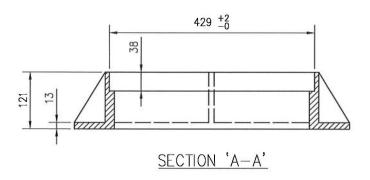
- (ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

 DUCTILE IRON TO CONFORM TO A.S.T.M. A536, GRADE 80-55-06

 MASS = 24 KILOGRAMS ±5%
- COATED CASTINGS ACCEPTED ONLY WHEN REQUIRED BY CITY.

| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|---------------------------|-------------|-----|---|---|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | Saskatoon | SIGNATURE SIGNATURE |
| | | | | CATCH BASIN SURFACE INLET GRATE TYPE K-1 | AVATA (9LE HANTIN PELIXIZE DATE SIGNED DATE SIGNED |
| E | | | | * | SCALES: HOR. N.T.S. PLAN NO. 102-0010-021r001 |

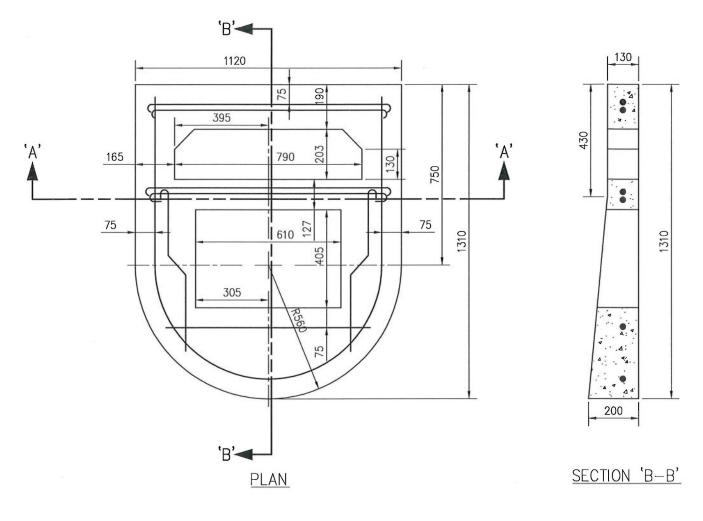


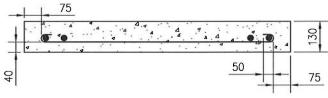


- (ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

 GREY CAST IRON TO CONFORM TO A.S.T.M. A48 CLASS 35B
- MASS = $57 \text{ KILOGRAMS } \pm 5\%$
- COATED CASTINGS ACCEPTED ONLY WHEN REQUIRED BY CITY.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|---------------------------|-------------|-----|---|---|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of Saskatoon | SIGNATURE SIGNATURE |
| | | | | CATCH BASIN SURFACE INLET FRAME TYPE K-1 | NAME SIGNED HATE SIGNED DATE SIGNED |
| E | | | | | SCALES: HOR. N.T.S. PLAN NO. 102-0010-022r001 |



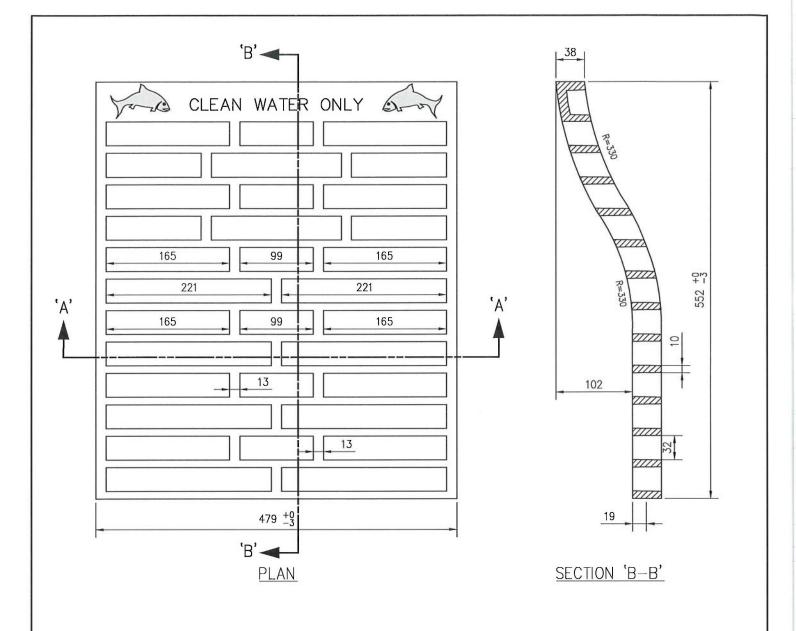


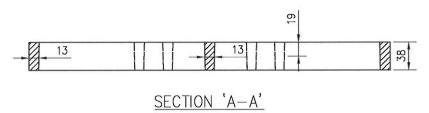
SECTION 'A-A'

(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

- CEMENT: SULPHATE RESISTANT TYPE: TYPE HS (TYPE 50) TO CSA A3001 OR TYPE V TO ASTM C150
- CONCRETE COMPRESSIVE STRENGTH: 30 MPa AT 28 DAYS
- AIR CONTENT: 4 TO 7% EXCEPT WHERE NO-SLUMP CONCRETE IS USED
- CONCRETE CLEAR COVER: 30mm MIN
- \bullet REINFORCING STEEL: DEFORMED BARS TO CSA G30.18, fy = 400 MPa TO BE 15M BARS WITH COLD BENDS, INSIDE RADIUS 30mm & SLANTED

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | C'ive 6 | APPROVALS |
|---|---------------------------|-------------|-----|--|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of Saskatoon | SCHATURE SCHATURE |
| | | | | CATCH BASIN PRECAST SLAB TOP TYPE K-1 | NAME FEG-2020 FEB 2 0 2020 DATE SIGNED |
| E | | | | | SCALES: HOR. N.T.S. VERT. N.T.S. PLAN NO. 102-0010-023r001 |





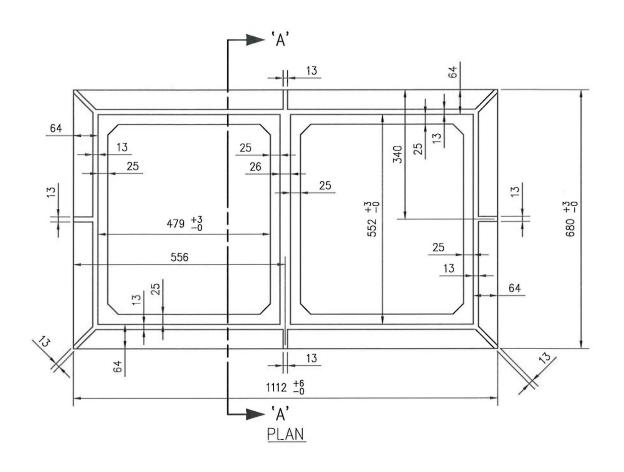
(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

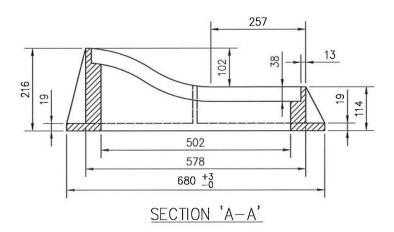
- DUCTILE IRON TO CONFORM TO A.S.T.M. A536 GRADE 80-55-06 (LATEST EDITION)
- MASS = 23 KILOGRAMS +5%.
- COATED CASTINGS ACCEPTED ONLY WHEN REQUIRED BY CITY

NOTES:

1. GRATE OPEN AREA = 0.1664m

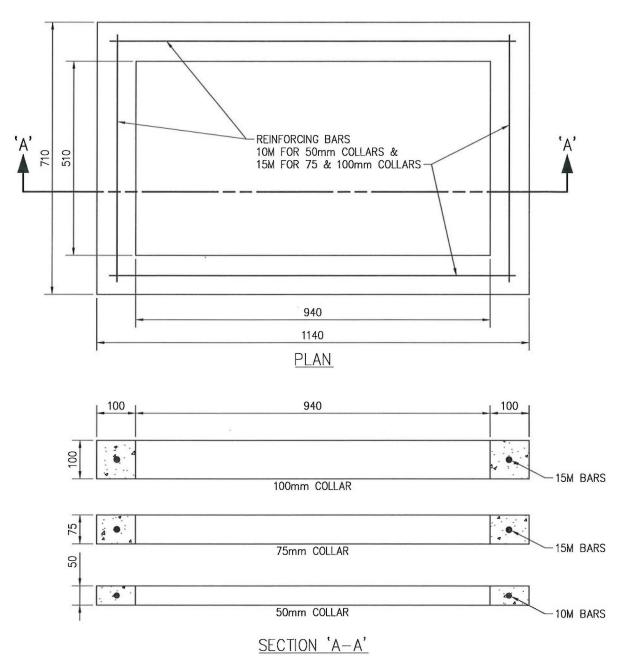
| PLAN DESCRIPTION/REVISION | DATE | BY | City of | APPROVALS |
|-----------------------------|-------------|-----|--|---|
| 1 ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | Saskatoon | SIGNATURE SIGNATURE |
| | | | ROLLED CURB CATCH BASIN GRATE TYPE K-2 | NAME 18, ZOZO FEB 2 0 2020 DATE SIGNED |
| | | | | SCALES: HOR. N.T.S. VERT. N.T.S. PLAN NO. 102-0010-024r001 |





(ALL SPECIFICATIONS & STANDARDS REFER TO THE LATEST EDITION)
• GREY CAST IRON TO CONFORM TO A.S.T.M. A48 CLASS 35B.
• MASS = 186 KILOGRAMS ±5%
• COATED CASTINGS ACCEPTED ONLY WHEN REQUIRED BY CITY.

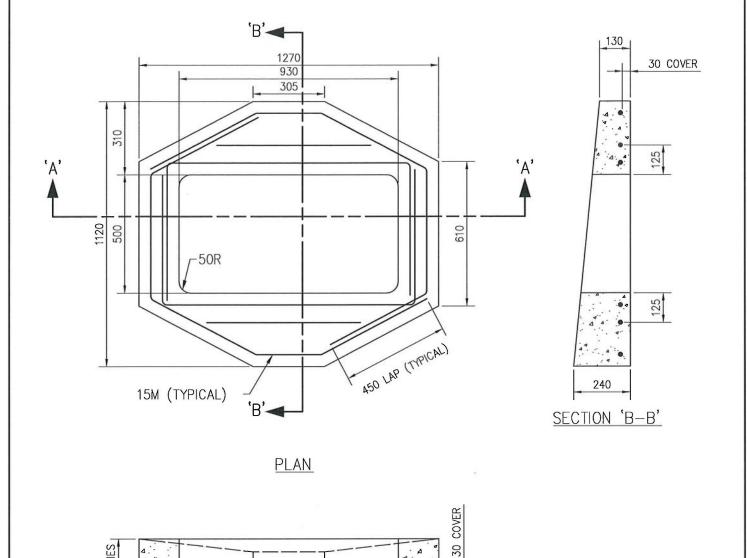
| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|---------------------------|-------------|-----|---|---|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-06 | DLH | City of Saskatoon | SIGNATURE SIGNATURE |
| | | | | ROLLED CURB CATCH BASIN FRAME TYPE K-2 | NAME / RES Z820 PEB 2 0 2020 DATE SIGNED DATE SIGNED |
| E | | | | | SCALES: HOR. N.T.S. VERT. N.T.S. 102-0010-025r001 |



(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

- CEMENT: SULPHATE RESISTANT TYPE: TYPE HS (TYPE 50) TO CSA A3001 OR TYPE V TO ASTM C150
 CONCRETE COMPRESSIVE STRENGTH: 30 MPa AT 28 DAYS
 AIR CONTENT: 4 TO 7% EXCEPT WHERE NO—SLUMP CONCRETE IS USED
 CONCRETE CLEAR COVER: 30mm MIN, EXCEPT FOR 50mm COLLAR SIZE
 REINFORCING STEEL: DEFORMED BARS TO CSA G30.18, fy = 400MPa TO BE 10M FOR 50mm COLLAR AND 15M FOR 75 & 100mm COLLARS

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|---------------------------|-------------|-----|---------------------------------------|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of Saskatoon | SIGNATURE SIGNATURE |
| | | | | CATCH BASIN PRECAST COLLARS TYPE K-2 | NAME SIGNED DATE SIGNED DATE SIGNED |
| E | | | | | SCALES: HOR. N.T.S. VERT. N.T.S. PLAN NO. 102-0010-026r001 |



(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

• CEMENT: SULPHATE RESISTANT TYPE: TYPE HS (TYPE 50) TO CSA A3001 OR TYPE V TO ASTM C150

• CONCRETE COMPRESSIVE STRENGTH: 30 MPa AT 28 DAYS

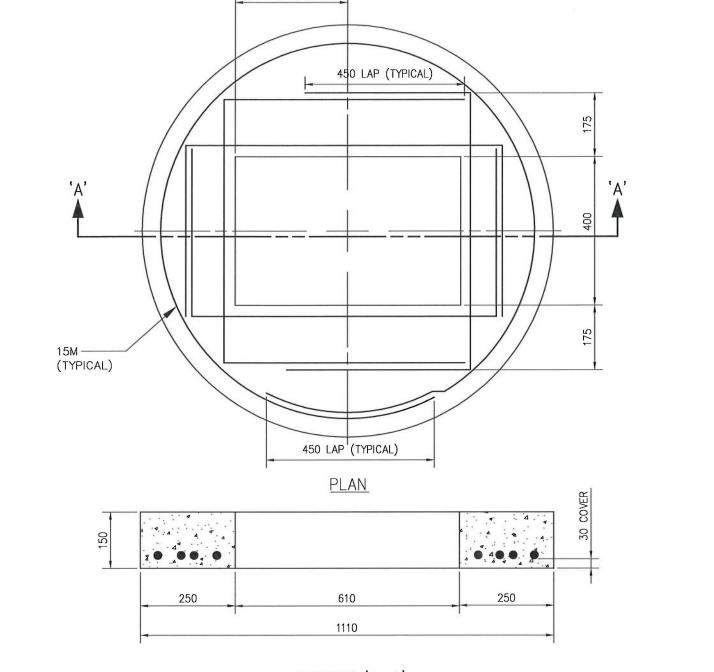
• AIR CONTENT: 4 TO 7% EXCEPT WHERE NO-SLUMP CONCRETE IS USED

• CONCRETE CLEAR COVER: 30mm MIN

• REINFORCING STEEL: DEFORMED BARS TO CSA G30.18, fy = 400 MPa TO BE 15M BARS

SECTION 'A-A'

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS |
|---|---------------------------|-------------|-----|--|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | City of Saskatoon | SIGNATURE SIGNATURE |
| | | | | CATCH BASIN PRECAST SLAB TOP TYPE K-2 | NAME TO THE SIGNED DATE SIGNED |
| | | | | | SCALES: HOR. N.T.S. VERT. N.T.S. PLAN NO. 102-0010-027r001 |



SECTION 'A-A'

NOTES:

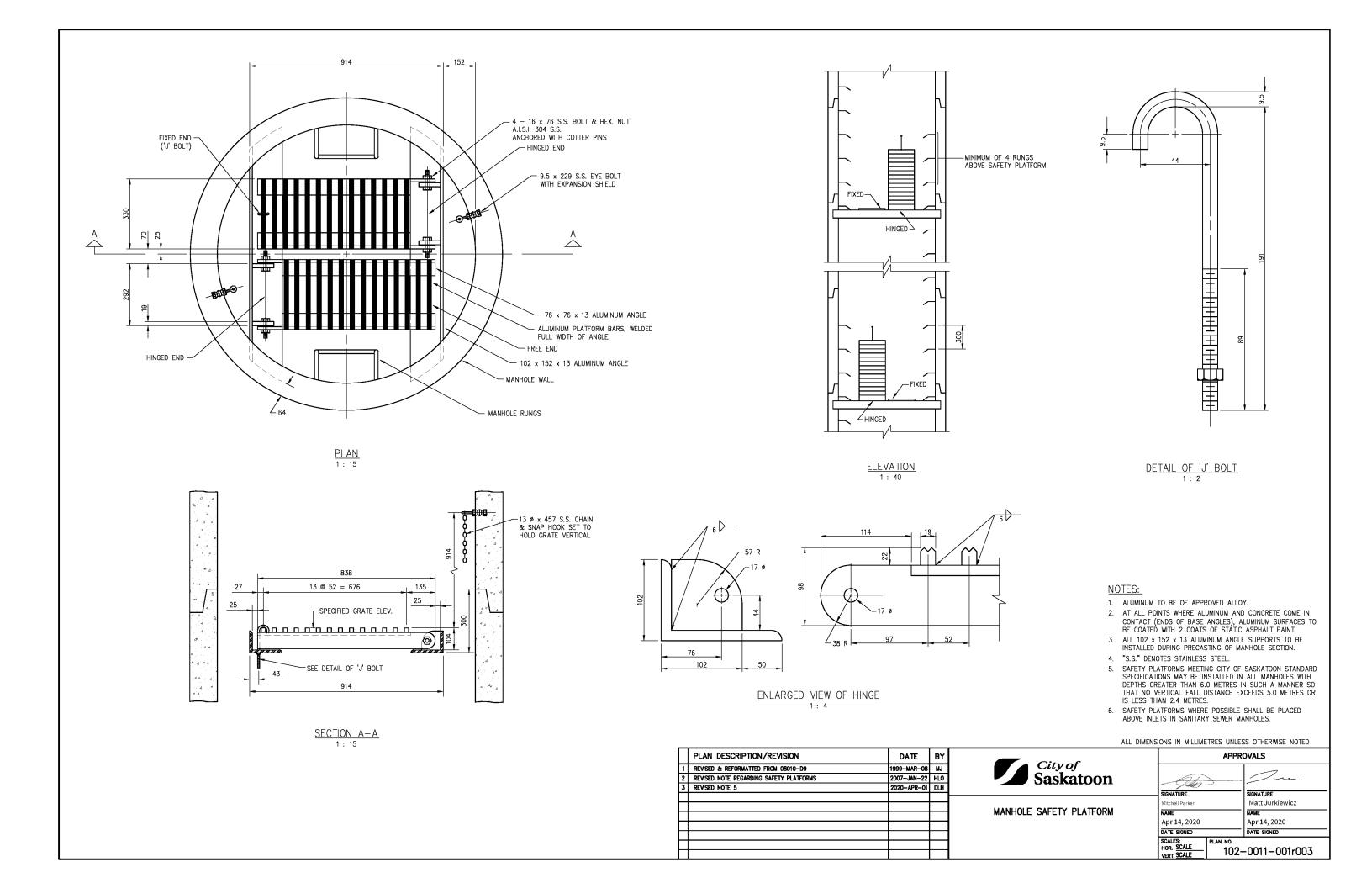
1. USE ROUND TOP IN PARKING LOTS, LANES OR DRIVEWAYS

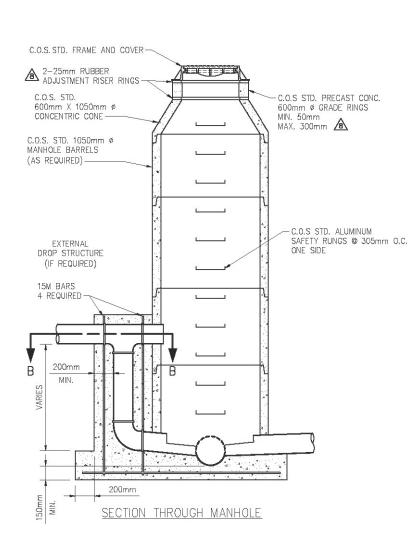
MATERIAL SPECIFICATIONS:

(ALL SPECIFICATIONS & STANDARDS REFER TO LATEST EDITION)

- CEMENT: SULPHATE RESISTANT TYPE: TYPE HS (TYPE 50) TO CSA A3001 OR TYPE V TO ASTM C150 CONCRETE COMPRESSIVE STRENGTH: 30 MPa AT 28 DAYS
- AIR CONTENT: 4 TO 7% EXCEPT WHERE NO-SLUMP CONCRETE IS USED
- CONCRETE CLEAR COVER: 30mm MIN
- REINFORCING STEEL: DEFORMED BARS TO CSA G30.18, fy = 400 MPa REINFORCING STEEL TO BE SLANTED WHERE NECESSARY TO ACCOMMODATE SLAB THICKNESS

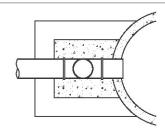
| Г | PLAN DESCRIPTION/REVISION | DATE | BY | 6:4 | APPROVALS |
|---|---------------------------|-------------|-----|--|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-JAN-30 | DLH | Saskatoon | SIGNATURE SIGNATURE |
| | | | | CATCH BASIN PRECAST SLAB TOP TYPE K-3 | ANNY COLE HOTTONICO NAME FOR ZOZO DATE SIGNED DATE SIGNED |
| E | | | | | SCALES: HOR. N.T.S. VERT. N.T.S. 102-0010-028r001 |





1050mm MANHOLE BARRELS AND CONCENTRIC CONE TO BE USED EXCLUSIVELY FOR REHABILITATION WORK ON EXISTING 1050mm MANHOLE BASES.

FOR NEW INSTALLATIONS
AND RECONSTRUCTION
SEE COS STANDARD SPECIFICATIONS.



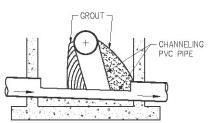
SECTION B-B

NOTES:

- DROP STRUCTURE REQUIRED WHEN CROWN OF INLET PIPE IS 0.75m OR MORE ABOVE CROWN OF OUTLET PIPE.
- USE 4 15M BARS PLACED AS SHOWN WHEN EXTERIOR DROP SECTION IS 1.5m OR MORE.
- ALL CAST IN PLACE CONCRETE TO BE 35MPG SULPHATE RESISTANT. ALL GROUT TO BE NON—SHRINK, TYPE HS SULPHATE RESISTANT, CEMENTITIOUS GROUT.
- PLACE 10M BARS AT 200mm O.C. EACH WAY IN BASE OF MANHOLES OVER 4.5 m DEEP.
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION C478.
- 6. SAFETY PLATFORMS AS PER CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0m.
- SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0m OR IS LESS THAN 2.4m.
- 8. MANHOLE RUNGS SHALL BE ORIENTED SUCH THAT THEY DO NOT INTERFERE WITH THE INCOMING PIPE.
- 9. PVC CHANNELING SHALL BE SEAMLESS FOR STRAIGHT THROUGH
- 10. PIPE TO MANHOLE CONNECTIONS SHALL BE WATERTIGHT.
- 11. TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH BASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE ROAD.

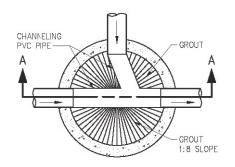
CHANNELIZATION DETAILS FOR INTERIOR DROP OF LESS THAN 0.75m

GROUT



SECTION A-A





PLAN VIEW

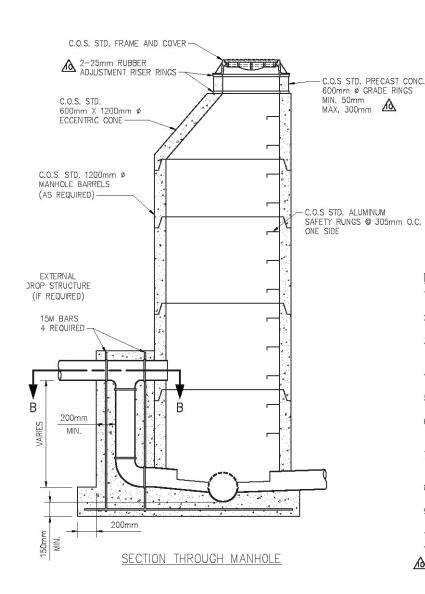
| L | | | | |
|---|---|-------------|-----|---|
| П | PLAN DESCRIPTION/REVISION | DATE | BY | ſ |
| 1 | RENUMBERED FROM 08010-D3A | 2000-AUG-30 | RO | l |
| 2 | | 2006-JAN-20 | HLO | l |
| 3 | | 2007-JAN-22 | HLO | l |
| 4 | | 2012-JAN-05 | HLO | ŀ |
| 5 | NOTE 3 - 35MPa CONC., NOTES 6&7 | 2014-DEC-12 | MJ | l |
| 6 | ADDED CROUT AROUND PIPES AT MANHOLE BASE AND NOTES B & 9 | 2015-NOV-26 | HLD | ı |
| 7 | REMOVE GROUT AROUND PIPES AT MANHOLE BASE, REVISED NOTE 3, | 2017-JAN-25 | HLO | l |
| 7 | AND ADDED NOTE 10 | 2017-JAN-25 | HLO | l |
| 8 | ADDED NOTE 11, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-07 | DLH | l |
| | | | | ı |

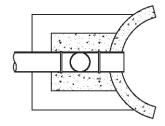


CHANNELING PVC PIPE

STANDARD 1050mm MANHOLE FOR 200mm TO 525mm SANITARY SEWERS FOR REHABILITATION WORK ONLY

| | | APPR | OVALS |
|---|-------------------------------|------------------|-------------------|
| | Joseph | ~ | 2 |
| - | SIGNATURE | | SIGNATURE |
| | Jeff P D Thon | nson | Maciej Jurkiewicz |
| | NAME | | NAME |
| | Jan 27, 2021 | | Jan 27, 2021 |
| | DATE SIGNED | | DATE SIGNED |
| | SCALES: HOR. 1:40 VERT. | PLAN NO. 102- | -0011-004r008 |

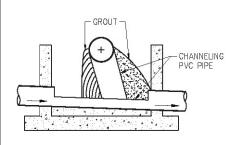


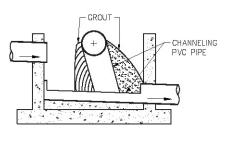


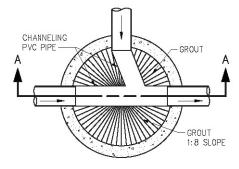
SECTION B-B

- 1. EXTERNAL DROP STRUCTURE REQUIRED WHEN CROWN OF INLET PIPE IS 0.75m OR MORE ABOVE CROWN OF OUTLET PIPE.
- USE 4 15M BARS PLACED AS SHOWN WHEN EXTERIOR DROP SECTION IS 1.5m OR MORE.
- 3. ALL CAST IN PLACE CONCRETE TO BE 35 MPa SULPHATE RESISTANT. ALL GROUT TO BE NON-SHRINK, TYPE HS SULPHATE RESISTANT, CEMENTITIOUS GROUT.
- 4. PLACE 10M BARS AT 200mm O.C. EACH WAY IN BASE OF MANHOLES OVER 4.5m DEEP.
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION C478.
- SAFETY PLATFORMS AS PER CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS.
- SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.
- 8. MANHOLE RUNGS SHALL BE ORIENTED SUCH THAT THEY DO NOT INTERFERE WITH THE INCOMING PIPE.
- PVC CHANNELING SHALL BE SEAMLESS FOR STRAIGHT THROUGH BASES.
- 10. PIPE TO MANHOLE CONNECTIONS SHALL BE WATERTIGHT.
- 11. TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH BASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE ROAD.

CHANNELIZATION DETAILS FOR INTERIOR DROP OF LESS THAN 0.75M







SECTION A-A

SECTION A-A

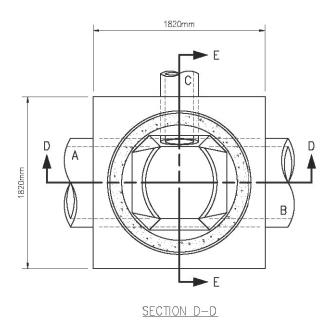
PLAN VIEW

| | PLAN DESCRIPTION/REVISION | DATE | BY |
|----|--|-------------|-----|
| 3 | | 2006-APR-04 | HLD |
| 4 | | 2007-JAN-22 | 12 |
| 5 | | 2009-NOV-16 | MLB |
| 6 | | 2012-JAN-05 | HLO |
| 7 | NOTES 3 - 35MPa CONC., 6, 7, & B | 2014-DEC-12 | MJ |
| 8 | ADDED GROUT AROUND PIPES AT MANHOLE BASE AND ADDED NOTES 8 & 9 | 2015-NOV-26 | HLD |
| 9 | REMOVE GROUT AROUND PIPES AT MANHOLE BASE, REVISE NOTE 3, | 2017-JAN-25 | HLO |
| 9 | AND ADDED NOTE 10 | 2017-JAN-25 | HLO |
| 10 | ADDED NOTE 11, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-11 | DLH |
| | | | |

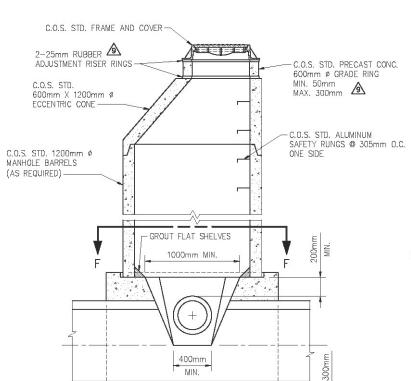


STANDARD 1200mm MANHOLE FOR 200mm TO 600mm SANITARY SEWERS WITH DROP STRUCTURE

| AP | PROVALS |
|-----------------------|-------------------|
| Jobten | 2 |
| SIGNATURE | SIGNATURE |
| Jeff P D Thomson | Maciej Jurkiewicz |
| NAME | NAME |
| Jan 27, 2021 | Jan 27, 2021 |
| DATE SIGNED | DATE SIGNED |
| SCALES: PLAN NO. 1:40 | 2-0011-005r010 |

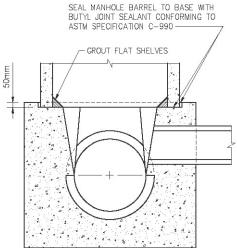


- 1. ALL POURED IN PLACE CONCRETE TO BE 35 MPa SULPHATE RESISTANT. ALL GROUT TO BE NON—SHRINK, TYPE HS SULPHATE RESISTANT, CEMENTITIOUS GROUT.
- 2. EXTERIOR DROP STRUCTURE REQUIRED FOR SANITARY SEWERS WHEN CROWN OF INLET PIPE IS 0.75m OR MORE ABOVE CROWN OF OUTLET
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-478.
- ALL WALLS SHALL BE FORMED INSIDE AND OUTSIDE, AND POURED IN PLACE.
- SAFETY PLATFORMS AS PER CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS.
- SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.
- PVC CHANNELING SHALL BE SEAMLESS FOR STRAIGHT THROUGH BASES.
- PIPE TO MANHOLE CONNECTIONS SHALL BE WATERTIGHT.
- TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH BASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE



| Α | B (MAX.) | C (MAX.) |
|-------|----------|----------|
| 675mm | 675mm | 600mm |
| 750mm | 750mm | 525mm |
| 900mm | 900mm | 300mm |

SPECIAL DESIGN IS REQUIRED.



SECTION D-D

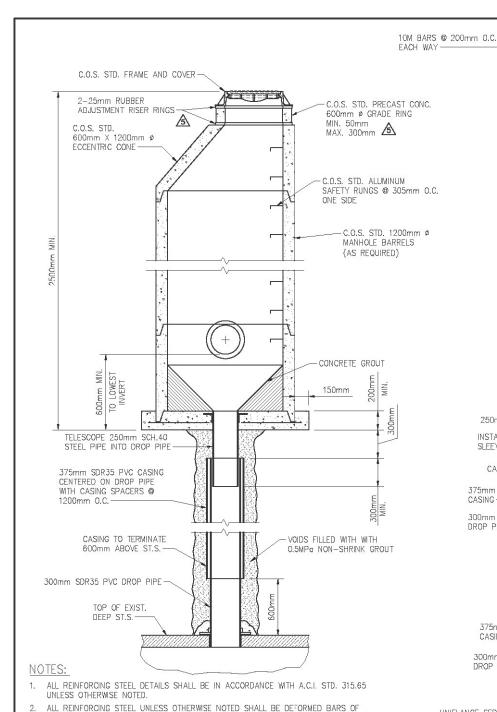
SECTION E-E

| | PLAN DESCRIPTION/REVISION | DATE | BY | Γ |
|---|--|-------------|-----|---|
| 2 | | 2006-JAN-20 | HLD | |
| 3 | | 2006-APR-04 | HLO | |
| 4 | | 2007-JAN-22 | HLO | |
| 5 | | 2012-JAN-05 | HLO | r |
| 6 | NOTES 1 - 35MPa CONC., 5 & 6 | 2014-DEC-12 | MJ | |
| 7 | ADDED GROUT AROUND MANHOLE BASE & ADDED NOTE 7 | 2015-NOV-26 | HLD | |
| 8 | SEAL BARREL TO BASE WITH BUTYL SEALANT, REVISED NOTE 1, | 2017-JAN-25 | HLO | |
| 8 | AND ADDED NOTE 8 | 2017-JAN-25 | HLO | |
| 9 | ADDED NOTE 9, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-12 | DLH | |
| | | | | |



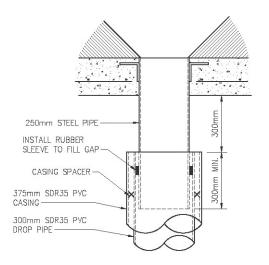
STANDARD 1200mm MANHOLE FOR SEWERS BETWEEN 600mm & 900mm

| | APPROVALS | | | | |
|---|-------------------------------|------------------|-------------------|--|--|
| | System | ~_ | 2 | | |
| _ | SIGNATURE | | SIGNATURE | | |
| | Jeff P D Thon | nson | Maciej Jurkiewicz | | |
| | NAME | | NAME | | |
| | Jan 27, 2021 | | Jan 27, 2021 | | |
| | DATE SIGNED | | DATE SIGNED | | |
| | SCALES: HOR. 1:40 VERT. | PLAN NO. 102- | -0011-006r009 | | |



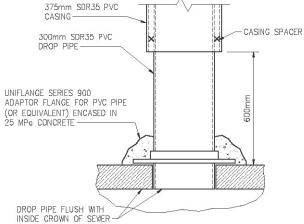
150mm TP. WELD 100mm x 100mm ANGLE IRON TO DROP PIPE & CAST INTO MANHOLE BASE MANHOLE BASE REINFORCING

SCALE 1:40



TELESCOPING SECTION

SCALE 1:20



CONNECTION AT ST.S. TRUNK SCALE 1:20

SAFETY PLATFORMS AS PER CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE

INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS. SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL

INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT C.S.A. STD. G30.12

CONCRETE COVER FOR REINFORCING STEEL UNLESS OTHERWISE NOTED SHALL BE 75mm

ALL POURED IN PLACE CONCRETE TO BE 35 MPg (IN 28 DAYS) SULPHATE RESISTANT. ALL PRECAST CONCRETE SECTIONS SHALL BE A.S.T.M. SPECIFICATION C-478.

MINIMUM COMPACTION OF TRENCH BACKFILL SHALL BE 98% OF MAXIMUM PROCTOR DENSITY.

CLEAR COVER FOR FORMED CONCRETE EXPOSED TO EARTH.

DROP PIPE SECTION TO BE AUGURED.

DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.

TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH BASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE ROAD.

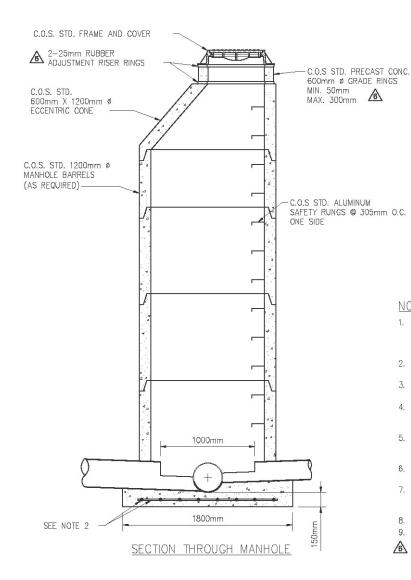
IF MANHOLE BARRELS AUGURED, NON-SHRINKABLE BACKFILL TO BE USED.

| _ | /3\ | | | |
|---|---|-------------|-----|---|
| | PLAN DESCRIPTION/REVISION | DATE | BY | Г |
| 1 | RENUMBERED FROM 402-0003-008r001 | 2000-AUG-30 | MJ | |
| 2 | | 2007-JAN-22 | HLO | |
| 3 | CORRECTED TRENCH BACKFILL FROM 95% TO 98% DENSITY | 2013-DEC-11 | HLO | |
| 4 | NOTE 4 - 35MPa CONC., NOTES 9&10 | 2014-DEC-14 | MJ | Н |
| 5 | ADDED NOTE 11, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-12 | DLH | |
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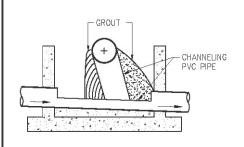
DROP STRUCTURE MANHOLE FOR CONNECTION TO TRUNK STORM SEWERS

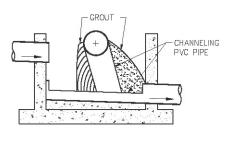
| APPROVALS | | | |
|----------------------|------------------|-------------------|--|
| Jo ten | ~ | 2 | |
| SIGNATURE | | SIGNATURE | |
| Jeff P D Thomson | | Maciej Jurkiewicz | |
| NAME | | NAME | |
| Jan 27, 2021 | | Jan 27, 2021 | |
| DATE SIGNED | | DATE SIGNED | |
| SCALES: HOR. 1:40 | PLAN NO. 102- | -0011-008r005 | |

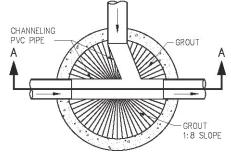


- ALL CAST IN PLACE CONCRETE INCLUDING CHANNELING AND BENCHING TO BE 35 MPa (IN 28 DAYS) SULPHATE RESISTANT. ALL GROUT TO BE NON—SHRINK, TYPE HS SULPHATE RESISTANT, CEMENTITIOUS GROUT.
- 2. PLACE 10M BARS AT 200mm O.C. EACH WAY IN BASE OF MANHOLES OVER 4.5m DEEP.
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION C478/C.O.S. SPEC'S.
- SAFETY PLATFORMS MEETING CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS.
- SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.
- 6. MANHOLE RUNGS SHALL BE ORIENTED SUCH THAT THEY DO NOT INTERFERE WITH THE INCOMING PIPE.
- 7. PVC CHANNELING REQUIRED FOR SANITARY SEWERS, GROUT CHANNELING IS ALLOWABLE FOR STORM SEWERS. PVC CHANNELING SHALL BE SEAMLESS FOR STRAIGHT THROUGH BASES.
- 8. PIPE TO MANHOLE CONNECTIONS SHALL BE WATERTIGHT.
- 9. TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH
 BASINS AND MANHOLES THAT ARE OFFSET FROM CENTER OF THE
 ROAD

CHANNELIZATION DETAILS FOR INTERIOR DROP OF LESS THAN 0.75M







SECTION A-A

SECTION A-A

PLAN VIEW

| | PLAN DESCRIPTION/REVISION | DATE | BY |
|---|---|-------------|-----|
| 1 | ORIGINAL DRAWING | 2009-FEB-20 | MLB |
| 2 | | 2012-JAN-05 | HLO |
| 3 | REVISED NOTES 1, 4, 5, 6, & 7 | 2014-DEC-12 | MJ |
| 4 | ADDED GROUT AROUND PIPES AT MH BASE AND REVISED NOTES 6 & 7 | 2015-NOV-26 | HLO |
| 5 | REMOVED GROUT AROUND PIPES AT MH BASE, REVISED NOTES 1 & 3, | 2017-JAN-25 | HLO |
| 5 | AND ADDED NOTE 8. | 2017-JAN-25 | HLD |
| 6 | ADDED NOTE 9, GRADE RING MIN., & RUBBER ADJ. RISER RINGS | 2021-JAN-13 | DLH |
| | | | |
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STANDARD 1200mm MANHOLE FOR 200mm TO 600mm SEWERS

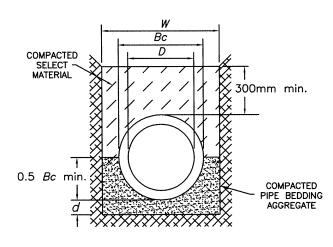
| _ | | | |
|---|-------------------------------|------------------|-------------------|
| | | APPR | OVALS |
| | Jo ten | ~ | 2 |
| _ | SIGNATURE | - | SIGNATURE |
| | Jeff P D Thon | nson | Maciej Jurkiewicz |
| | NAME Jan 27, 2021 | | NAME |
| | | | Jan 27, 2021 |
| | DATE SIGNED | | DATE SIGNED |
| | SCALES: HOR. 1:40 VERT. | PLAN NO. 102- | -0011-009R006 |

- ALL CONCRETE TO BE MADE WITH TYPE HS/HSB SULPHATE RESISTANT CEMENT.
- 2. BEDDING AGGREGATE TO CONFORM TO GRADATION IN SECTION 03001-3.2.7 OF SPECIFICATIONS.
- 3. SELECT BACKFILL TO BE FREE OF ALL LUMPS, STONES AND SUBSTANCE WHICH COULD REACT CHEMICALLY WITH PIPE MATERIAL.
- 4. PNEUMATIC OR MECHANICAL EQUIPMENT SHALL BE USED TO COMPACT THE BEDDING MATERIAL AND THE SELECT BACKFILL MATERIAL TO 98% OF ITS STANDARD PROCTOR DENSITY (PLACED IN 150mm LAYERS).
- 5. COMPACT SELECT MATERIAL MUST BE CLASS 4 OR BETTER AS CHARACTERIZED IN ASTM D2321.
- 6. UNSUPPORTED STRAIGHT WALL TRENCH USED ONLY FOR UNDISTURBED SOIL DISTURBED SOIL TRENCHES MUST BE 1:1 SIDEWALL SLOPE FROM BOTTOM OF TRENCH. IN EITHER CASE, COMPACTED PIPE AGGREGATE MUST BE INSTALLED TO TRENCH WALL.

NOMINAL PIPE SIZE | W (min.) 150mm - 600mm | Bc + 450mm 675mm & larger | 1.25 Bc + 300mm

DEPTH OF BEDDING MATERIAL BELOW PIPE (d)

<u>D</u> <u>d (MIN)</u> ≤1500mm 100mm 1650mm & larger 150mm

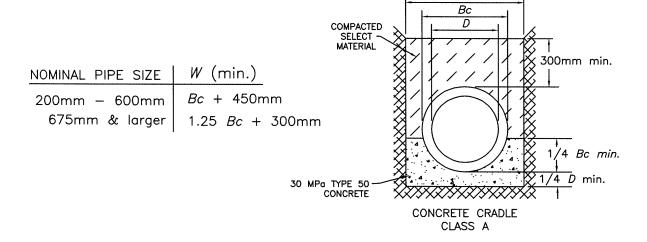


GRANULAR FOUNDATION CLASS B

| R E V I S I O N S 1 | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 3 0 2017 DATE |
|--------------------------|---|-----------------------------------|
| 4 DRAWN BY | CIRCULAR PVC PIPE BEDDINGS | JAN 3 0 2017 DATE |
| SCALE: HOR. NTS VER. NTS | | PLAN NO. 102-0011-010r001 |

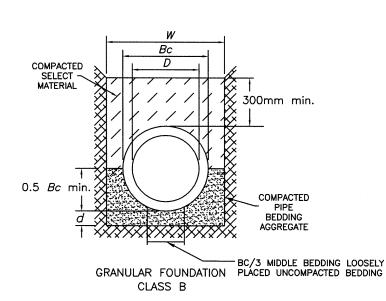
- ALL CONCRETE TO BE MADE WITH TYPE HS/HSB SULPHATE RESISTANT CEMENT.
- 2. BEDDING AGGREGATE TO CONFORM TO GRADATION IN SECTION 03001-3.2.7 OF SPECIFICATIONS.
- 3. SELECT BACKFILL TO BE FREE OF ALL LUMPS, STONES AND SUBSTANCE WHICH COULD REACT CHEMICALLY WITH PIPE MATERIAL.
- 4. PNEUMATIC OR MECHANICAL EQUIPMENT SHALL
 BE USED TO COMPACT THE BEDDING MATERIAL
 AND THE SELECT BACKFILL MATERIAL TO 98% OF ITS
 STANDARD PROCTOR DENSITY (PLACED IN 150mm LAYERS).
- 5. COMPACT SELECT MATERIAL MUST BE CLASS 4 OR BETTER AS CHARACTERIZED IN ASTM D2321.
- 6. UNSUPPORTED STRAIGHT WALL TRENCH USED ONLY FOR UNDISTURBED SOIL. DISTURBED SOIL TRENCHES MUST BE 1:1 SIDEWALL SLOPE FROM BOTTOM OF TRENCH. IN EITHER CASE COMPACTED PIPE AGGREGATE MUST BE INSTALLED TO TRENCH WALL.

W

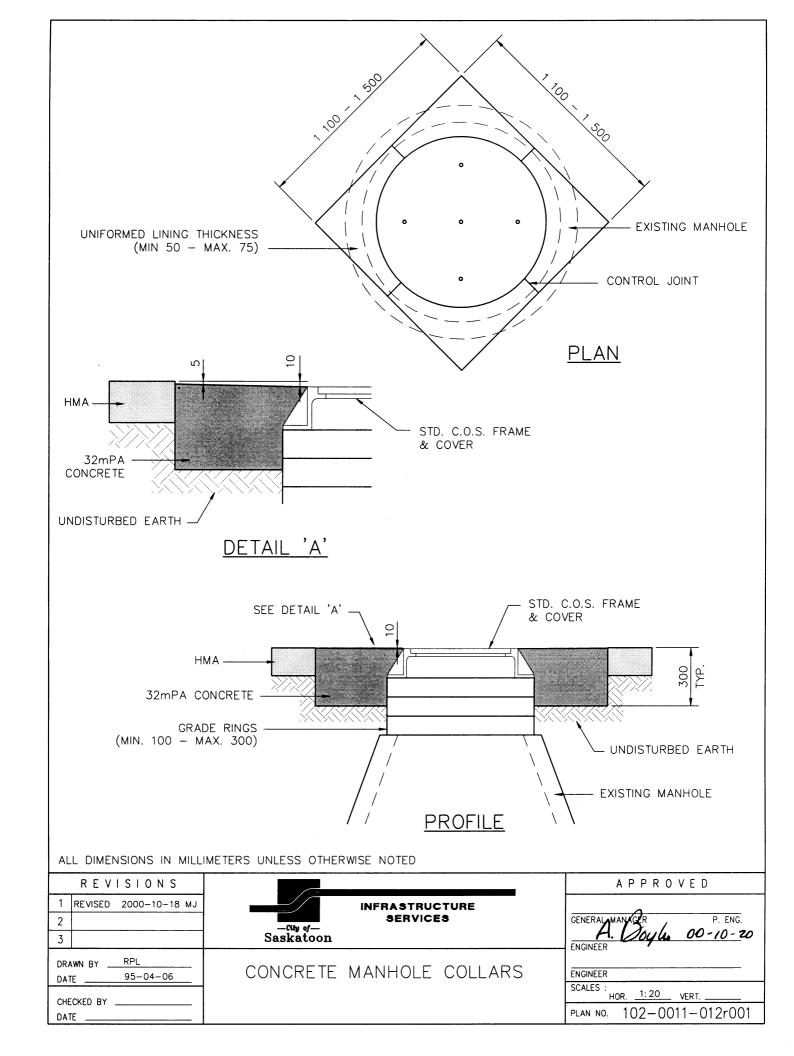


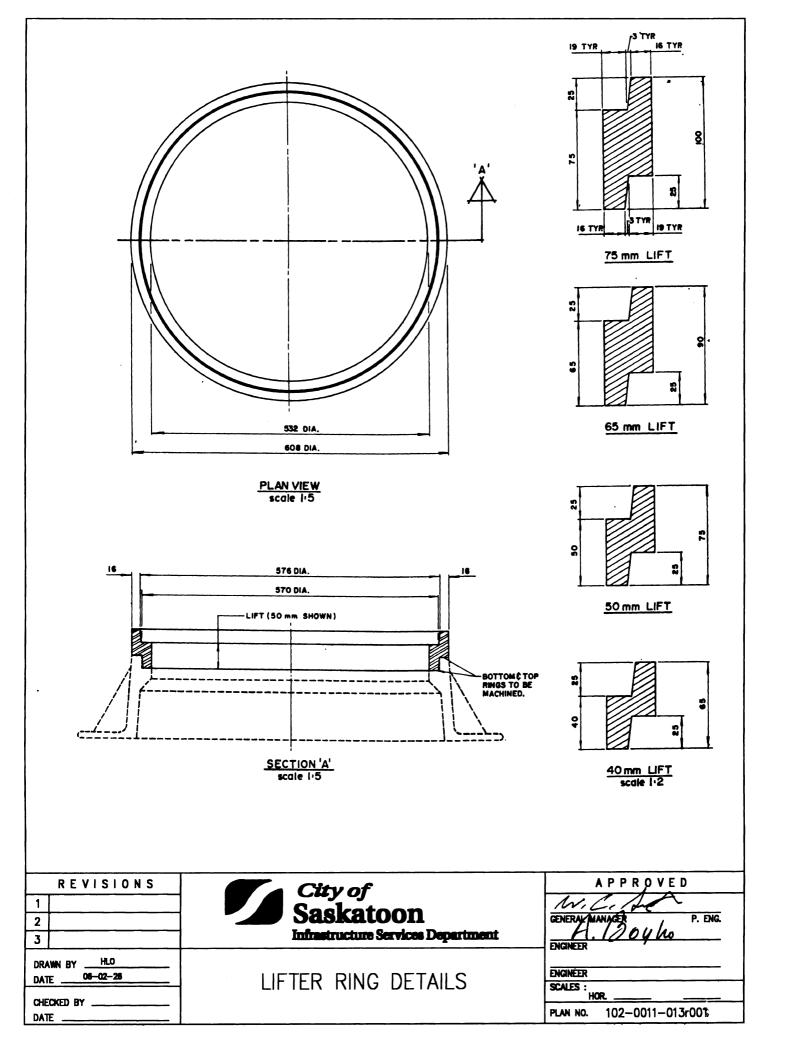
DEPTH OF BEDDING MATERIAL BELOW PIPE (d)

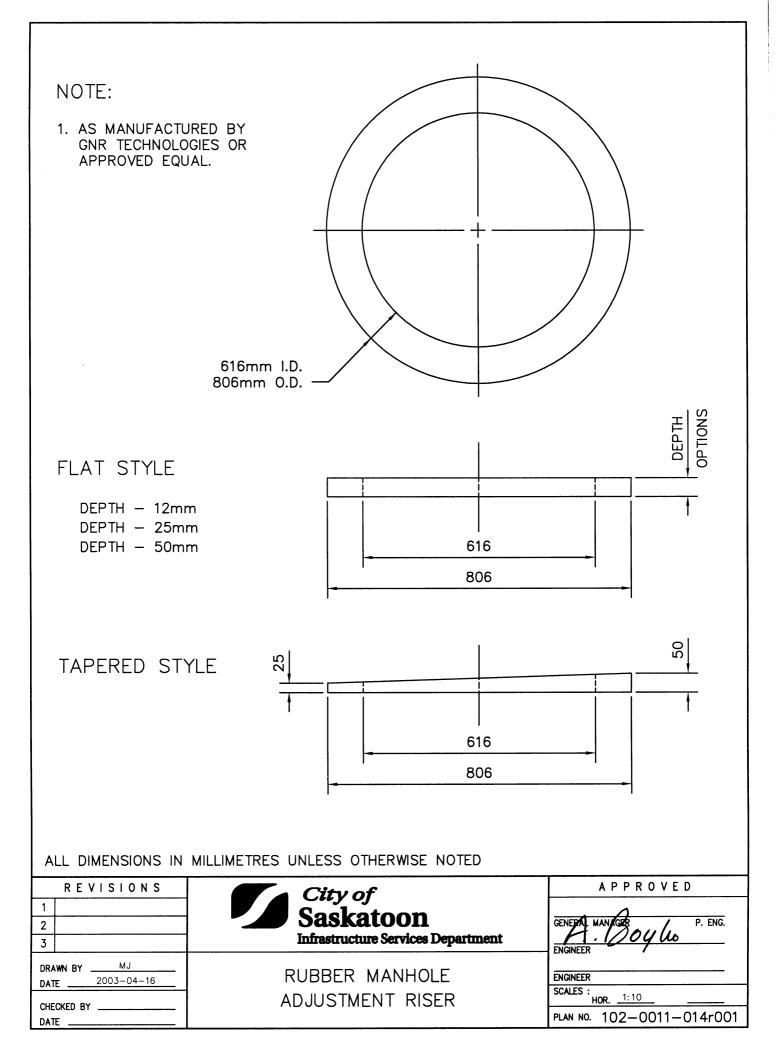
<u>D</u> <u>d (MIN)</u>
675mm & smaller 75mm
750mm to 1500mm 100mm
1650mm & larger 150mm

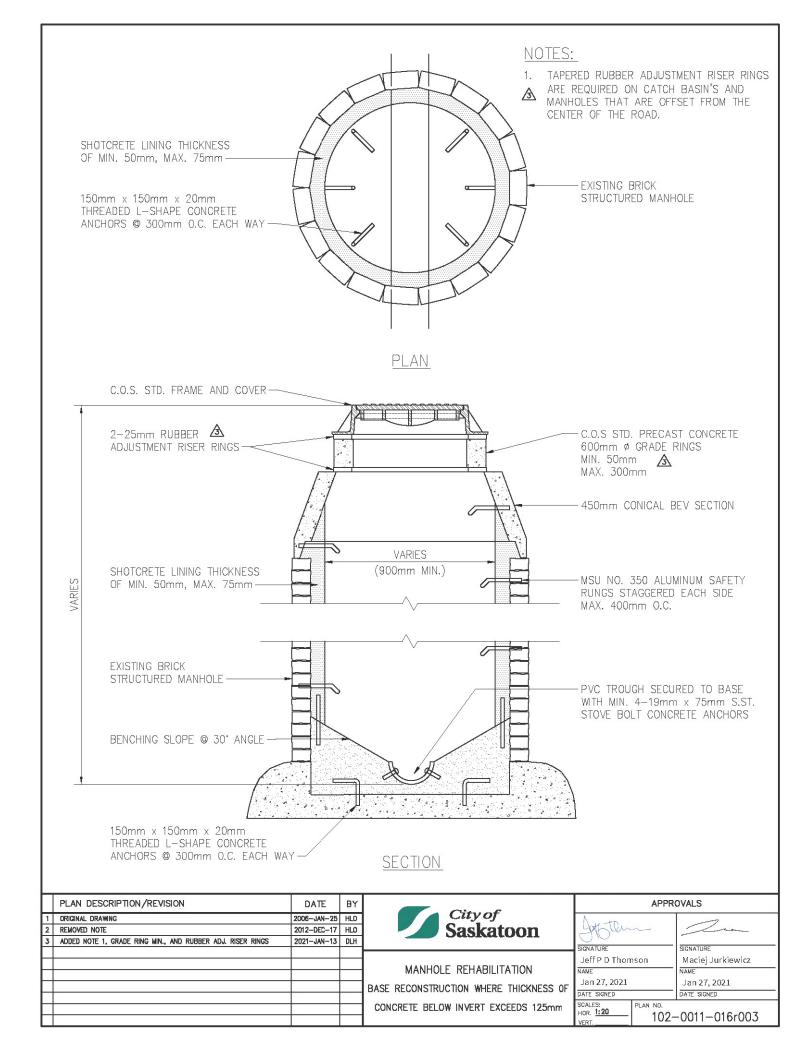


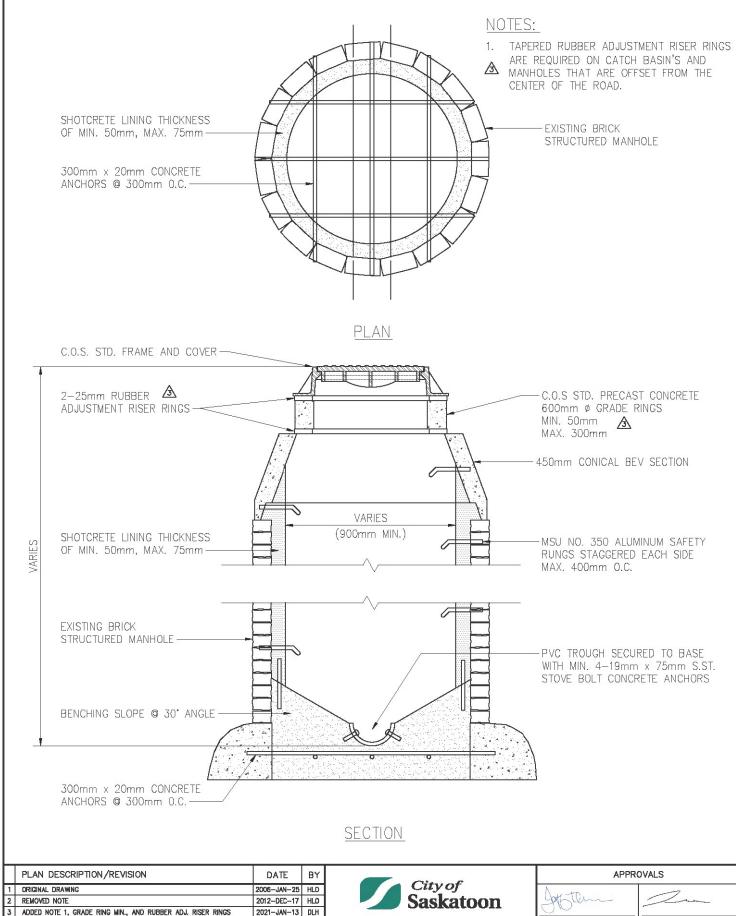
| REVISIONS 1 2 3 | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 3 0 2017 DATE |
|--------------------------|---|----------------------------------|
| 4 DRAWN BYJEL | CIRCULAR CONCRETE PIPE BEDDINGS | ENGINEER JAN 3 0 2017 DATE |
| SCALE: HOR. NTS VER. NTS | | PLAN NO. 102-0011-011r001 |



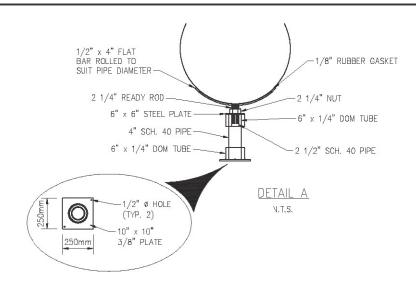




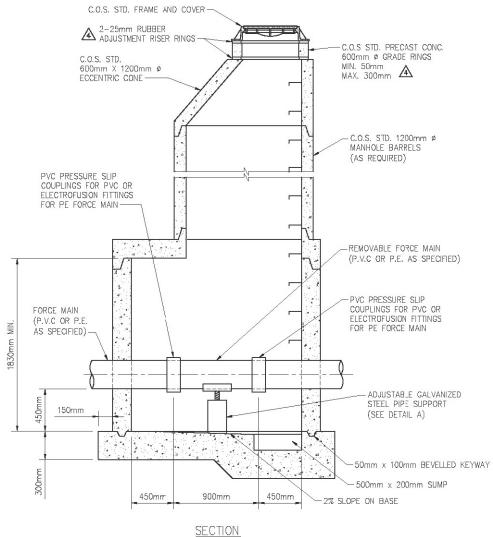




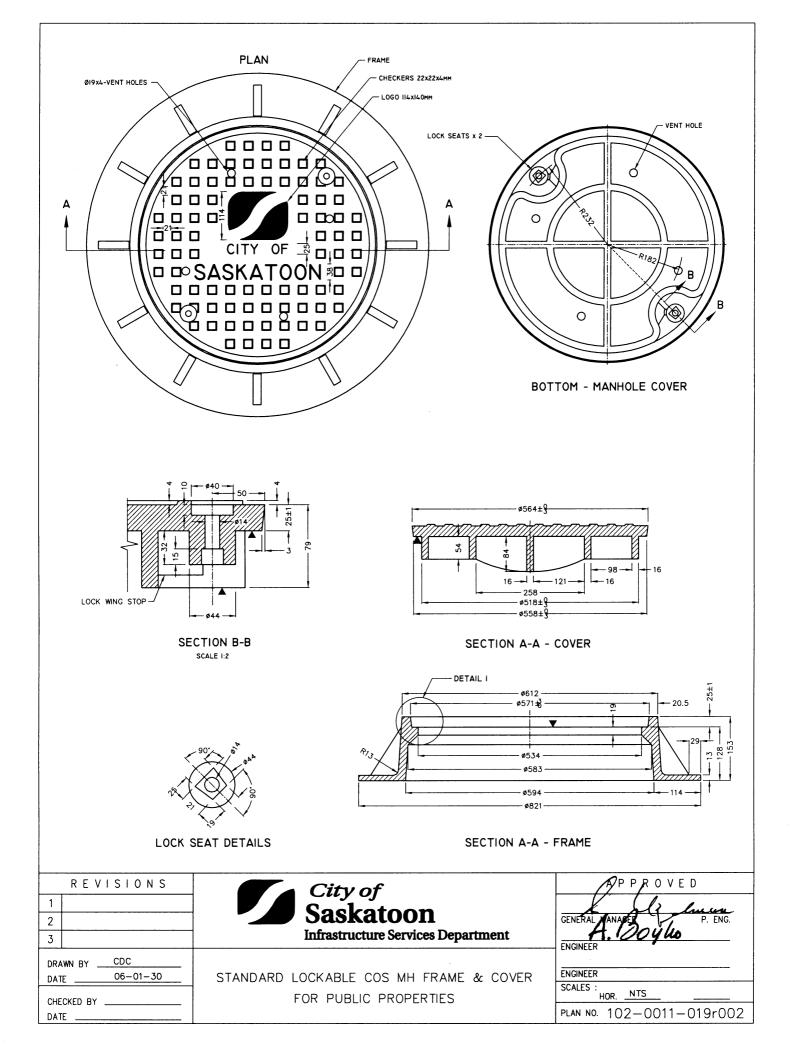
| | PLAN DESCRIPTION/REVISION | DATE | 01 | | | AFFIN | DYALS |
|----------|--|-------------|-----|---|----------------------|----------|-------------------|
| 1 | ORIGINAL DRAWING | 2006-JAN-25 | HLD | City of | Nuto | | |
| 2 | REMOVED NOTE | 2012-DEC-17 | HLO | City of Saskatoon | Soft ten | ~_ | Lan |
| 3 | ADDED NOTE 1, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-13 | DLH | | | | |
| | | | | | SIGNATURE | · · | SIGNATURE |
| П | | | | MANUALE BELLABULEATION | Jeff P D Thon | nson | Maciej Jurkiewicz |
| \vdash | | | | MANHOLE REHABILITATION | NAME | - | NAME |
| Н | | | | BASE RECONSTRUCTION WHERE THICKNESS OF | Jan 27, 2021 | | Jan 27, 2021 |
| | | | | DAGE RESONATION WHERE THICKNESS OF | DATE SIGNED | | DATE SIGNED |
| Н | | | | CONCRETE BELOW INVERT DOES NOT EXCEED 125mm | SCALES: HOR. 1:20 | PLAN NO. | |
| \vdash | | | | | VERT. | 102- | -0011-017r003 |
| | | | | | | • | |



- ALL POURED IN PLACE CONCRETE TO BE 35 MPa SULPHATE RESISTANT.
- ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH A.S.T.M SPECIFICATION C-478.
- 3. FORCE MAIN INSPECTION MANHOLES SHALL BE INSTALLED AT LOCATIONS ON EITHER SIDE OF A HORIZONTAL ALIGNMENT DEFLECTION IN SUCH A POSITION THAT PERMITS INSPECTION & CLEANING OF FORCE MAIN IN MULTIPLE DIRECTIONS.
- 4. SAFETY PLATFORMS AS PER CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS.
- 5. SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.
- 6. TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH ABASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE ROAD.



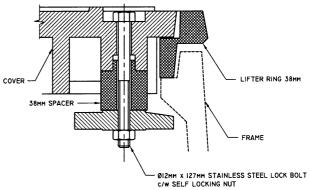
| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | | OVALS |
|---|--|-------------|-----|---------------------|-------------------------|-------------------|--|-------|
| 1 | DRIGINAL DRAWING | 2006-JAN-25 | HLD | City of Saskatoon | Nto | | | |
| 2 | | 2007-JAN-22 | HLO | Saskatoon | Soft tem | Lan | | |
| 3 | REVISED MANHOLE WITH DETAIL, NOTES 1, 3, 4, & 5 | 2014-DEC-12 | MJ | | | | | |
| 4 | ADDED NOTE 6, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-13 | DLH | | SIGNATURE | SIGNATURE | | |
| | | | | 051155 50505 14411 | Jeff P D Thomson | Maciej Jurkiewicz | | |
| Н | | | | SEWER FORCE MAIN | NAME | NAME | | |
| Н | | | | INSPECTION MANHOLE | Jan 27, 2021 | Jan 27, 2021 | | |
| Н | | | | INSPECTION MANIFOLE | DATE SIGNED | DATE SIGNED | | |
| Н | | | | | SCALES: PLAN NO. | | | |
| | | | | | HOR. 1:40 VERT. 102- | -0011-018r004 | | |



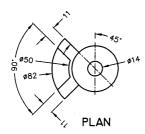
SECTION VIEW OF COVER WITH FRAME

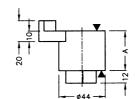
COVER FRAME 612HM X 89HM STAINLESS STEEL LOCK BOLT C/W SELF LOCKING NUT

SECTION VIEW OF COVER WITH FRAME AND 38MM LIFTER RING

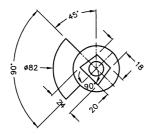


SPACER WITH WING STOP



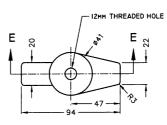


SIDE VIEW

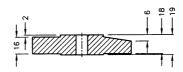


BOTTOM VIEW

LOCK WING DETAILS



PLAN



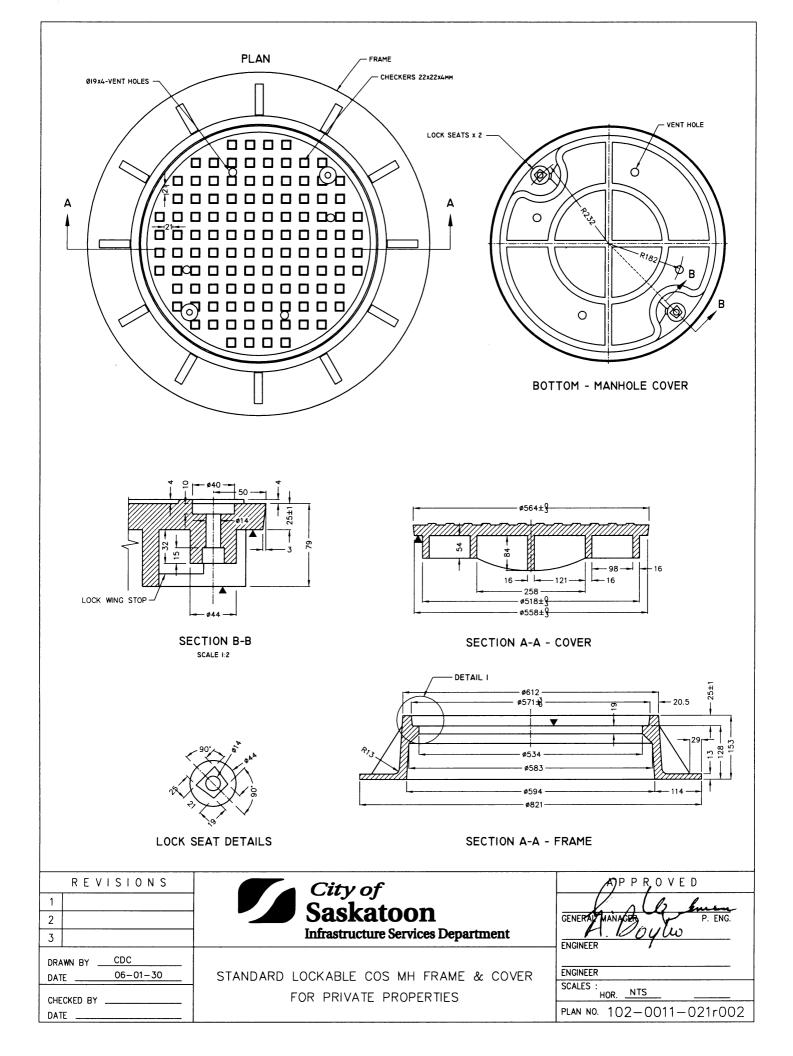
SECTION E-E

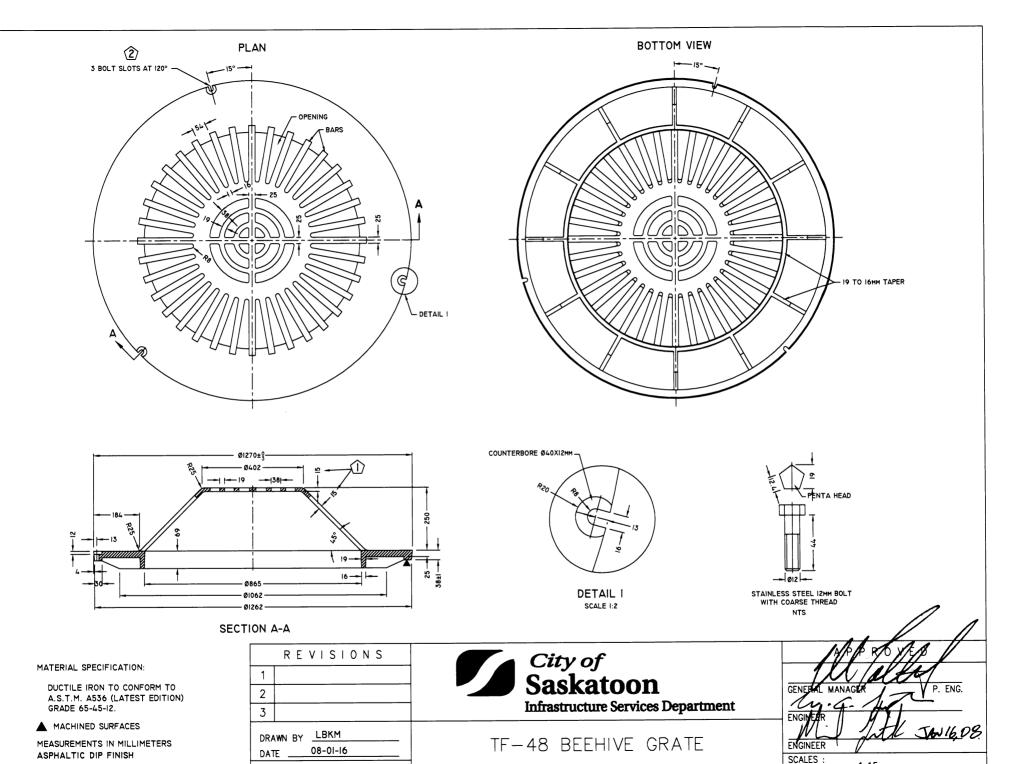
TABLE I MANUFACTURING TOLERANCE

- ALL DIMENSIONS SHALL CONFORM TO ±3MM TOLERANCE EXCEPT:
- (I) AS NOTED
- (2) MACHINED SURFACES -
- (3) NO DEVIATION SHALL BE ACCEPTABLE FOR DIMENSION WHICH ARE LESS THEN 10MM

| LIFTER RING SIZE | DIMENSION A | BOLT SIZE |
|------------------|-------------|-----------|
| 38 | 38 | 12 x 127 |
| 51 | 51 | 12 x 140 |
| 64 | 64 | 12 x 153 |
| 76 | 76 | 12 x 165 |

City of Saskatoon REVISIONS GENERA 2 **Infrastructure Services Department** 3 DRAWN BY _ ENGINEER 06-01-30 LOCK WING & SPACERS DATÉ . SCALES : NTS FOR STANDARD COS MANHOLE COVERS CHECKED BY PLAN NO. 102-0011-020r002 DATE



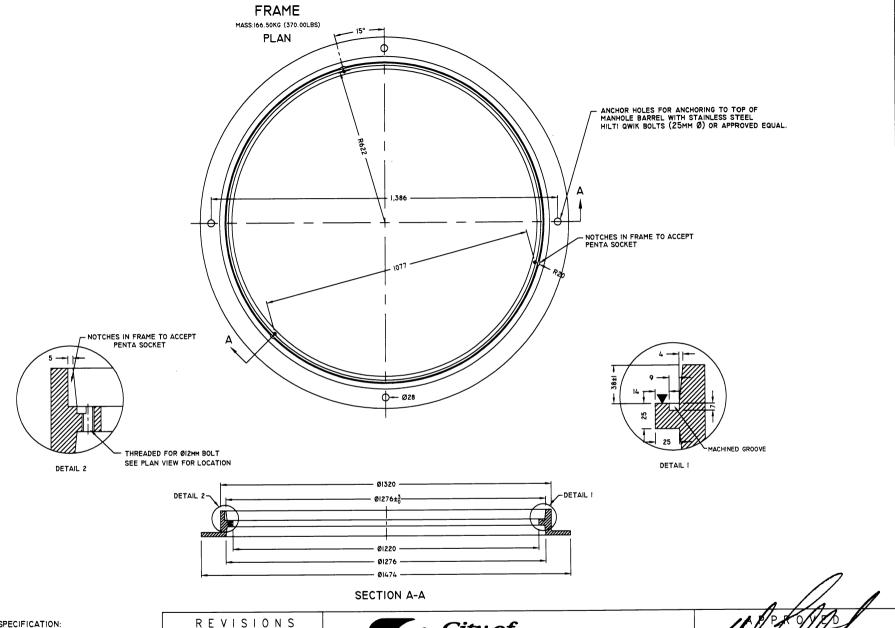


CHECKED BY _

DATE .

HOR. 1:15

PLAN NO. 102-0011-022r001



DUCTILE IRON TO CONFORM TO A.S.T.M. A536 (LATEST EDITION) GRADE 65-45-12.

▲ MACHINED SURFACES

MEASUREMENTS IN MILLIMETERS ASPHALTIC DIP FINISH



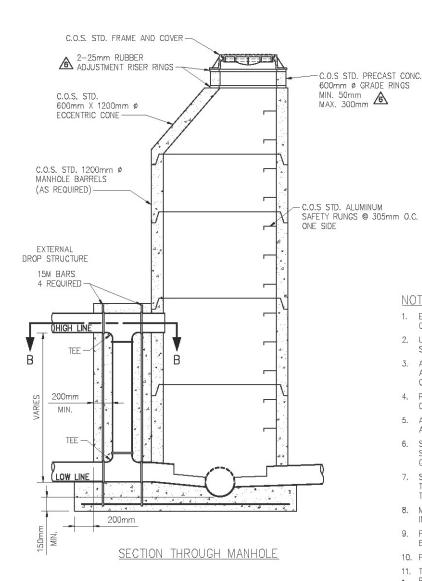
DRAWN BY LBKM

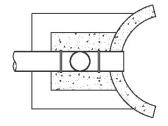
CHECKED BY .

08-01-16

TF-48 BEEHIVE FRAME

SCALES HOR. 1:15 PLAN NO. 102-0011-023r001



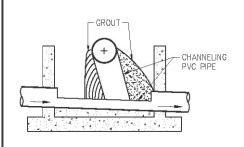


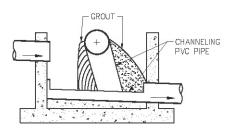
SECTION B-B

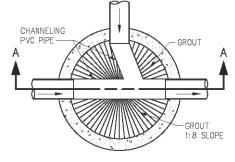
NOTES:

- EXTERNAL DROP STRUCTURE REQUIRED WHEN CROWN OF INLET PIPE IS 0.75m OR MORE ABOVE CROWN OF OUTLET PIPE.
- USE 4 15M BARS PLACED AS SHOWN WHEN EXTERIOR DROP SECTION IS 1.5m OR MORE.
- ALL CAST IN PLACE CONCRETE TO BE 35 MPg SULPHATE RESISTANT. ALL GROUT TO BE NON-SHRINK, TYPE HS SULPHATE RESISTANT, CEMENTITIOUS GROUT.
- 4. PLACE 10M BARS AT 200mm O.C. EACH WAY IN BASE OF MANHOLES OVER 4.5m DEEP.
- 5. ALL PRECAST CONCRETE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM SPECIFICATION C478.
- SAFETY PLATFORMS MEETING CITY OF SASKATOON STANDARD SPECIFICATIONS SHALL BE INSTALLED IN ALL MANHOLES WITH DEPTHS GREATER THAN 6.0 METERS.
- SAFETY PLATFORMS SHALL BE INSTALLED IN SUCH A MANNER SO THAT NO VERTICAL FALL DISTANCE EXCEEDS 5.0 METERS OR IS LESS THAN 2.4 METERS.
- MANHOLE RUNGS SHALL BE ORIENTED SUCH THAT THEY DO NOT INTERFERE WITH THE INCOMING PIPE.
- PVC CHANNELING SHALL BE SEAMLESS FOR STRAIGHT THROUGH BASES.
- 10. PIPE TO MANHOLE CONNECTIONS SHALL BE WATERTIGHT.
- TAPERED RUBBER ADJUSTMENT RISER RINGS ARE REQUIRED ON CATCH BASINS AND MANHOLES THAT ARE OFFSET FROM THE CENTER OF THE 11. <u>6</u>

CHANNELIZATION DETAILS FOR INTERIOR DROP OF LESS THAN 0.75M







SECTION A-A

SECTION A-A

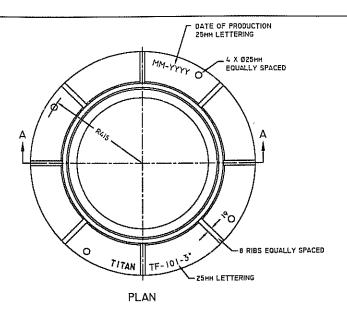
PLAN VIEW

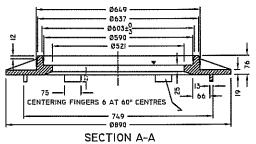
| | PLAN DESCRIPTION/REVISION | DATE | BY | ſ |
|---|---|-------------|-----|---|
| 1 | ORIGINAL DRAWING | 2008-FEB-19 | HLD | ı |
| 2 | | 2012-JAN-05 | HLO | ı |
| 3 | NOTES 3 - 35MPa CONC., 6, 7, & B | 2014-DEC-12 | MJ | ı |
| 4 | ADDED GROUT AROUND PIPES AT MH BASE AND NOTES 8 & 9 | 2015-NOV-26 | HLO | r |
| 5 | REMOVED GROUT AROUND PIPES AT MANHOLE BASE, REVISED NOTE 3, | 2017-JAN-25 | HLO | ı |
| 5 | AND ADDED NOTE 10 | 2017-JAN-25 | HLD | ı |
| 6 | ADDED NOTE 11, GRADE RING MIN., AND RUBBER ADJ. RISER RINGS | 2021-JAN-14 | DLH | ı |
| | | | | ı |
| | | | | ı |
| | | | | L |



SANITARY SEWER MANHOLE DROP STRUCTURE BETWEEN HIGH LINE AND LOW LINE

| APPROVALS | | | |
|-----------------------|-------------------|--|--|
| Stotem | 2 | | |
| SIGNATURE | SIGNATURE | | |
| Jeff P D Thomson | Maciej Jurkiewicz | | |
| NAME | NAME | | |
| Jan 27, 2021 | Jan 27, 2021 | | |
| DATE SIGNED | DATE SIGNED | | |
| SCALES: PLAN NO. 102- | -0011-024r006 | | |





SPECIFICATIONS

- (I) CASTINGS SHALL CONFORM TO ALL REQUIREMENTS OF A.S.T.M. DESIGNATION A48 CLASS 30
- (2) CASTINGS SHALL BE PRODUCED TO THE DIMENSIONS AND WITHIN THE TOLERANCES NOTED IN THE TABLE I.

CHECKED BY .

- (3) CASTINGS SHALL BE MARKED WITH THE PROPER IDENTIFICATION MARKINGS WHICH WILL INCLUDE:
 - (A) MARKINGS AS REQUESTED AT TIME OF ORDER.
 - (B) FOUNDRY IDENTIFICATION MARKING, AND YEAR OF CASTING.
 - (c) THESE MARKINGS SHALL BE SO LOCATED IN SUCH A MANNER AND OF SUCH SIZE THAT THEY ARE EASILY IDENTIFIABLE AFTER INSTALLATION.
- (4) ALL CASTING WILL BE FREE OF DEFECTS, BE TRUE TO PATTERN AND BE FREE FROM CRACKS, GAS HOLES, FLAWS AND EXCESSIVE SPRINKAGE, SURFACES OF CASTING SHALL BE FREE FROM BURNT ON SAND AND SHALL BE REASONABLY SMOOTH.
- (5) CASTING SHALL NOT ROCK WHEN INSTALLED. THE MANUFACTURER SHALL TRIAL FIT THE CASTINGS AGAINST A STANDARD FRAME.

▼ - BEARING SURFACES

MEASUREMENTS IN MILLIMETERS

TABLE I MANUFACTURING TOLERANCE

ALL DIMENSIONS SHALL CONFORM TO ±2MH TOLERANCE EXCEPT:

- (I) AS NOTE
- (2) NO DEVIATION SHALL BE ACCEPTABLE FOR DIMENSIONS WHICH ARE LESS THEN 10MM

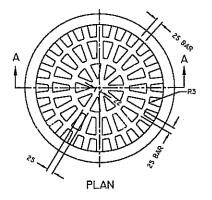
| R E V I S I O N S | City of |
|----------------------------|--|
| 2 3 | Saskatoon Infrastructure Services Department |
| DRAWN BY MLB DATE 08-II-2I | TF-101 BEEHIVE FRAME |

ENGINEER P. ENG.

ENGINEER NOVAL, 08

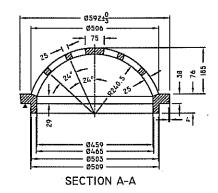
SCALES: HOR. 1:15

PLAN NO. 102-0011-025r001



SPECIFICATIONS

- (I) CASTINGS SHALL CONFORM TO ALL REQUIREMENTS OF A.S.T.M. DESIGNATION A48 CLASS 30
- (2) CASTINGS SHALL BE PRODUCED TO THE DIMENSIONS AND WITHIN THE TOLERANCES NOTED IN THE TABLE (.
- (3) CASTINGS SHALL BE MARKED WITH THE PROPER IDENTIFICATION MARKINGS WHICH WILL INCLUDE:
 - (A) MARKINGS AS REQUESTED AT TIME OF ORDER.
 - (a) FOUNDRY IDENTIFICATION MARKING, AND YEAR OF CASTING.
 - (c) THESE MARKINGS SHALL BE SO LOCATED IN SUCH A MANNER
 AND OF SUCH SIZE THAT THEY ARE EASILY IDENTIFIABLE AFTER INSTALLATION.
- (4) ALL CASTING WILL BE FREE OF DEFECTS, BE TRUE TO PATTERN AND BE FREE FROM CRACKS, GAS HOLES, FLAWS AND EXCESSIVE SPRINKAGE. SURFACES OF CASTING SHALL BE FREE FROM BURNT ON SAND AND SHALL BE REASONABLY SMOOTH.
- (5) CASTING SHALL NOT ROCK WHEN INSTALLED. THE MANUFACTURER SHALL TRIAL FIT THE CASTINGS AGAINST A STANDARD FRAME.



▼ - BEARING SURFACES

MEASUREMENTS IN MILLIMETERS

TABLE I MANUFACTURING TOLERANCE

ALL DIMENSIONS SHALL CONFORM TO ±2MM TOLERANCE EXCEPT:

- (I) AS NOTED.
- (Z) NO DEVIATION SHALL BE ACCEPTABLE FOR DIMENSIONS WHICH ARE LESS THEN IONN

| REVISIONS | | A A PARABA ED. |
|-----------------------------|------------------------------------|---------------------------|
| 1 | City of Saskatoon | 111 Wellet Dog 2/02 |
| 2 | | GENERAL MANAGER , P. ENG. |
| 3 | Infrastructure Services Department | ENGNEER - |
| DRAWN BY MLB DATE 08-11-21 | TF-101 BEEHIVE GRATE | ENGINEER NOVALOS |
| | | SCALES : HOR. 1:15 |
| CHECKED BY | | PLAN NO. 102-0011-026r001 |

GENERAL NOTES AND SPECIFICATIONS

- 1. GENERAL NOTES
 - 1.1. WORK SHALL CONFORM TO THE CURRENT EDITION OF THE FOLLOWING CODES AND STANDARDS:
 - 1.1.1. CAN/CSA-A23.4 PRECAST CONCRETE MATERIALS AND CONSTRUCTION
 - 1.1.2. CAN/CSA-A23.3 DESIGN OF CONCRETE STRUCTURES
 - 1.1.3. CAN/CSA-G30.18 CARBON STEEL BARS FOR CONCRETE REINFORCEMENT
 - 1.1.4. CAN/CSA-S6 CANADIAN HIGHWAY BRIDGE DESIGN CODE
 - 1.1.5. CAN/CSA-A257 STANDARDS FOR CONCRETE PIPE AND MANHOLE SECTIONS
 - 1.1.6. ASTM C478 STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS
 - 1.2. CITY OF SASKATOON TAKES RESPONSIBILITY FOR GENERAL ARRANGEMENT, SIZING, AND REINFORCING STEEL AS SHOWN.
 - 1.3. AS PER REQUIREMENTS OF CAN/CSA-A23.4 PRECAST MANUFACTURER TO SUBMIT SEALED SHOP DRAWINGS FOR ALL ELEMENTS NOT DETAILED IN THIS STANDARD.
 - 1.4. DEVIATION FROM THE DESIGN SHOWN IS PERMITTED ONLY BY APPROVAL OF THE ENGINEER AND WITH SUBMISSION OF SITE SPECIFIC SHOP DRAWING SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF SASKATCHEWAN.
 - 1.5. SEE DRAWING 102-0011-029 FOR FOR SECTIONS AND DETAILS.
 - 1.6. SEE DRAWING 102-0011-030 FOR CAST-IN-PLACE CONSTRUCTION.
- 2. CONSTRUCT PRECAST MANHOLE ACCORDING TO THE GEOMETRY AND REINFORCING PROVIDED. CONFIRM INLET/OUTLET QUANTITIES AND ORIENTATION. CONFIRM CONCRETE PIPE OUTSIDE DIAMETERS WITH PIPE SUPPLIER/CONTRACTOR PRIOR TO FABRICATION. DESIGN OF MANHOLE CHAMBER TO BE GOVERNED BY LARGEST PIPE ENTERING/EXITING THE CHAMBER AND DEPTH OF CHAMBER FROM FINAL GRADE TO TOP OF SLAB. CORNER GEOMETRY OTHER THAN 90° PERMITTED PROVIDED ELEMENT THICKNESS TO SPAN RATIO SHOWN IN TABLES IS NOT
- 3. CONCRETE MATERIAL
 3.1 REQUIREMENTS FOR CONCRETE MATERIAL

 - 3.1.1. CLASS OF EXPOSURE: A-1, S-2
 3.1.2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35MPa
 - 3.1.3. MAXIMUM WATER-CEMENT RATIO: 0.40

 - 3.1.4. AIR CONTENT: 5%-8% 3.1.5. CEMENT TYPE: HS/HSb
 - 3.2. CONCRETE COVER TO OUTSIDE LAYER OF REINFORCING STEEL TO BE 50mm AT ALL LOCATIONS UNLESS NOTED OTHERWISE.
- 4. REINFORCING STEEL
 - #4.1.1. BARS TO BE BILLET STEEL, DEFORMED TO GRADE 400, PLAIN FINISH. 4.1.2. PROVIDE LAP LENGTHS ON CORNER BARS AS FOLLOWS:

 - 10M = 450mm
 - 15M = 750mm20M = 900mm
 - 25M = 1300mm
 - 30M = 1600mm
 - 35M = 1900mm
 - TRIM AT PIPE OPENINGS AS REQUIRED.
- 5. FOUNDATION
 - 5.1. EXCAVATE IN-SITU MATERIAL TO UNDERSIDE OF BOTTOM SLAB ELEVATION.
 - 5.2. ENSURE SURFACE IS VIRGIN, UNDISTURBED MATERIAL. OVER EXCAVATE IF REQUIRED.
 5.3. EXCAVATE DEPTH EQUAL TO BOTTOM SLAB THICKNESS TO MAXIMUM OF 600mm.
 - 5.4. BOULDERS AND COBBLES NOT PERMITTED TO PROTRUDE IN DEPTH OF GRANULAR BASE.
 - 5.5. SUBGRADE MATERIAL TO BE REVIEWED AND DEEMED ACCEPTABLE BY A PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF GRANULAR BASE.

 - 5.6. GRANULAR MATERIAL TO CONFORM TO C.O.S. SPECIFICATION 0.3001 ITEM 3.2.7.
 5.7. DO NOT PLACE GRANULAR MATERIAL ON DESICCATED, FROZEN, OR WET SUBGRADE.
 5.8. PLACE GRANULAR MATERIAL IN 150mm LIFTS COMPACTED TO 98' STANDARD PROCTOR
- 6. MISCELLANEOUS REQUIREMENTS
 - 6.1. CONTRACTOR TO SUPPLY AND PLACE CHAMBER, MANHOLE BARRELS AND CONE, LADDER RUNGS, WALL PIPE RAIL, FRAME AND LOCKING COVER. SEE CITY OF SASKATOON STANDARDS FOR MORE INFORMATION.

NOTE:

THESE NOTES AND SCHEDULES TO BE USED IN CONJUNCTION WITH DRAWINGS 102-0011-029 - SECTIONS & DETAILS 102-0011-030 - CAST-IN-PLACE DETAILS

MAINTENANCE HOLE CHAMBERS LESS THAN 6 METERS DEEP

| | | BOTTOM SLAB | | | | | ALL W | ALLS | | | | | TOP SLAB | |
|-----------------|-----------|------------------------|------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|-----------------|----------------------|------------------|-----------------|------------------------|------------------------|
| MANHOLE TYPE | THICKNESS | HORIZONTAL | | THICKNESS | | но | RIZ. & VERT. | | | С | CORNERS | | HORIZ | CONTAL |
| III | T1 | "A" BARS UPPER FACE | "B" BARS LOWER FACE | THICKNESS T2 | "C" BARS OUTSIDE | "D" BARS INSIDE | "E" BARS EACH FACE | HEIGHT "H" | STIRRUPS "H" | "G" BARS VERTICAL | "G" BARS TIES | THICKNESS T3 | "F" BARS UPPER FACE | "G" BARS LOWER FACE |
| 1050-1350 | 300 | 15M @ 200 | 10M @ 200 | 300 | 10M @ 150 | 10M @ 250 | 3-15M | 450 | 10M @ 250 | 5-20M | A-10M @ 300 | 250 | 10M @ 250 | 20M @ 200 |
| 1500 | 300 | 15M @ 150 | 10M @ 150 | 300 | 15M @ 250 | 10M @ 250 | 4-15M | 600 | 10M @ 250 | 5-20M | A-10M @ 300 | 275 | 10M @ 250 | 20M @ 200 |
| 1800 | 300 | 20M @ 175 | 15M @ 175 | 300 | 15M @ 225 | 10M @ 225 | 4-15M | 800 | 10M @ 250 | 5-20M | A-10M @ 300 | 300 | 10M @ 250 | 20M @ 175 |
| 2100 | 325 | 20M @ 150 | 15M @ 150 | 300 | 15M @ 150 | 10M @ 150 | 5-15M | 800 | 10M @ 250 | 7-20M | B-10M @ 300 | 300 | 10M @ 250 | 25M @ 200 |
| 2400 | 350 | 25M @ 225 | 20M @ 225 | 325 | 20M @ 225 | 15M @ 225 | 4-20M | 800 | 10M @ 250 | 7-20M | B-10M @ 300 | 325 | 10M @ 250 | 25M @ 175 |
| 3000 | 400 | 25M @ 175 | 20M @ 175 | 375 | 20M @ 150 | 15M @ 150 | 5-20M | 800 | 10M @ 200 | 7-20M | B-10M @ 300 | 375 | 10M @ 250 | 25M @ 150 |

MAINTENANCE HOLE CHAMBERS LESS THAN 12 METERS DEEP

| | | BOTTOM SLAB | | | | | ALL W | ALLS | | | | | TOP SLAB | |
|-----------------|-----------------|------------------------|------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|-----------------|----------------------|------------------|-----------------|------------------------|----------|
| MANHOLE TYPE | THOMES | HORIZ | ONTAL | THOMESO | | но | RIZ. & VERT. | | | С | ORNERS | T. 110141500 | HORIZ | ZONTAL |
| (IFE | THICKNESS T1 | "A" BARS UPPER FACE | "B" BARS LOWER FACE | THICKNESS T2 | "C" BARS OUTSIDE | "D" BARS INSIDE | "E" BARS EACH FACE | HEIGHT "H" | STIRRUPS "H" | "G" BARS VERTICAL | "G" BARS TIES | THICKNESS T3 | "F" BARS UPPER FACE | "G" BARS |
| 1050-1350 | 400 | 25M @ 200 | 15M @ 200 | 350 | 15M @ 250 | 10M @ 250 | 4-15M | 600 | 10M @ 250 | 7-20M | B-10M @ 300 | 350 | 10M @ 250 | 20M @ 15 |
| 1500 | 400 | 30M @ 250 | 20M @ 250 | 350 | 15M @ 200 | 10M @ 200 | 3-20M | 600 | 10M @ 250 | 7-20M | B-10M @ 300 | 350 | 10M @ 250 | 25M @ 20 |
| 1800 | 400 | 30M @ 200 | 20M @ 200 | 350 | 20M @ 225 | 15M @ 225 | 5-20M | 800 | 10M @ 250 | 7-20M | B-10M @ 300 | 400 | 10M @ 250 | 25M @ 20 |
| 2100 | 450 | 30M @ 200 | 20M @ 200 | 400 | 20M @ 200 | 15M @ 200 | 5-20M | 800 | 10M @ 250 | 7-20M | B-10M @ 300 | 450 | 10M @ 250 | 30M @ 22 |
| 2400 | 500 | 30M @ 175 | 20M @ 175 | 450 | 20M @ 175 | 15M @ 175 | 5-20M | 800 | 10M @ 200 | 7-25M | B-10M @ 400 | 450 | 10M @ 250 | 30M @ 20 |
| 3000 | 600 | 35M @ 200 | 25M @ 200 | 550 | 25M @ 225 | 20M @ 225 | 4-25M | 1000 | 10M @ 150 | 10-25M | C-10M @ 400 | 550 | 10M @ 250 | 30M @ 1 |

MAINTENANCE HOLE CHAMBERS LESS THAN 20 METERS DEEP

| | | | N | IOTE: CONCRE | TE THICKNESS A | AND REINFORCIN | IG GOVERNED | BY LARGES | T PIPE ENTERIN | G THE CHAM | BER | | | |
|-----------------|-----------------|------------------------|------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|-----------------|----------------------|------------------|-----------------|------------------------|------------------------|
| | | BOTTOM SLAB | | | | | ALL W | ALLS | | | | | TOP SLAB | |
| MANHOLE TYPE | HORIZONTAL | | | | | но | RIZ. & VERT. | | | C | ORNERS | T. 1101/11500 | HORIZ | ONTAL |
| 1172 | THICKNESS T1 | "A" BARS UPPER FACE | "B" BARS LOWER FACE | THICKNESS T2 | "C" BARS OUTSIDE | "D" BARS INSIDE | "E" BARS EACH FACE | HEIGHT "H" | STIRRUPS "H" | "G" BARS VERTICAL | "G" BARS TIES | THICKNESS T3 | "F" BARS UPPER FACE | "G" BARS LOWER FACE |
| 1050-1350 | 500 | 30M ② 225 | 20M @ 225 | 400 | 20M @ 250 | 15M @ 250 | 4-20M | 600 | 10M @ 250 | 7-20M | B-10M @ 300 | 400 | 10M @ 250 | 25M @ 175 |
| 1500 | 550 | 30M @ 225 | 20M @ 225 | 450 | 20M @ 250 | 15M @ 250 | 3-25M | 600 | 10M @ 250 | 7-20M | B-10M @ 300 | 450 | 10M @ 250 | 30M @ 225 |
| 1800 | 600 | 30M @ 200 | 20M @ 200 | 500 | 20M @ 225 | 15M @ 225 | 3-25M | 800 | 10M @ 250 | 725M | B-10M @ 400 | 500 | 10M @ 250 | 30M @ 200 |
| 2100 | 700 | 30M @ 175 | 20M @ 175 | 550 | 20M @ 175 | 15M @ 175 | 3-25M | 800 | 10M @ 150 | 10-25M | C-10M @ 400 | 550 | 10M @ 250 | 35M @ 225 |
| 2400 | 750 | 35M @ 225 | 25M @ 225 | 650 | 25M @ 250 | 20M @ 250 | 4-25M | 1000 | 10M @ 150 | 10-25M | C-10M @ 400 | 650 | 10M @ 250 | 35M @ 200 |
| 3000 | 900 | 35M @ 150 | 25M @ 175 | 750 | 30M @ 250 | 25M @ 250 | 4-30M | 1000 | 10M @ 100 | 10-25M | C-10M @ 400 | 750 | 10M @ 250 | 35M @ 200 |

ALL DIMENSIONS IN mm (MILLIMETRES) UNLESS NOTED OTHERWISE

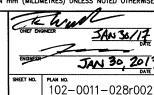
A TRUE COPY OF SEALED ENGINEERED DRAWING ON RECORD AT SASKATOON WATER PLAN DESCRIPTION/REVISION DATE BY

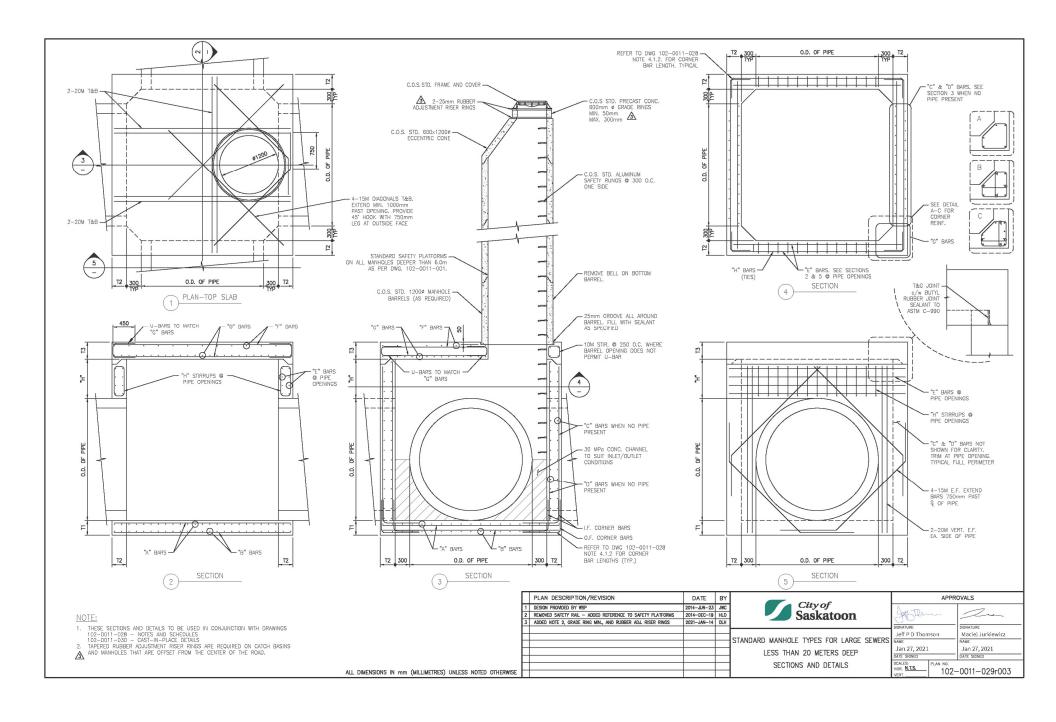
HOR. NTS RAWN BY J.W.C. AT WSP (GENIVAR) 2014-APR-2



STD. M.H. TYPES FOR LARGE SEWERS NOTES AND SCHEDULES

> FOR SEWERS LESS THAN 20 METERS DEEP





CAST-IN-PLACE CONSTRUCTION

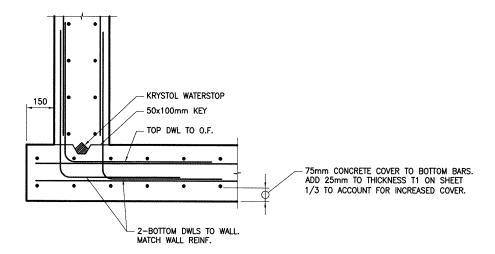
GENERAL NOTES AND SPECIFICATIONS

- 1. GENERAL NOTES
 - 1.1 ALL WORK SHALL CONFORM TO SPECIFICATIONS LISTED ON DRAWINGS 102-0011-028 AND 102-0011-029 UNLESS OTHERWISE STATED.
 - 1.2 WORK SHALL CONFORM TO THE CURRENT EDITION OF THE FOLLOWING CODES AND STANDARDS:
 - 1.2.1. CAN/CSA-A23.1 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
 - 1.2.2. CAN/CSA-A23.3 DESIGN OF CONCRETE STRUCTURES
 - 1.2.3. CAN/CSA-G30.18 CARBON STEEL BARS FOR CONCRETE REINFORCEMENT
 - 1.2.4. CAN/CSA-S6 CANADIAN HIGHWAY BRIDGE DESIGN CODE
 - 1.2.5. CAN/CSA-A257 STANDARDS FOR CONCRETE PIPE AND MANHOLE SECTIONS
 1.3. DEVIATION FROM THE DESIGN SHOWN IS PERMITTED ONLY BY APPROVAL OF THE ENGINEER AND WITH SUBMISSION OF SITE SPECIFIC SHOP DRAWING SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF SASKATCHEWAN.
- 2. CONSTRUCT CAST-IN-PLACE MANHOLE ACCORDING TO THE GEOMETRY AND REINFORCING PROVIDED ON DRAWING 102-0011-028. CONFIRM ARRANGEMENT, ORIENTATION, DIAMETERS AND QUANTITY OF INLETS AND OUTLET PIPES WITH CONTRACTOR. DESIGN OF MANHOLE CHAMBER TO BE GOVERNED BY LARGEST PIPE ENTERING THE CHAMBER AND DEPTH OF CHAMBER FROM FINAL GRADE TO TOP OF SLAB.
- - 3.1. CONCRETE TESTING SHALL FOLLOW SECTION 06005 READY MIX CONCRETE IN THE CITY OF SASKATOON STANDARD CONSTRUCTION SPECIFICATIONS.
- 4. CAST-IN-PLACE CONCRETE TO BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

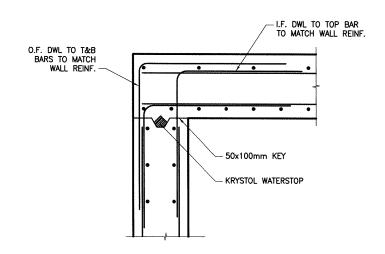
| STRENGTH | CEMENT | CLASS OF | MAX AGGREGATE (mm) | SLUMP | TOTAL |
|-----------|--------|----------|--------------------|-------|-------|
| f'c (MPa) | SYMBOL | EXPOSURE | | (mm) | AIR % |
| 35 | HS/HSb | A-1, S-2 | 20 | 75+25 | 58 |

ADDITION OF SUPERPLASTICIZOR TO ACHIEVE WORKABLE MIX IS PERMITTED. TEST SUMP BEFORE AND AFTER ADDITION OF SUPERPLASTICIZOR.

- 5. CEMENTITIOUS WATERPROOFING
 - 5.1. HORIZONTAL CONSTRUCTION JOINTS:
 - KRYSTOL WATERSTOP SYSTEM (INTERNAL)
 - 5.2. FORM-TIE HOLES, MINOR HONEYCOMB AREAS SHALL BE CHIPPED BACK AND PATCHED WITH KRYSTOL WATERSTOP GROUT.



BASE SLAB TO WALL DETAIL



WALL TO TOP SLAB DETAIL

NOTE:

THESE CAST-IN-PLACE DETAILS TO BE USED IN CONJUNCTION WITH DRAWINGS 102-0011-028 - NOTES AND SCHEDULES 102-0011-029 - SECTIONS AND DETAILS

ALL DIMENSIONS IN mm (MILLIMETRES) UNLESS NOTED OTHERWISE

ENGINEERED DRAWING ON RECORD AT SASKATOON WATER REVISED AIR CONTENT FROM 4%-7% TO 5%-8%

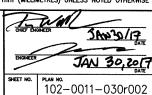
DESIGN PROVIDED BY WSP - 203 WELLMAN CRES. - SASKATOON

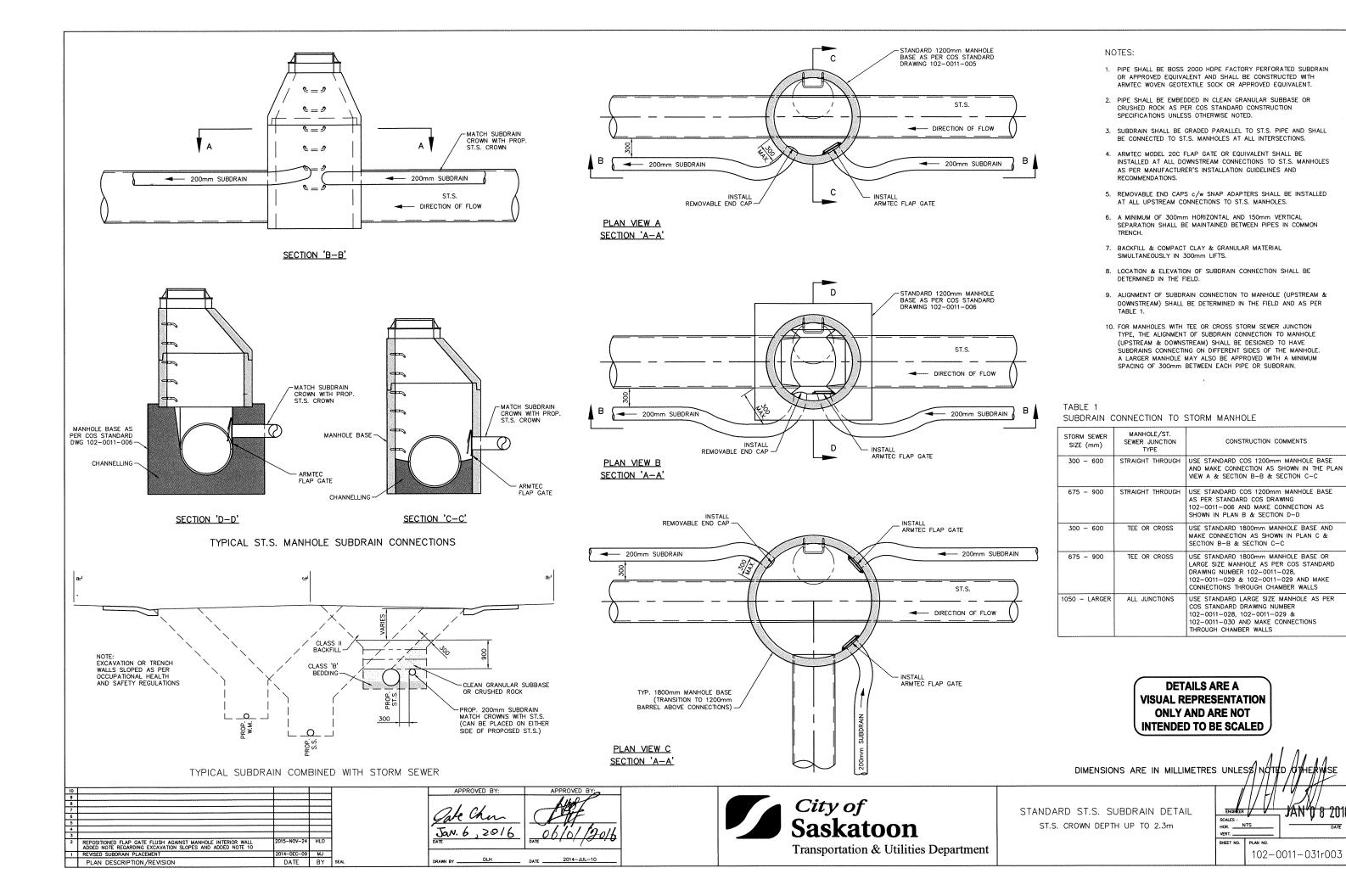
AWN BY J.W.C. AT WSP (GENIVAR E 2014-APR-2

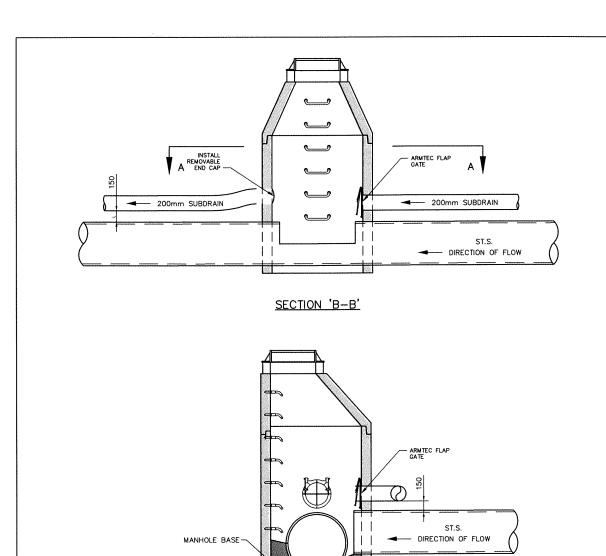


STD. M.H. TYPES FOR LARGE SEWERS CAST-IN-PLACE DETAILS

> FOR SEWERS LESS THAN 20 METERS DEEP





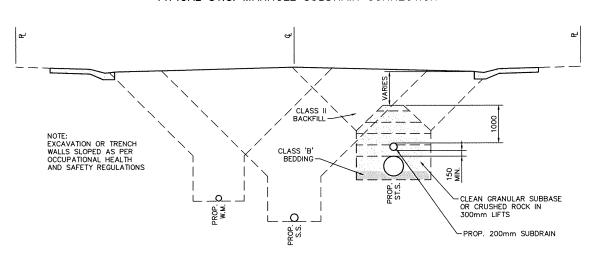


SECTION 'C-C'

CHANNELLING -

REPOSITIONED FLAP GATE FLUSH AGAINST MANHOLE INTERIOR WALL AND ADDED NOTE REGARDING EXCAVATION SLOPES.

TYPICAL ST.S. MANHOLE SUBDRAIN CONNECTION



TYPICAL SUBDRAIN COMBINED WITH STORM SEWER

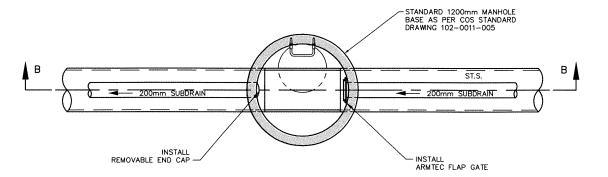
2014-JUL-08 DLH

APPROVED BY:

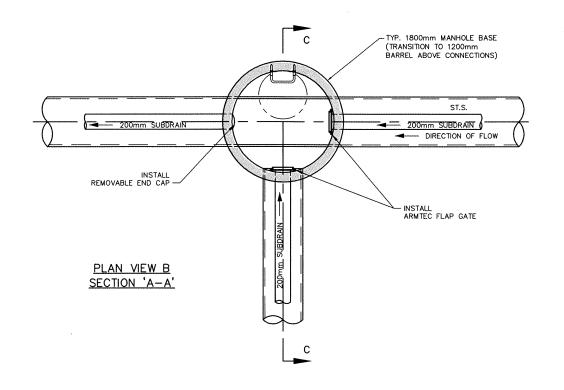
Jan. 6, 2016

06/01/2016

Jake Chen



PLAN VIEW A SECTION 'A-A'



NOTES:

- PIPE SHALL BE BOSS 2000 HDPE FACTORY PERFORATED SUBDRAIN OR APPROVED EQUIVALENT AND SHALL BE CONSTRUCTED WITH ARMTEC WOVEN GEOTEXTILE SOCK OR APPROVED EQUIVALENT.
- 2. PIPE SHALL BE EMBEDDED IN CLEAN GRANULAR SUBBASE OR CRUSHED ROCK AS PER COS STANDARD CONSTRUCTION SPECIFICATIONS UNLESS OTHERWISE NOTED.
- 3. SUBDRAIN SHALL BE GRADED PARALLEL TO ST.S. PIPE AND SHALL BE CONNECTED TO ST.S. MANHOLES AT ALL INTERSECTIONS.
- 4. ARMTEC MODEL 20C FLAP GATE OR EQUIVALENT SHALL BE INSTALLED AT ALL DOWNSTREAM CONNECTIONS TO ST.S. MANHOLES AS PER MANUFACTURER'S INSTALLATION GUIDELINES AND
- 5. REMOVABLE END CAPS c/w SNAP ADAPTERS SHALL BE INSTALLED AT ALL UPSTREAM CONNECTIONS TO ST.S. MANHOLES.
- 6. A MINIMUM OF 300mm HORIZONTAL AND 150mm VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN PIPES IN COMMON
- BACKFILL & COMPACT CLAY & GRANULAR MATERIAL SIMULTANEOUSLY IN 300mm LIFTS.
- 8. LOCATION & ELEVATION OF SUBDRAIN CONNECTION SHALL BE
- 9. ALIGNMENT OF SUBDRAIN CONNECTION TO MANHOLE (UPSTREAM & DOWNSTREAM) SHALL BE DETERMINED IN THE FIELD AND AS PER

DETAILS ARE A VISUAL REPRESENTATION ONLY AND ARE NOT INTENDED TO BE SCALED

DIMENSIONS ARE IN MILLIMETRES UNLESS/NOTED,

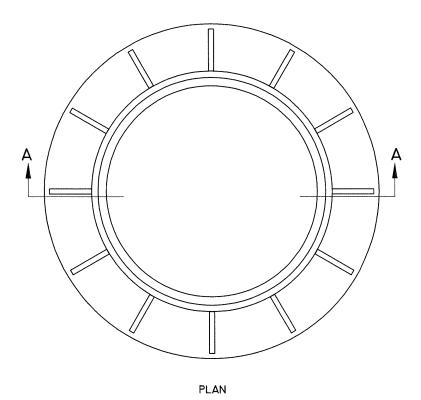


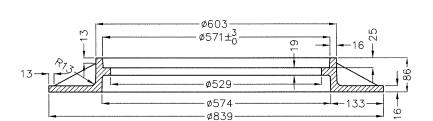
STANDARD ST.S. SUBDRAIN DETAIL ALTERNATIVE INSTALLATION WHERE ST.S. CROWN IS DEEPER THAN 2.3m

JAN 0 8 2016

102-0011-032r003

TO BE USED EXCLUSIVELY FOR REHABILITATION WORK

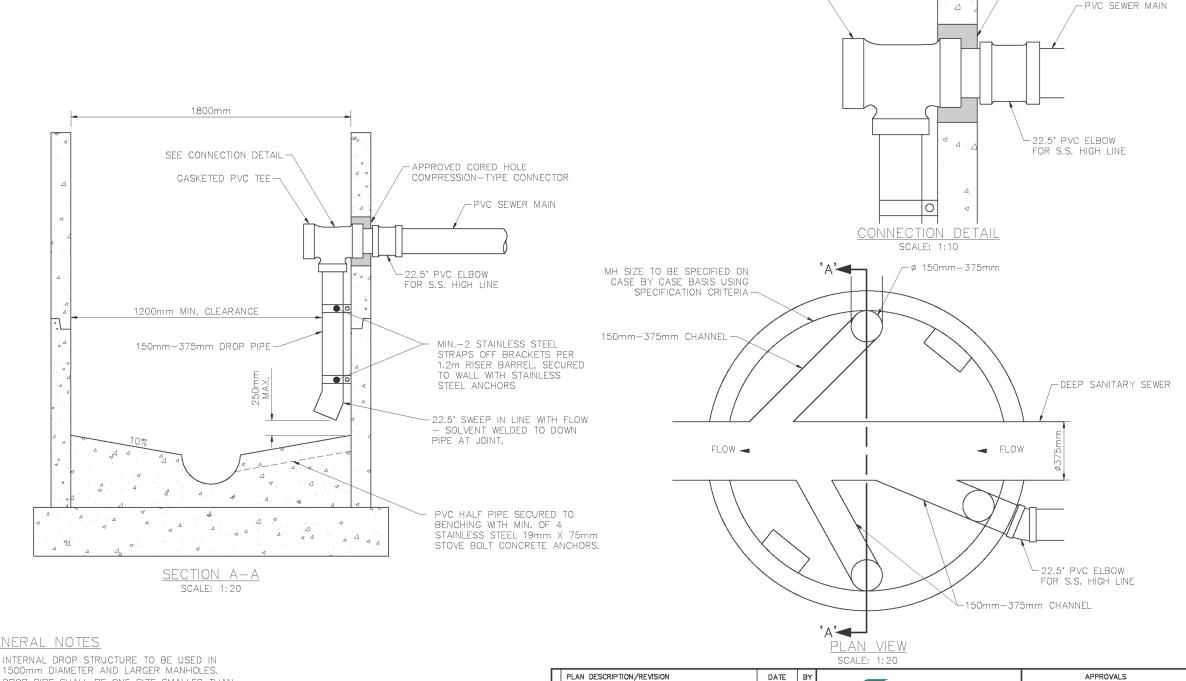




SECTION A-A

MEASUREMENTS IN MILLIMETERS

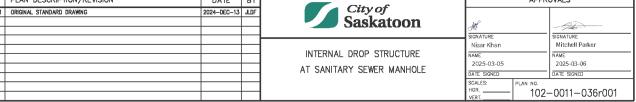




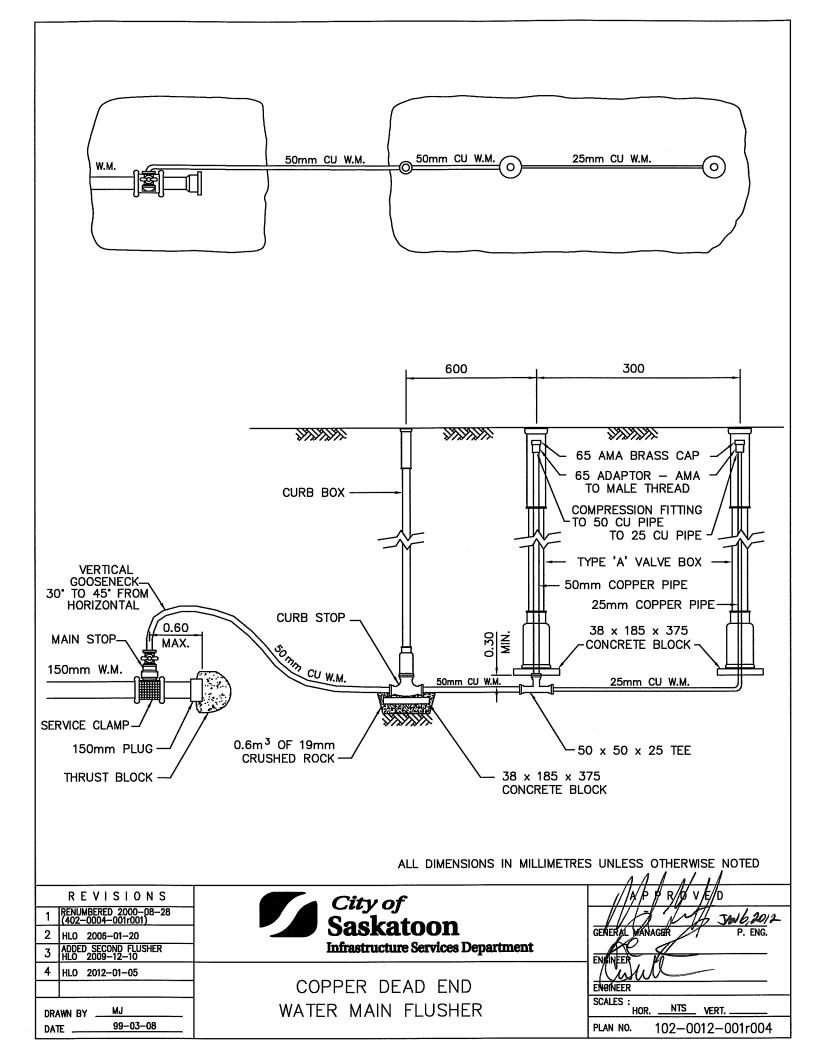
GASKETED PVC TEE-

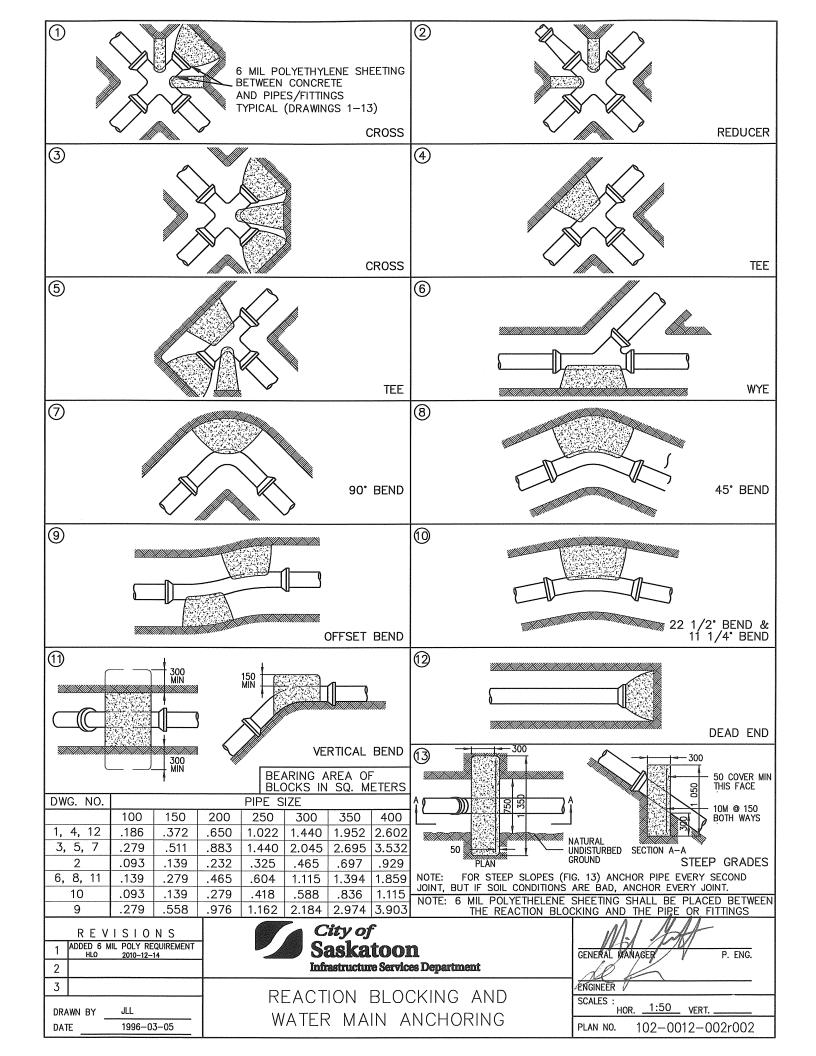
GENERAL NOTES

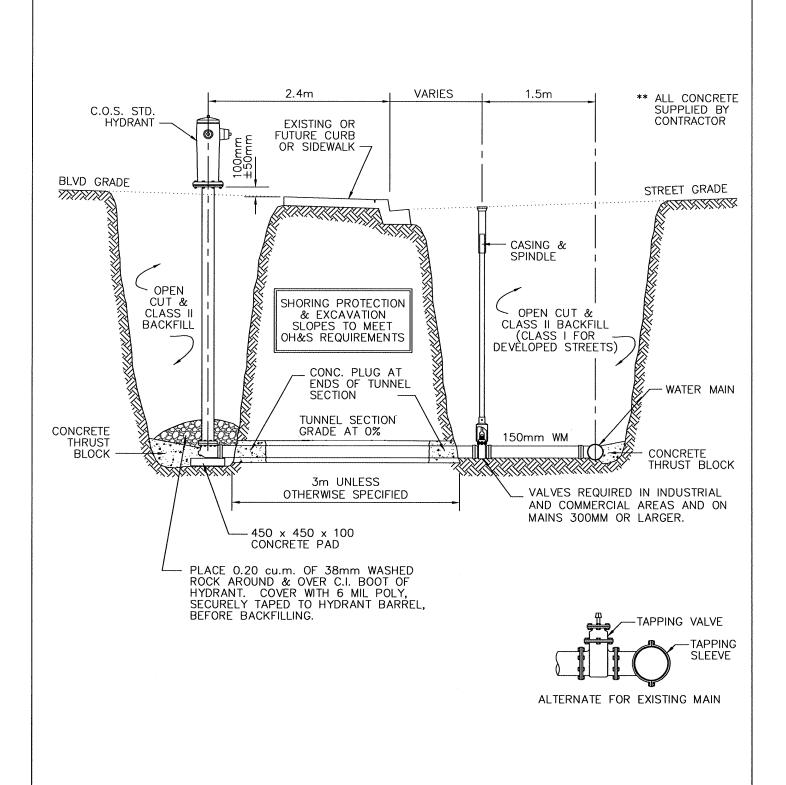
- 1. INTERNAL DROP STRUCTURE TO BE USED IN
- 2. DROP PIPE SHALL BE ONE SIZE SMALLER THAN THE SEWER MAIN SIZE WITH A MINIMUM DROP PIPE SIZE OF 150mm DIAMETER AND A MAXIMUM OF 375mm DIAMETER.
- 3. STRAPS SHALL NOT BE PLACED WITHIN 100mm OF ANY MAINTENANCE HOLE SECTION JOINT.
- 4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.



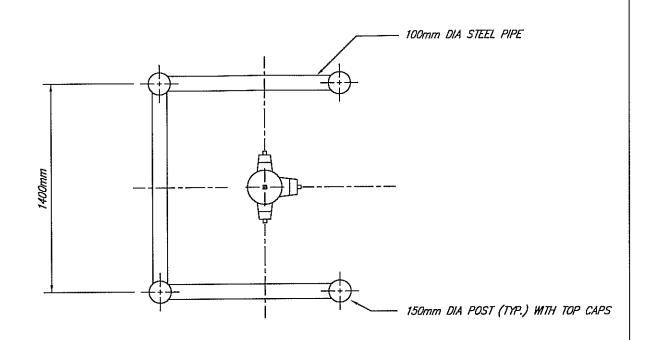
-APPROVED CORED HOLE COMPRESSION-TYPE CONNECTOR

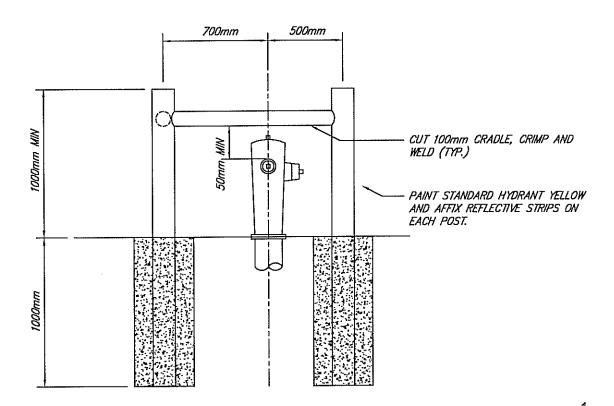




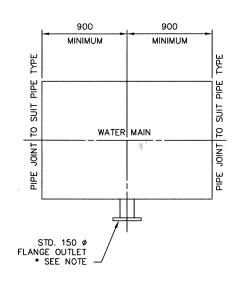


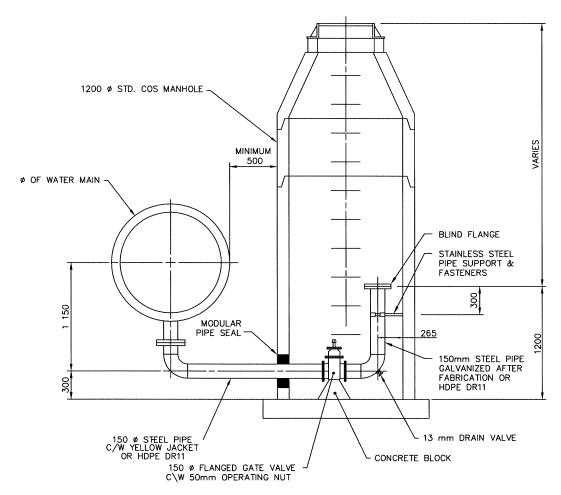






| R E VISIONS 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. |
|-------------------|--|---|
| DRAWN BY | SQUARE HYDRANT GUARD | ENGINEER SCALES: HOR. 1: 25 PLAN NO. 102-0012-004r002 |





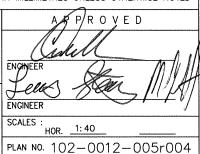
* REFER TO THE STANDARD SPECIFICATION SECTION 15001-9 FOR APPROVED TAPPING SLEEVES.

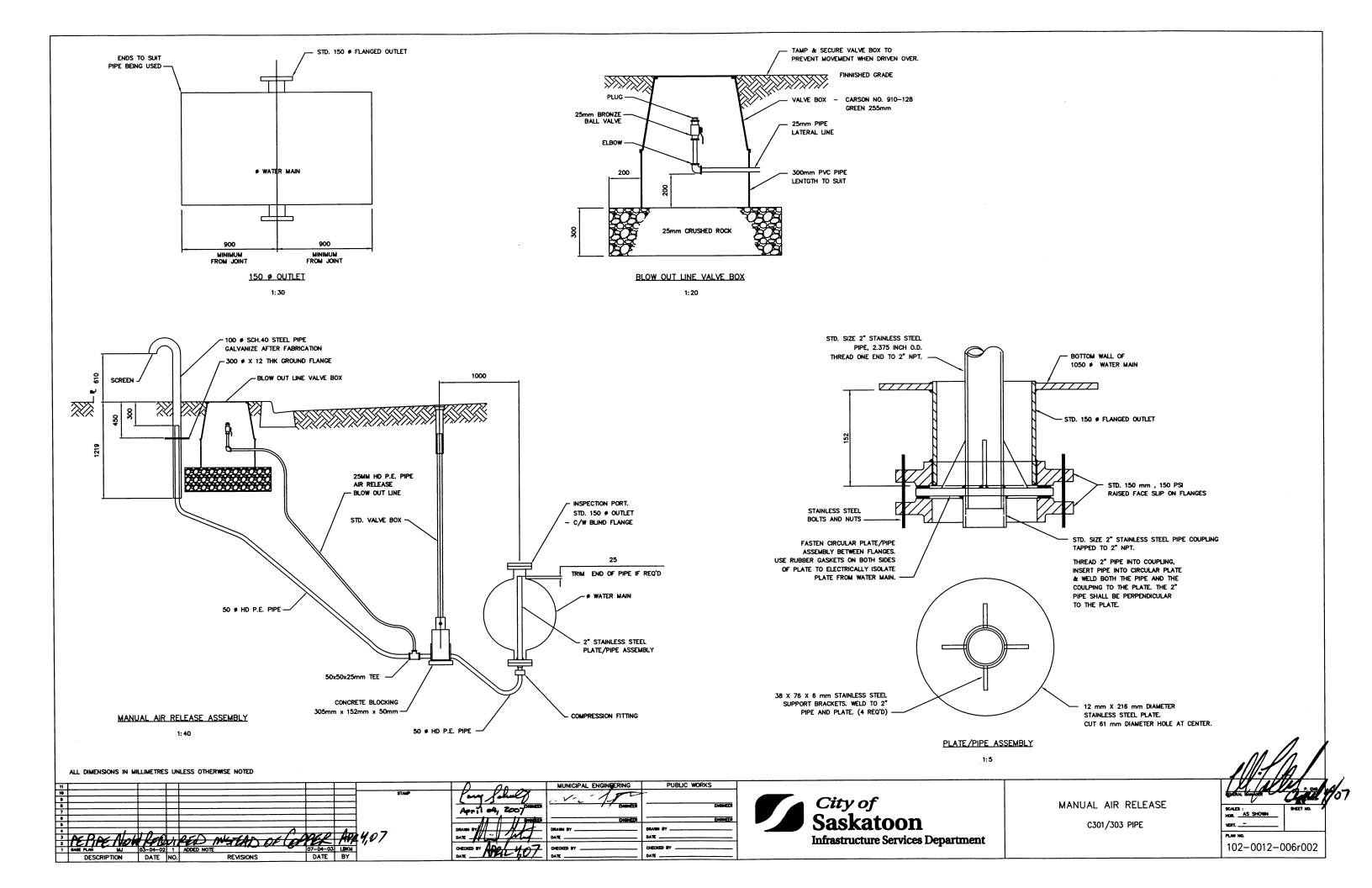
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

| | REVISIONS |
|-----|--|
| 1 | ADDED HDPE DR11 HLO 2013-01-03 |
| 2 | ADDED SPECIFICIATION NOTE & LOWER BLIND FLG ASSEMBLY JAB - 2013 DEC 16 |
| 3 | DECREASED DISTANCE BETWEEN MAIN AND MANHOLE HLO 2014-DEC-15 |
| 4 | |
| DR/ | AWN BY MJ TE 2003-04-02 |

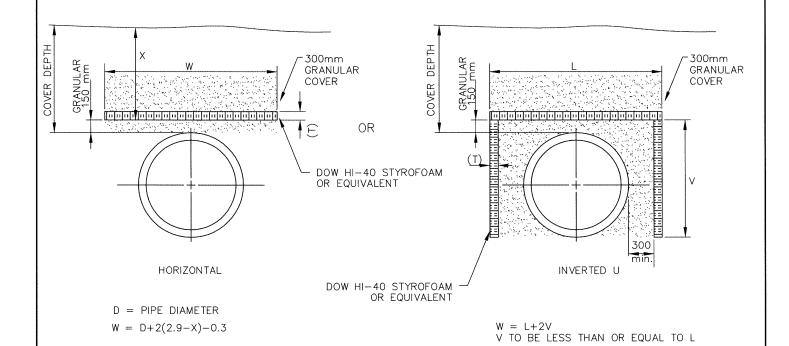


PUMPED DRAIN STRUCTURE



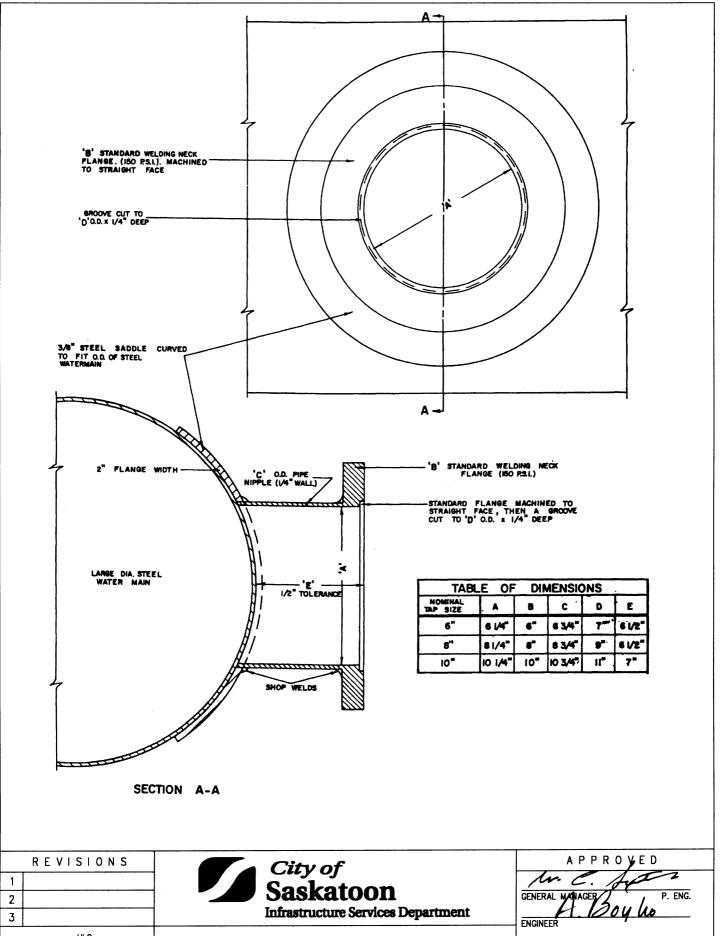


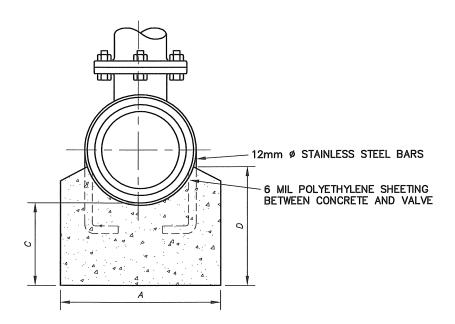
| COVER DEPTH | THICKNESS |
|-------------|---------------|
| m | (T) mm (IN) |
| 1.1 - 1.4 | 90 (3.5) |
| 1.4 - 1.7 | 75 (3.0) |
| 1.7 - 2.0 | 75 (3.0) |
| 2.0 - 2.3 | 50 (2.0) |
| 2.3 - 2.6 | 40 (1.5) |
| 2.6 - 2.9 | 40 (1.5) |
| BELOW 2.9 | - |

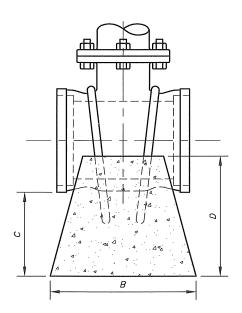


NOTES:
1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED
2. APPLICABLE WHEN USING FILLCRETE OR GRANULAR BACKFILL
3. COMPRESSION STRENGTH OF STYROFOAM: 275 KPa (min)

| ALL DIMENSIONS IN MILLIMETERS UNLE APPLICABLE WHEN USING FILLCRETE COMPRESSION STRENGTH OF STYROFO | OR GRANULAR BACKFILL | MIMA |
|--|------------------------------------|-----------------------------|
| PLAN DESCRIPTION/REVISIONS | City of | |
| 4 | City of Saskatoon | CHIEF ENGINEER JAN 0 8 2016 |
| 3 CLARIFY D = PIPE DIAMETER 2015-DEC-01 HLO | | JAN VU O ZUIO |
| 2 RV UPDATE SPECS. 2012-NOV-20 | Infrastructure Services Department | WAIL |
| 1 JMH 06-01-25 | TYPICAL PIPE INSULATION | ENGINEER |
| DRAWN BYMJ DATE2003-04-02 | TIFICAL FIFE INSULATION | JAN 0 8 2016 DATE |
| SCALE : HOR. NTS VERT. | | PLAN NO. 102-0012-007r004 |



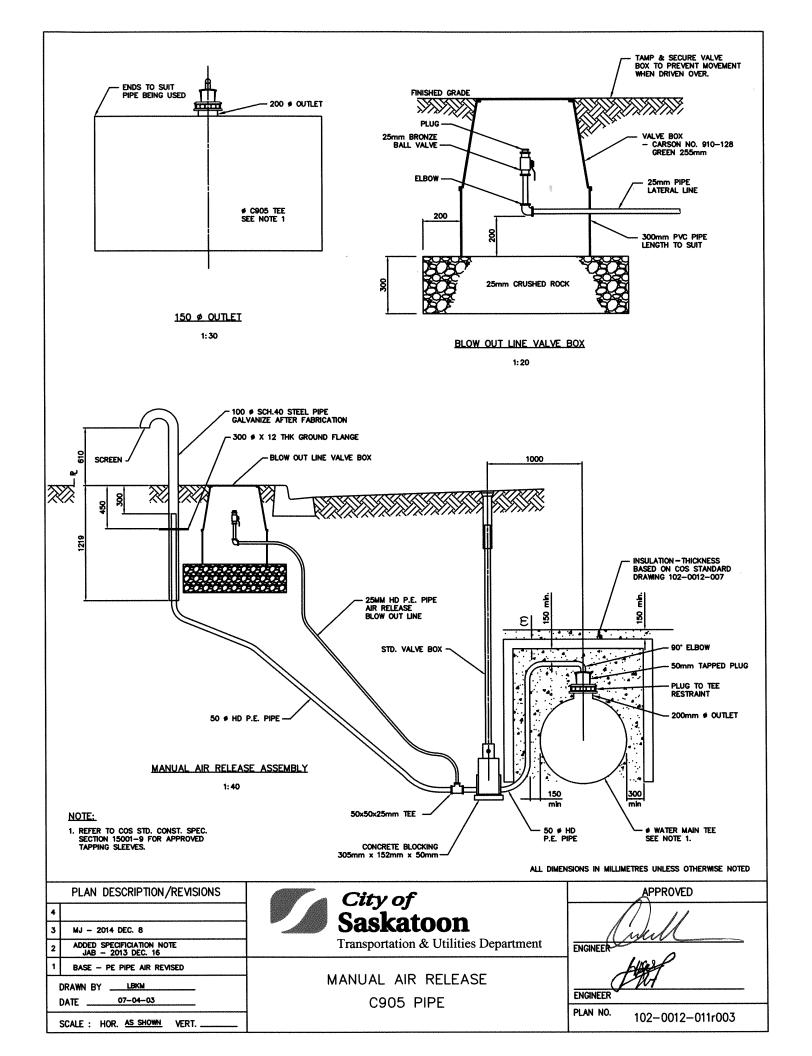


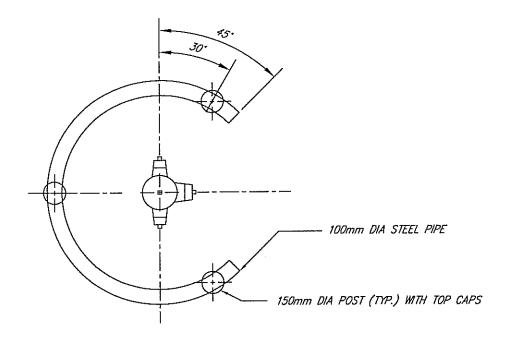


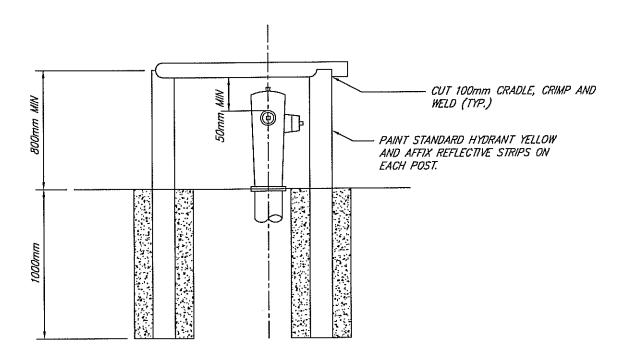
| DIA | Α | В | C | D |
|-----|-----|-----|-----|-----|
| 300 | 600 | 400 | 300 | 400 |
| 350 | 700 | 475 | 350 | 475 |
| 400 | 800 | 550 | 400 | 550 |

NOTE: CONCRETE SHALL BE 20MPa AT 28 DAYS, AND BE SULPHATE RESISTANT

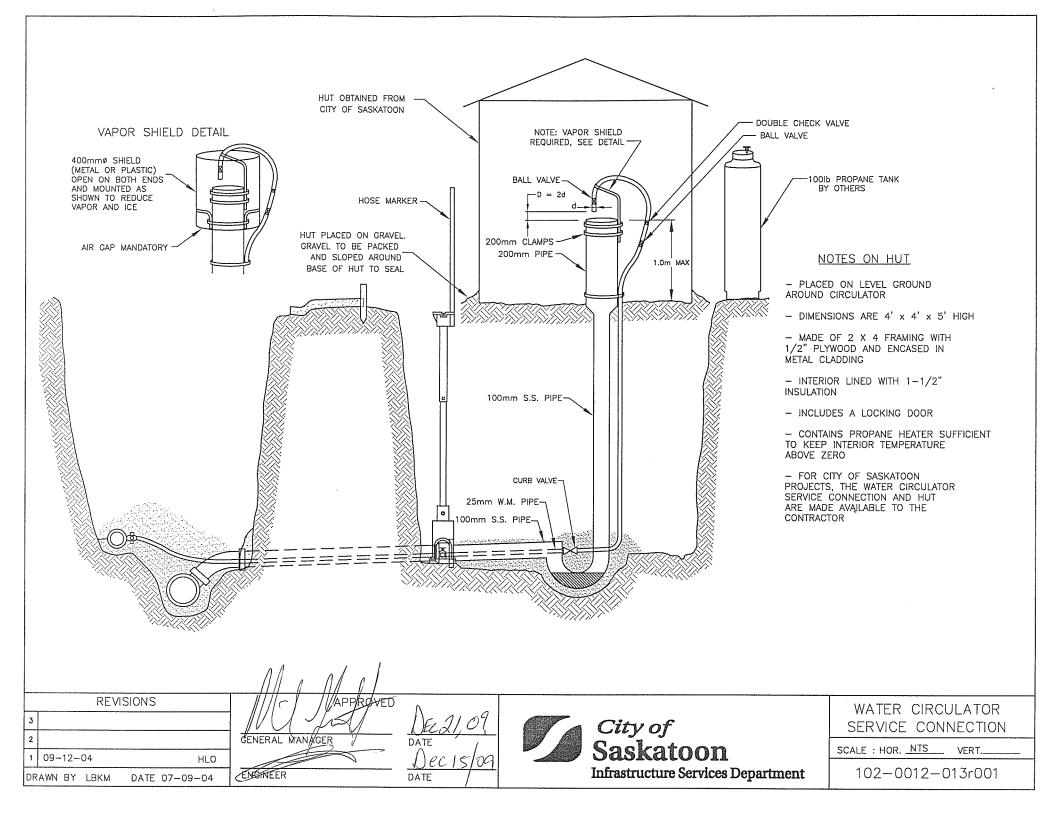
| R E V I S I O N S 1 HLO 2007-01-22 2 ADDED 6 MIL POLY REQUIREMENT HLO 2010-12-14 3 | City of Saskatoon Infrastructure Services Department | A P P R O V E D GENERAL MANAGER P. ENG. |
|---|---|--|
| DRAWN BY | VALVE ANCHORING DETAILS FOR 300 MM & LARGER VALVES | ENGINEER SCALES: HOR. 1:10 |
| DATE | | PLAN NO. 102-0012-010r003 |

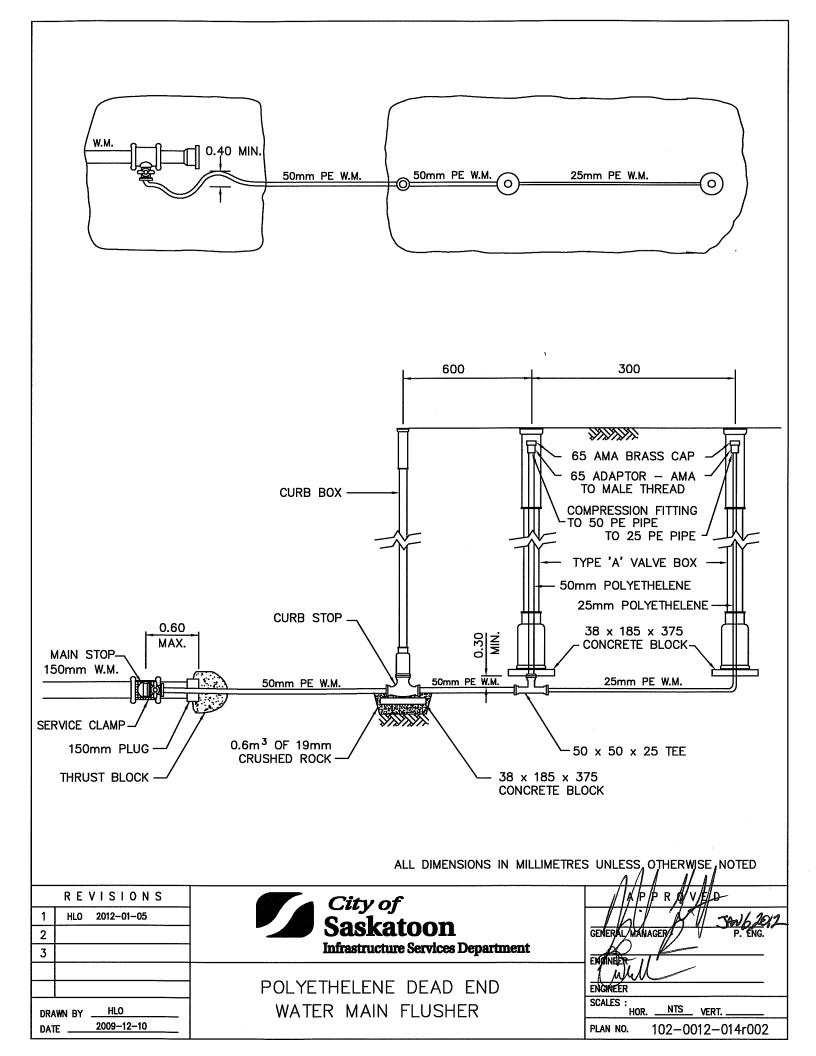


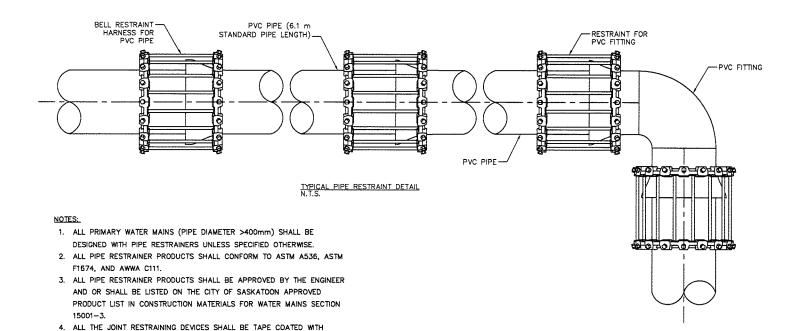




| REVISIONS 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. |
|--|--|---|
| DRAWN BY RWDT DATE 08-10-14 CHECKED BY DATE | CIRCULAR HYDRANT GUARD | ENGINEER SCALES: HOR. 1: 25 PLAN NO. 102-0012-012r001 |







BELL RESTRAINT HARNESS FOR C905 PVC PIPE (OR APPROVED EQUIVALENT)

SPECIFICATION.

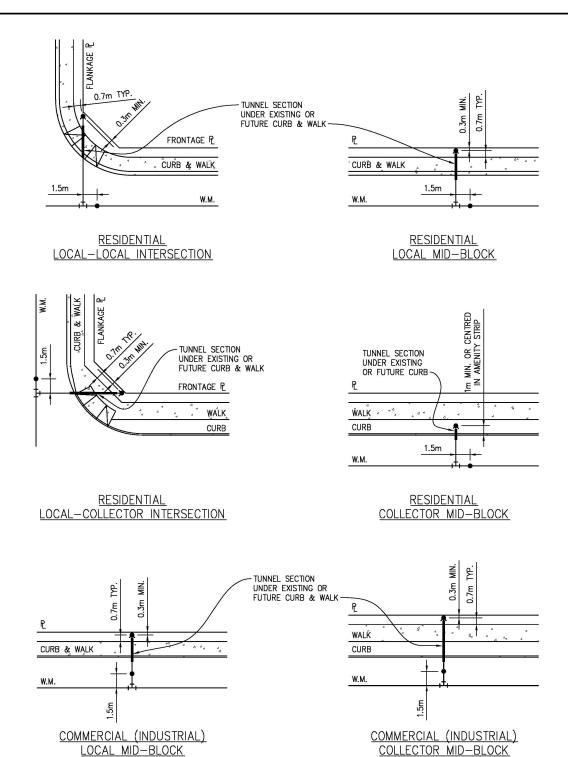
DENSO WRAP/PASTE AS DETAILED IN SECTION 01005-31 OF THE

| NOMINAL PIPE SIZE | PIPE OD | MAXIMUM BELL OD CLEARANCE | THRUST BOLT | OVERALL LENGTH |
|----------------------|------------|------------------------------|-------------|-------------------|
| in/mm | in/mm | in/mm | NUMBER | in/mm |
| 18/450 | 19.5/495 | 24.88/632 | 6 | 27.76/705 |
| 20/525 | 21.6/549 | 27.13/689 | 7 | 30.01/762 |
| 24/600 | 25.8/655 | 31.63/803 | 8 | 35/889 |
| 30/750 | 32.0/813 | 39.25/997 | 10 | 42.88/1089 |
| 36/900 | 38.3/973 | 46.13/1172 | 12 | 49.76/1264 |
| 42/1050 | 44.5/1130 | 49.00/1245 | 14 | 54.12/1375 |
| 48/1200 | 50.8/1290 | 56.00/1422 | 16 | 61.08/1551 |

RESTRAINT FOR C905 PVC PIPE AT PVC FITTINGS (OR APPROVED EQUIVALENT)

| NOMINAL PIPE SIZE | PIPE OD | MAXIMUM BELL OD CLEARANCE | THRUST BOLT | OVERALL LENGTH |
|----------------------|------------|------------------------------|-------------|-------------------|
| in/mm | in/mm | in/mm | NUMBER | in/mm |
| 18/450 | 19.5/495 | 24.88/632 | 6 | 18/457 |
| 20/525 | 21.6/549 | 27.13/689 | 7 | 18/457 |
| 24/600 | 25.8/655 | 31.63/803 | 8 | 28/711 |
| 30/750 | 32.0/813 | 39.25/997 | 10 | 28/711 |
| 36/900 | 38.3/973 | 46.13/1172 | 12 | 28/711 |
| 42/1050 | 44.5/1130 | 49.00/1245 | 14 | 36/914 |
| 48/1200 | 50.8/1290 | 56.00/1422 | 16 | 48/1219 |

| PLAN DESCRIPTION/REVISIONS | City of | //////APPROVED |
|---|--|---------------------------|
| 3 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
| 1 RESTRAINT JOINTS ON PVC PIPE DRAWN BY HCS DATE 2013-JUN-04 | RESTRAINT JOINTS ON C905 PVC PIPE | ENGINEER SECTION ENGINEER |
| SCALE : HOR. NTS VERT. | | PLAN NO. 102-0012-015r001 |

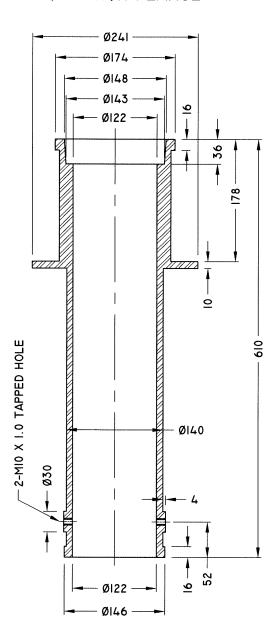


NOTES:

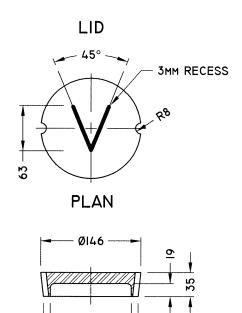
- ALL HYDRANT LEADS CONNECTED TO MAINS 300mm OR LARGER SHALL BE VALVED.
- 2. ALL HYDRANT LEADS IN COMMERCIAL, INDUSTRIAL, AND HIGH DENSITY RESIDENTIAL AREAS SHALL BE VALVED.
- 3. VALVES ON MAINS SHALL BE INSTALLED PER CITY'S STANDARDS.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APP | ROVALS |
|---|--|-------------|-----|----------------------|--|------------------|
| 1 | ORIGINAL DRAWING | 2013-DEC-12 | JAB | City of Saskatoon | May | |
| 2 | UPDATED TO ALIGN WITH THE DESIGN & DEVELOPMENT STANDARDS | 2022-AUG-02 | DLH | Saskatoon | A STATE OF THE STA | 94 |
| 2 | MANUAL AND POLICY CO7-030 - STREET DESIGN | 2022-AUG-02 | DLH | oublettoon. | <i>O 19</i> | = \(\alpha \) = |
| | | | | | SIGNATURE | SIGNATURE |
| | | | | FIDE LIVEDANT | Nisar Khan | Mitchell Parker |
| Г | | | | FIRE HYDRANT | NAME | NAME |
| Г | | | | STANDARD LOCATIONS | Jan 19, 2023 | Jan 19, 2023 |
| Г | | | | STANDARD ECOATIONS | DATE SIGNED | DATE SIGNED |
| Н | | | | | SCALES: PLAN NO. | |
| H | | | | | VERT. 102 | 2-0012-016r002 |

TOP WITH FLANGE



SECTION THRU MAIN BODY



CAST IRON FUSION BONDED EPOXY

UNLESS OTHERWISE SPECIFIED THE MATERIALS AND APPLICATION OF THIS COATING SHALL CONFORM TO THE AWWA STANDARD C213-96.

ØII8

Ø138

SECTION

THE COATING MATERIAL SHALL BE A 100% SOLID, THERMOSETTING, FUSION BONDED, DRY POWDER EPOXY RESIN, APPROVED FOR CONTACT WITH POTABLE WATER BY THE NATIONAL SANITATION FOUNDATION (NSF). POWDERS SHALL BE ONE OF THE FOLLOWING PRODUCTS OR APPROVED EQUAL:

VALSPAR, D 1003 LD VALSPAR, G 1003 RB NAP-GARD MARK X 7-2500 3M, SCOTCHKOTE 134

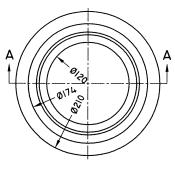
THE SURFACE PREPARATION SHALL CONFORM TO SEC. 3.2 OF THE AWWA STANDARD C213-96. THESE COATINGS SHALL BE THE FLUIDIZED BED METHOD OR THE ELECTROSTATIC POWDER SPRAY GUN METHOD. THE COATING THICKNESS SHALL BE 0.50mm (15 MIL) MINIMUM, 0.64mm (20 MIL) MAXIMUM.

MAM

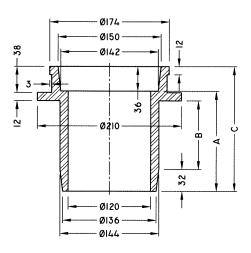
MATERIAL SPECIFICATIONS AND MASS:

GREY CAST IRON CLASS 20 ASTM A48 (LATEST EDITION)

| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 0 8 2016 DATE |
|-------------------------------------|---|-------------------------------------|
| DRAWN BY | TYPE 'C' VALVE BOX TOP AND LID | ENGINEER PLAN NO. 102-0012-017r001 |



PLAN



SECTION A-A

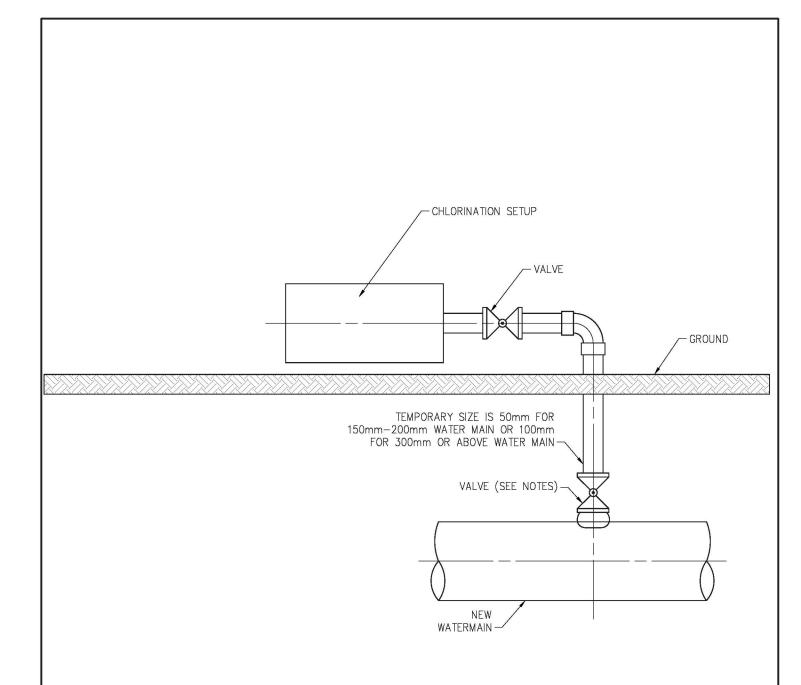
| MASS | RING | Α | В | С |
|------------------|------|-----|-----|-----|
| 5.13KG(II.40LBS) | NO.I | 50 | 0 | 86 |
| 5.49KG(12.2ILBS) | NO.2 | 75 | 25 | 111 |
| 5.99KG(I3.3ILBS) | NO.3 | 100 | 50 | 136 |
| 7.56KG(I6.80LBS) | NO.4 | 150 | 100 | 186 |

MMA

- * GENERAL TOLERANCES ±1
- * NO DEVIATION SHALL BE ACCEPTABLE FOR DIMENSIONS WHICH ARE LESS THEN 10MM

MATERIAL SPECIFICATIONS AND MASS:
GREY CAST IRON CLASS 20 ASTM A48 (LATEST EDITION)

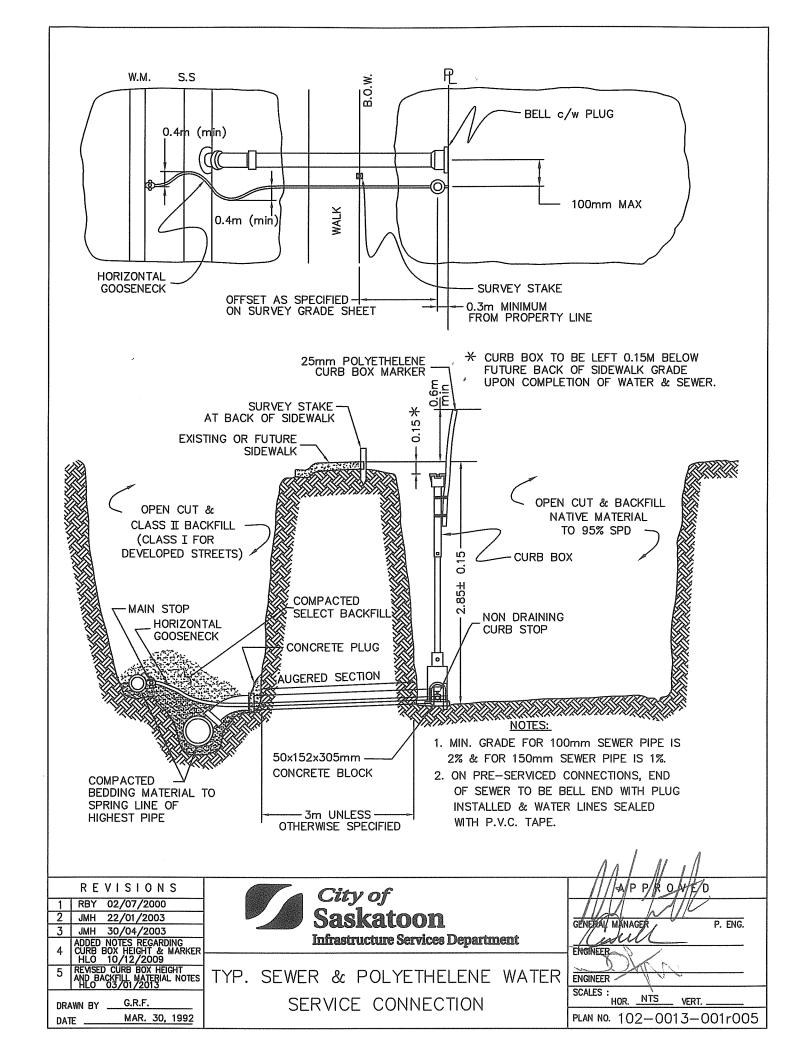
| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Transportation & Utilities Department | CHIEF ENGINEER JAN 0 8 2016 DATE |
|---|---|------------------------------------|
| DRAWN BY HLO DATE 2015-DEC-31 SCALE : HORNTS VERTNTS | TYPE 'C' LIFTER RINGS | ENGINEER PLAN NO. 102-0012-018r001 |

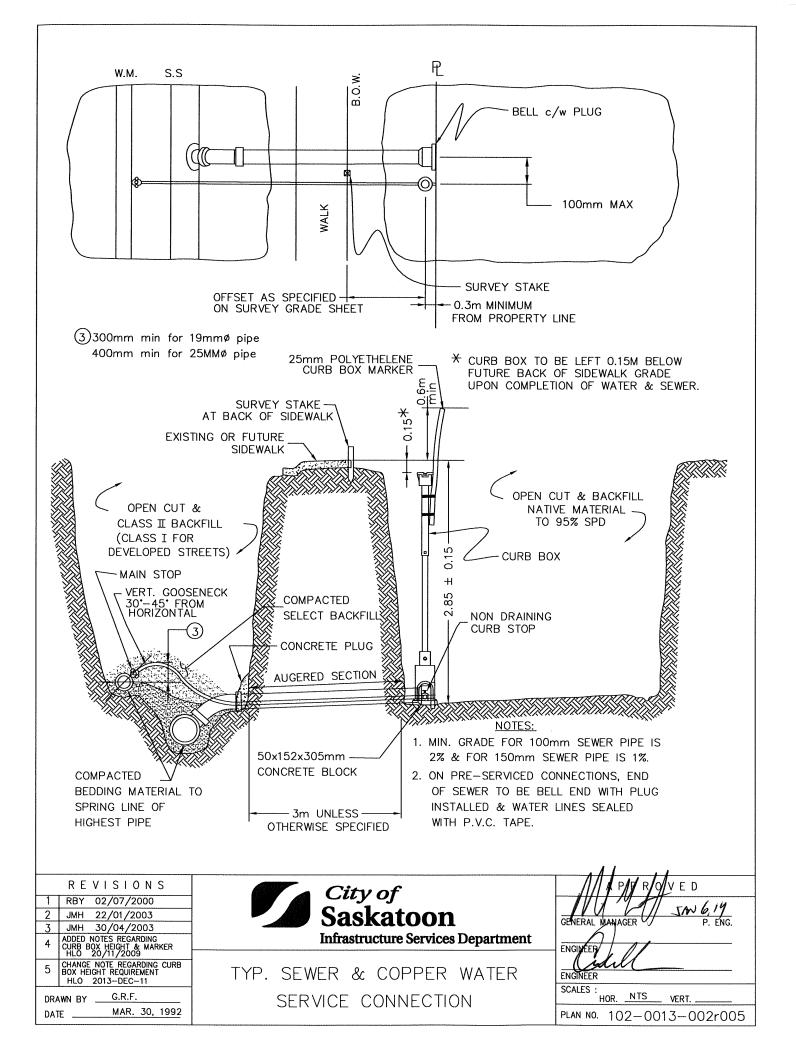


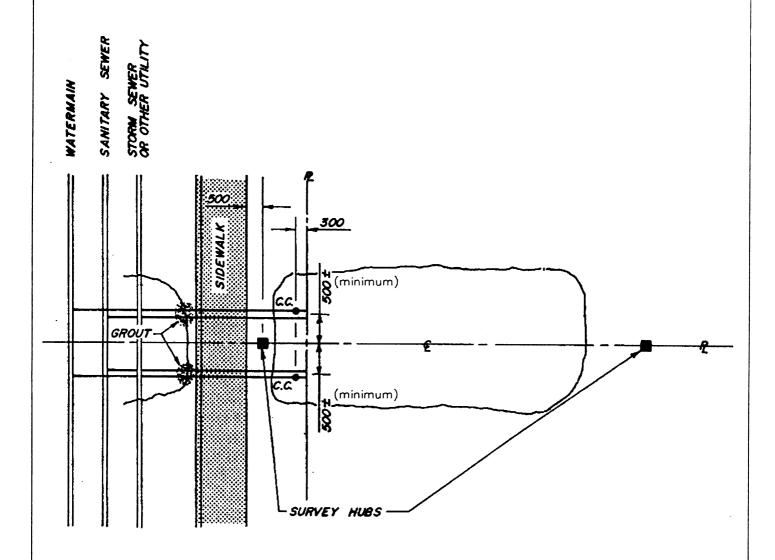
NOTES

- 1) GATE VALVE FOR 100mm TAPPING
 2) MAIN STOP FOR 25mm AND 50mm TAPPINGS

| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---|-------------|-----|--------------------------|-------------------------------------|-------------------|
| 1 | ORIGINAL STANDARD SPECIFICATION DRAWING | 2021-MAY-03 | IJK | City of Saskatoon | Sohrab Khan | |
| H | | | | Saskatoon | Sohrab Khan (May 3, 2021 19:17 MDT) | |
| H | | | | | SIGNATURE | SIGNATURE |
| | | | | CHLORINE INJECTION POINT | Sohrab Khan NAME | Maciej Jurkiewicz |
| H | | | | SHESKINE INSECTION TOTAL | May 3, 2021 | May 3, 2021 |
| H | | | | | DATE SIGNED | DATE SIGNED |
| | | | | | SCALES: PLAN NO. | 0010 005-001 |
| L | | | | | VERT. 102- | -0012-025r001 |

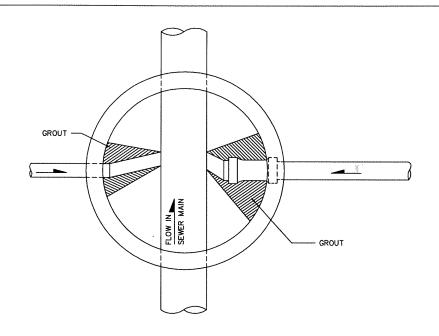


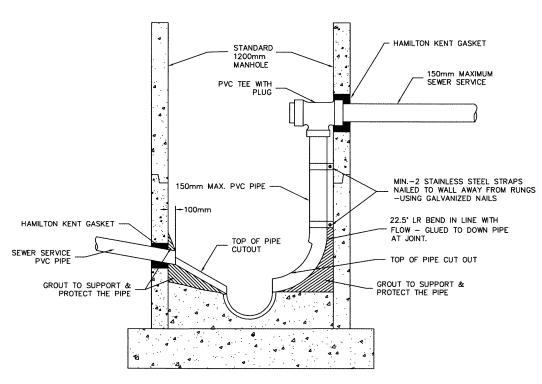




- I. CURB BOX (WATER LINES) TO BE LAYED TO THE OUTSIDE
- 2. CENTER LINE MUST BE LOCATED & DUPLEX E.O.P. &
- 3. GRADES FOR BOTH CONNECTIONS WILL BE IDENTICAL UNLESS OTHERWISE STIPULATED.
- 4. DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SHOWN.

| R E V I S I O N S 1 RBY 02/02/2000 2 3 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL MANAGER SOY LE D. ENG. ENGINEER |
|--|--|--|
| DRAWN BY R.F. DATE APR. 1, 1992 CHECKED BY | TYPICAL DUPLEX WATER AND SEWER SERVICE CONNECTIONS | ENGINEER SCALES: HOR. N.T.S. VERT. |
| DATE | 08025-3 | PLAN NO. 102-0013-003r001 |





NOTES:

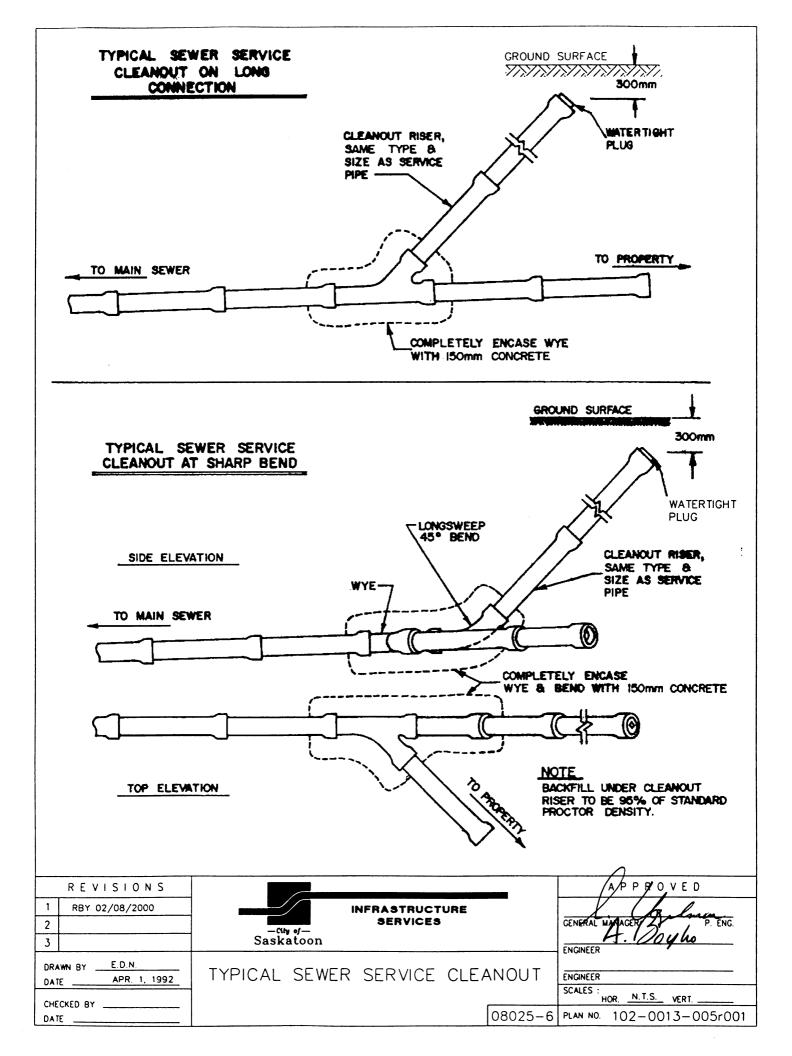
- INTERIOR DROP STRUCTURE TO BE USED WHERE DIFFERENCE BETWEEN MAIN AND SERVICE PIPE CROWNS EXCEEDS 750mm.
- 2) SERVICE ENTRANCE & DROP STRUCTURE MUST BE LOCATED CLEAR OF MH RUNGS.
- 3) MAXIMUM 150mm DIAMETER SERVICE PIPE FOR INTERNAL DROP STRUCTURES.

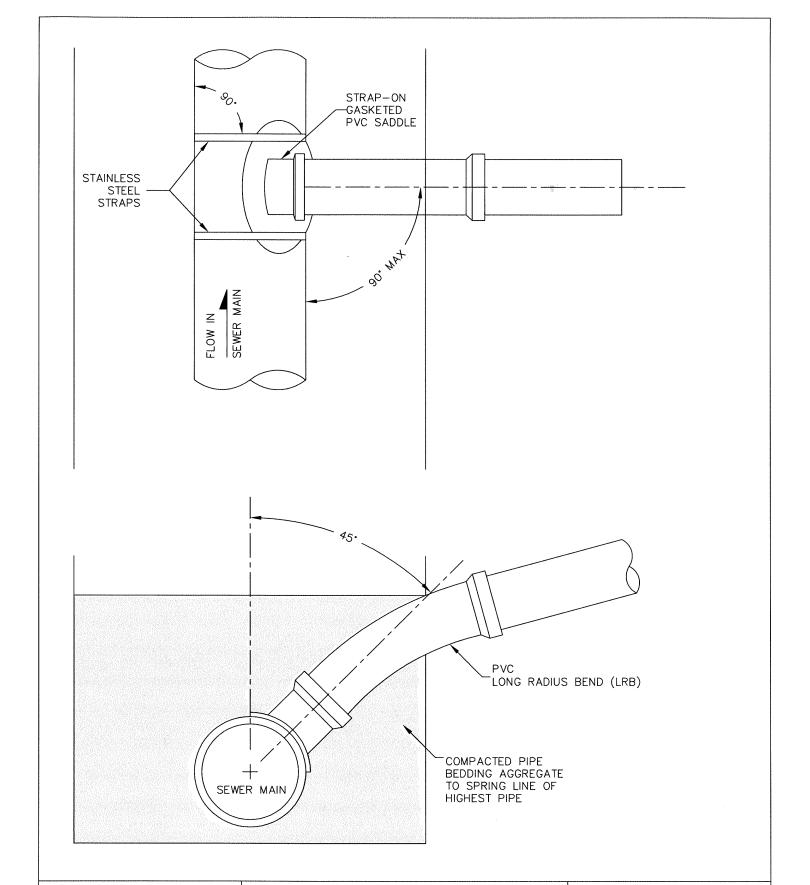
| 1 2 3 | R E V I S I O N S RBY 2000-08-02 HLO 2012-01-05 DJC 2012-01-05 | City of Saskatoon Infrastructure Services Department | |
|-------|---|--|--|
| DAT | WN BY E.D.N. E APR. 1, 1992 CKED BY | INTERIOR DROP STRUCTURE AT SANITARY SEWER MANHOLE | |



SCALES : 4 HOR. N.T.S. VERT.

plan no. 102–0013–004r003



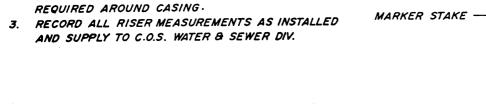


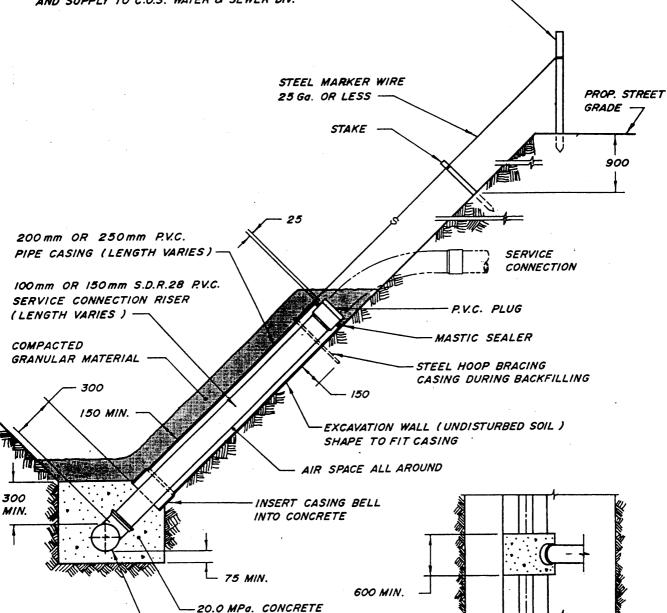
| 4 | PLAN DESCRIPTION/REVISIONS | City of Saskatoon | APPROVED |
|---|------------------------------------|---------------------------------------|---------------------------|
| 2 | DJC 2014-DEC-08 | Transportation & Utilities Department | CHIEF ENGINEER |
| 1 | RBY 02/08/2000 | | free States |
| | ORAWN BYE.D.N DATE APR. 1, 1992 | TYPICAL SEWER TAPPING | ENGINEER |
| | SCALE : HOR. N.T.S. VERT. N.T.S. | | PLAN NO. 102-0013-007r002 |

NOTE

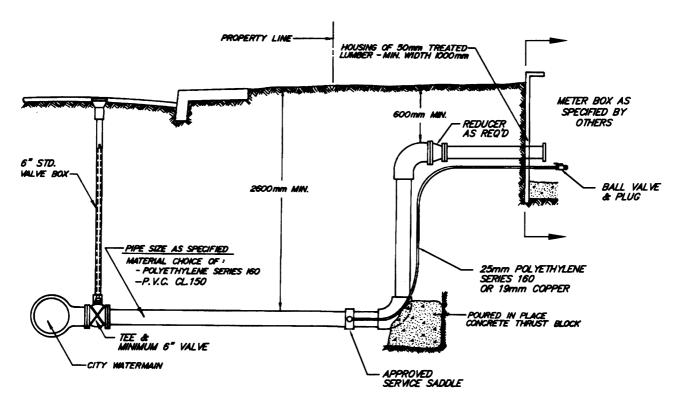
SEWER MAIN TEE -

- I. TEE & JUNCTION TO BE SUPPORTED TO UNDISTURBED SOIL WITH POURED IN PLACE SULPHATE RESISTANT CONCRETE, MAX. 20mm AGGREGATE.
- 2. BACKFILL EXCAVATION IN LIFTS, COMPACTED GRANULAR MATERIAL TO 150mm MIN.





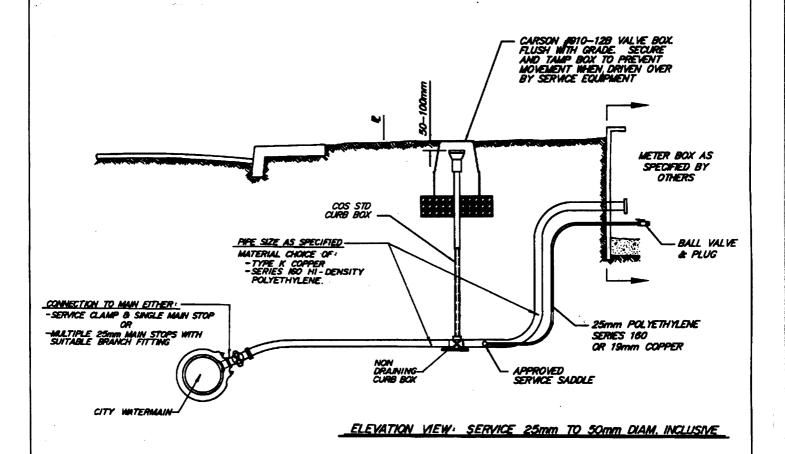
| R E V I S I O N S 1 RBY 02/02/2000 2 3 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL WHAGER SOY LO P. ENG. ENGINEER |
|--|---|--|
| DRAWN BY L.C.I. DATE APR. 1, 1992 | P.V.C. SERVICE CONNECTION | ENCINEER |
| CHECKED BY | RISER ASSEMBLY | SCALES : HOR. N.T.S. VERT |



ELEVATION VIEW: SERVICE KOOMM DIAM, & LARGER

NOTE: ALL JOINTS RESTRAINED

| R E V I S I O N S 1 RBY 02/08/2000 2 MJ 2006-01-31 3 | INFRASTRUCTURE SERVICES Saskatoon | GENERAL MANGAGER 2 P. ENG. |
|---|--|---|
| DRAWN BY E.D.N. DATE APR. 1, 1992 CHECKED BY DATE | 100mm SEASONAL WATER SERVICE CONNECTION | ENGINEER SCALES: HOR. N.T.S. VERT PLAN NO. 102-0013-009r001 |



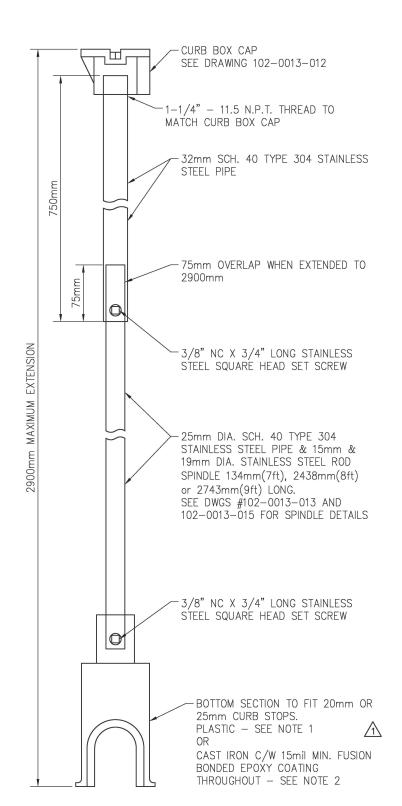
NOTES .

U NETER & CONTROLS TO BE ONE STANDARD SIZE SMALLER THAN PIPE.

2) SOLVENT-WELD FITTINGS & COMPANION FLANGES MAY BE USED WITH RV.C. PIRE FOR ALL WORK. OFF-STREET.

3) ALL WORK ON STREET TO CONFORM TO STE CITY SPEC. FOR SERVICE CONNECTIONS.

| 1 2 3 | R E V I S I O N S RBY 02/08/2000 MJ 2008-01-31 | INFRASTRUCTURE SERVICES Saskatoon | OENERAL MARAGER 1 P. ENG. DAGNEER DAGNEER |
|---|--|---|---|
| DRAWN BY E.D.N APR. 1, 1992 CHECKED BY DATE | | 50mm SEASONAL WATER SERVICE CONNECTION | ENGINEER SCALES: HOR. N.T.S. VERT PLAN NO. 102-0013-010r001 |



NOTES A

- . PLASTIC BOTTOM SECTION
 NON-CORRODIBLE ACRYLONITRILE BUTADIENE STYRENE
 (ABS) PLASTIC OR TOLUENE DIISOCYANATE
 (TDI)-TERMINATED LIQUID URETHANE PREPOLYMER.
- 2. CAST IRON BOTTOM SECTION C/W FUSION BONDED EPOXY
 UNLESS OTHERWISE SPECIFIED THE MATERIALS AND APPLICATION OF THIS COATING SHALL CONFORM TO

THE AWWA STANDARD C213-96. THE COATING MATERIAL SHALL BE A 100% SOLID, THERMOSETTING, FUSION BONDED, DRY POWDER EPOXY RESIN, APPROVED FOR CONTACT WITH POTABLE WATER BY THE NATIONAL SANITATION FOUNDATION (NSF). POWDERS SHALL BE ONE OF THE FOLLOWING PRODUCTS OR APPROVED EQUAL:

VALSPAR, D 1003 LD VALSPAR, G 1003 RB NAP-GARD MARK X 7-2500 3M, SCOTCHKOTE 134

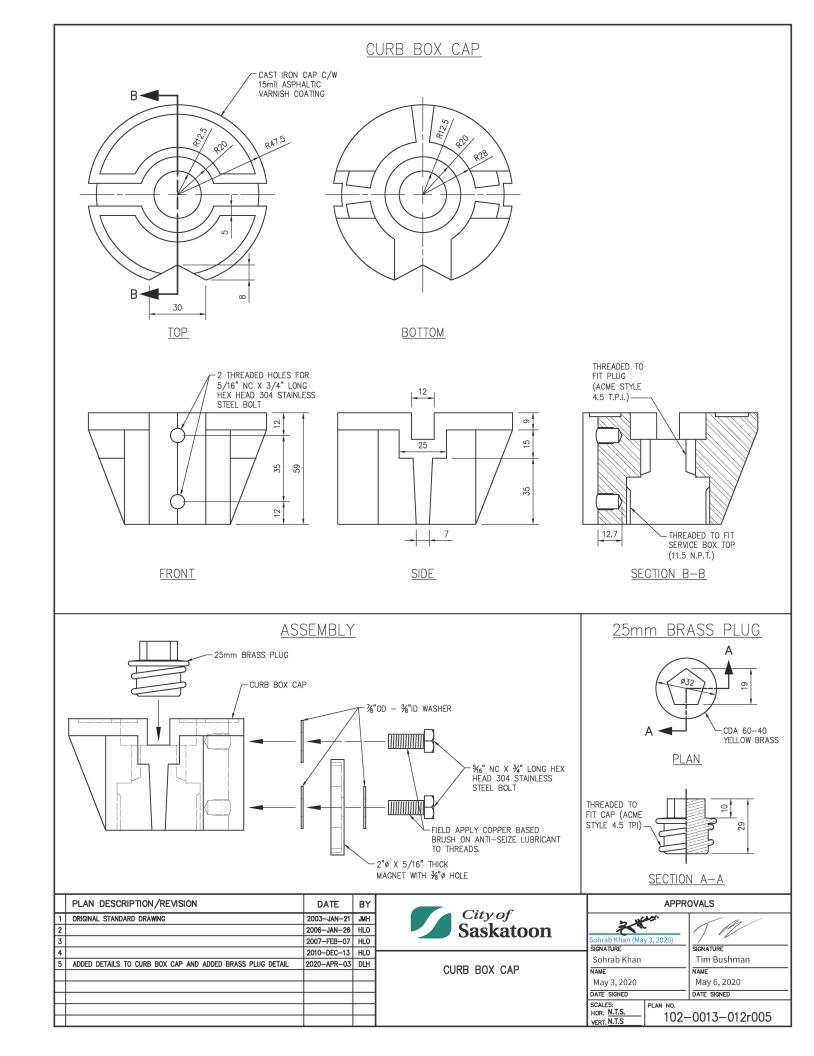
THE SURFACE PREPARATION SHALL CONFORM TO SEC. 3.2 OF THE AWWA STANDARD C213-96. THESE COATINGS SHALL BE APPLIED TO A PREHEATED SURFACE BY THE FLUIDIZED BED METHOD OR THE ELECTROSTATIC POWDER SPRAY GUN METHOD. THE COATING THICKNESS SHALL BE 0.38MM (15 MIL) MINIMUM, 0.64 MM (25 MIL) MAXIMUM.

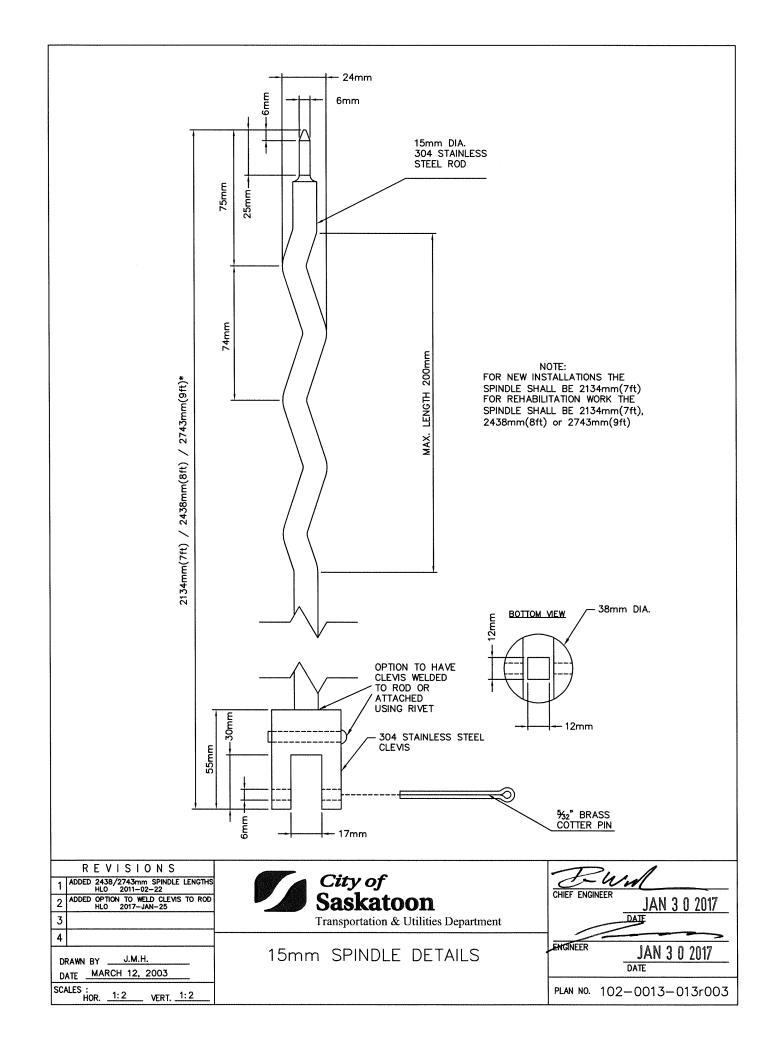
| | PLAN DESCRIPTION/REVISION | DATE | BY | ĺ |
|---|---|-------------|-----|---|
| 1 | ORIGINAL STANDARD DRAWING | 2003-MAR-10 | JMH | ı |
| 2 | | 2006-JAN-26 | HLO | ı |
| 3 | | 2007-FEB-07 | HLO | ı |
| 4 | | 2010-DEC-20 | HL0 | r |
| 5 | ADDED 2438/2743mm SPINDLE LENGTHS | 2011-FEB-22 | HLO | ı |
| 6 | ADDED PLASTIC BOTTOM SECTION & NOTE, REARRANGED NOTE ORDER, | 2020-APR-01 | DLH | ı |
| 6 | AND CORRECTED COATING THICKNESSES | 2020-APR-01 | DLH | ı |
| | | | | ı |
| | | | | ı |
| | | | | ı |

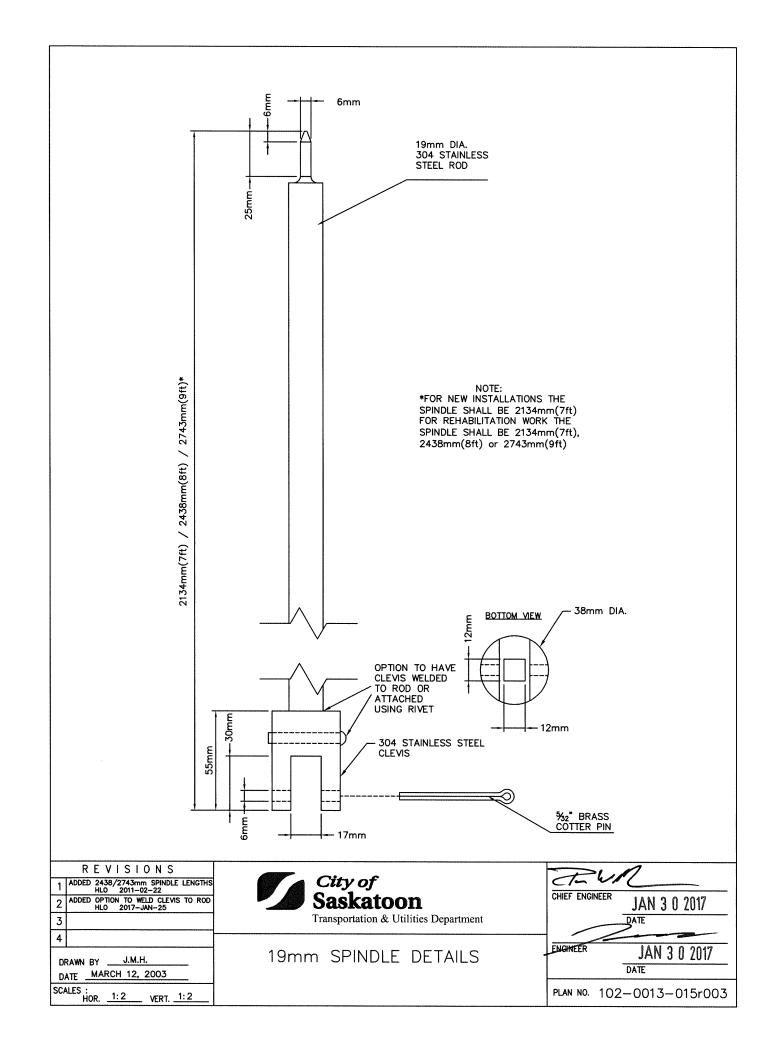


STANDARD CURB BOX

| APPROVALS | | |
|-----------------------------------|---------------|--|
| Sohrab Khan (May 3, 2020) | 11/1 | |
| SIGNATURE | SIGNATURE | |
| Sohrab Khan | Tim Bushman | |
| NAME | NAME | |
| May 3, 2020 | May 6, 2020 | |
| DATE SIGNED | DATE SIGNED | |
| SCALES: PLAN NO. HOR. N.T.S. 102- | -0013-011r006 | |

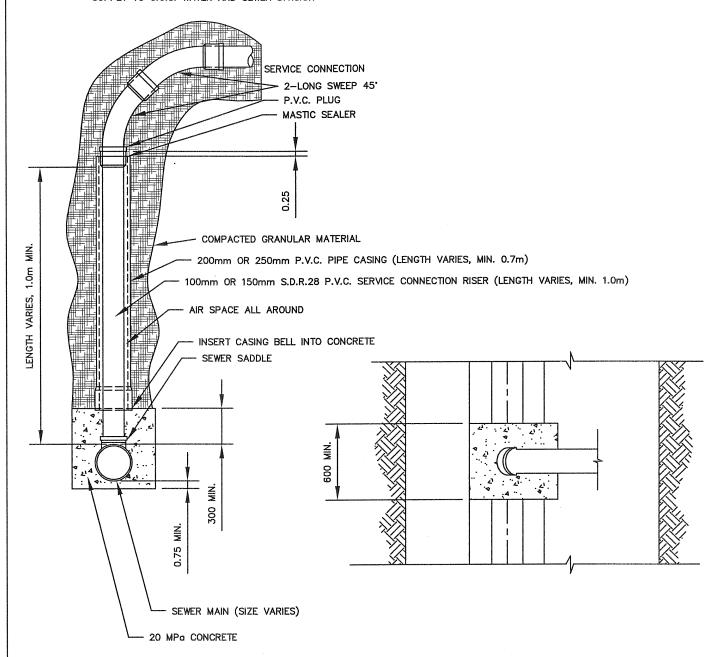






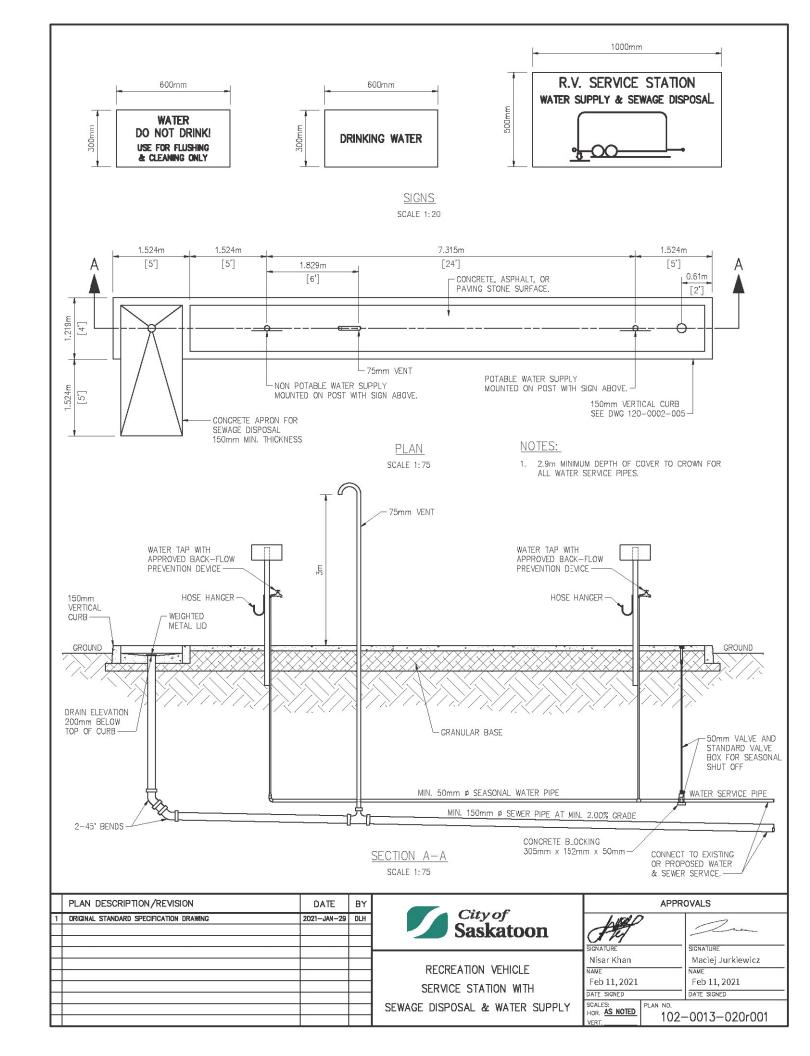


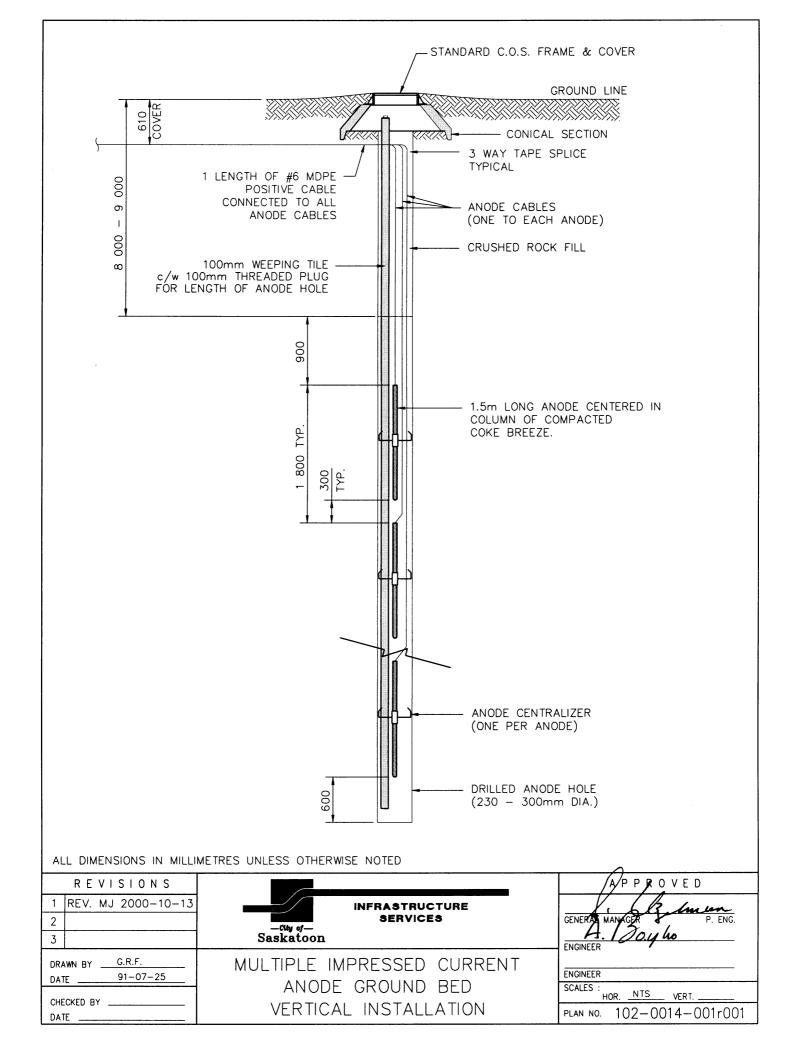
- 1. TEE & JUNCTION TO BE SUPPORTED TO UNDISTURBED SOIL WITH POURED IN PLACE SULPHATE RESISTANT CONCRETE
- BACKFILL EXCAVATION IN LIFTS, COMPACTED GRANULAR MATERIAL TO 150mm MIN.
- 3. RECORD ALL RISER MEASUREMENTS AS INSTALLED AND SUPPLY TO C.O.S. WATER AND SEWER DIVISION

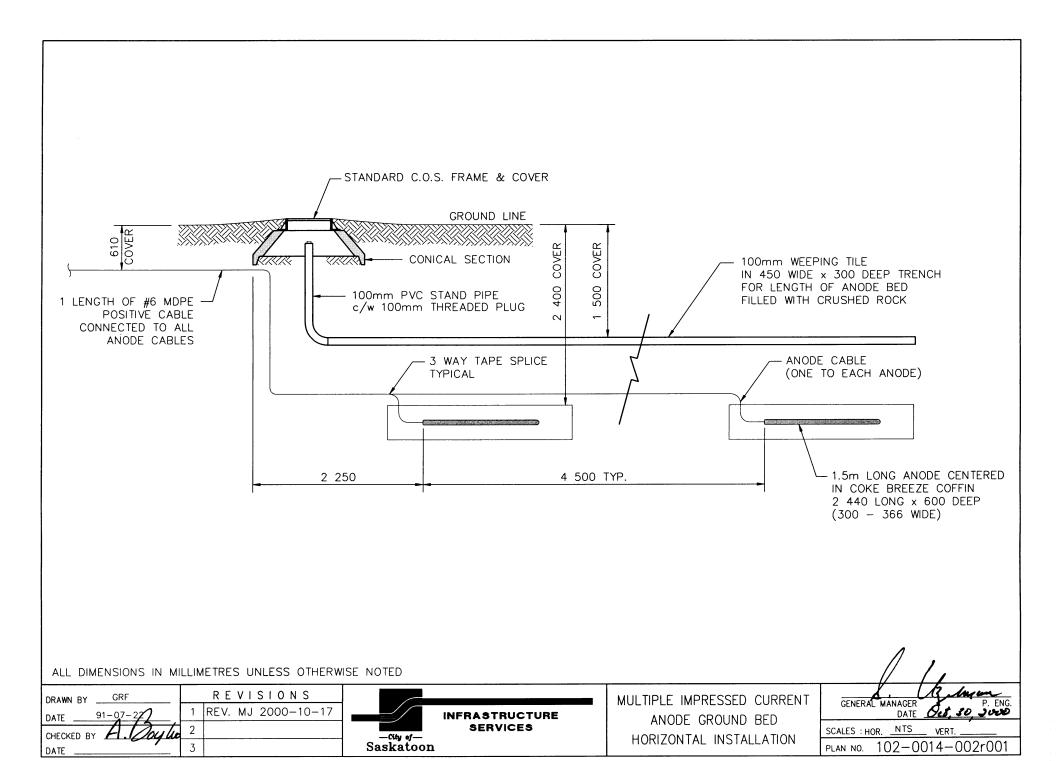


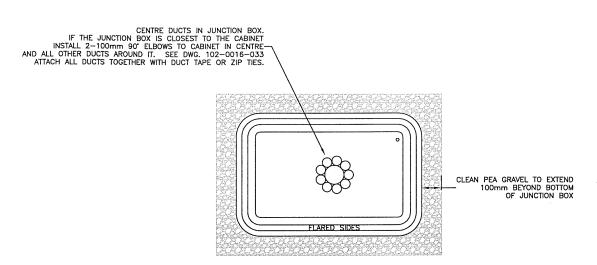
*RISERS PERMITTED WHEN SEWER INVERT MINIMUM 5.0m BELOW PAVEMENT

| REVISIONS 1 2 3 | City of Saskatoon Infrastructure Services Department | APPROVED GENERAL MANAGER ENGINEER |
|--|--|--|
| DRAWN BY RAM DATE MAR. 27, 2007 CHECKED BY DATE | PVC SERVICE CONNECTION VERTICAL RISER ASSEMBLY (RECONSTRUCTION ONLY) | ENGINEER SCALES: HOR. N.T.S. VERT. PLAN NO. 102-0013-016r001 |





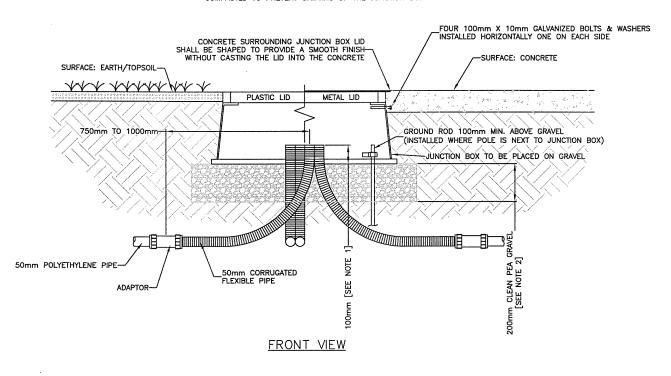




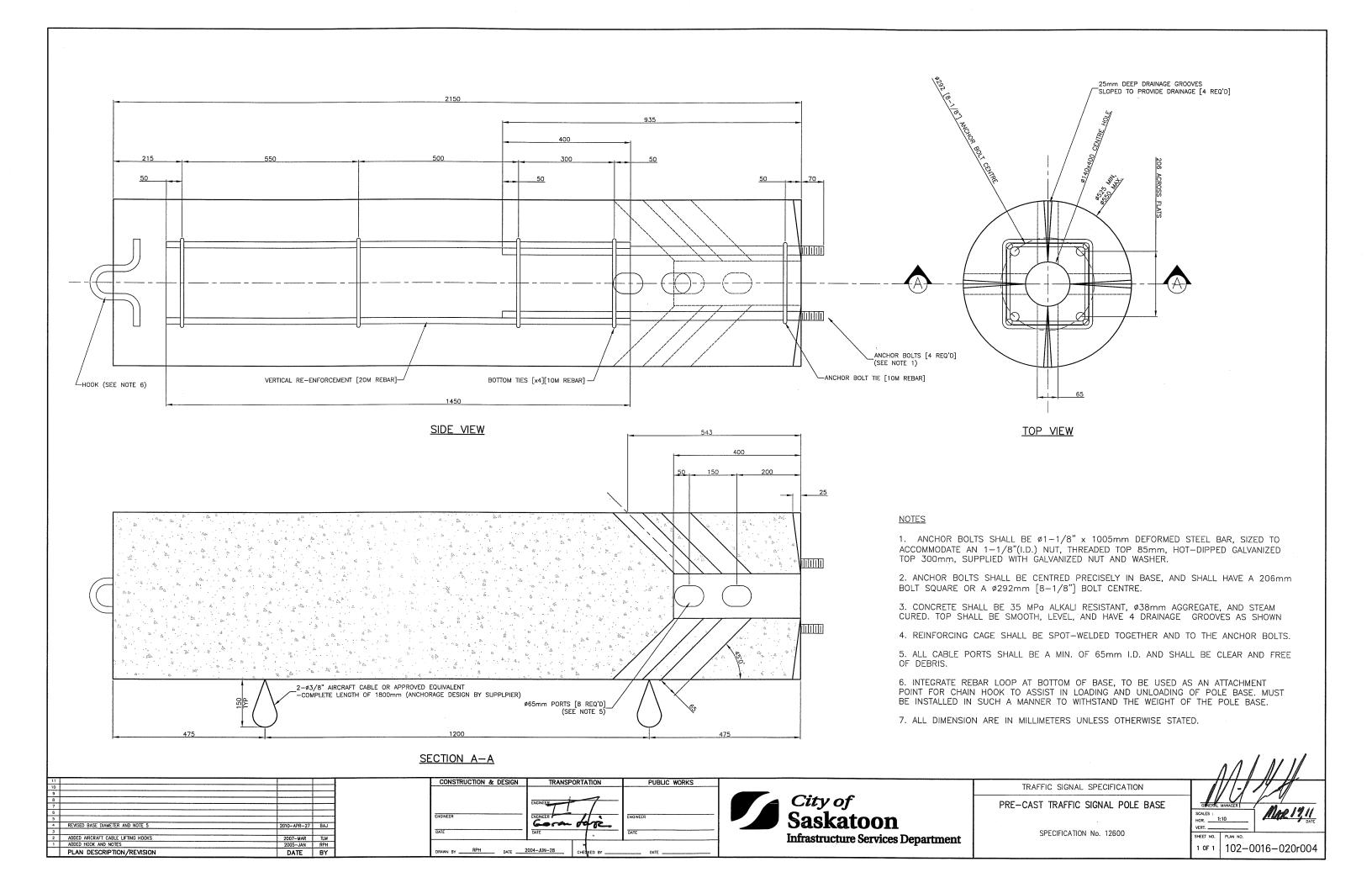
TOP VIEW

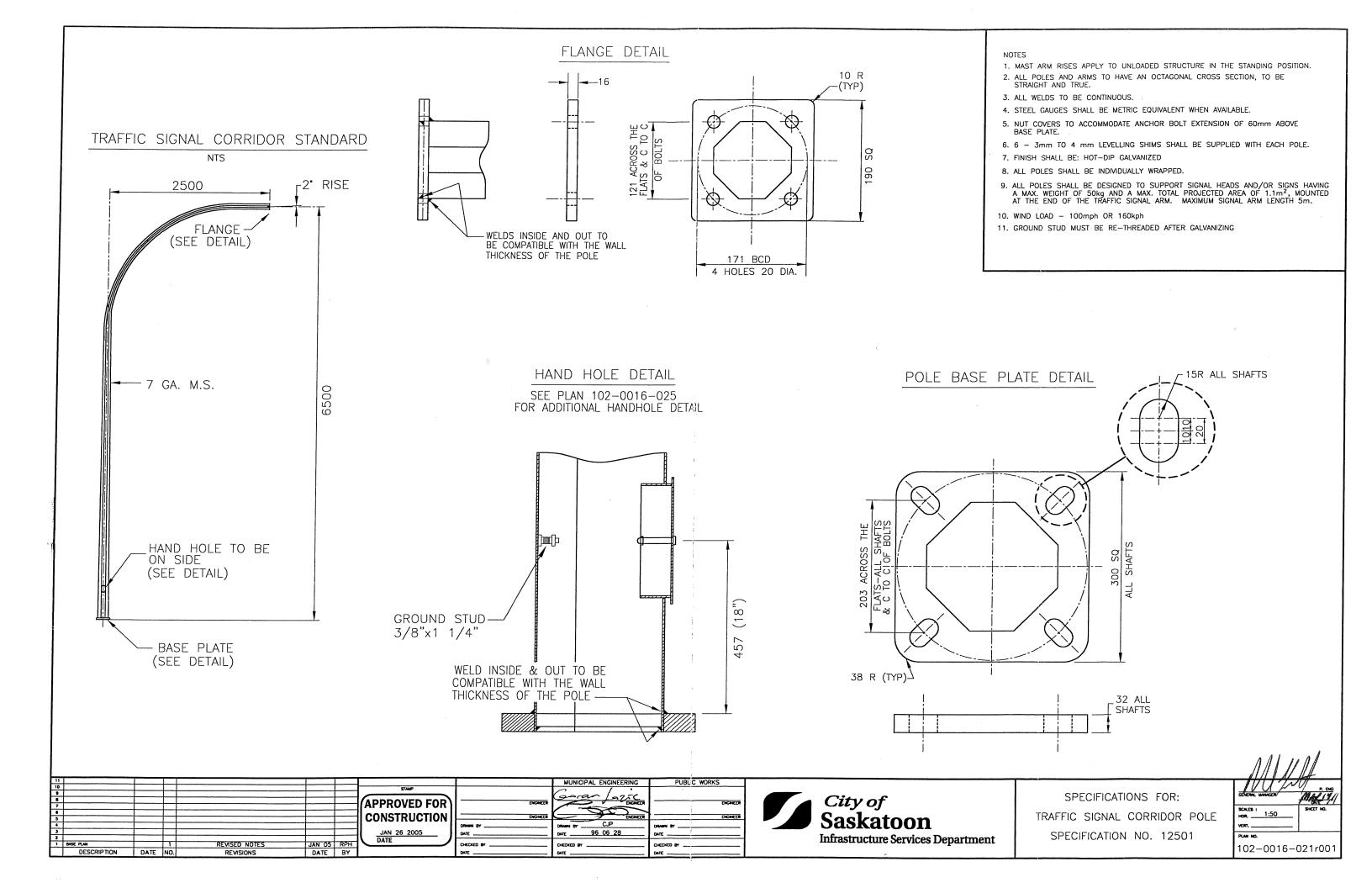
NOTES:

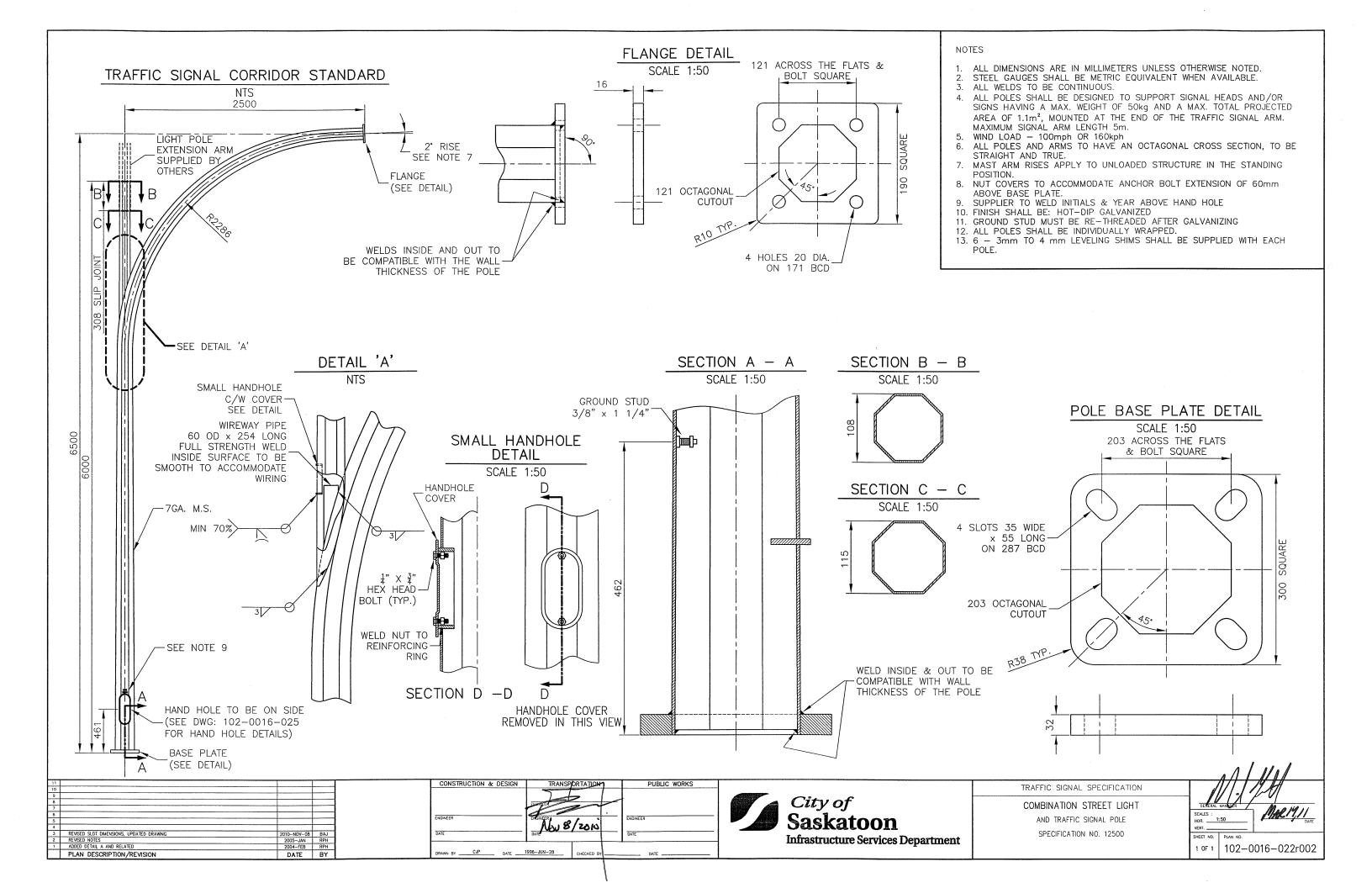
- CONDUIT TO BE CUT PARALLEL TO SURFACE
 CLEAN PEA GRAVEL SHALL BE SUFFICIENTLY
 COMPACTED TO PREVENT SHIFTING OF THE JUNCTION BOX









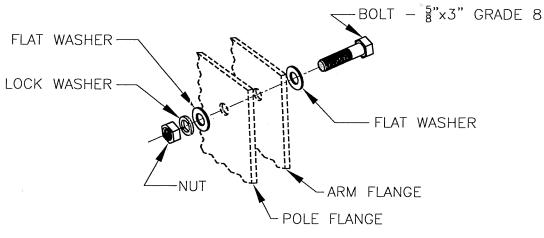


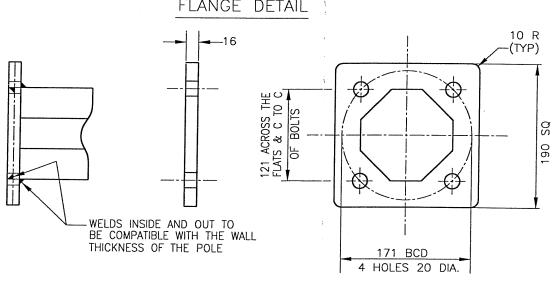
TRAFFIC SIGNAL ARMS NTS 5.0m FLANGE [TYP.] (SEE DETAIL) `-7 GA. M.S. TENON TO BE 60X400mm STD. PIPE (O.D.)-200 PROJ [TYP.] 4.0m <u>^</u>7 GA. M.S. 3.0m~11 GA. M.S. 2.0m <u></u>11 GA. M.S. FLANGE DETAIL

NOTES

- ALL ARMS TO HAVE AN OCTAGONAL CROSS SECTION, TO BE STRAIGHT AND TRUE.
- 2. ALL WELDS TO BE CONTINUOUS.
- 3. STEEL GAUGES SHALL BE METRIC EQUIVALENT WHEN AVAILABLE.
- 4. EACH ARM TO BE SUPPLIED WITH FOUR GALVANIZED 5/8" X 3" LG. GRADE 8 N.C. S.A.E. HEX HEAD BOLTS C/W NUTS AND WASHERS FOR FLANGE CONNECTIONS. ATTACH LOOSELY DURING SHIPPING (SEE BOLT ASSEMBLY DETAIL)
- 5. FINISH SHALL BE: HOT-DIP GALVANIZED
- 6. ALL ARMS SHALL BE INDIVIDUALLY WRAPPED.
- 7. ALL ARMS SHALL BE DESIGNED TO SUPPORT SIGNAL HEADS AND/OR SIGNS HAVING A MAX. WEIGHT OF 50kg AND A MAX. TOTAL PROJECTED AREA OF 1.1m2, MOUNTED AT THE END OF THE TRAFFIC SIGNAL ARM.

BOLT ASSEMBLY

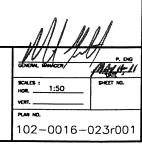




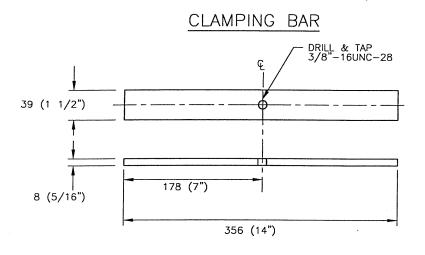
| _ | | 1 | | 1 0416 | | L | CA15 | DVIE | DATE |
|----------|-------------|--------------|---------------|--------|-----|-------------------|--------------|-----------------------|--------------|
| 1 | DESCRIPTION | DATE NO. | REVISIONS | DATE | BY | | DATE | DATE | |
| <u>'</u> | BASE PLAN | | REVISED NOTES | JAN 05 | RPH | DATE | CHECKED BY | CHEDIED BY | CHECKED BY |
| 2 | | | | | | DATE | DATE | DATE 95 06 28 | DATE |
| 3 | | | | | | JAN 26 2005 | DATE | | |
| | | | | | | 11 | Different BY | DRAWN BY CUP | DRAWN BY |
| 3 | | | | | | II CONSTRUCTION I | ENGINEER | DICHEDI | ENGINEE |
| | | | | | | 13 1 | | | 1 |
| 7 | | | | | | (APPROVED FOR) | ENGMEER | ENCNEER | ENGNEE |
| | | | | | | (2222 | | Goran fave | , |
| , | | | | | | STAMP | | C_{\bullet} | |
| 10 | | | | | | | <u> </u> | MUNICIPAL ENGINEERING | PUBLIC WORKS |
| 7 | | | | | | T | 1 | | |
| L | · | | | | | | | | |



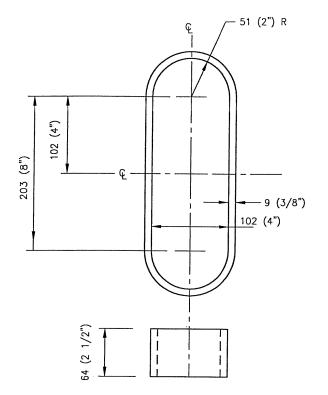
SPECIFICATIONS FOR:
TRAFFIC SIGNAL ARMS
SPECIFICATION NO. 12502



CLAMPING BAR HAND HOLE COVER TO BE INSTALLED ON POLE USING 3" X3.2" ALL THREAD BOLT. PEEN END OF BOLT REINFORCING RING CLAMPING BAR CAP SCREW

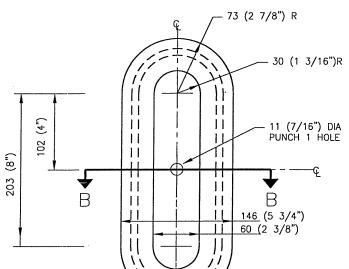


REINFORCING RING

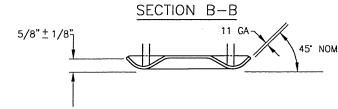


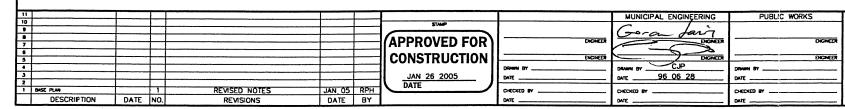
NOTES:

- 1. FINISH SHALL BE: HOT-DIP GALVANIZED
- 2. RE-THREAD BOLTS AFTER GALVANIZING



COVER

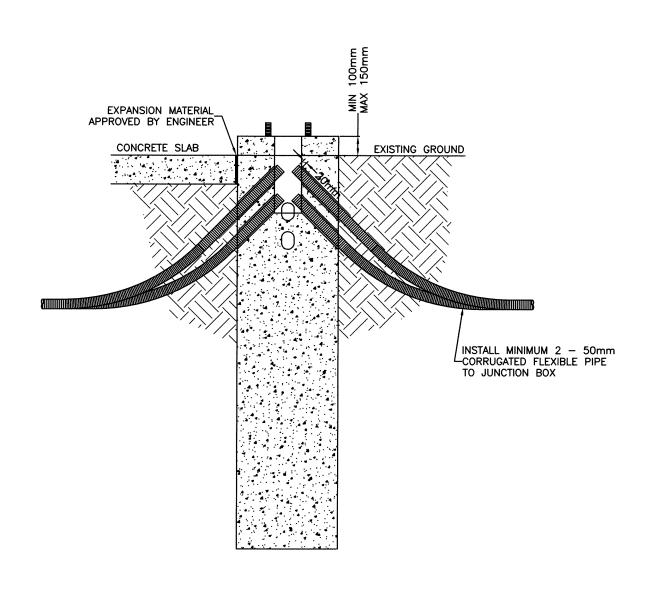






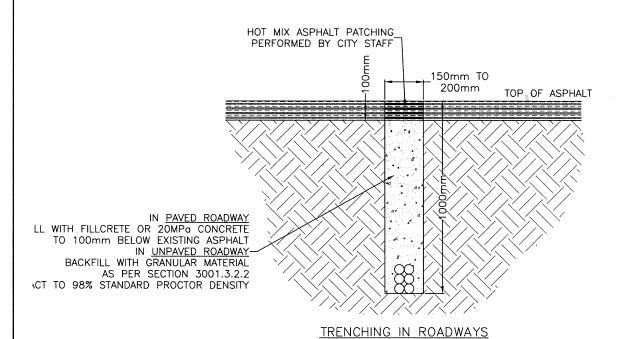
SPECIFICATIONS FOR: HAND HOLE ASSEMBLY

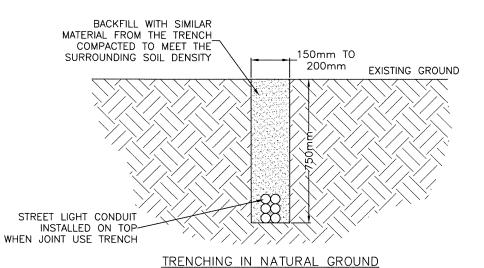




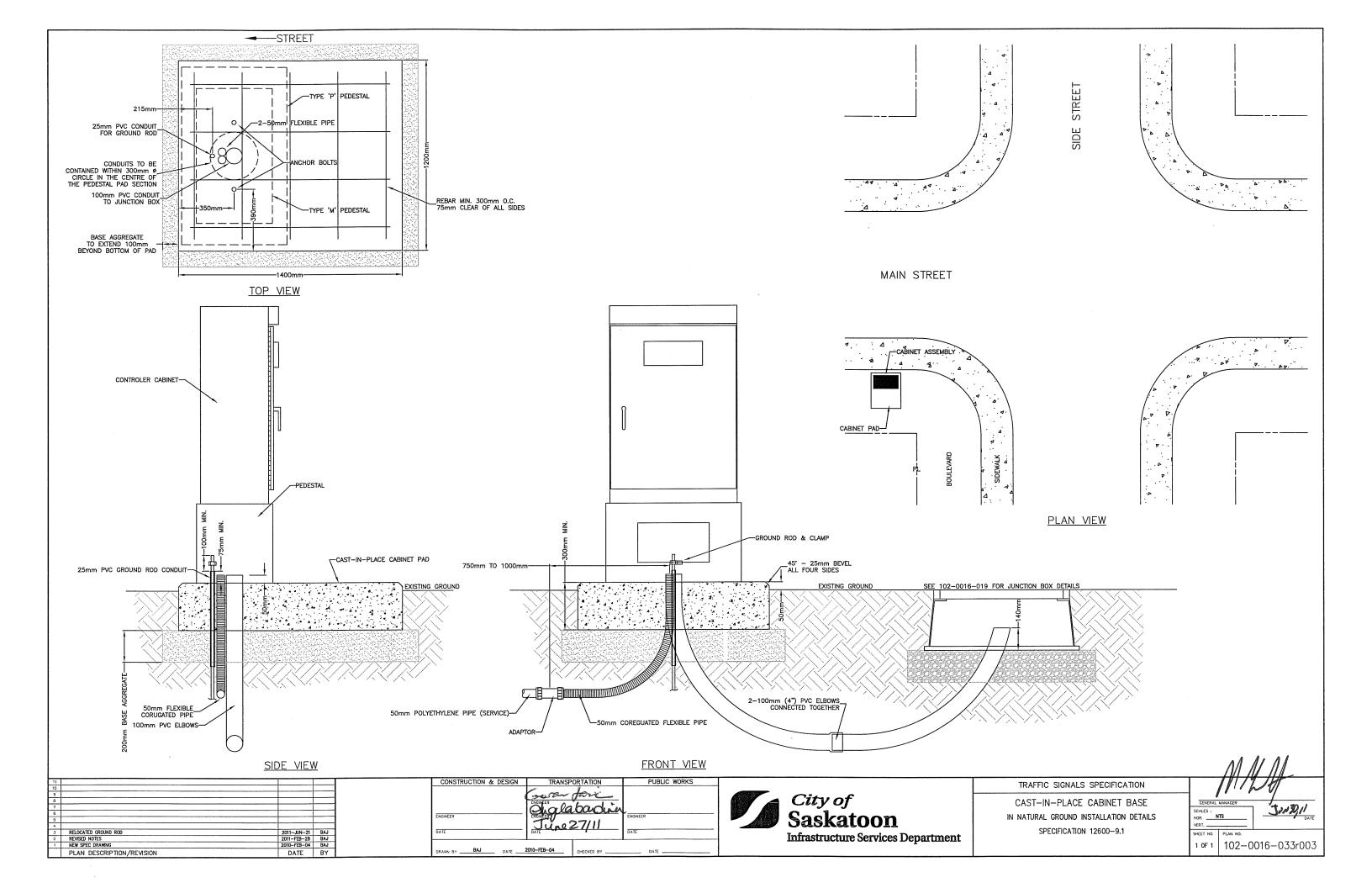
NOTE:
EXCAVATION FOR THE POLE BASE SHALL BE OF
SUFFICIENT WIDTH TO ALLOW FOR THE MECHANICAL
COMPACTION OF BACKFILL MATERIAL. ALL LOOSE
MATERIAL SHALL BE REMOVED FROM THE EXCAVATION
AND BACKFILLED WITH BASE AGGREGATE AS PER
SECTION 03001-3.2.2 (AVAILABLE ON THE CITY'S
WEBSITE).

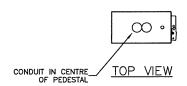
| PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|--|---|-------------------------------------|
| 4 | City of Saskatoon Infrastructure Services Department | Goran Jazic |
| DRAWN BY BAJ DATE 2010-FEB-05 SCALE: HOR. VERT. | PRE-CAST POLE BASE INSTALLATION DETAILS SPECIFICATION 12600-8 | ENGINEER PLAN NO. 102-0016-029r003 |

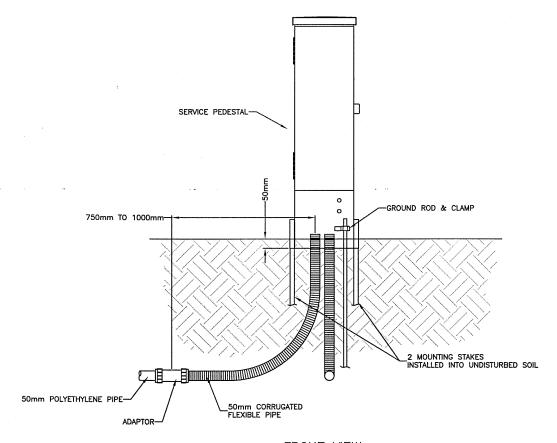




| PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|---|------------------------------------|---------------------------|
| 4 | City of Saskatoon | |
| 2 | Infrastructure Services Department | ENGINEER |
| 1 REMOVED BACK OF CURB DETAIL 2014—DEC—18 DJC | TRENCHING | 1/2001 |
| DRAWN BY BAJ DATE 2010-FEB-05 | INSTALLATION DETAILS | ENGLAPER |
| SCALE : HOR VERT | SPECIFICATION 12600-5 | PLAN NO. 102-0016-032r002 |

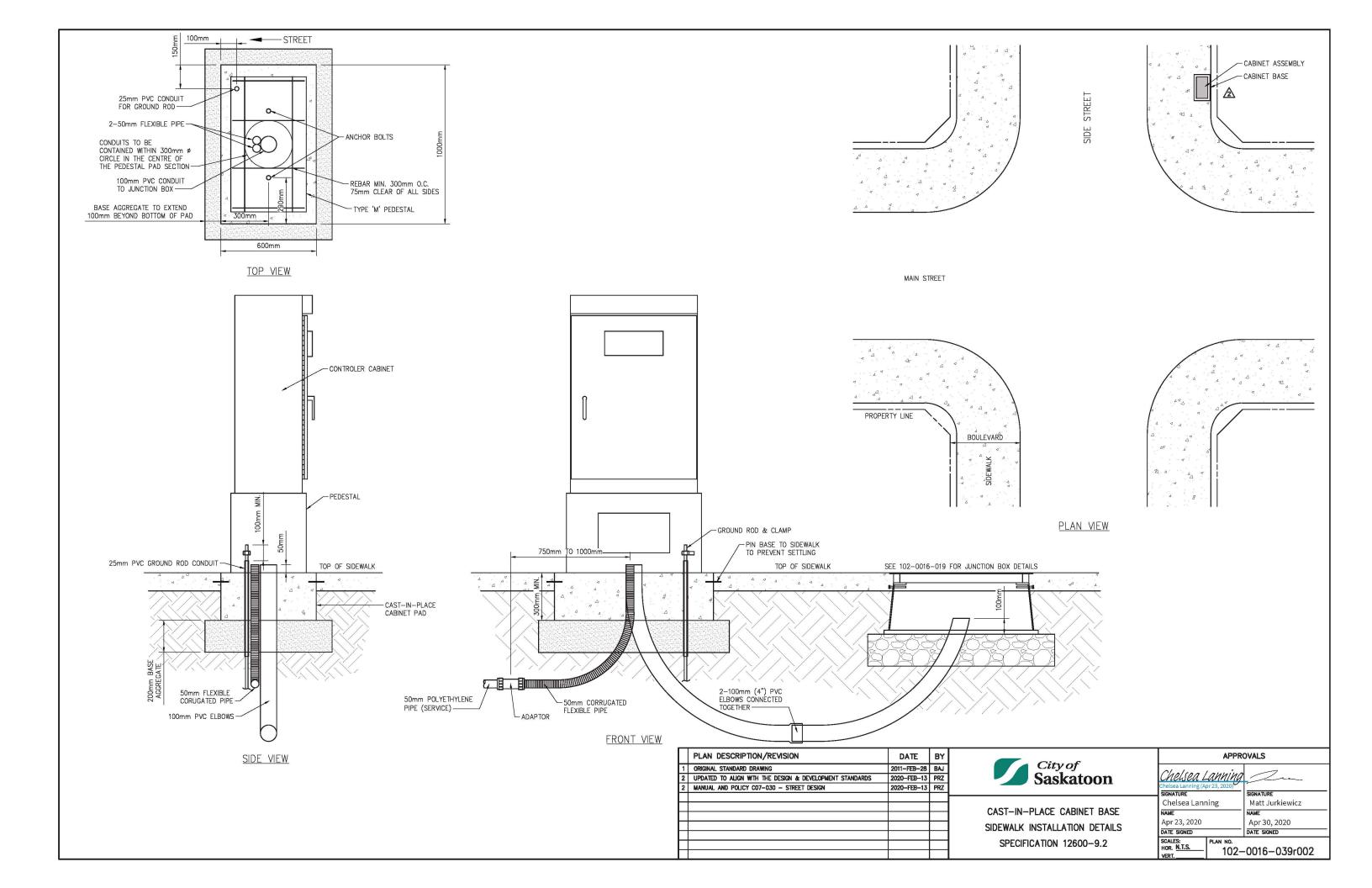


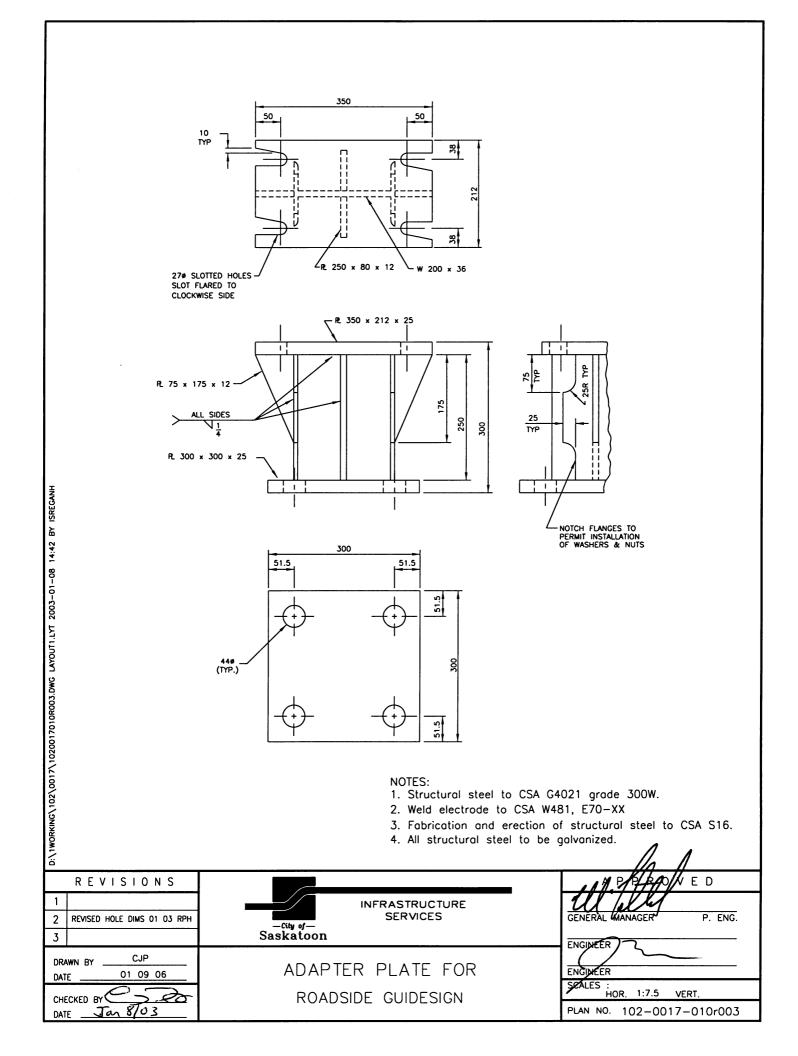


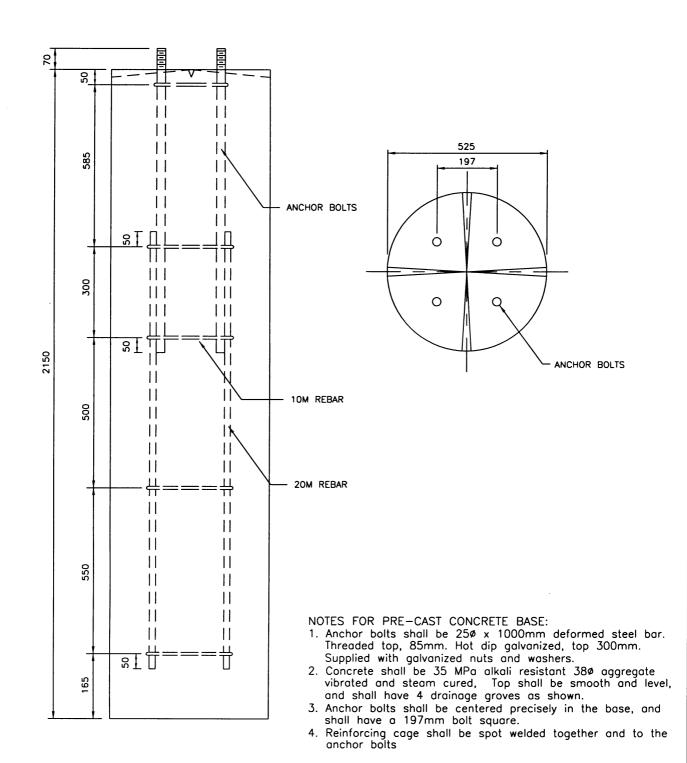


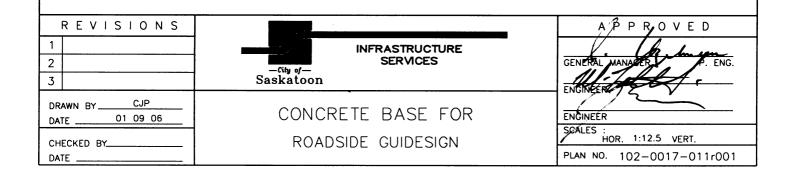
FRONT VIEW

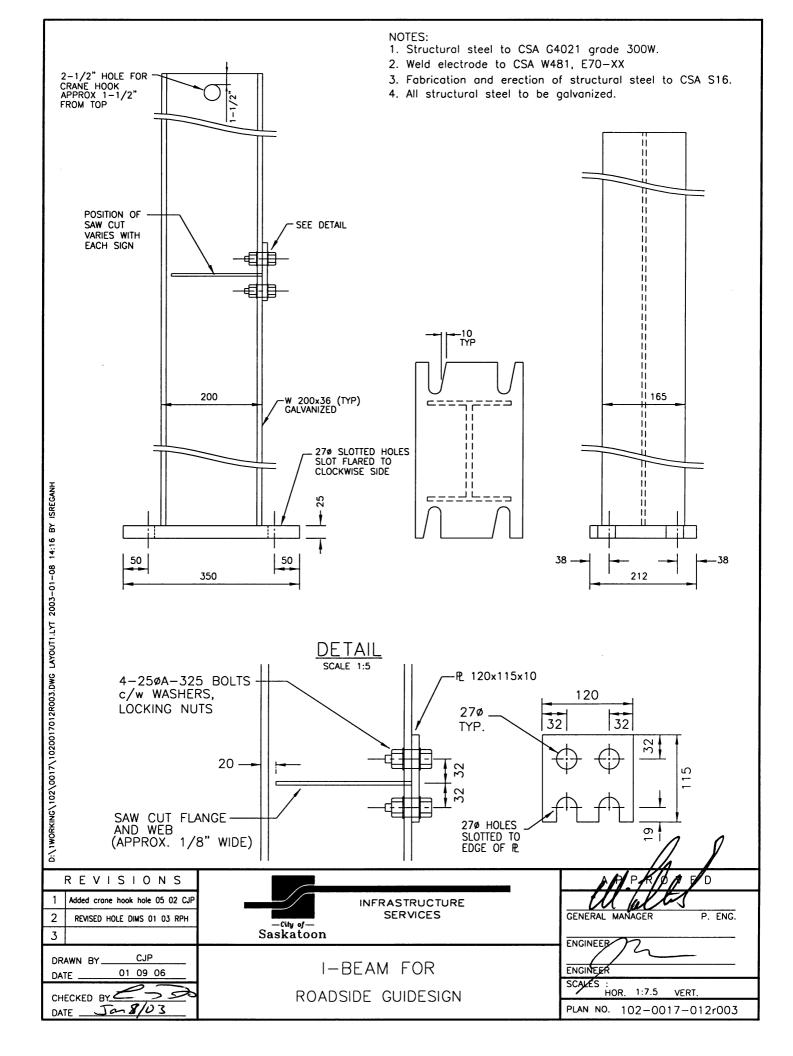
| PLAN DESCRIPTION/REVISIONS 4 3 2 REVISED NOTES & SIZE OF CABINET | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER GENERAL MANAGER GOO'A JOHN J. |
|--|--|--|
| 1 NEW SPEC DRAWING DRAWN BYBAJ DATE2010_FEB_05 SCALE : HOR VERT | SERVICE PEDESTAL INSTALLATION DETAILS SPECIFICATION 12600-11 | ENGINEER PLAN NO. 102-0016-034r002 |





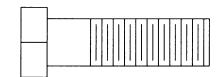




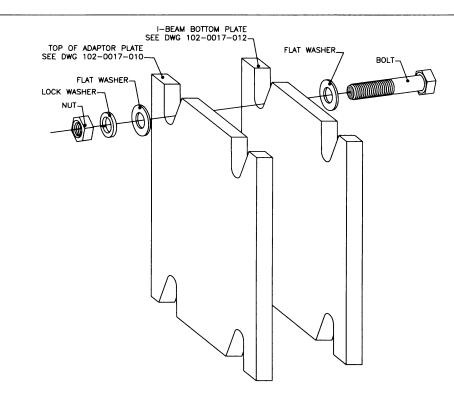


 $\frac{\text{BOLT}}{\text{STANDARD BOLT }-1\text{"}\times3\frac{1}{2}\text{"}}$







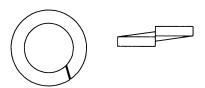


<u>NUT</u> STANDARD NUT - 1"

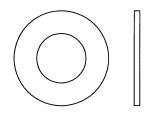




<u>LOCK WASHER</u> STANDARD LOCK WASHER - 1"



<u>FLAT WASHER x2</u> STANDARD FLAT WASHER - 1"



NOTE: BOLT ASSEMBLY TO BE -GRADE 5 QUALITY -GALVANIZED

| | | | | 11 1 1/11 |
|-----|-------------------------------|-----------|-----|----------------------|
| | | | | WHICIPAL ENGAREERING |
| | | | | The ple |
| | | | | Nov 20, 2006. |
| | | | | |
| | | | | DRAWN BY RPH |
| | | | | DATE JAN 15 02 |
| 1 | REVISED BOLT LENGTH TO 3-1/2" | NOV 17 05 | RPH | CHECKED BY |
| NO. | REVISIONS | DATE | BY | DATE |

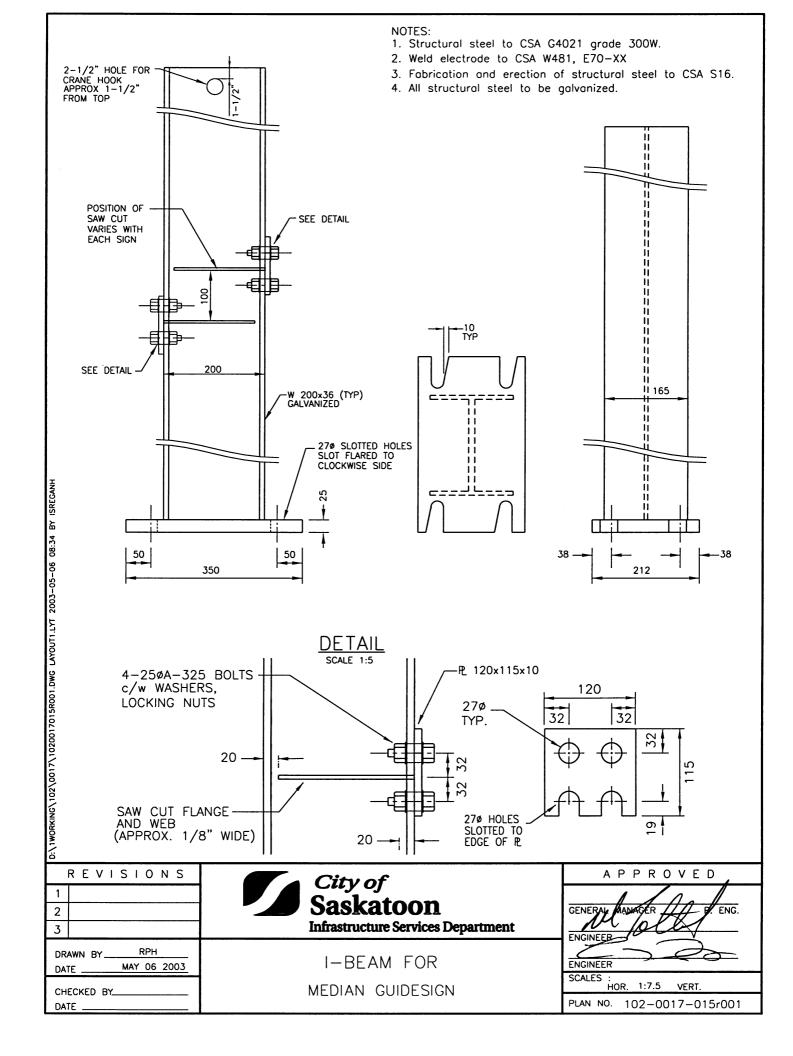


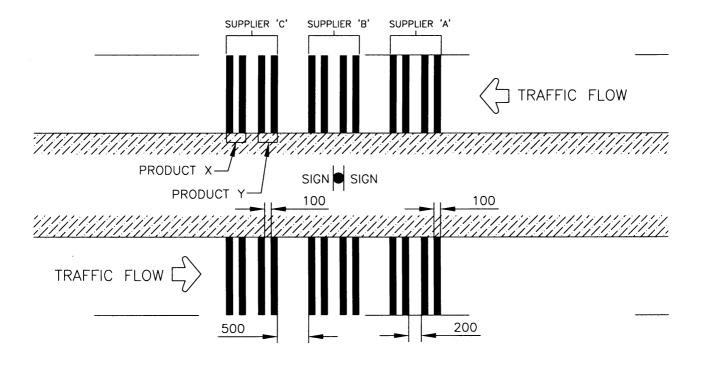
BOLT ASSEMBLY

I-BEAM TO ADAPTER PLATE

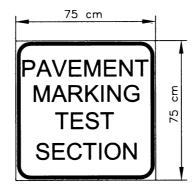
FOR GROUND MOUNTED SIGNS

| 01 | |
|----------------------|-----------|
| STATUL WHITES | m Lope |
| SCALES : HOR. 1:2 | SHEET NO. |
| VERT | |
| PLAN NO. | |
| 102-0017-0 | |

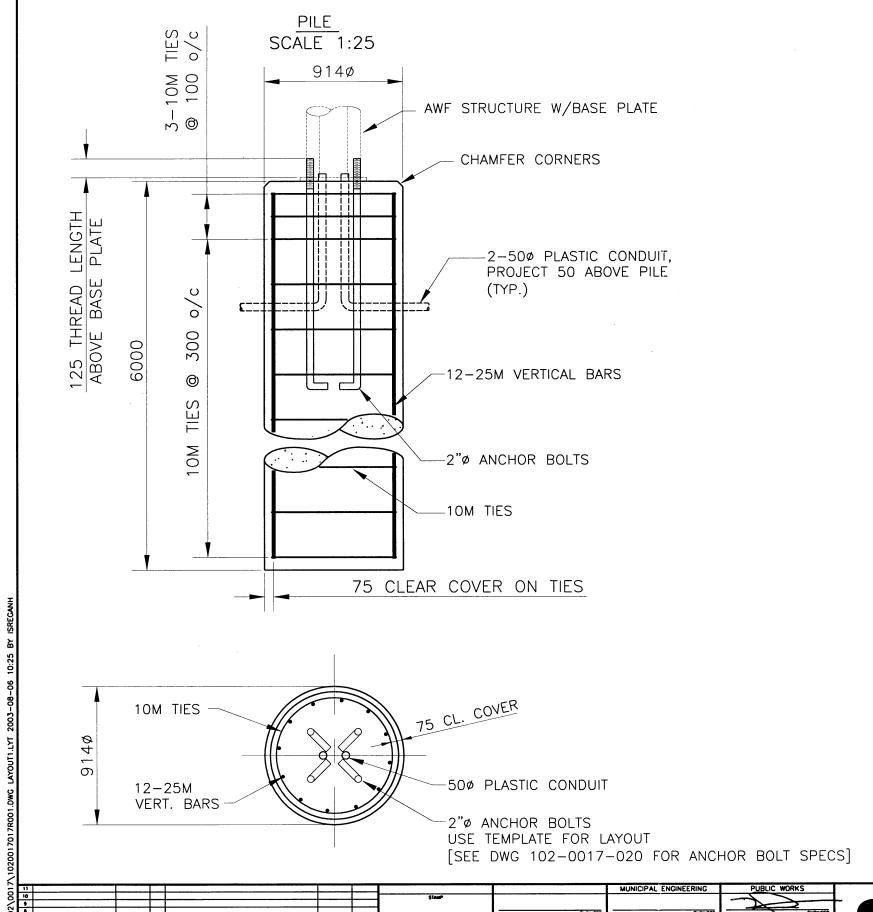




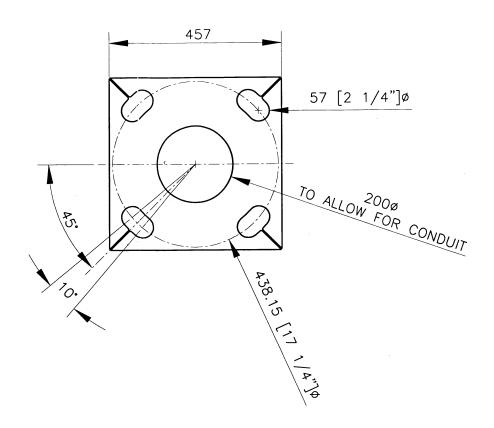
- ALL TEST LINES TO BE 100mm WIDE, WITH A 100mm BUFFER BETWEEN EACH SAME PRODUCT TEST LINE
- A 200mm BUFFER REQUIRED BETWEEN EACH DIFFERENT PRODUCT TEST LINE GROUP
- SUPPLIERS TEST SECTIONS TO BE SEPARATED BY A 500mm BUFFER
- ALL TEST SECTIONS TO BE ACCOMPANIED BY THIS SIGN:



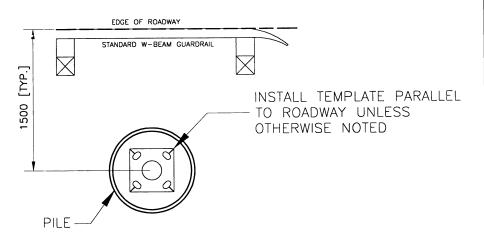
| 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. ENGINEER ENGINEER |
|---|--|---|
| DRAWN BY RPH DATE MAY 12 2003 CHECKED BY | PAVEMENT MARKING TEST SECTIONS TEMPLATE | ENGINEER SCALES: HOR. NTS VERT. PLAN NO. 102-0017-016r001 |



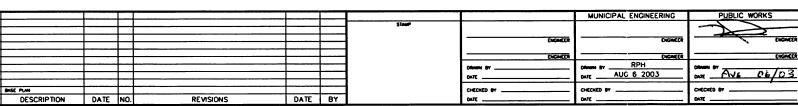
ANCHOR BOLT TEMPLATE SCALE 1:10



GENERAL ARRANGMENT SCALE 1:40



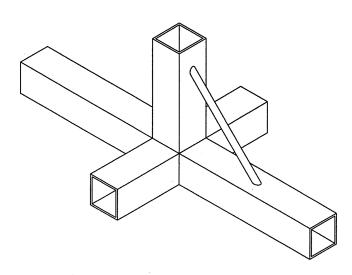
NOTE: THIS DRAWING IS ONLY TO BE USED WITH STANDARD ADVANCE WARNING FLASHER STRUCTURES





ADVANCE WARNING FLASHER STRUCTURE
PILE AND ANCHOR BOLT TEMPLATE

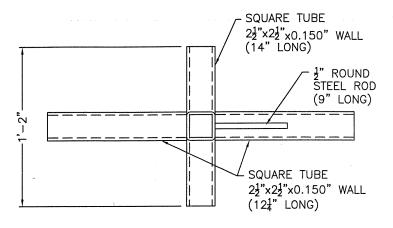
| GENERAL MANAGER | P. ENG |
|---------------------------|-----------|
| | DATE |
| SCALES : HOR, AS NOTED | SHEET NO. |
| VERT | |
| PLAN NO. | |
| 102-0017- | 017r001 |



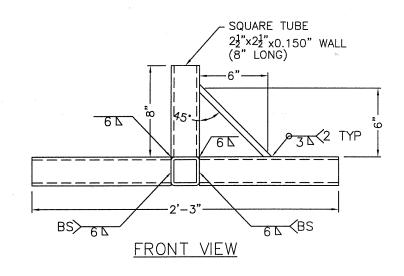
TEMPORARY SIGN BASE ASSEMBLY

LIST OF MATERIALS: (PER ASSEMBLY)

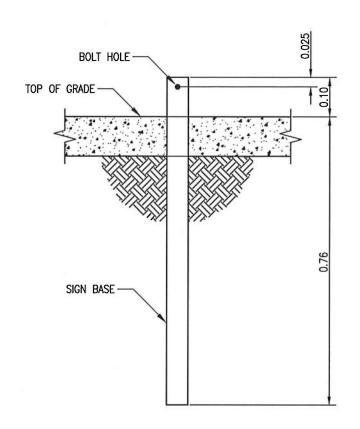
 $2 - 2\frac{1}{2}$ " $\times 2\frac{1}{2}$ " $\times 0.150$ " WALL $\times 12\frac{1}{4}$ " $1 - 2\frac{1}{2}$ " $\times 2\frac{1}{2}$ " $\times 0.150$ " WALL $\times 14$ " $1 - 2\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x 0.150" WALL x 8" $1 - \frac{1}{2}$ " x 9" STEEL ROD



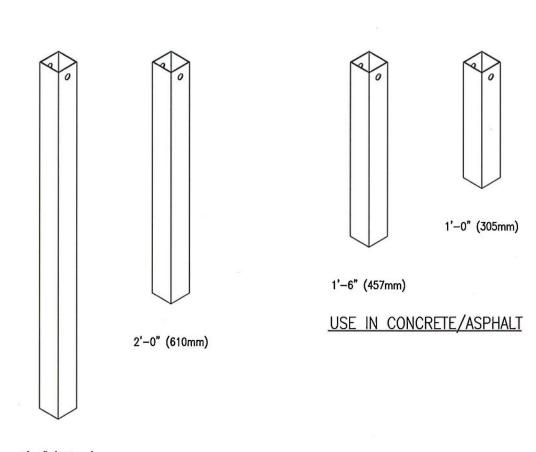
TOP VIEW







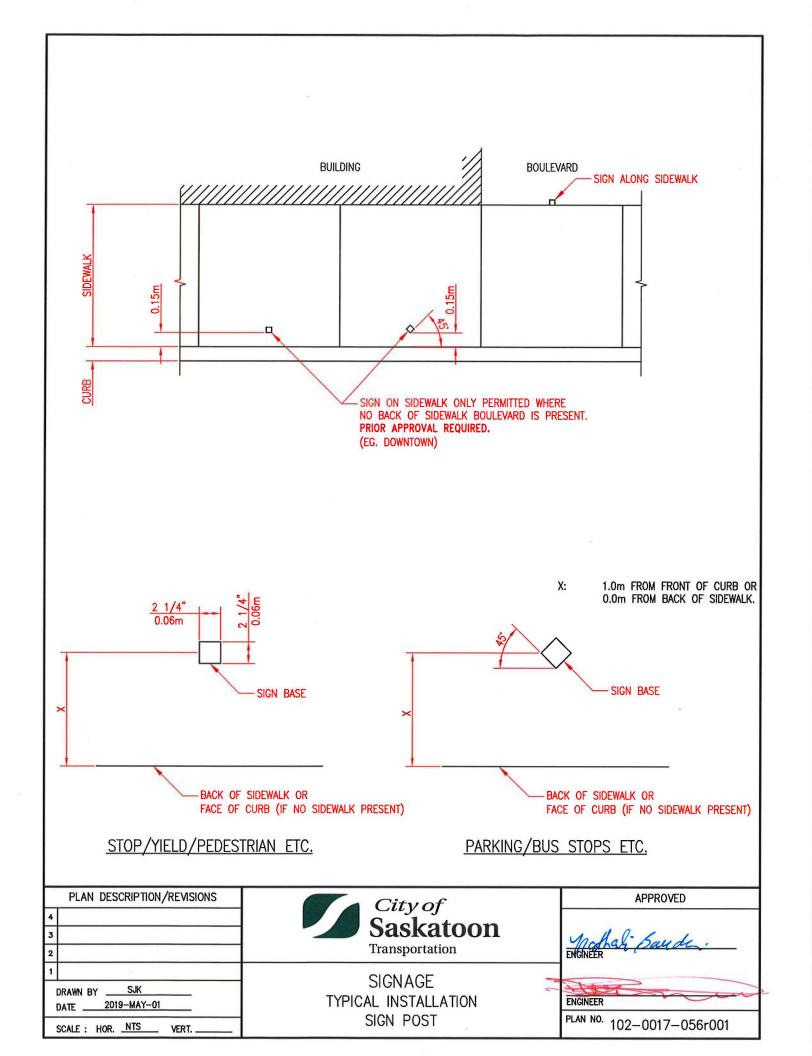


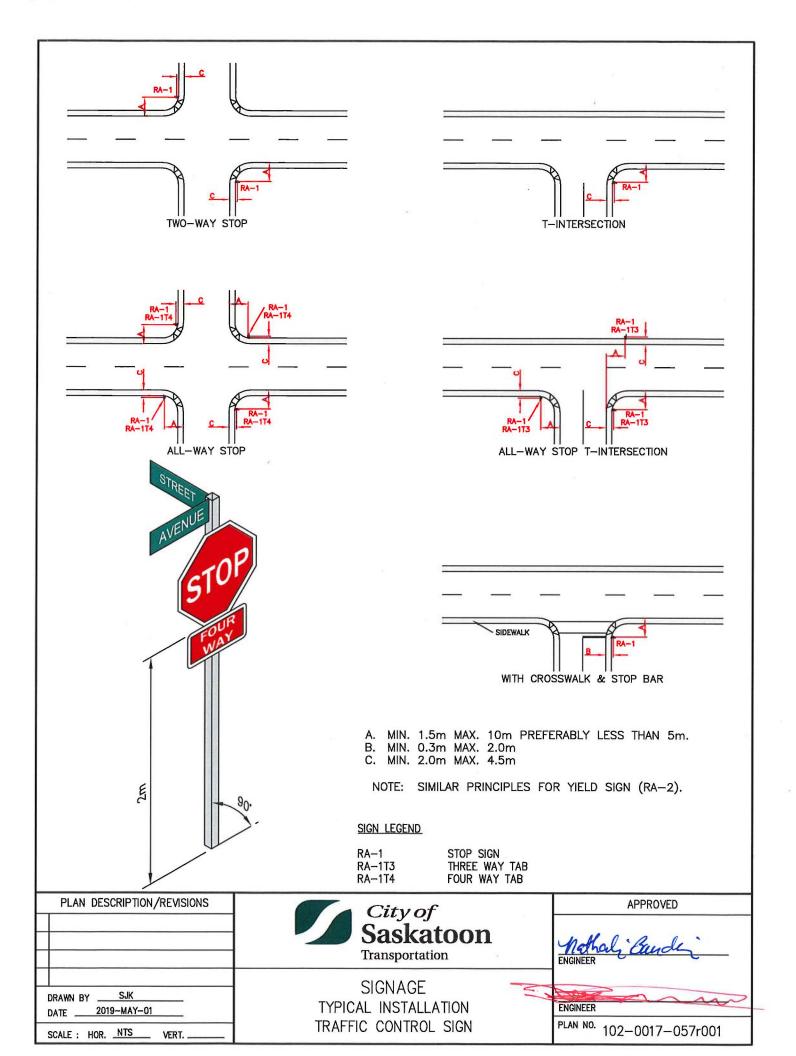


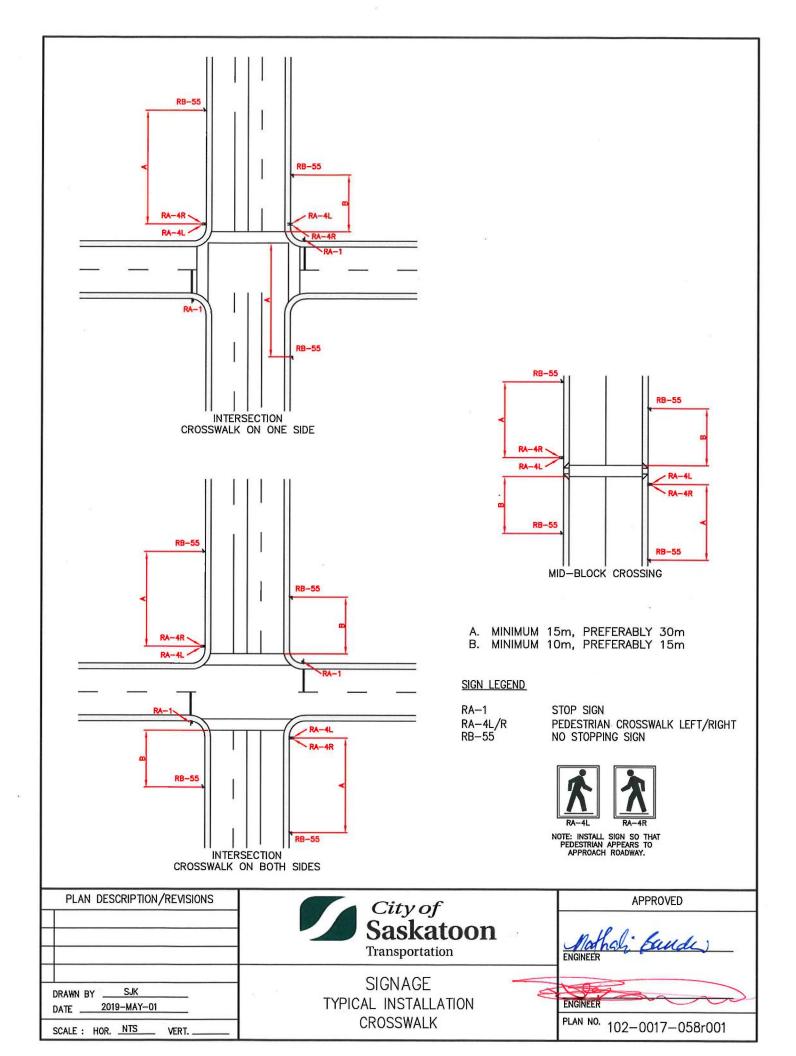
3'-0" (914mm)

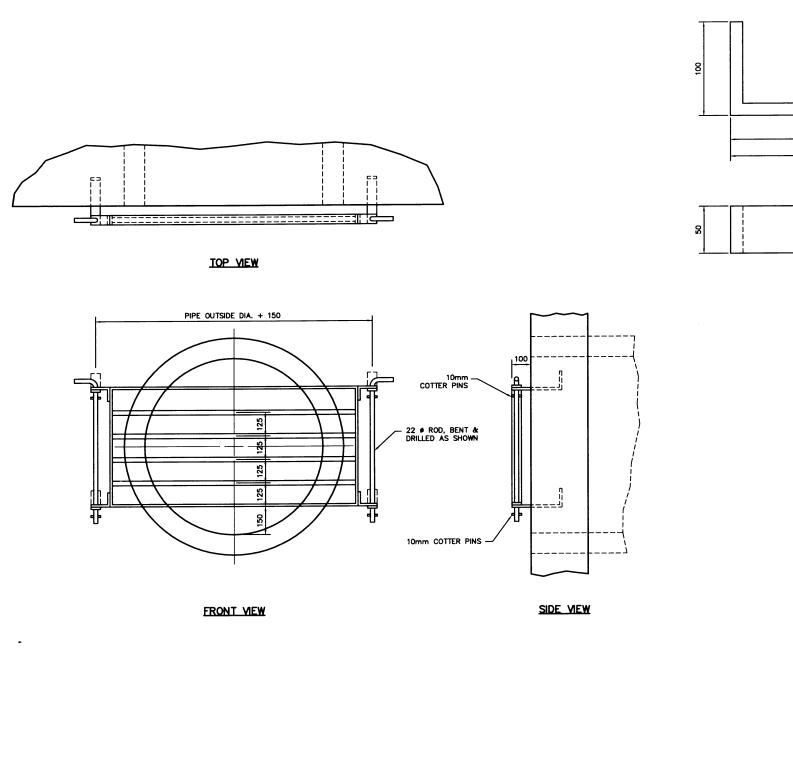
USE IN GRASS/DIRT/GRAVEL

| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED |
|---|--|------------------------------------|
| 3 2 | City of Saskatoon Transportation | Motholi Barda |
| DRAWN BYSJK DATE2019-MAY-01 SCALE: HOR, _NTSVERT | SIGNAGE TYPICAL SIGN POST BASE DETAIL | ENGINEER PLAN NO. 102-0017-055r001 |









PIPE DIAMETER

525

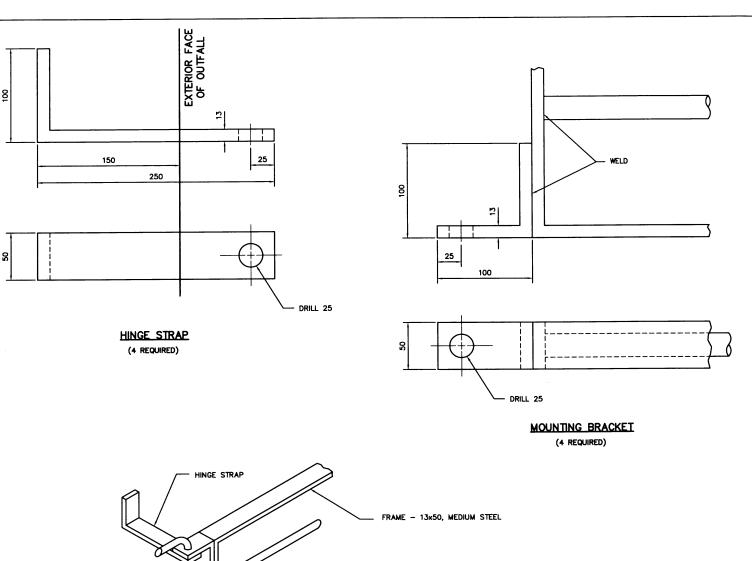
600

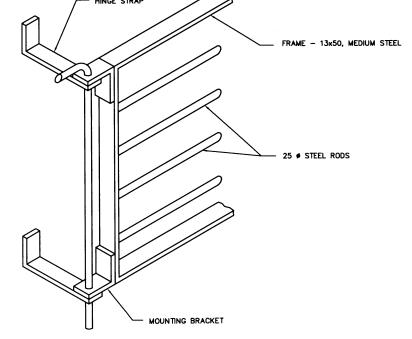
675

750

900

1050





ASSEMBLY

NOTE:

- 1. GRATE ASSEMBLY SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
 2. GALVANIZING SHALL BE 56.8 g ZINC & IN ACCORDANCE WITH CSA SPEC. G164—1965.
 3. ALL STEEL SHALL BE A.S.T.M. A—36 MIN.

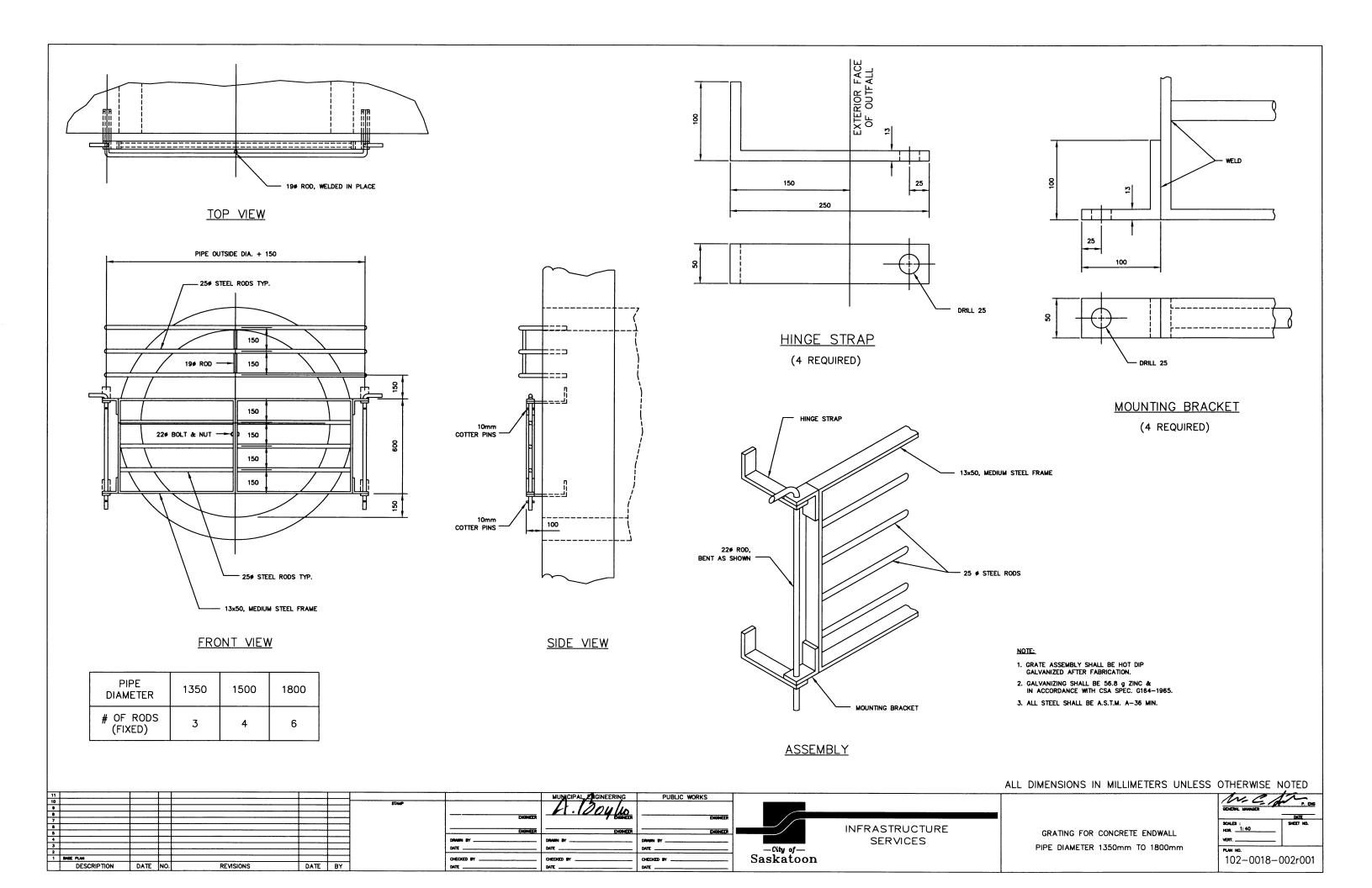
ALL DIMENSIONS IN MILLIMETERS UNLESS OTHER

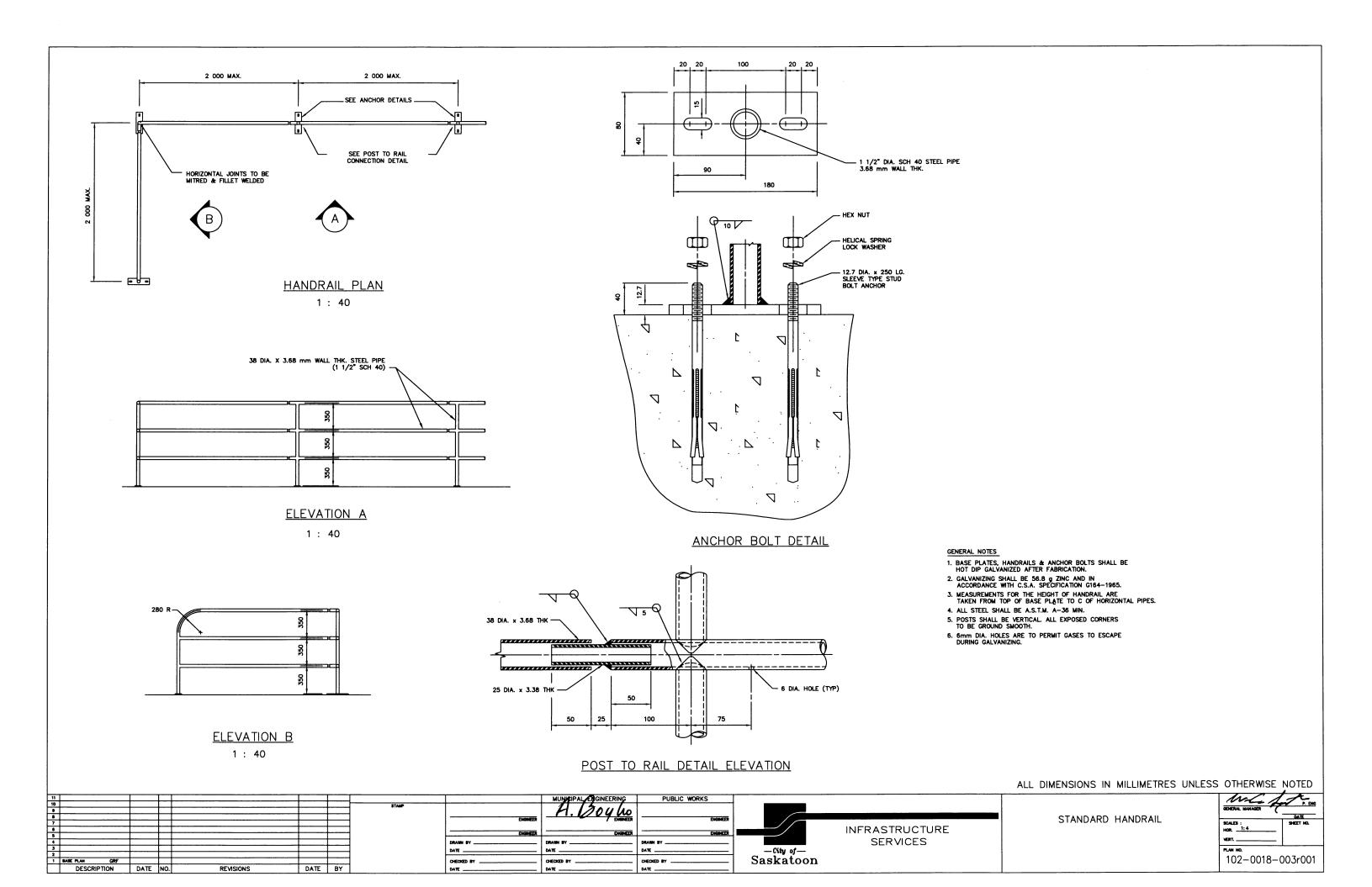
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| 7 | | | \vdash | | | | | | | | | INFRASTRUCTURE | i |
| • | | | \vdash | | - | - | | ENGINEER | ENGINEER | ENGINEER | | | i |
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| ÷ | l | | \vdash | | | | | MT | DATE | DATE | — Other of — | | i |
| 2 | | | \vdash | | | | | | | | | | i |
| 1 | BASE PLAN | | \Box | | | | | CHECKED BY | CHECKED BY | CHECKED BY | Saskatoon | | i |
| | DESCRIPTION | DATE | NO. | REVISIONS | DATE | BY | | DATE | DATE | DATE | | | |

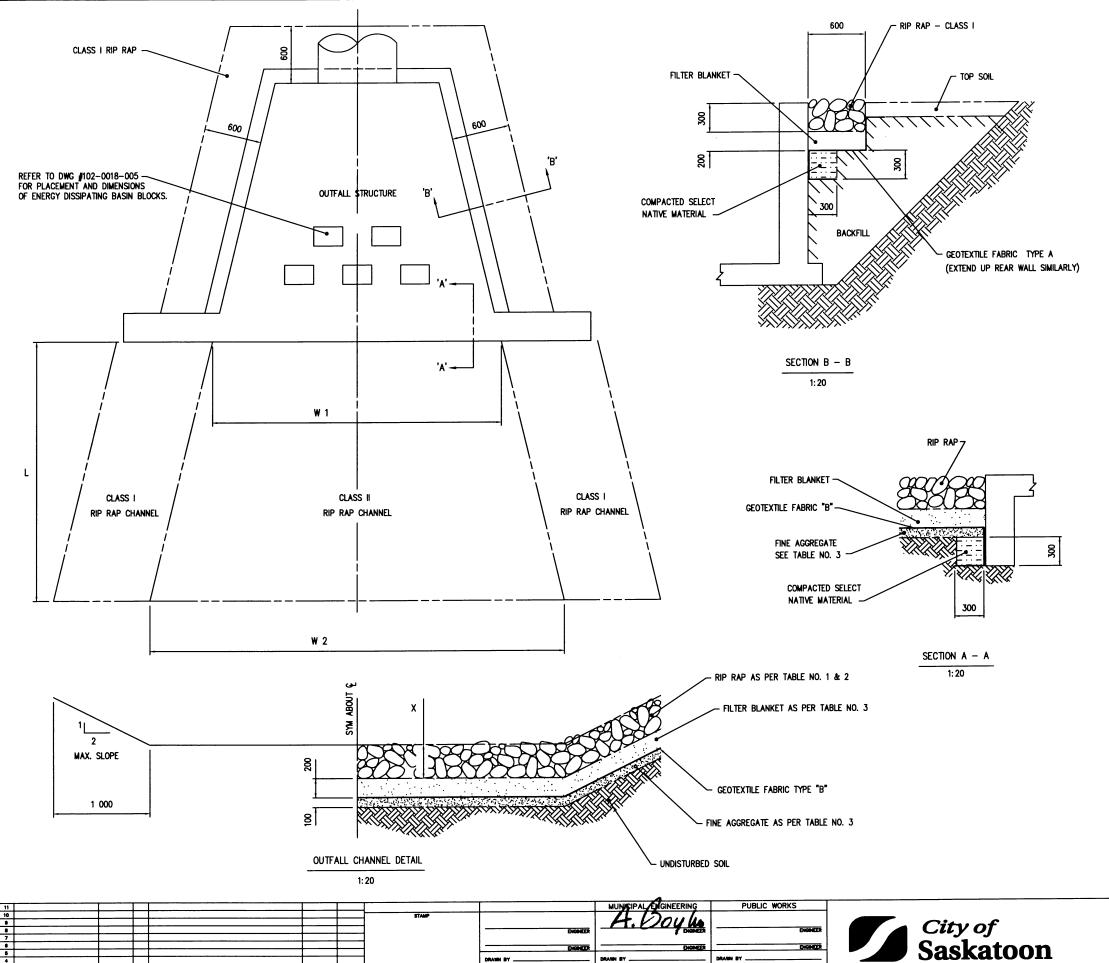
1200

GRATING FOR CONCRETE ENDWALL PIPE DIAMETER UP TO 1200mm

102-0018-001r001







1 BASE PLAN JMH 06-01-25
DESCRIPTION DATE NO.

DATE BY

REVISIONS

TABLE NO.1

| OUTFALL LOCATION | RIP RAP CLASS | L | W 1 | W 2 | x |
|------------------|------------------|-------|------------|-------|-----|
| EXAMPLE STREET | CLASS II | 6 400 | 3 000 | 6 030 | 625 |
| | | | | | _ |
| | | | | | |

TABLE NO. 2

| RIP RAP STONE SIZE | | | | | | | | |
|-------------------------|---------|-----|-----|-------|--|--|--|--|
| % OF TOTAL WEIGHT | CLASS I | | CLA | SS II | | | | |
| SMALLER THAN GIVEN SIZE | kg | DIA | kg | DIA | | | | |
| 100 | 50 | 350 | 300 | 625 | | | | |
| 80 | 25 | 275 | 200 | 525 | | | | |
| 50 | 10 | 200 | 100 | 425 | | | | |
| 10 | 1 | 100 | 10 | 200 | | | | |

TABLE NO. 3

| FILTER BLANKET | | | FINE AGGREGATE | | |
|----------------|-------------|-----------|----------------|-----------|--------|
| FOR CLASS | S I RIP RAP | FOR CLASS | II RIP RAP | % PASSING | SIZE |
| % PASSING | SIEVE SIZE | % PASSING | SEIVE SIZE | BY WEIGHT | |
| 100 | 38 | 100 | 50 | 100 | 10 |
| 90 | 25 | 80 | 38 | 97 | 5 |
| 70 | 18 | 60 | 25 | 88 | 2 |
| 45 | 10 | 45 | 18 | 63 | 900 µm |
| 25 | 5 | 25 | 10 | 32 | 400 µm |
| 10 | 2 | 10 | 5 | 7 | 160 µm |

TABLE NO. 4

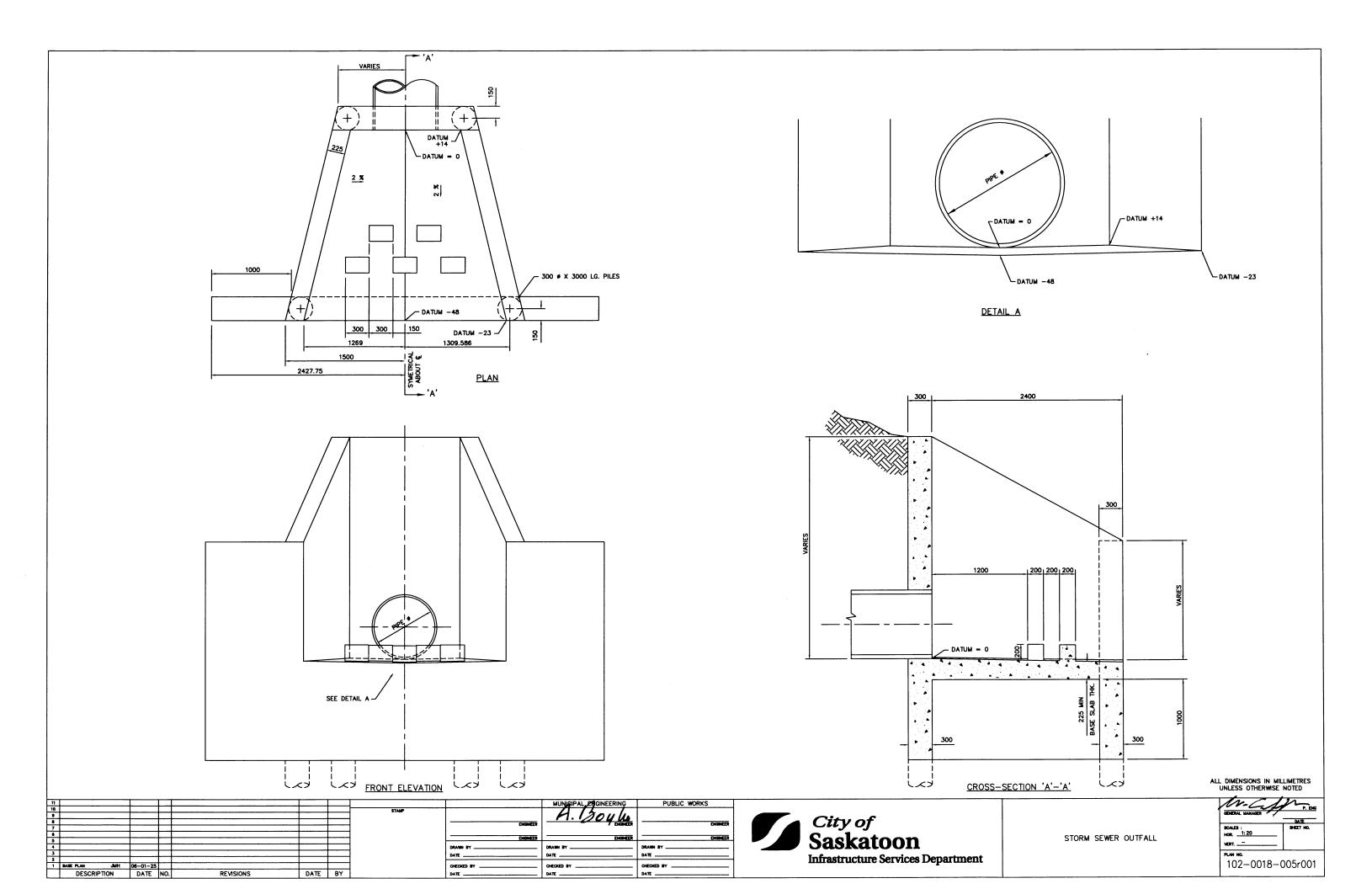
| GEOT | EXTILE | |
|----------------|-------------------|---------------------|
| GEOTEXTILE "A" | MASS THICKNESS | 240 g/m² 2.75 mm |
| GEOTEXTILE "B" | MASS THICKNESS | 240 g/m² 3.30 mm |

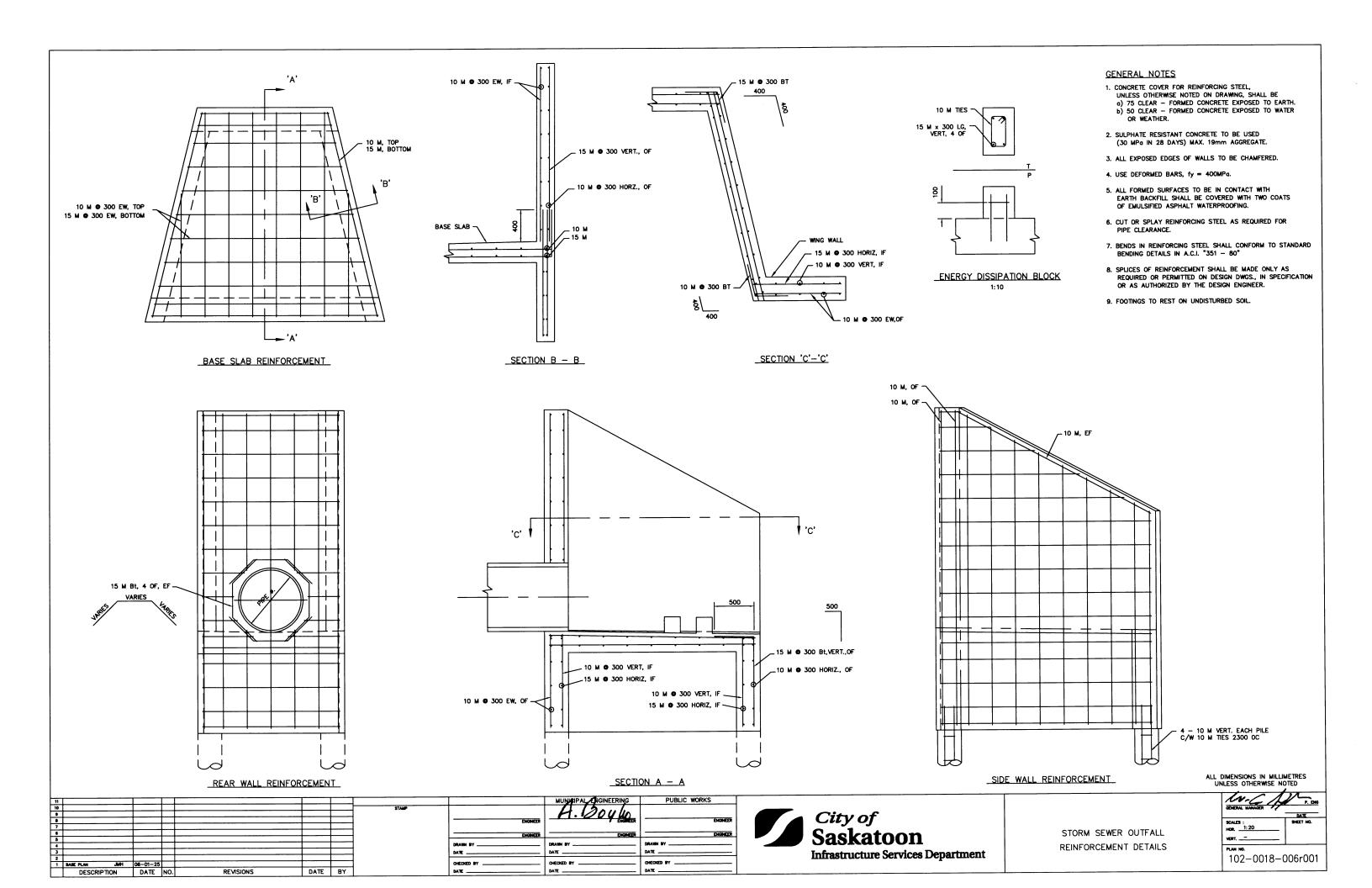
ALL DIMENSIONS IN MILLIMETRES UNLESS OF HERWISE NOTED

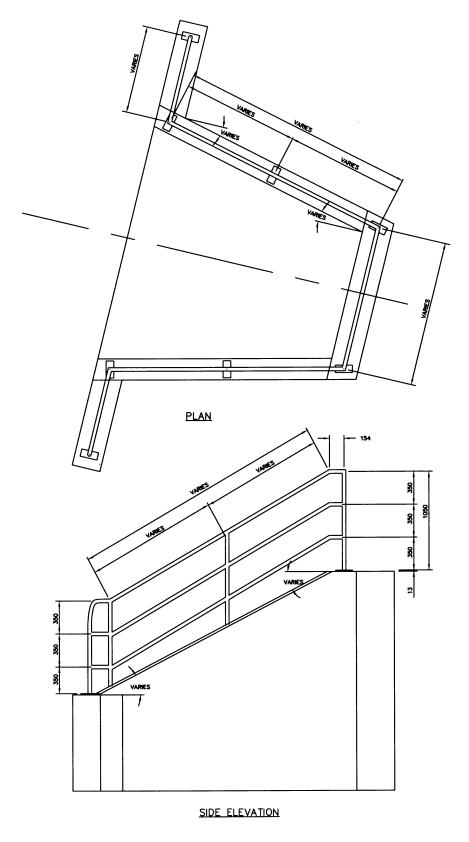
102-0018-004r001

STANDARD RIPRAP DETAIL

Infrastructure Services Department

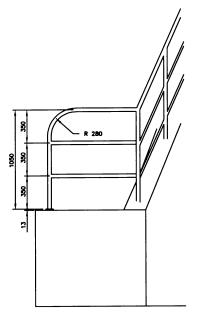






NOTE:

1. HANDRAIL SHALL BE 3-RAIL & 1050mm HIGH AS SHOWN ON PLAN 102-0018-003r001.



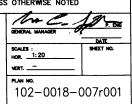
FRONT ELEVATION

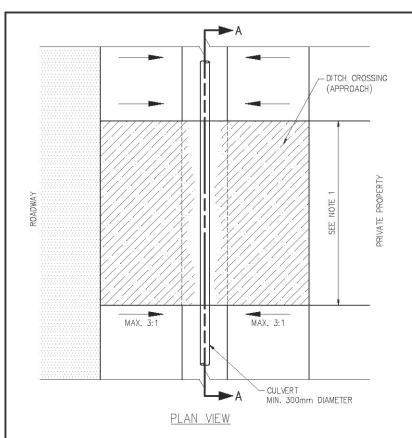
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

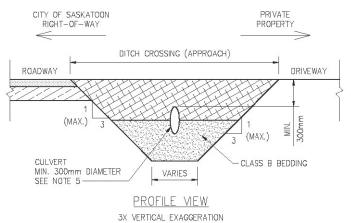
| 11 | T | | $\overline{}$ | | | | | MUNICIPAL ENGINEERING | PUBLIC WORKS |
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| ÷ | | | Н | | | t | STAMP | 1111 | 7 00210 11011110 |
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| | | _ | \vdash | | | | ENGIN | ER ENGINEER | |
| <u>.</u> | | | \vdash | | | ├ | DRAWN BY | DRAWN BY | DRAWN BY |
| <u>.</u> | | + | \vdash | | | | | | DATE |
| <u> </u> | | | Н | | - | † | DATE | DATE | DATE |
| ÷ | BASE PLAN DT | 90-06-15 | - | | | † | CHECKED BY | CHECKED BY | CHECKED BY |
| ÷ | DESCRIPTION | | NO. | REVISIONS | DATE | BY | DATE | DATE | DATE |



HANDRAIL DETAILS







NOTES:

- MAXIMUM DRIVEWAYS WIDTHS SHALL BE THE LESSER OF:
- RESIDENTIAL = 6.1m
- 1.2. COMMERCIAL
- 1.3. INDUSTRIAL 12.2m

OR

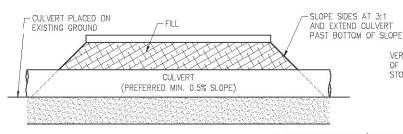
- PRIVATE PROPERTIES IN MONTGOMERY PLACE WITH DITCH & 1.4. CULVERT DRAINAGE MAY HAVE A MAXIMUM CROSSING WIDTH OF ONE-THIRD OF PROPERTY FRONTAGE UP TO A MAXIMUM OF 16m.
- 2. MINIMUM CULVERT SIZES SHALL:
- RESIDENTIAL 300mm 2.1.
- COMMERCIAL = 2.2.
- INDUSTRIAL 450mm
- 3. ANY ALTERNATE CULVERT SIZE AND MINIMUM COVER SHALL BE REVIEWED AND APPROVED BY THE CITY.
- 4. ALL DRIVEWAYS REQUIRE AN APPLICATION FOR A PRIVATE DRIVEWAY CROSSING PERMIT.
- 5. CULVERT MATERIAL SPECIFICATIONS:
- 5.1. CORRUGATED STEEL PIPE (CSP)
- 68mm x 13mm CORRUGATION PROFILE.
- 5.2. POLYVINYL CHLORIDE (PVC)
- SOLID WALL PVC 5.2.1.

CERTIFIED TO CSA B182.2 AND CONFORMING TO ASTM D3034 WITH MINMUM PIPE STIFFNESS OF 320MPa @ 5% DEFLECTION.

- 5.2.2. PROFILE PIPE CERTIFIED TO CSA B182.4 AND CONFORMING TO ASTM F794 WITH MINIMUM PIPE STIFFNESS OF 320MPa @ 5% DEFLECTION.
- 5.3. REINFORCED CONCRETE PIPE (RCP)
- 300mm 600mm COVER RCP TO BE ASTM CLASS V.
 - MORE THAN 600mm COVER

RCP CLASS TO BE REVIEWED AND APPROVED BY THE CITY.

- 5.4. CORRUGATED POLYETHYLENE (CPE)
- CERTIFIED TO CSA 182.8 AND CONFORMING TO ASTM 3350 5.4.1. WITH MINIMUM PIPE STIFFNESS OF 320MPa AT 5% DEFLECTION.



EXISTING GROUND VERTICAL WALL OF BRICK OR STONE **CULVERT** (PREFERRED MIN. 0.5% SLOPE)

FILL -

SECTION A-A - OPTION 1

3X VERTICAL EXAGGERATION

IF DITCH CROSSINGS (APPROACHES) ARE IN CLOSE PROXIMITY THAT DOES NOT ALLOW 3:1 SIDE SLOPE, OPTION 2 (VERTICAL SIDE WALL) SHALL BE USED.

SECTION A-A - OPTION 2 3X VERTICAL EXAGGERATION

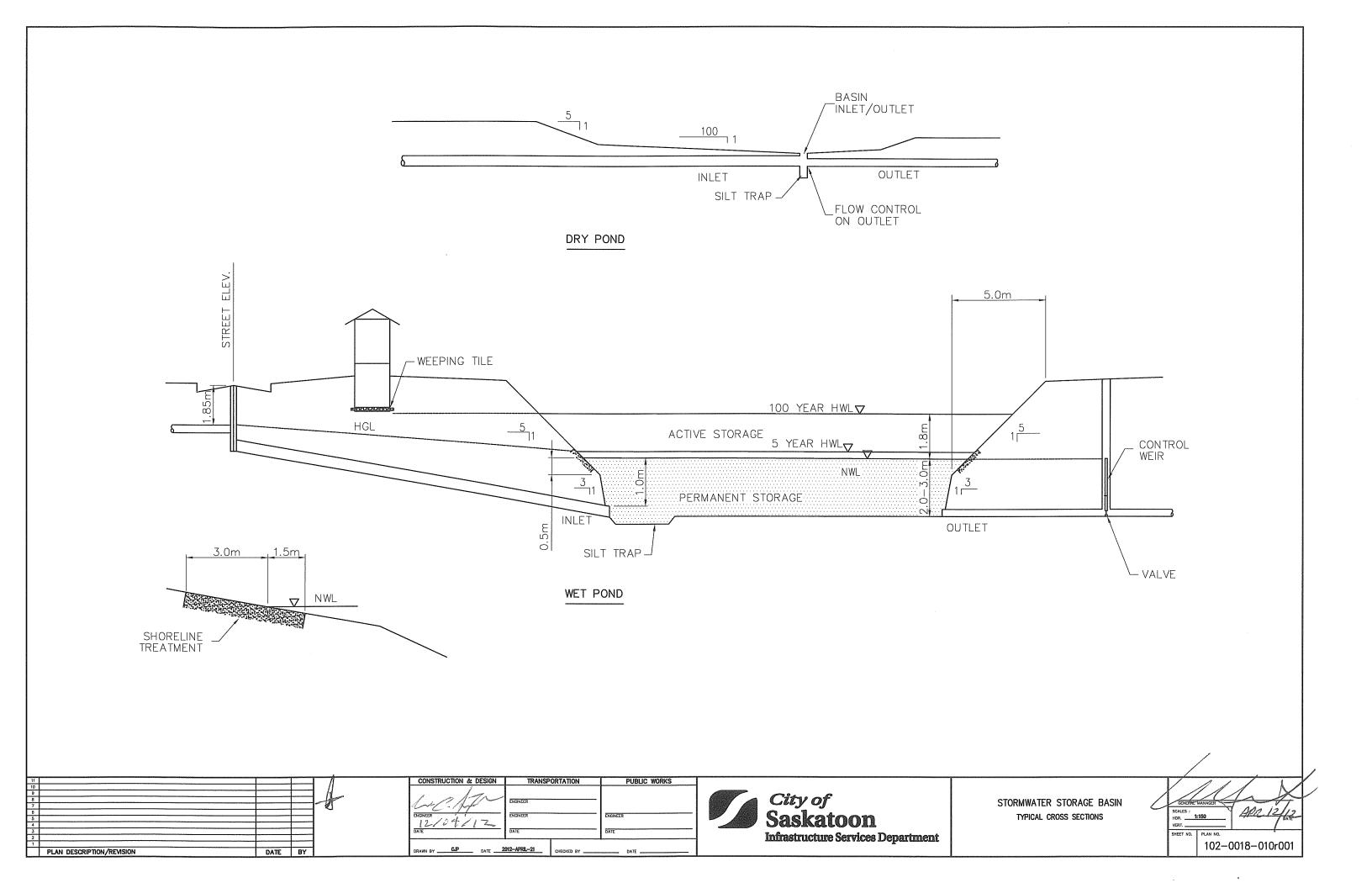
| _ | | | | |
|---|---|-------------|-----|---|
| | PLAN DESCRIPTION/REVISION | DATE | BY | Г |
| 1 | ORIGINAL DRAWING | 2000-JUL-26 | MRH | ı |
| 2 | DIMENSION CHANGE AND NOTES ADDED | 2018-MAR-05 | EDH | ı |
| 3 | ADDED MONTGOMERY PLACE MAXIMUM CROSSING WIDTH AND | 2019-DEC-31 | DLH | |
| 3 | CULVERT MATERIAL SPECIFICATIONS | 2019-DEC-31 | DLH | H |
| | | | | ı |
| | | | | |
| | | | | |
| | | | | |
| | · | | | |
| | | | | ı |



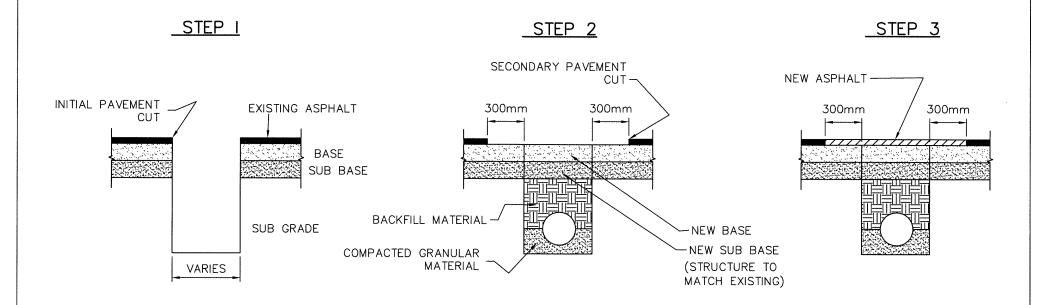
STANDARD DITCH CROSSING CULVERT REQUIREMENTS

| APPROVALS | | | | |
|---|--|--------------------------------|--|--|
| SIGNATURE Mitchell McM: | | SIGNATURE Maciej Jurkiewicz | | |
| NAME | | NAME | | |
| J | | Jan 22, 2021 | | |
| DATE SIGNED | | DATE SIGNED | | |
| SCALES: HOR. 1:125 VERT. AS NOTED PLAN NO. 102-0018-009r003 | | | | |

CULVERT PLACED ON



VERTICAL—WALLED TRENCH

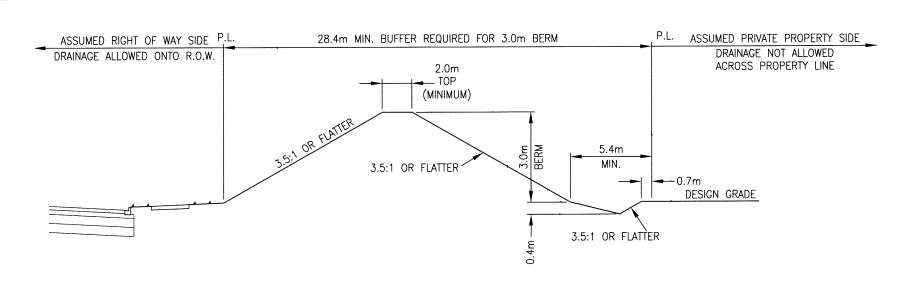


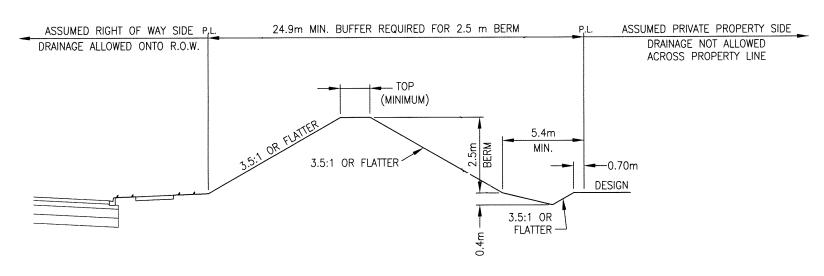
| DRAWN BY | REVISIONS | | | |
|---------------|-----------|--|--|--|
| DATE 06/19/00 | 1 | MATCH EXISTING STRUCTURE NOTE 15-DEC-2014 HLO | | |
| CHECKED BY | 2 | | | |
| DATE | 3 | | | |



KEYING OF TRENCH







THESE ARE FOR EXAMPLE ONLY; CALCULATE THE BUFFER REQUIREMENT BASED ON THE DESIRED BERM HEIGHT

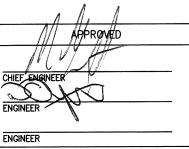
| | PLAN DESCRIPTION/REVISIONS | |
|---|--|---|
| 4 | | 7 |
| 3 | | 1 |
| 2 | CHANGED BUFFER WDTH JVS 2014 JUN 25 | 1 |
| 1 | INCREASED BUFFER WIDTH JAB 2013 DEC 18 | Ι |
| | DRAWN BY MRH | 1 |
| | DATE 2009 MAR 30 | |

SCALE : HOR. __1:250_ VERT. __1:125_

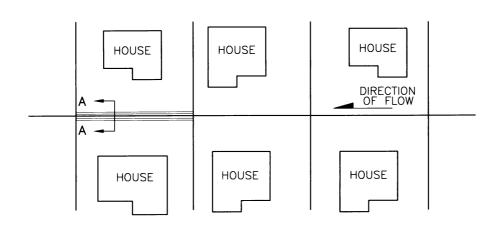


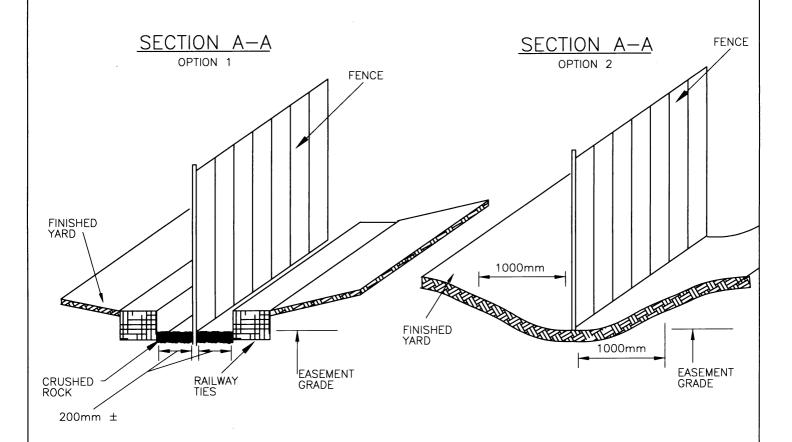
Transportation & Utilities Department

TYPICAL BERM REQUIREMENT



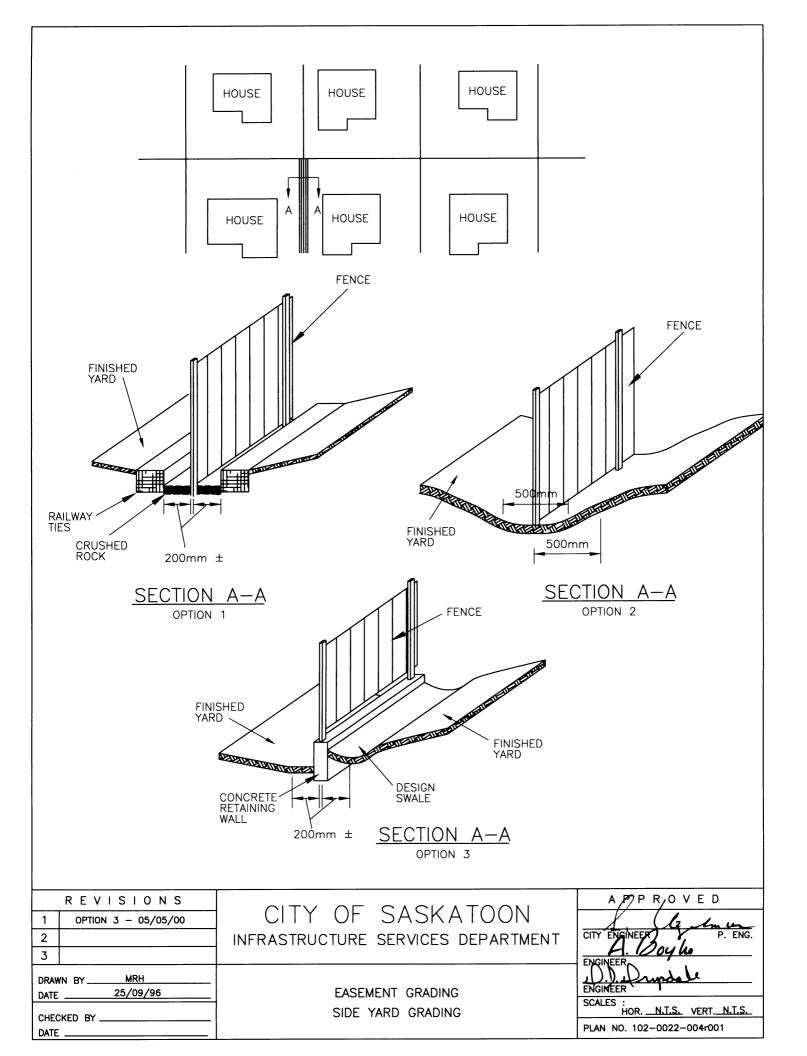
PLAN NO. 102-0021-001r003

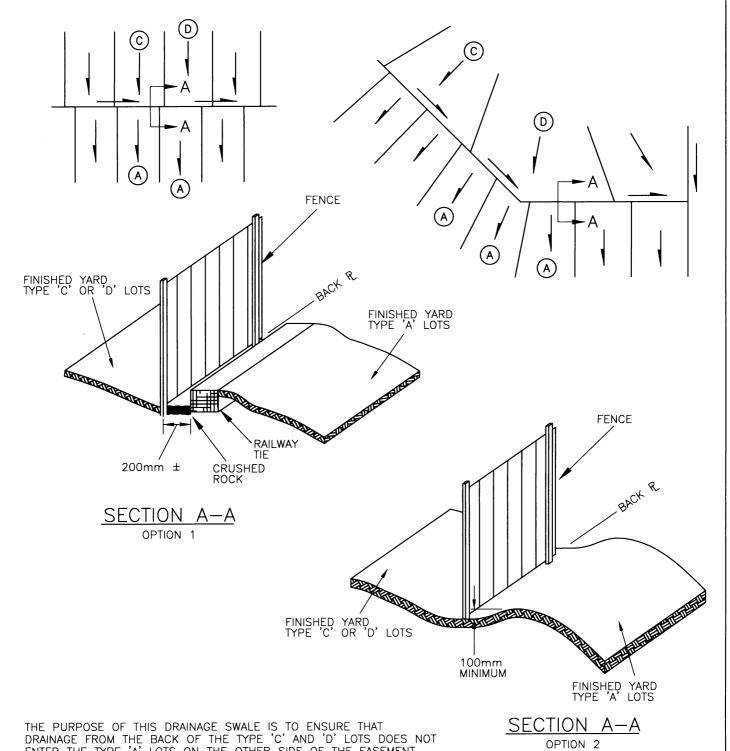




NOTE: REAR LOT GRADES ARE DESIGNED TO FLOW ALONG THE FENCE LINE, SEE LOT GRADE "PREGRADES" AND DIRECTION OF FLOW.

| R E V I S I O N S 1 | CITY OF SASKATOON INFRASTRUCTURE SERVICES DEPARTMENT | A P P R O V E D CITY ENGINEER P. ENG. ENGINEER O Y LO |
|---|--|---|
| DRAWN BYRPL/MRH DATE03/07/96 CHECKED BY DATE | EASEMENT GRADING BACK YARD | ENGINEER SCALES: HOR. N.I.S. VERT. N.I.S. PLAN NO. 102-0022-003r001 |



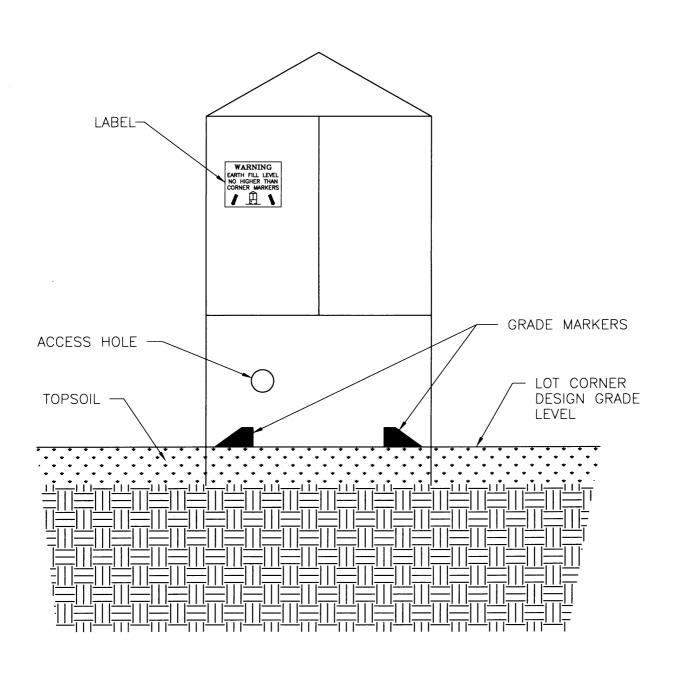


THE PURPOSE OF THIS DRAINAGE SWALE IS TO ENSURE THAT DRAINAGE FROM THE BACK OF THE TYPE 'C' AND 'D' LOTS DOES NOT ENTER THE TYPE 'A' LOTS ON THE OTHER SIDE OF THE EASEMENT.

THE UTILITY KIOSKS LOCATED ALONG THE UTILITY EASEMENTS WILL HAVE THE ELEVATION MARKED TO SHOW THE FINAL GRADE AT THE BACK PROPERTY LINE.

THIS WOULD APPLY TO THE BACK OF ALL TYPE 'A' LOTS.

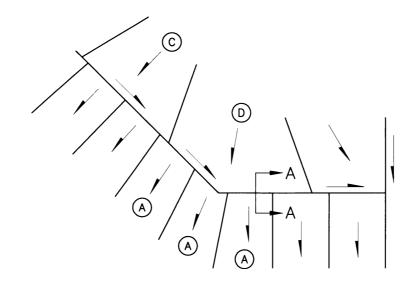
| R E V I S I O N S 1 | CITY OF SASKATOON INFRASTRUCTURE SERVICES DEPARTMENT | CITY ENGINEER P. ENG. |
|----------------------|--|---|
| DRAWN BY | DRAINAGE SWALE BACK OF LOT, 1 OF 2 | ENGINEER SCALES: HOR. N.I.S. VERT. N.I.S. PLAN NO. 102-0022-005r001 |

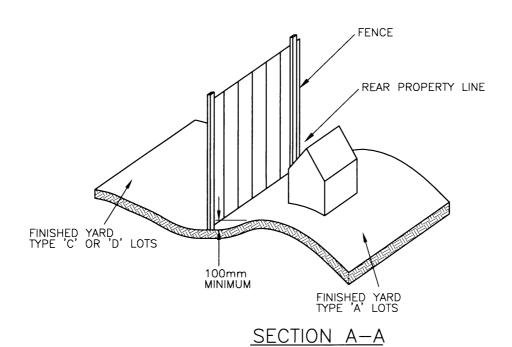


NOTE:

- 1. LABEL TWO SIDES FACING HOUSES.
- 2. PLACE GRADE MARKERS ON ALL FOUR SIDES NEAR CORNERS.

| REVISIONS 1 2 3 | CITY OF SASKATOON INFRASTRUCTURE SERVICES DEPARTMENT | A P P R D V E D CITY ENGINEER P. ENG. |
|---|--|---|
| DRAWN BY G. HRYCAK DATE 10/10/96 CHECKED BY DATE | GRADE MARKERS ELECTRICAL KIOSK | ENGINEER SCALES: HOR. N.I.S. VERT. N.I.S. PLAN NO. 102-0022-006r001 |





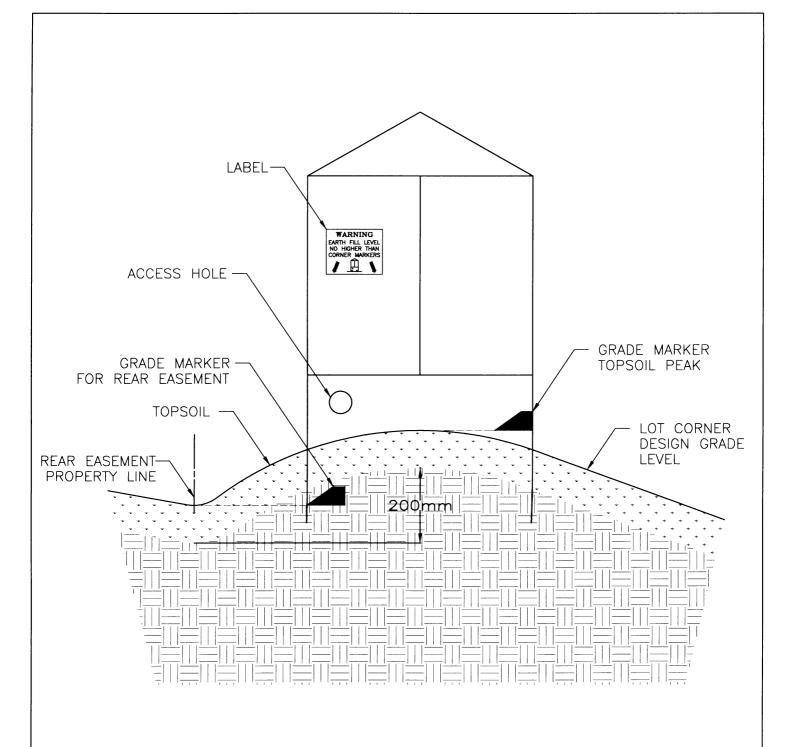
OPTION 3

THE PURPOSE OF THIS DRAINAGE SWALE IS TO ENSURE THAT DRAINAGE FROM THE BACK OF THE TYPE 'C' AND 'D' LOTS DOES NOT ENTER THE TYPE 'A' LOTS ON THE OTHER SIDE OF THE EASEMENT.

THE UTILITY KIOSKS LOCATED ALONG THE UTILITY EASEMENTS WILL HAVE THE ELEVATION MARKED TO SHOW THE FINAL GRADE AT THE BACK PROPERTY LINE.

THIS WOULD APPLY TO THE BACK OF ALL TYPE 'A' LOTS.

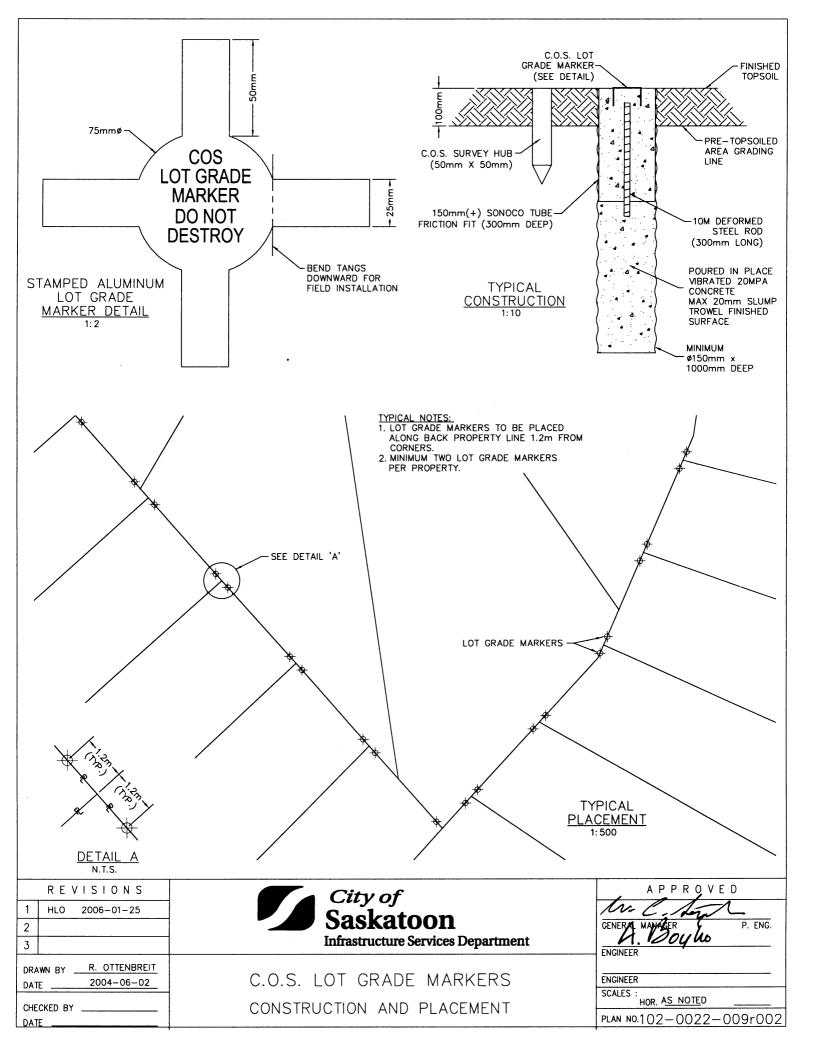
| REVISIONS | | APPROVED |
|----------------------------------|------------------------------------|---|
| 1 | CITY OF SASKATOON | |
| 2 | INFRASTRUCTURE SERVICES DEPARTMENT | CITY ENGINEER P. ENG. |
| 3 | | ENGINEER A |
| DRAWN BY C. CARTER DATE 23/07/02 | DRAINAGE SWALE | ENGINEER Drydale |
| CHECKED BY | BACK OF LOT, 2 OF 2 | SCALES : HORN.T.SVERTN.T.SPLAN NO. 102-0022-007r001 |

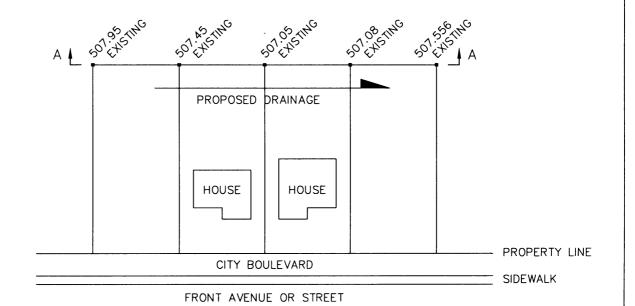


NOTE:

- 1. LABEL TWO SIDES FACING HOUSES.
- 2. PLACE GRADE MARKERS ON ALL FOUR SIDES NEAR CORNERS.

| REVISIONS | CITY OF SASKATOON | A F/PROVED |
|----------------------------------|------------------------------------|---|
| 2 3 | INFRASTRUCTURE SERVICES DEPARTMENT | CITY ENGINEER P. ENG. |
| DRAWN BY C. CARTER DATE 23/07/02 | GRADE MARKERS | ENGINEER Dydal |
| CHECKED BY | ELECTRICAL KIOSK | SCALES : HOR. N.T.S. VERT. N.T.S. PLAN NO. 102-0022-008r001 |

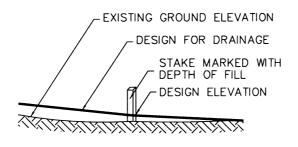




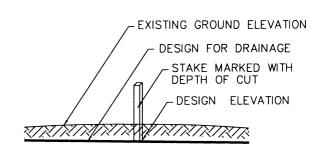
SURVEY STAKE — DESIGN GRADE — EXISTING GROUND ELEVATION (TOP OF TOPSOIL)

— FILL REQUIRED — CUT REQUIRED

PROFILE ALONG A-A
REAR LOT LINE ALONG FENCE

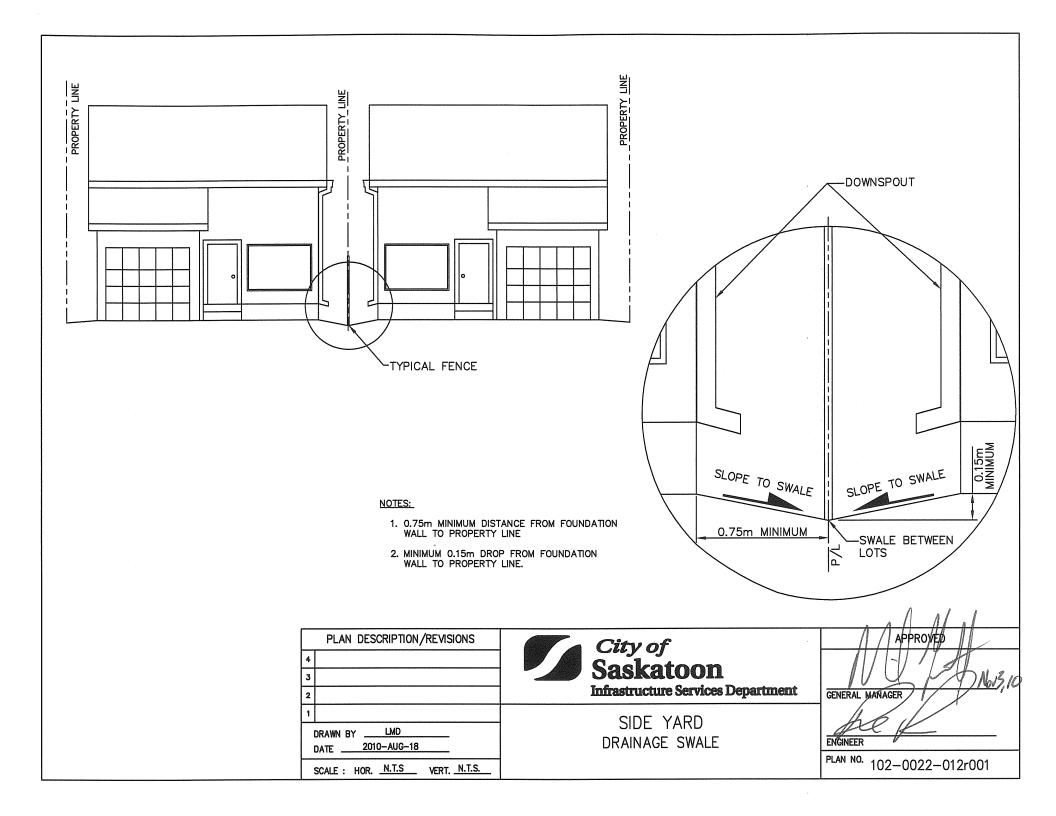


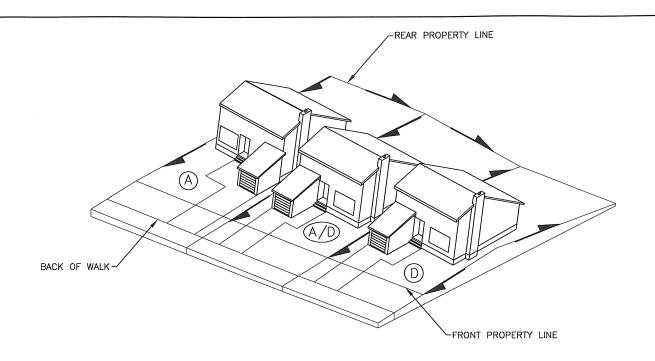


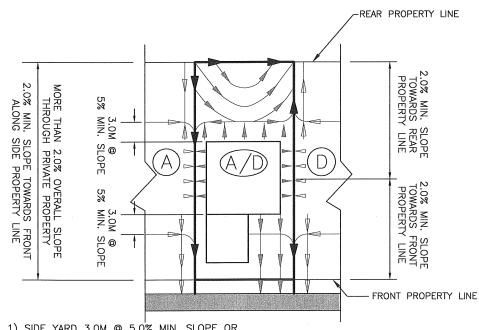


CUT STAKE





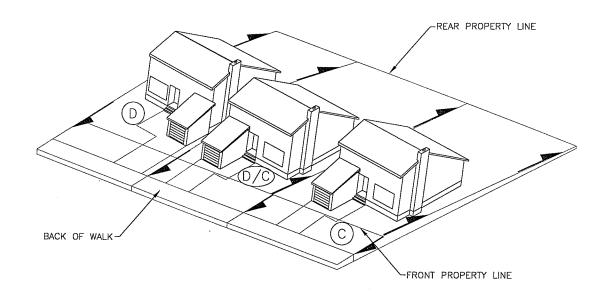


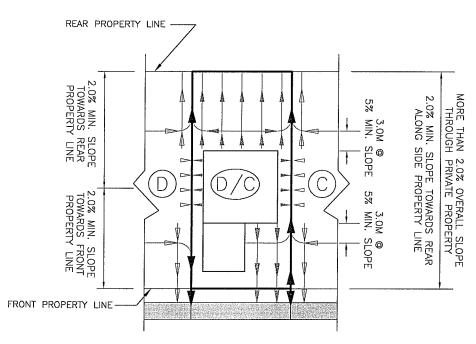


NOTE: 1) SIDE YARD 3.0M @ 5.0% MIN. SLOPE OR MIN. 0.15M DROP FROM WALL TO PROPERTY LINE 2) LOT TYPE D/A IS REVERSE OF LOT TYPE A/D

PLAN VIEW TRANSITION LOT TYPE A/D

| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGEN |
|----------------------------------|--|-------------------------------------|
| DRAWN BY | LOT GRADING TRANSITION LOT TYPE A/D & D/A | ENGINEER PLÁN NO. 102-0022-013r001 |

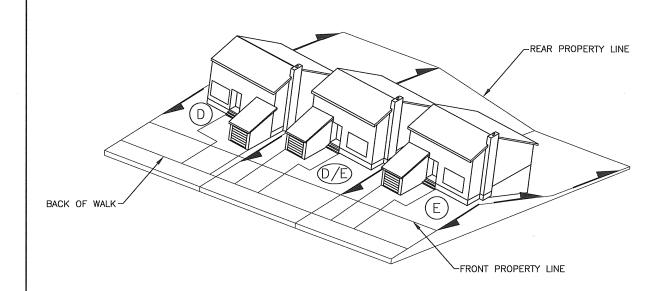


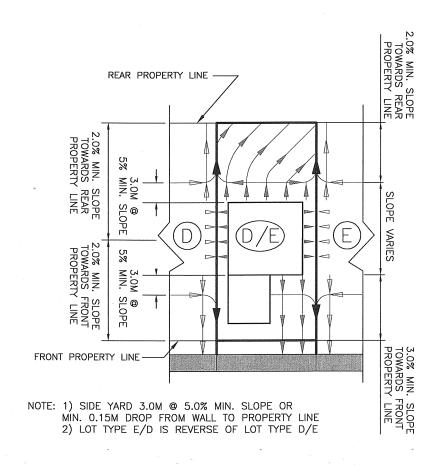


NOTE: 1) SIDE YARD 3.0M @ 5.0% MIN. SLOPE OR MIN. 0.15M DROP FROM WALL TO PROPERTY LINE 2) LOT TYPE C/D IS REVERSE OF LOT TYPE D/C

PLAN VIEW TRANSITION LOT TYPE D/C

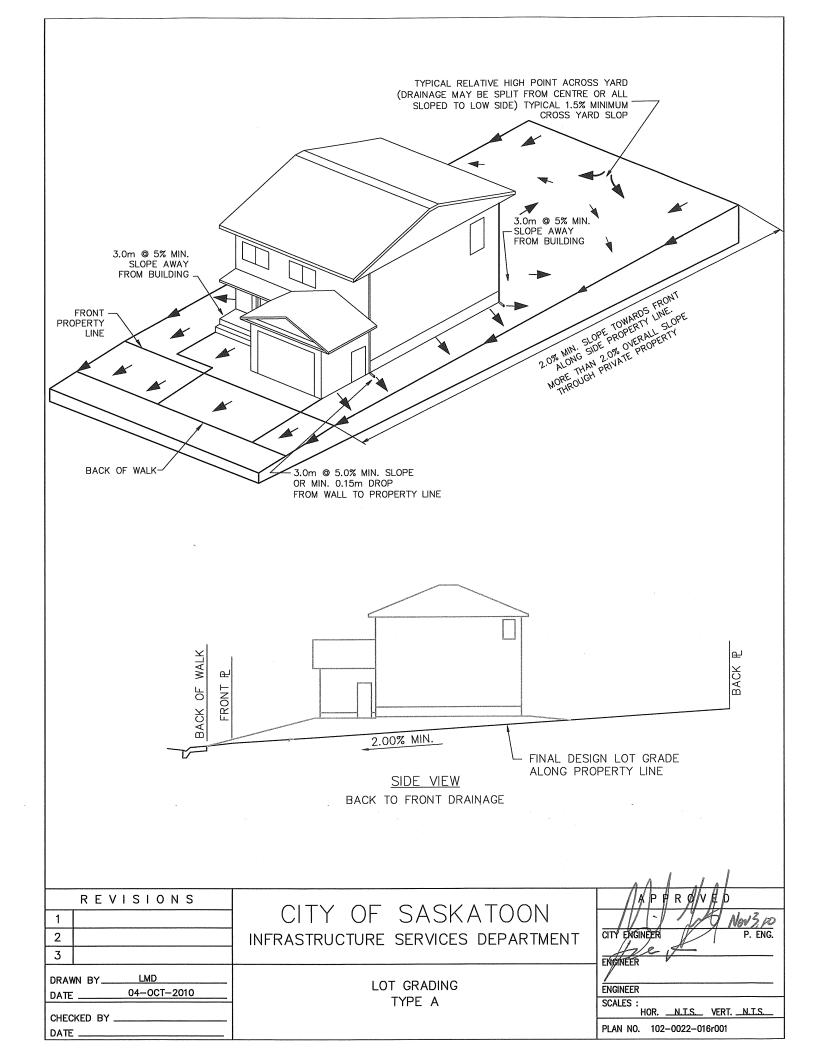
| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Infrastructure Services Department | APPROVED MALJEA GENERAL MANAGER |
|----------------------------------|--|-----------------------------------|
| 1 | LOT GRADING TRANSITION LOT TYPE D/C & C/D | ENGINEER |
| SCALE : HOR VERT | | PLAN NO. 102-0022-014r001 |

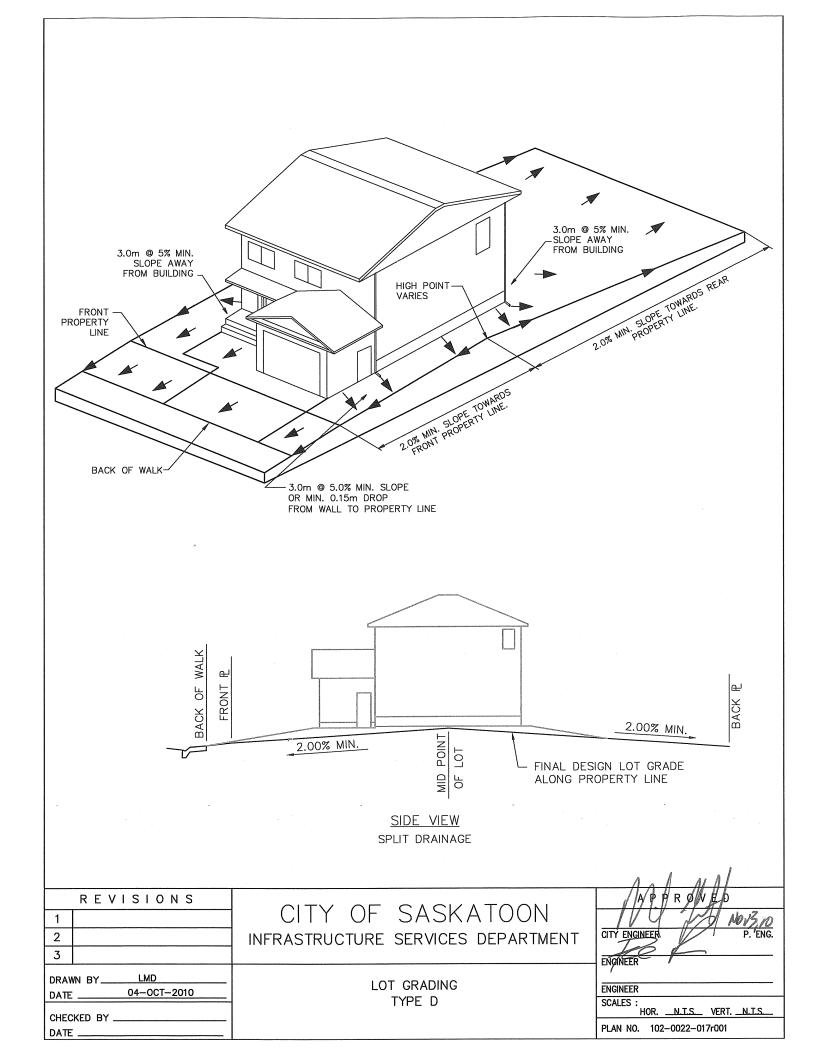


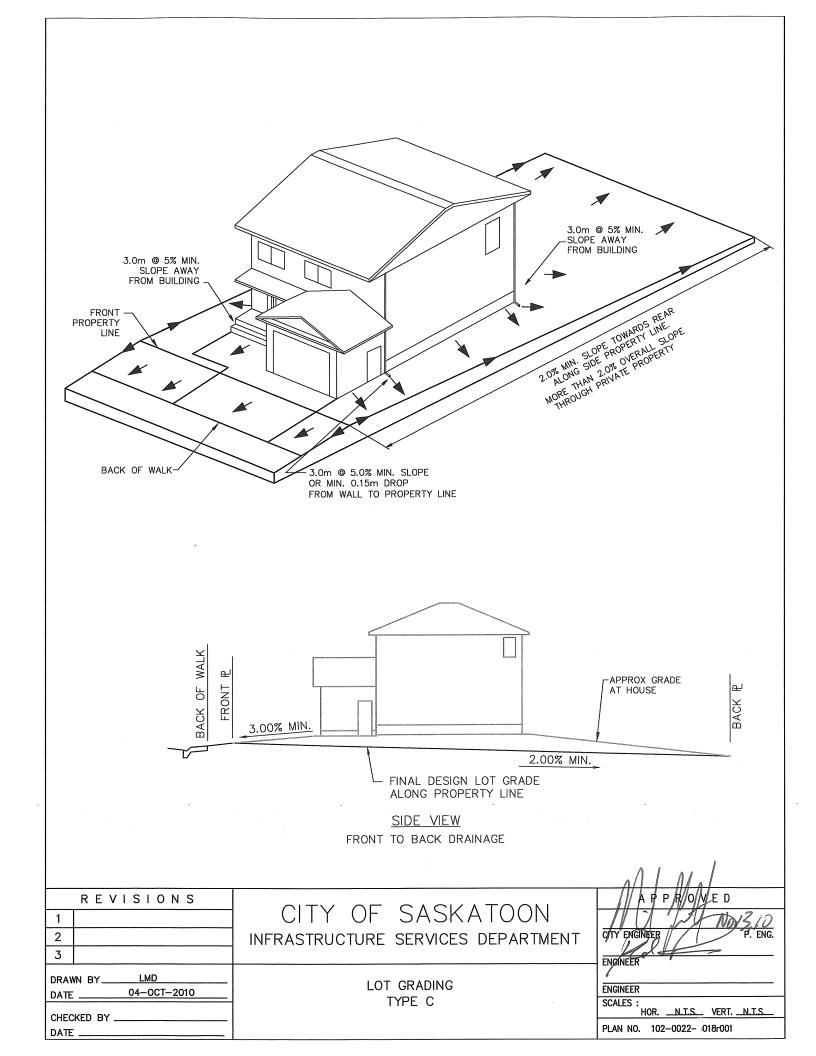


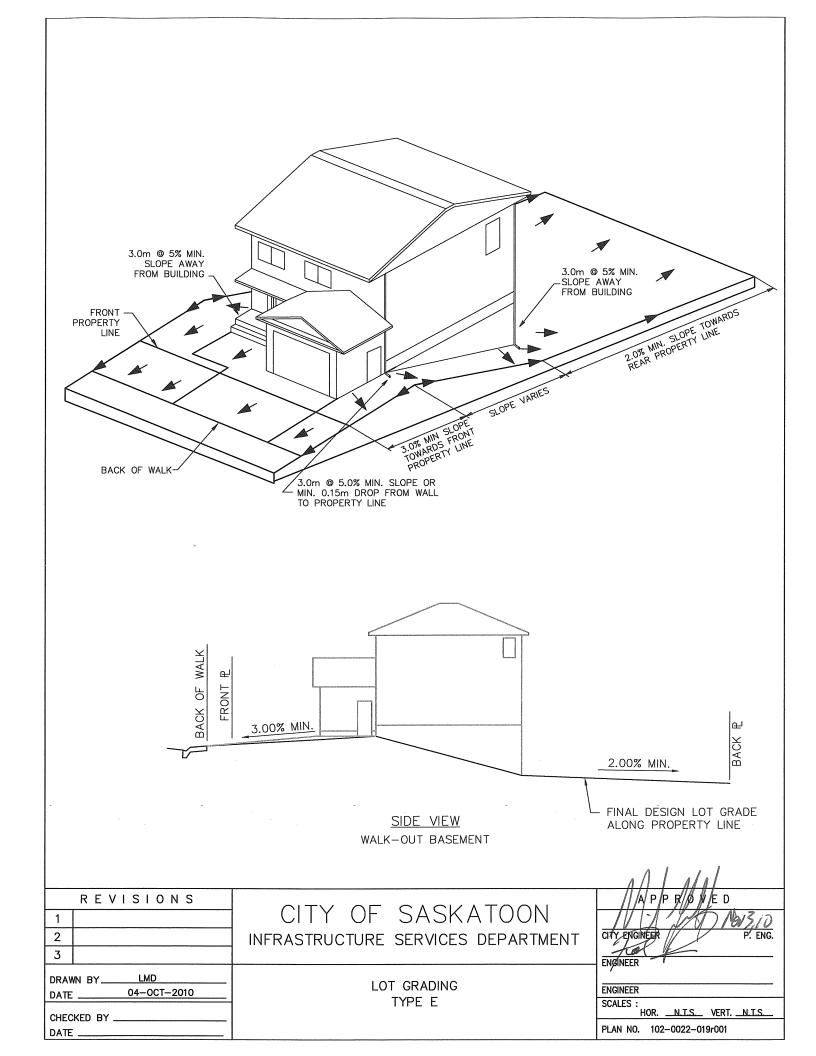
PLAN VIEW TRANSITION LOT TYPE D/E

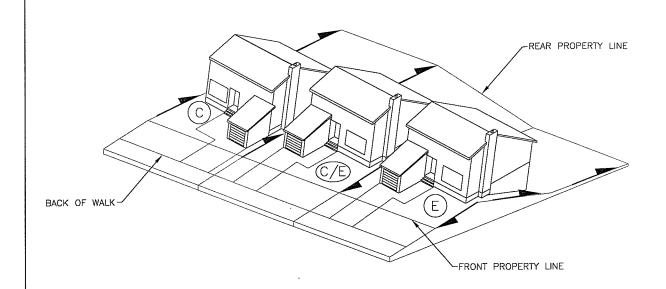
| PLAN DESCRIPTION/REVISIONS | City of | / |
|----------------------------|------------------------------------|--------------------------------------|
| 4 | City of Saskatoon | 1 /1/13/1 /9 HH_ |
| 3 | | 1 / / NO1310 |
| 2 | Infrastructure Services Department | GENERAL MANAGER |
| 1 | LOT GRADING | |
| DRAWN BYLMD | | |
| DATE2010-SEP-14 | TRANSITION LOT TYPE D/E & E/D | ENGINEER / |
| SCALE : HOR VERT | | ^{ÉLAN NO.} 102-0022-015r001 |

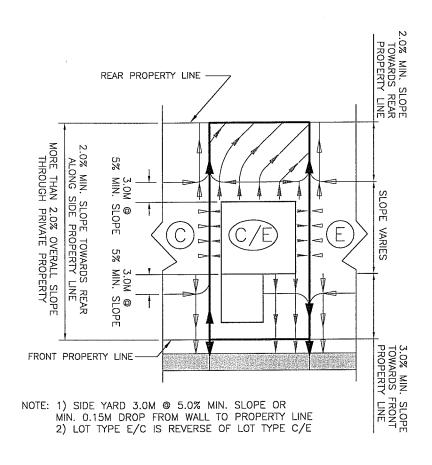






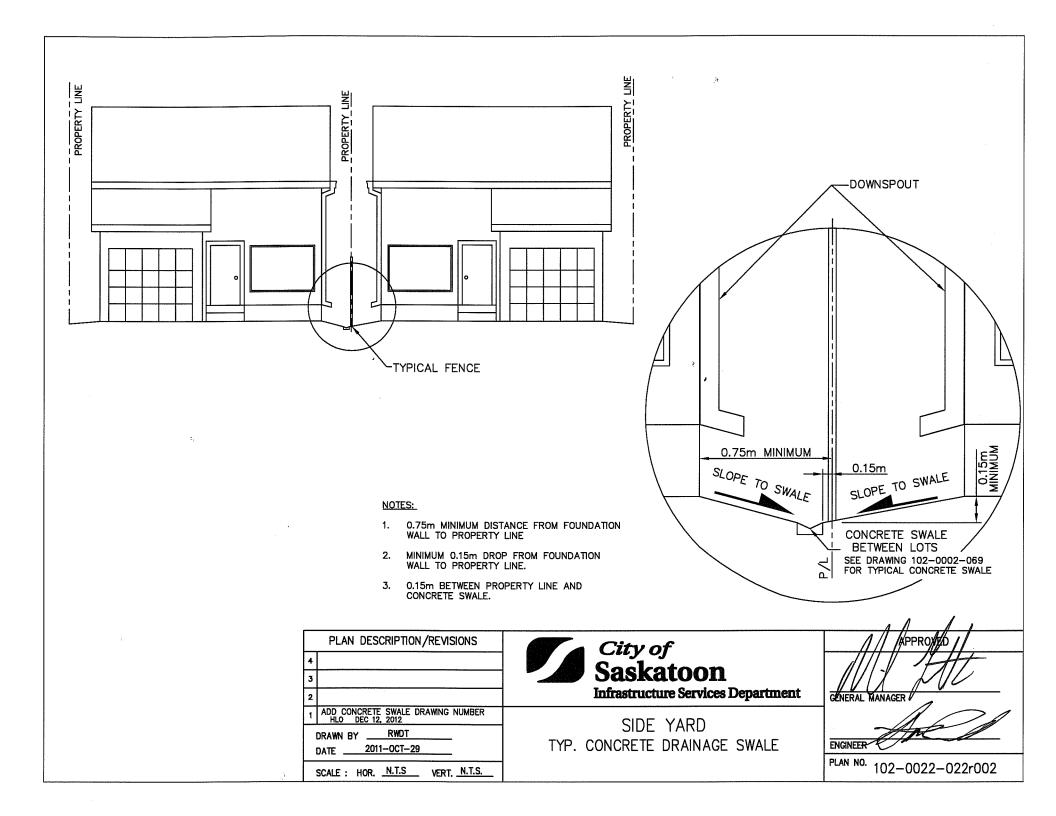


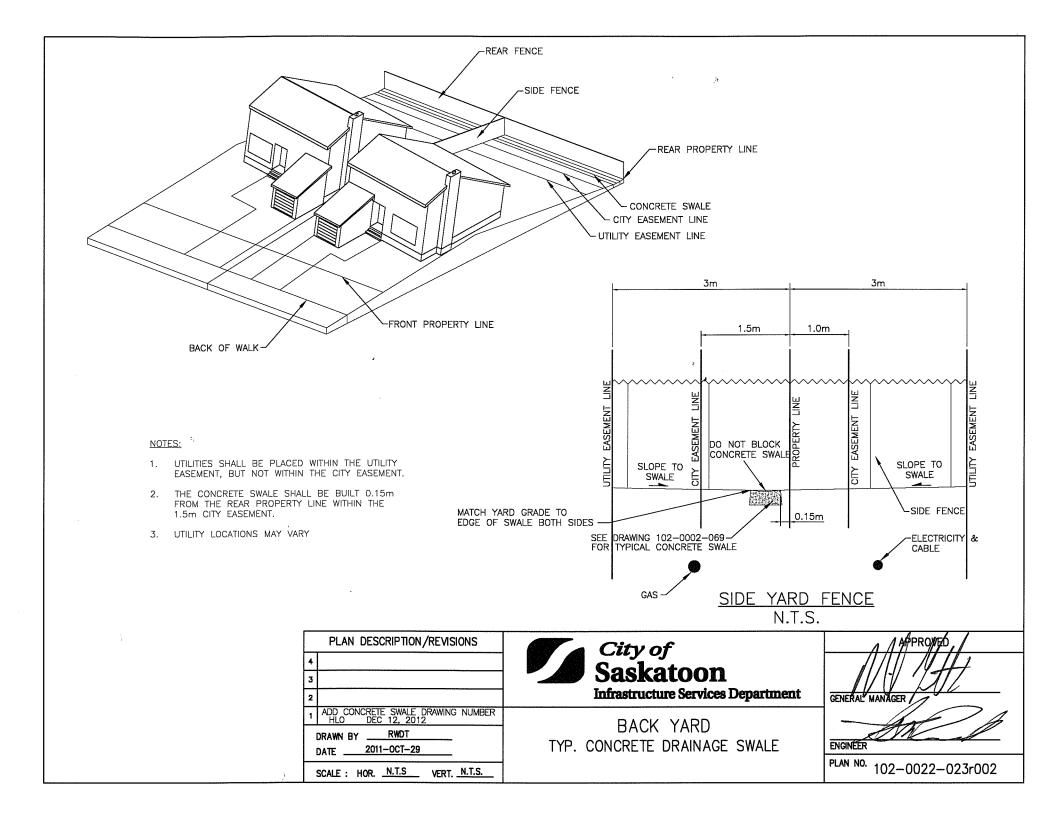


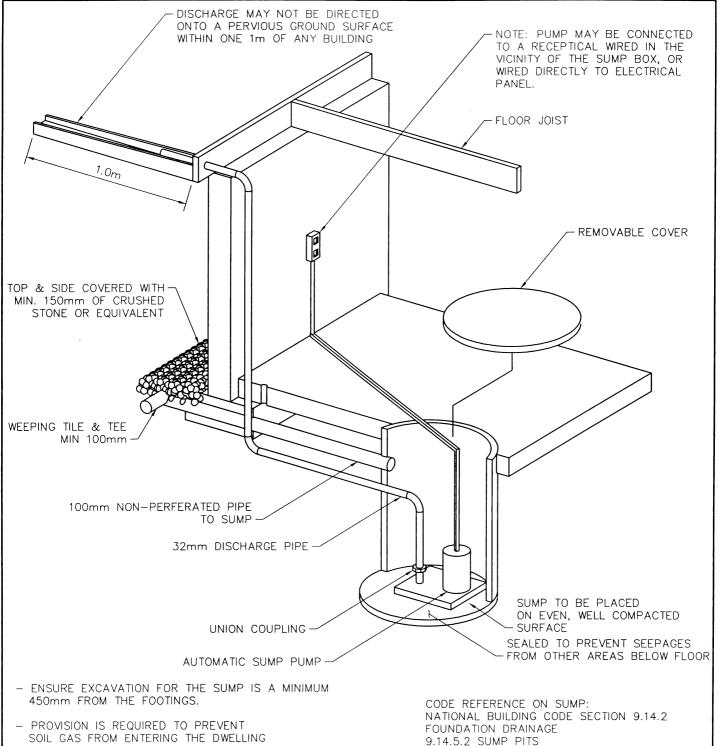


PLAN VIEW TRANSITION LOT TYPE C/E

| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
|----------------------------------|--|---------------------------|
| DRAWN BYHLO | LOT GRADING TRANSITION LOT TYPE C/E & E/C | ENGINEER |
| SCALE : HOR VERT | · · · · · · · · · · · · · · · · · · · | PLAN NO. 102-0022-021r001 |







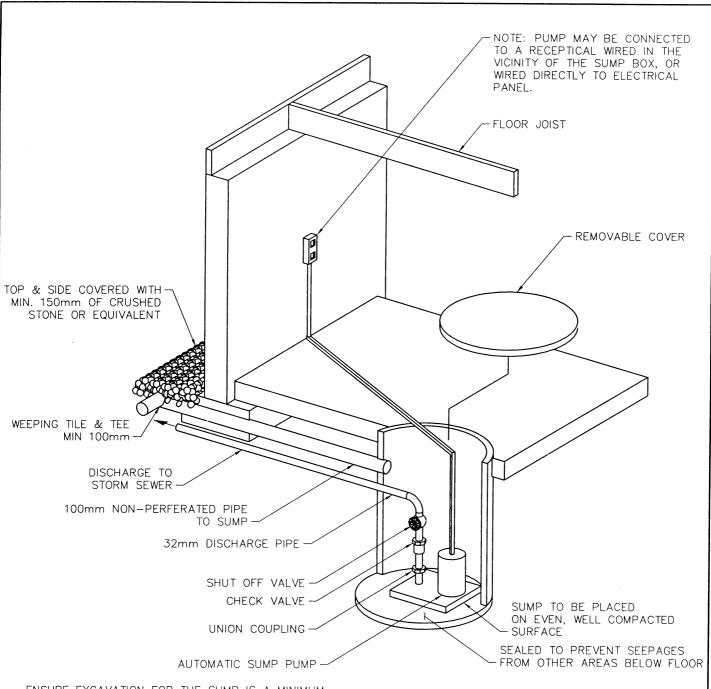
FROM THE SUMP AND WEEPING TILE.

- SUMP PIT MAY BE CONSTRUCTED OF:
 - A) CONCRETE
 - B) CORROSION RESISTANT STEEL
 - C) PLASTIC

WHERE A SUMP PIT IS PROVIDED IT SHALL BE:

- A) NOT LESS THAN 750mm DEEP.
- B) NOT LESS THAN 0.25sq.m IN AREA, AND
- C) PROVIDED WITH A COVER.

| R E V I S I O N S 1 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER P. ENG. |
|--|--|---|
| DRAWN BY C. CARTER DATE 10/30/02 CHECKED BY DATE | SUMP WITH PUMPED DISCHARGE TO SURFACE | ENGINEER SCALES: HOR. NTS PLAN NO. 102-0025-001r004 |



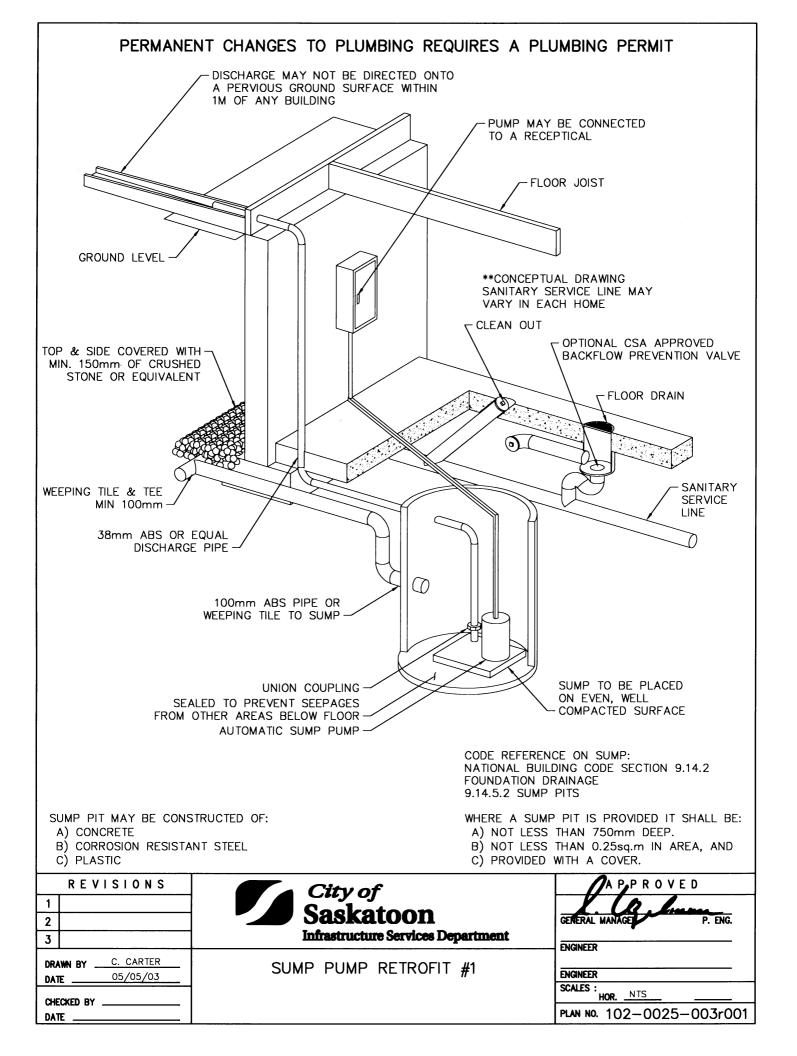
- ENSURE EXCAVATION FOR THE SUMP IS A MINIMUM 450mm FROM THE FOOTINGS.
- PROVISION IS REQUIRED TO PREVENT SOIL GAS FROM ENTERING THE DWELLING FROM THE SUMP AND WEEPING TILE.
- SUMP PIT MAY BE CONSTRUCTED OF:
 - A) CONCRETE
 - B) CORROSION RESISTANT STEEL
 - C) PLASTIC

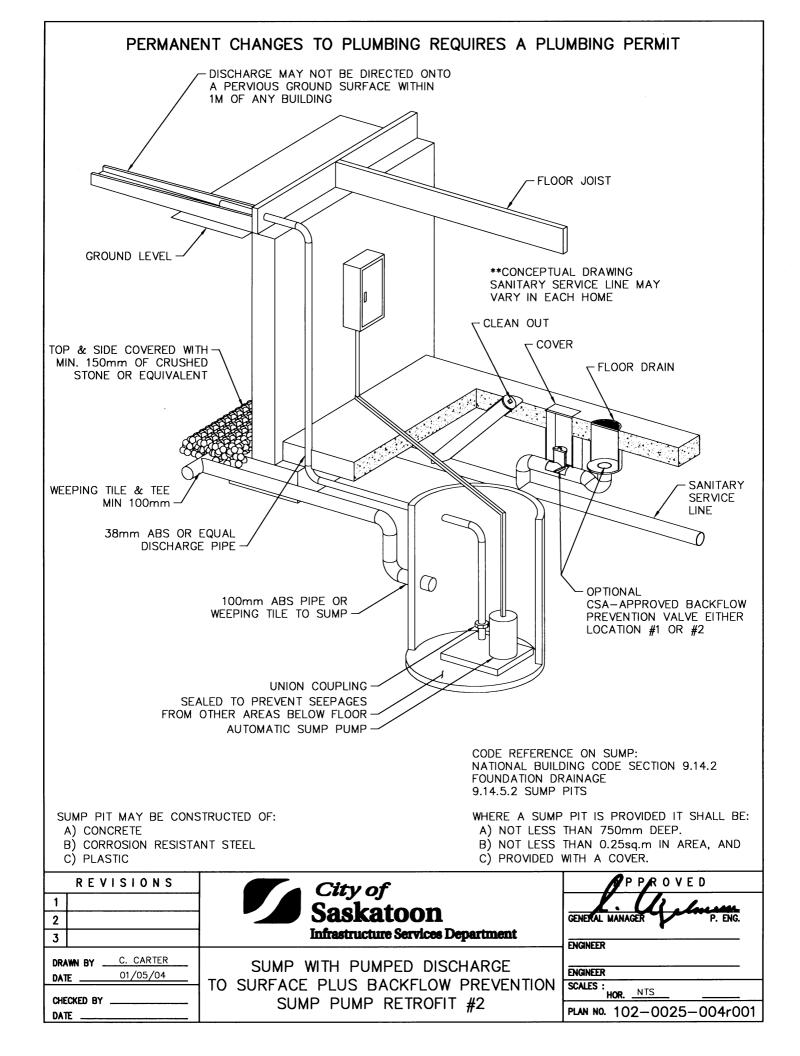
CODE REFERENCE ON SUMP:
NATIONAL BUILDING CODE SECTION 9.14.2
FOUNDATION DRAINAGE
9.14.5.2 SUMP PITS

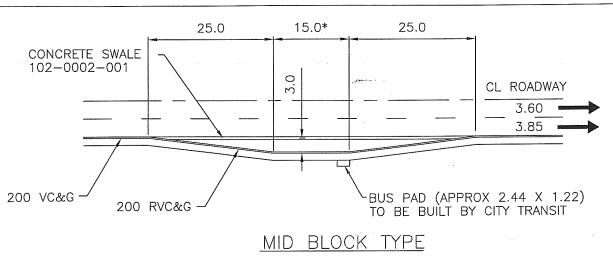
WHERE A SUMP PIT IS PROVIDED IT SHALL BE:

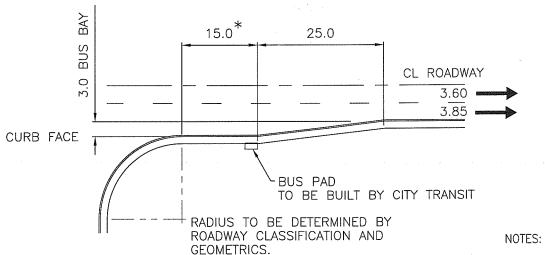
- A) NOT LESS THAN 750mm DEEP.
- B) NOT LESS THAN 0.25sq.m IN AREA, AND
- C) PROVIDED WITH A COVER.











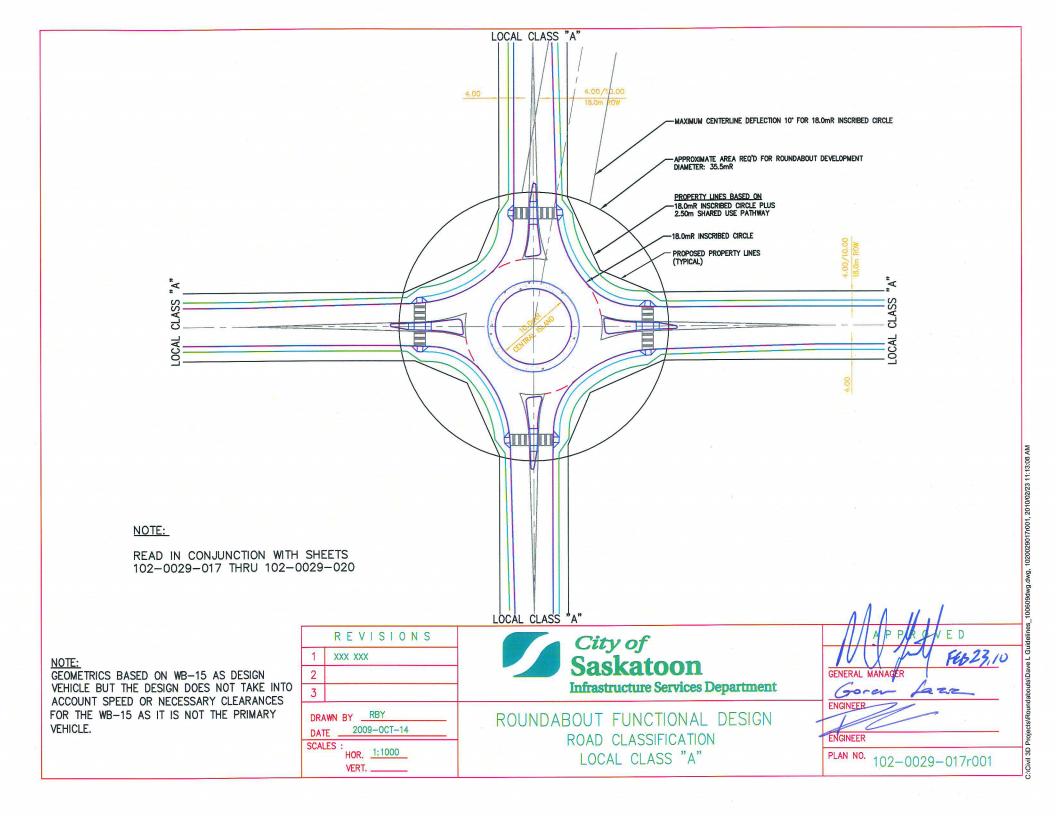
CORNER TYPE

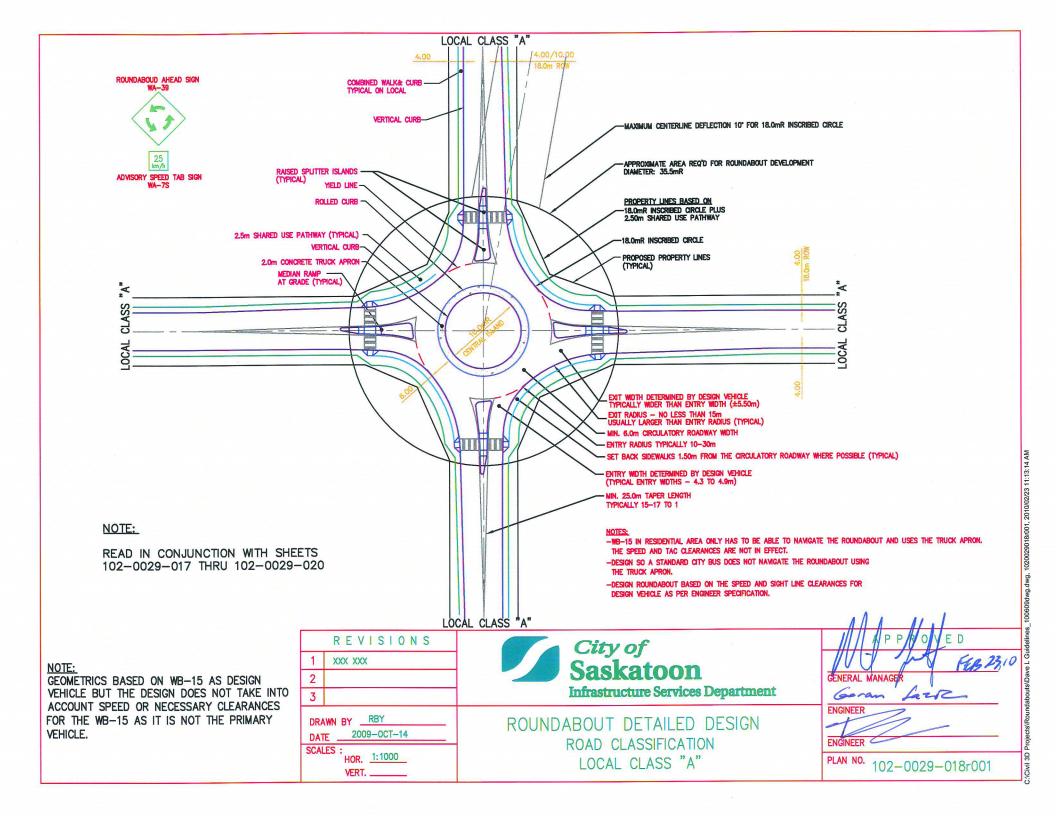
State of the second

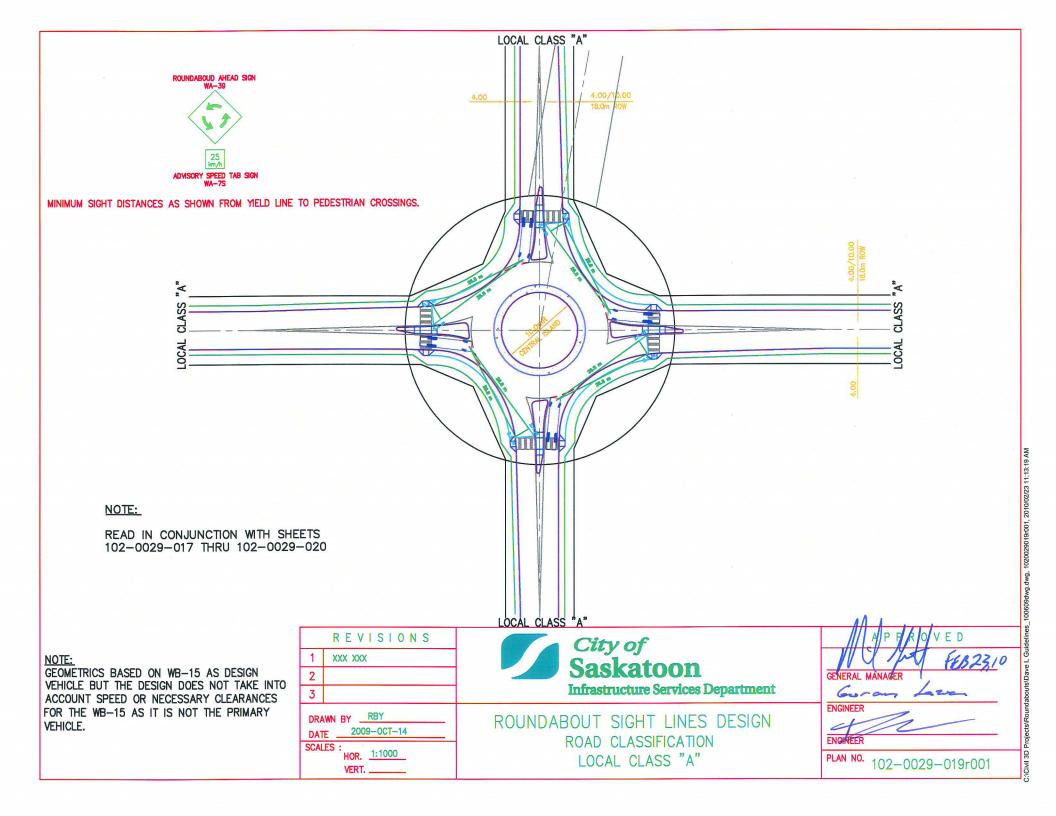
* DIMENSIONS ACCOMMODATE A SINGLE CITY BUS.

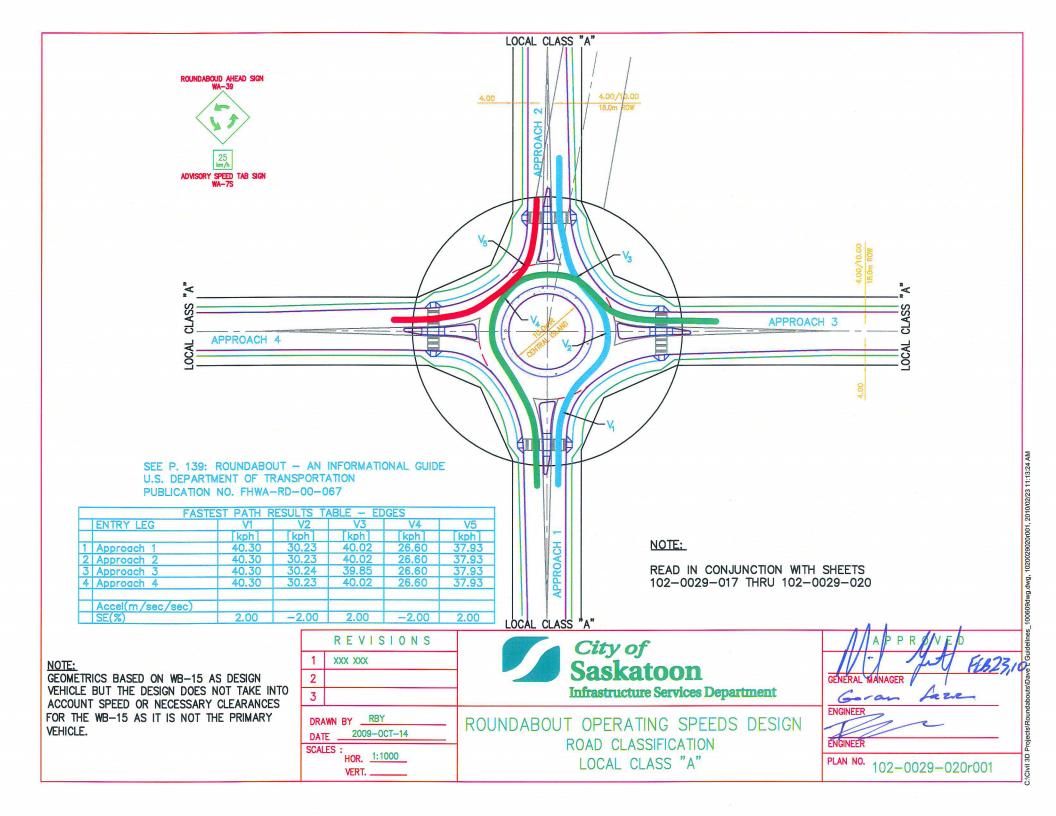
SCALE IN METRES

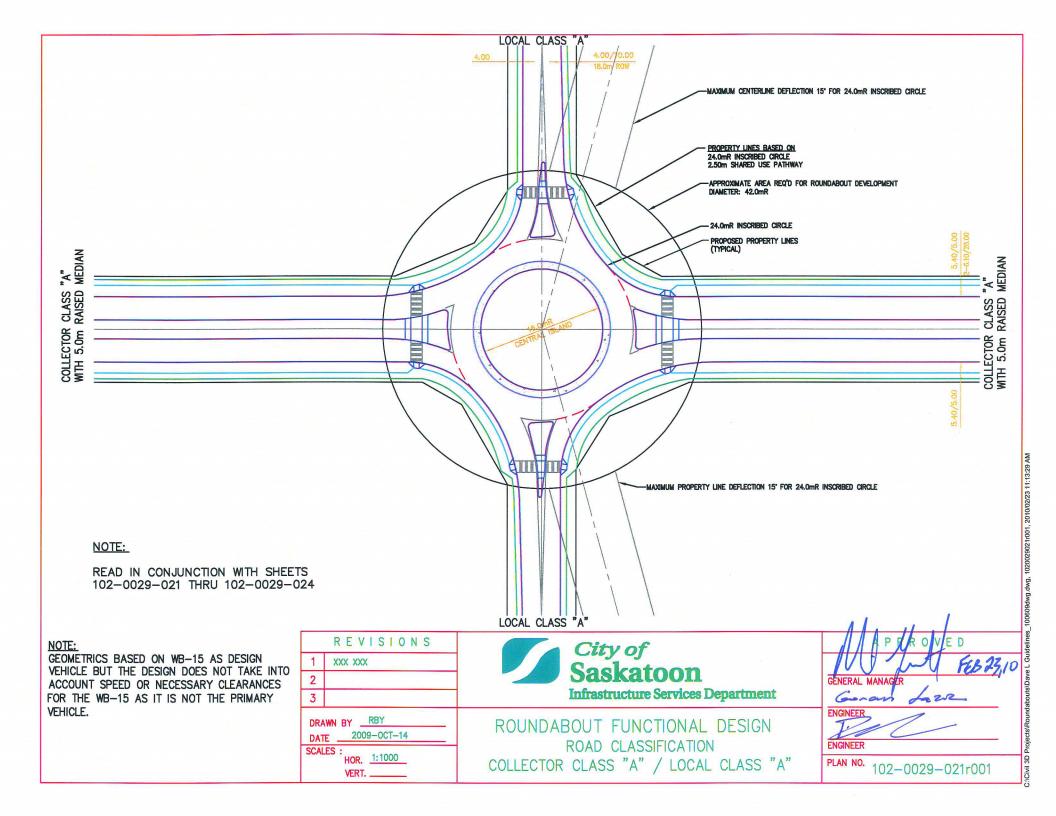
| | | 0 10 120 / 30 |
|--|------------------------------------|---------------------------|
| REVISIONS | Ca City of | //APPR/OVED |
| 1 | City of Saskatoon | NU RU |
| 2 | | GENERAL MANAGER |
| 3 | Infrastructure Services Department | |
| DRAWN BY LCI DATE 2009-05-08 SCALES: 4.75 | BUS BAY TURNOUT | ENGINEER |
| HOR. 1:75 VERT | | PLAN NO. 102-0029-014r001 |

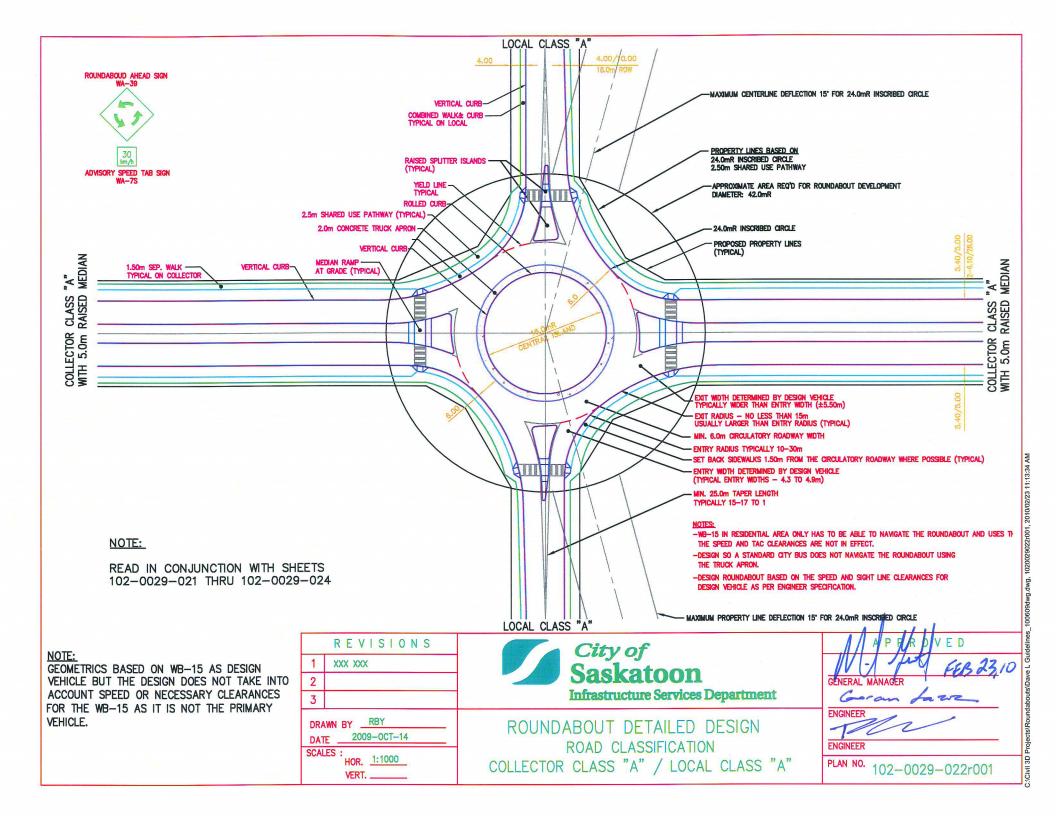


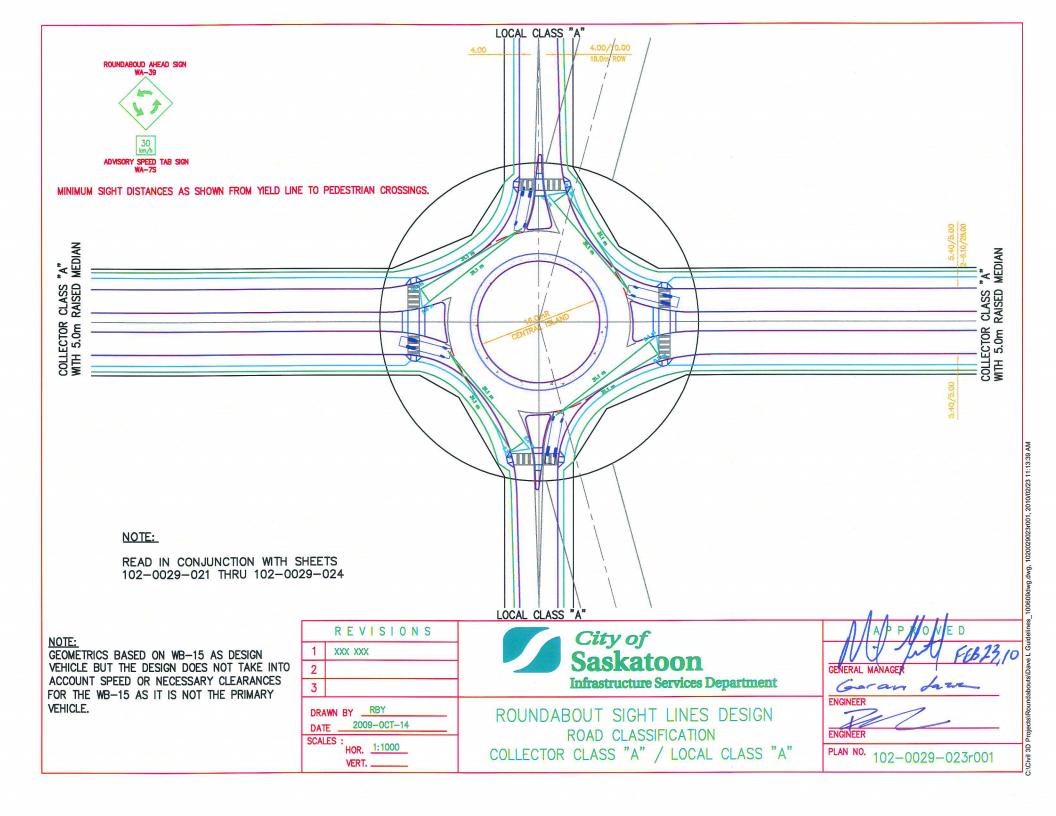


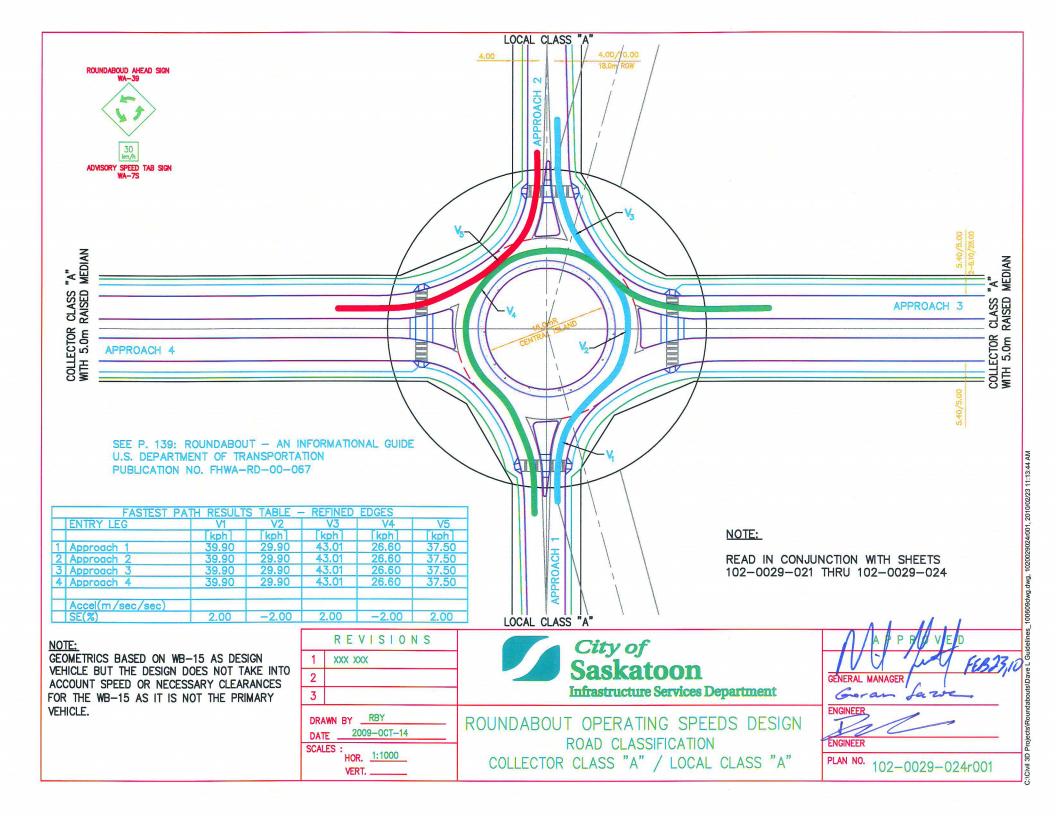




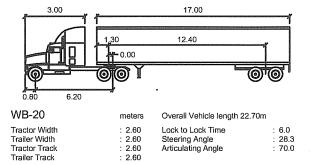






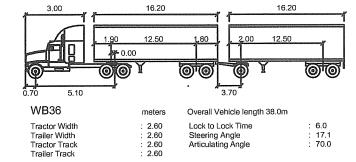


| VEHICLE NAME | WB-20 | <u>WB-36</u> | |
|---|--------------------|---|--|
| SOURCE LIBRARY: AUTOTURN 7.0 | TAC 1999 | ALBERTA INFRASTRUCTURE HIGHWAY GEOMETRIC | |
| VEHICLE TYPE | SEMI-TRAILER CB | DOUBLE TRAILER CB-A | |
| <u>CLASS</u> | TRANSPORT TRUCK | TRANSPORT TRUCK | |
| LOCK TO LOCK TIME | 6.0 SEC. | 6.0 SEC. | |
| STEERING LOCK ANGLE | 28.3 DEGREES | 17.1 DEGREES | |
| UNITS OF MEASURE | METERS | METERS | |
| OVERALL VEHICLE LENGTH | 22.7 | 38.0 | |
| # OF AXLES | 5.0 | 8.0 | |
| TRACTOR WIDTH | 2.6 | 2.6 | |
| TRAILER WIDTH | 2.6 | 2.6 | |
| MIN. TURNING RADIUS BASED ON CENTERLINE | 13.07 @ 90 DEGREES | 17.34 @ 90 DEGREES | |
| FRONT OVERHANG | 0.8 | 0.8 | |
| REAR OVERHANG | 3.3 | 1.7 | |
| ARTICULATING ANGLE | 70.0 DEGREES | 70.0 DEGREES | |



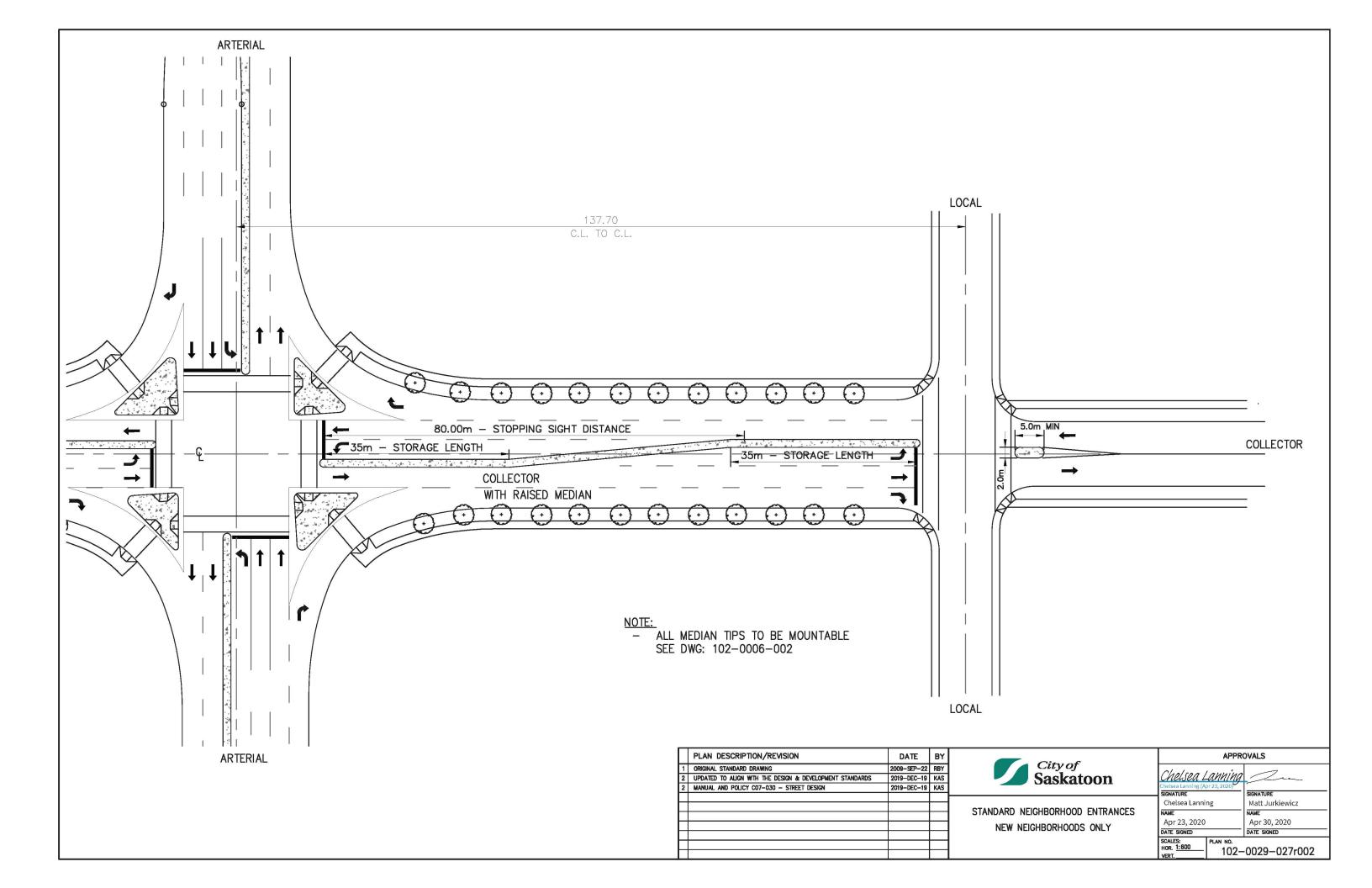
SOURCE: TAC 1999

Trailer Track

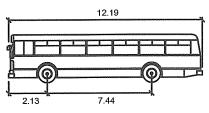


SOURCE: ALBERTA INFRASTRUCTURE; HIGHWAY GEOMETRIC

| PLAN DESCRIPTION/REVISIONS 4 3 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
|---|---|------------------------------------|
| DRAWN BYRBY DATE2011-JULY-28 SCALE : HORNAVERTNA | DESIGN VEHICLES FOR ARTERIALS, EXPRESSWAYS, FREEWAYS & HIGHWAY GEOMETRIC DESIGN | ENGINEER PLAN NO. 102-0029-026r001 |



| VEHICLE NAME | D40LF |
|---------------------|--------------------|
| SOURCE LIBRARY: | COS CUSTOM |
| AUTOTURN 7.0 | VEHICLES |
| | |
| VEHICLE TYPE | STANDARD BUS |
| CLASS | BUS |
| LOCK TO LOCK TIME | 6.0 SEC. |
| STEERING LOCK ANGLE | 33.7 DEGREES |
| UNITS OF MEASURE | METERS |
| OVERALL VEHICLE | |
| LENGTH | 12.19 |
| # OF AXLES | 2.00 |
| TRACTOR WIDTH | 2.6 |
| MIN. TURNING RADIUS | |
| BASED ON CENTERLINE | 13.40 @ 90 DEGREES |
| FRONT OVERHANG | 2.13 |
| REAR OVERHANG | 2.62 |



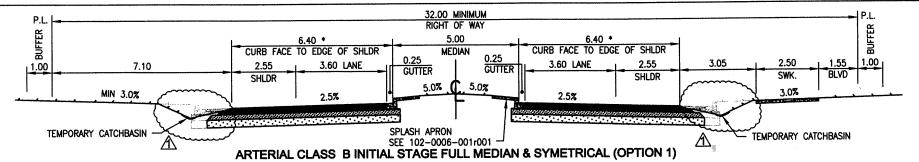
D40LF Overall Vehicle length 12.19m

meters

Bus Width : 2.60 Bus Track : 2.60 Lock to Lock Time : 6.0 Steering Angle : 33.7

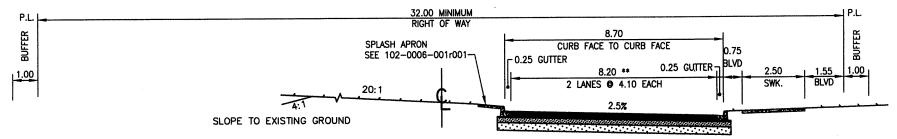
SOURCE: COS CUSTOM VEHICLES

| 4 3 2 | PLAN DESCRIPTION/REVISIONS | City of Saskatoon Infrastructure Services Department GENERAL MANAGER | |
|-------------|--|---|----------|
| | DRAWN BYRBY DATE2011-AUG-02 SCALE : HORNA VERTNA | D40LF (STANDARD COS BUS) DESIGN VEHICLE FOR COLLECTORS AND ROUNDABOUTS ENGINEER PLAN NO. 102-0029-0316 | r001 |



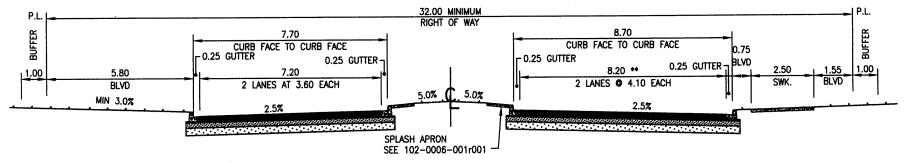
PREFERRED FOR HIGH SPEED, OR MIXED TRAFFIC (INDUSTRIAL, COMMERCIAL), OR MULTI-YEAR GAP BETWEEN STAGES

NOTE 1: ECONOMICS OF COMPLETE CROSS SECTION VERSUS SINGLE LANE TO BE A PROJECT-SPECIFIC DECISION.



ARTERIAL CLASS B INITIAL STAGE, ONE SIDE ONLY (OPTION 2)

PREFERRED FOR LOW SPEED, OR MIXED TRAFFIC (INDUSTRIAL, COMMERCIAL), OR 1-2 YEAR GAP BETWEEN STAGES



ARTERIAL CLASS B FINAL STAGE (ASYMETRICAL)

- * TAC 1999, TABLE 2.3.7.1 (CASE II:C)
- ** TAC 1999, TABLE 2.3.7.1 (CASE III: C)

REVISIONS:

REVISED ENTIRE DRAWING TO MATCH TAC 1999 DESIGN
PAVEMENT WIDTHS FOR INDUSTRIAL/COMMERCIAL TRAFFIC
CONDITIONS.

SEE NOTE 1

PLAN DESCRIPTION/REVISIONS

City of Saskatoon Infrastructure Services Department

CLASS B ARTERIAL STAGING OPTIONS INDUSTRIAL/ COMMERCIAL

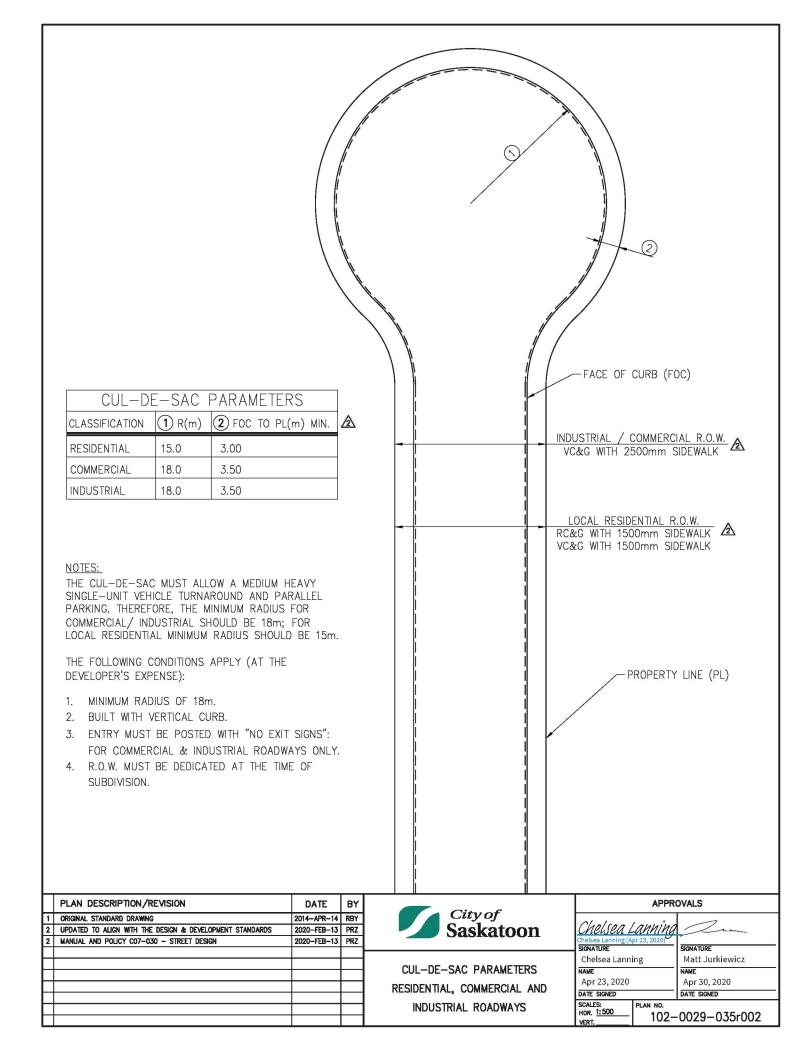
GENERAL MANAGER

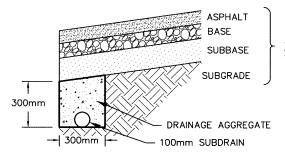
OUGLABACKA LI

ENGINEER

DIAN NO

PLAN NO. 102-0029-032r002



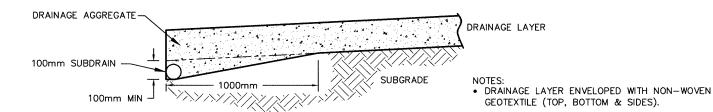


EDGE DRAINAGE SYSTEM

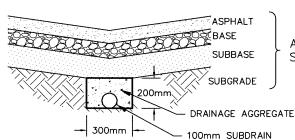
AS PER PAVEMENT STRUCTURE DESIGN

NOTES:

- . DRAINAGE AGGREGATE ENVELOPED WITH NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES).
- INTERIOR FACE OF EDGE DRAIN MAY BE VERTICAL OR SLOPED.



FULL DRAINAGE LAYER SYSTEM

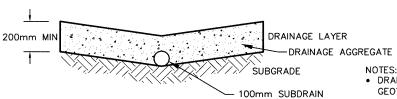


AS PER PAVEMENT STRUCTURE DESIGN

NOTES:

- DRAINAGE AGGREGATE ENVELOPED WITH
- NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES). FACES OF CENTRE DRAIN MAY BE VERTICAL OR

CENTRE DRAIN - NO DRAINAGE LAYER TYPICAL OF BACK LANE



• DRAINAGE LAYER ENVELOPED WITH NON-WOVEN GEOTEXTILE (TOP, BOTTOM & SIDES).

CENTRE DRAIN - WITH DRAINAGE LAYER TYPICAL OF BACK LANE

| | PLAN DESCRIPTION/REVISIONS | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| 4 | | | | | | | | |
| 3 | | | | | | | | |
| 2 | | | | | | | | |
| 1 | RELOCATE SUBDRAIN TO LOWEST POINT 2015-DEC-01 HLO | | | | | | | |
| | DRAWN BY <u>HLO</u> DATE <u>2014-DEC-15</u> | | | | | | | |
| | SCALE : HOR. N.T.S. VERT. N.T.S. | | | | | | | |

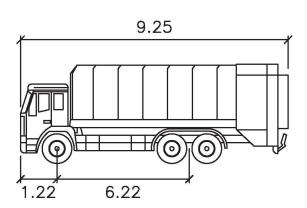


Transportation & Utilities Department

TYPICAL ROAD AND BACK LANE SUBDRAINAGE DETAILS

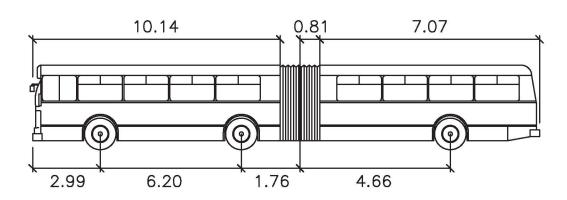
| // | MMAA |
|----------------------|------------------|
| CHIEF ENG | JAM 0 8 2016 |
| ENGINEER ENGINEER | 8 |
| PLAN NO. | 102-0029-045r002 |

| VEHICLE NAME | 1285 INT SIDE LOADER |
|---|-------------------------|
| SOURCE LIBRARY: AUTOTURN 10.2 | COS CUSTOM VEHICLES |
| VEHICLE TYPE | SIDE LOAD GARBAGE TRUCK |
| CLASS | REFUSE COLLECTION |
| LOCK TO LOCK TIME | 6.0 SEC. |
| STEERING LOCK ANGLE | 36.3 DEGREES |
| UNITS OF MEASURE | METERS |
| OVERALL VEHICLE LENGTH | 9.25 |
| # OF AXLES | 3 |
| TRACTOR WIDTH | 2.44 |
| MIN. TURNING RADIUS BASED ON CENTERLINE | 12.46 @ 90 DEGREES |
| FRONT OVERHANG | 1.22 |
| REAR OVERHANG | 1.81 |



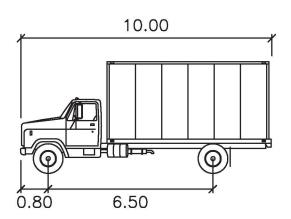
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|-----|---|--|-----------------------------------|
| | ORIGINAL STANDARD DRAWING | 2020-FEB-13 | SJK | Saskatoon | Chelsea Lanning Chelsea Lanning (Apr 23, 2020) SIGNATURE | SIGNATURE |
| F | | | | DESIGN VEHICLE SIDE LOAD GARBAGE TRUCK | Chelsea Lanning NAME Apr 23, 2020 | Matt Jurkiewicz NAME Apr 30, 2020 |
| E | | | | SIDE LUND GARLAGE TRUCK | DATE SIGNED SCALES: HOR. N.T.S. VERT. PLAN NO. 102- | DATE SIGNED -0029-048r001 |

| VEHICLE NAME | NOVA LFS 60 |
|-------------------------------|---------------------|
| SOURCE LIBRARY: AUTOTURN 10.2 | COS CUSTOM VEHICLES |
| VEHICLE TYPE | ARTICULATING BUS |
| CLASS | BUS |
| LOCK TO LOCK TIME | 6.0 SEC. |
| STEERING LOCK ANGLE | 40.0 DEGREES |
| ARTICULATING ANGLE | 50.0 DEGREES |
| UNITS OF MEASURE | METERS |
| OVERALL VEHICLE LENGTH | 18.83 |
| # OF AXLES | 3 |
| TRACTOR WIDTH | 2.60 |
| MIN. TURNING RADIUS BASED ON | |
| CENTERLINE | 10.57 @ 90 DEGREES |
| FRONT OVERHANG | 2.99 |
| REAR OVERHANG | 3.22 |



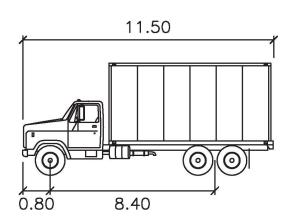
| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|----------|----------------------|--------------------------------|-----------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-13 | SJK | City of | 0/2/22 / 22 / | |
| L | | | | City of Saskatoon | Chelsea Lanning | |
| H | | | | | Chelsea Lanning (Apr 23, 2020) | SIGNATURE |
| H | | | \vdash | | Chelsea Lanning | Matt Jurkiewicz |
| H | | | | DESIGN VEHICLE | NAME | NAME |
| r | | | | ARTICULATING BUS | Apr 23, 2020 | Apr 30, 2020 |
| Г | | | | | DATE SIGNED | DATE SIGNED |
| Г | | | | | SCALES: PLAN NO. | 0000 050 004 |
| | | | | | vert102- | -0029-050r001 |

| VEHICLE NAME | MSU |
|---|--------------------------|
| SOURCE LIBRARY: AUTOTURN 10.2 | CANADIAN DESIGN VEHICLES |
| VEHICLE TYPE | MEDIUM SINGLE UNIT TRUCK |
| CLASS | COMMERCIAL TRUCK |
| LOCK TO LOCK TIME | 4.0 SEC. |
| STEERING LOCK ANGLE | 40.2 DEGREES |
| UNITS OF MEASURE | METERS |
| OVERALL VEHICLE LENGTH | 10.00 |
| # OF AXLES | 2 |
| TRACTOR WIDTH | 2.60 |
| MIN. TURNING RADIUS BASED ON CENTERLINE | 10.05 @ 90 DEGREES |
| FRONT OVERHANG | 0.80 |
| REAR OVERHANG | 2.70 |

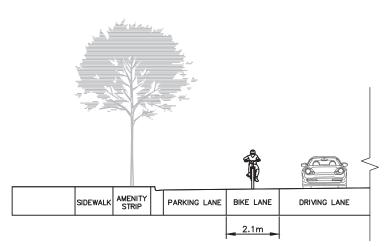


| Γ | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|-----|---|--|-----------------------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-13 | SJK | Saskatoon | Chelsea Lanning Chelsea Lanning (Apr 23, 2020) SIGNATURE | SIGNATURE |
| E | | | | DESIGN VEHICLE MEDIUM SINGLE UNIT TRUCK | Chelsea Lanning NAME Apr 23, 2020 | Matt Jurkiewicz NAME Apr 30, 2020 |
| E | | | | (MSU) | DATE SIGNED SCALES: HOR. N.T.S. VERT. PLAN NO. 102- | DATE SIGNED -0029-051r001 |

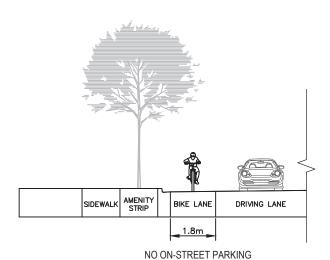
| VEHICLE NAME | <u>HSU</u> | | |
|---|--------------------------|--|--|
| SOURCE LIBRARY: AUTOTURN 10.2 | CANADIAN DESIGN VEHICLES | | |
| VEHICLE TYPE | HEAVY SINGLE UNIT TRUCK | | |
| CLASS | COMMERCIAL TRUCK | | |
| LOCK TO LOCK TIME | 6.0 SEC. | | |
| STEERING LOCK ANGLE | 40.0 DEGREES | | |
| UNITS OF MEASURE | METERS | | |
| OVERALL VEHICLE LENGTH | 11.50 | | |
| # OF AXLES | 3 | | |
| TRACTOR WIDTH | 2.60 | | |
| MIN. TURNING RADIUS BASED ON CENTERLINE | 13.05 @ 90 DEGREES | | |
| FRONT OVERHANG | 0.80 | | |
| REAR OVERHANG | 2.30 | | |



| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPROVALS | | |
|---|---------------------------|-------------|-----|-------------------------|--------------------------------|-----------------|--|
| F | ORIGINAL STANDARD DRAWING | 2020-FEB-13 | SJK | City of Saskatoon | Chelsea Lanning | 2 | |
| F | | | | Guskutoon | Chelsea Lanning (Apr 23, 2020) | SIGNATURE | |
| r | | | | DECION MELLIOLE | Chelsea Lanning | Matt Jurkiewicz | |
| Г | | | | DESIGN VEHICLE | NAME | NAME | |
| Г | | | | HEAVY SINGLE UNIT TRUCK | Apr 23, 2020 | Apr 30, 2020 | |
| Г | | | | | DATE SIGNED | DATE SIGNED | |
| Г | | | | (HSU) | SCALES: PLAN NO. | | |
| | | | | | VERT. 102- | -0029-052r001 | |

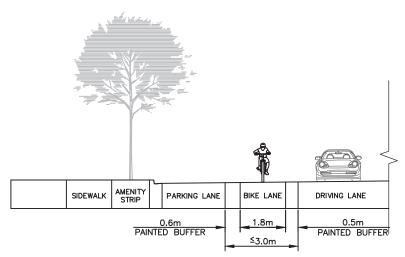


WITH ON-STREET PARKING

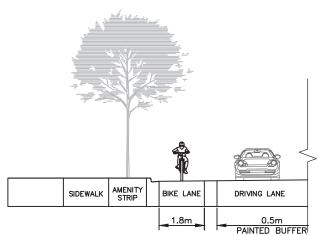


- ON-STREET BIKE LANE ONLY FOR USE ON COLLECTOR STREETS. DIMENSIONS NOTED ARE MINIMUMS.
- NUMBER OF DRIVEWAYS AND ACCESS POINTS SHOULD BE MINIMIZED ON CYCLING ROUTES.
- PAVEMENT MARKINGS ARE REQUIRED FOR CYCLING FACILITIES. SEE DWG No. 102-0034-001, 102-0034-002, 102-0034-003, 102-0034-007, 102-0034-009, 102-0034-016 AND 102-0034-017
- BIKE LANE WIDTH DOES NOT INCLUDE CURB AND GUTTER WIDTH.

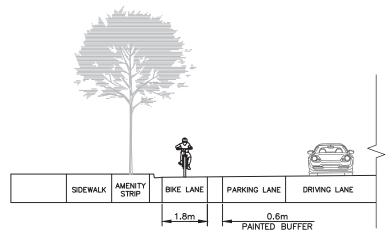
| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED | | |
|---|---------------------------------------|--|--|--|
| | City of Saskatoon Transportation | Sapieha, Digitally signed by Sapieha, Katie Date: 2025.04.14 07:56:00 -06'00' | | |
| 2 UPDATED NOTES SJK DRAWN BY SJK DATE 2019-NOV-18 | CROSS—SECTIONS ON—STREET BIKE LANE | Nathalie Digitally signed by Nathalie Baudais Baudais Date: 2025.05.01 15:50:46 -06'00' ENGINEER | | |
| SCALE : HOR. 1:150 VERT. 1:150 | (NON ALL AGES & ABILITIES) | PLAN NO. 102-0029-053r002 | | |



WITH ON-STREET PARKING



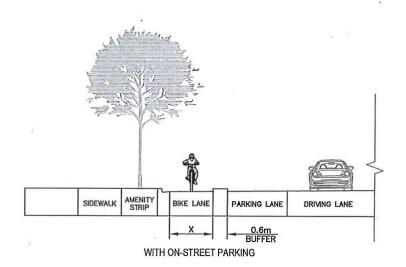
NO ON-STREET PARKING

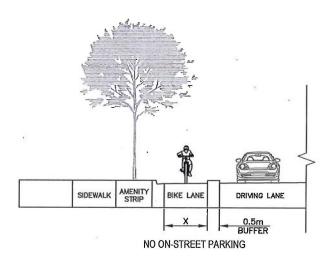


WITH ON-STREET PARKING AS ADDITIONAL BUFFER

- 1. BUFFERED BIKE LANE ONLY FOR USE ON COLLECTOR STREETS.
- 2. DIMENSIONS NOTED ARE MINIMUMS.
- NUMBER OF DRIVEWAYS AND ACCESS POINTS SHOULD BE MINIMIZED ON CYCLING ROUTES.
- PAVEMENT MARKINGS ARE REQUIRED FOR CYCLING FACILITIES.
 SEE DWG No. 102-0034-001, 102-0034-002, 102-0034-003,
 102-0034-007, 102-0034-009, 102-0034-016 AND 102-0034-017.
- 5. BIKE LANE WIDTH DOES NOT INCLUDE CURB AND GUTTER WIDTH.

| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED |
|---------------------------------|----------------------------|---|
| | | Sapieha, Katie Digitally signed by Sapieha, Katie Date: 2025.04.14 07:55:05 |
| | Transportation | ENGINEER Digitally signed by Nathalie |
| 2 UPDATED NOTES 2024-DEC-02 SJK | CROSS-SECTIONS | Baudais |
| DRAWN BYSJK | | Daudais -06'00' |
| DATE2019-NOV-18 | BUFFERED BIKE LANE | ENGINEER |
| SCALE : HOR 1:150 VERT 1:150 | (NON ALL AGES & ABILITIES) | PLAN NO. 102-0029-054r002 |

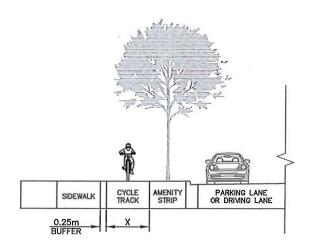




- PROTECTED BIKE LANE FOR USE ON COLLECTOR AND ARTERIAL STREETS.
- DIMENSIONS NOTED ARE MINIMUMS.
- PROTECTED BIKES LANES ADJACENT TO PARKING LANES SHALL
- INCORPORATE ACCESSIBILITY REQUIREMENTS.
 BUFFER DESIGN AND VERTICAL DELINEATORS TO BE APPROVED BY
 TRANSPORTATION DIVISION AT DESIGN.
 NUMBER OF DRIVEWAYS AND ACCESS POINTS SHOULD BE MINIMIZED ON
- CYCLING ROUTES.
- PAVEMENT MARKINGS ARE REQUIRED FOR CYCLING FACILITIES. SEE DWG No. 102-0034-001, 102-0035-002, 102-0034-003, 102-0034-007, 102-0034-009, 102-0034-016 AND 102-0034-017.

1.8m (min.) FOR COLLECTOR STREETS 2.0m (min.) FOR ARTERIAL STREETS

| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED |
|--------------------------------|------------------------------------|---------------------------|
| | City of Saskatoon Transportation | College EIT |
| DRAWN BY SJK DATE 2019-NOV-18 | CROSS—SECTIONS PROTECTED BIKE LANE | Mathal Bande Engineer |
| SCALE : HOR. 1:150 VERT. 1:150 | (ALL AGES & ABILITIES) | PLAN NO. 102-0029-055r001 |



1. RAISED CYCLE TRACK FOR USE ON COLLECTOR AND ARTERIAL STREETS.

2. DIMENSIONS NOTED ARE MINIMUMS.

BUFFER BETWEEN CYCLE TRACK AND SIDEWALK IS REQUIRED TO DESIGNATE SPACE FOR EACH USER AND PROVIDE GUIDANCE FOR THE VISUALLY IMPAIRED.

4. BUFFER BETWEEN CYCLE TRACK AND SIDEWALK SHALL BE HARD SURFACE WITH DIFFERENT COLORS AND TEXTURES TO DISTINGUISH FROM BOTH CONCRETE AND ASPHALT.

5. ASPHALT CYCLE TRACK, CONCRETE SIDEWALK.

- CYCLE TRACK AND SIDEWALK GRADE SHALL BE MAINTAINED THROUGH DRIVEWAY CROSSINGS.
- 7. NUMBER OF DRIVEWAYS AND ACCESS POINTS SHOULD BE MINIMIZED ON CYCLING ROUTES.
- PAVEMENT MARKINGS ARE REQUIRED FOR CYCLING FACILITIES. SEE DWG No. 102-0034-001, 102-0034-002, 102-0034-003, 102-0034-007 AND 102-0034-017.

X = 1.8m (min.) FOR COLLECTOR STREETS 2.0m (min.) FOR ARTERIAL STREETS

| PLAN DESCRIPTION/RE | VISIONS |
|--------------------------------|-----------|
| | |
| DRAWN BYSJK DATE2019-NOV-18 | _ |
| | RT. 1:150 |



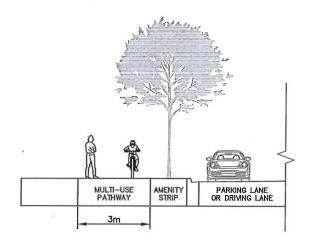
CROSS—SECTIONS
RAISED CYCLE TRACK
(ALL AGES & ABILITIES)

APPROVED

EIT ENGINEER

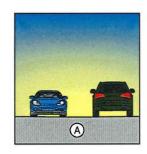
Mothal: Bunda.

PLAN NO. 102-0029-056r001



- MULTI-USE PATH FOR USE ON COLLECTOR AND ARTERIAL STREETS. DIMENSIONS NOTED ARE MINIMUMS.
 MULTI-USE PATH GRADE SHALL BE MAINTAINED THROUGH
- MOLTI-USE PATH GRADE SHALL BE MAINTAINED THROUGH DRIVEWAY CROSSINGS. NUMBER OF DRIVEWAYS AND ACCESS POINTS SHOULD BE MINIMIZED ON CYCLING ROUTES. PAVEMENT MARKINGS ARE REQUIRED AT INTERSECTIONS.
- SEE DWG No. 102-0034-017.

| PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|--|---|---------------------------|
| | City of Saskatoon Transportation | EIT ENGINEER |
| DRAWN BY SJK DATE 2019-NOV-18 SCALE: HOR. 1:150 VERT. 1:150 | CROSS—SECTIONS MULTI—USE PATHWAY (ALL AGES & ABILITIES) | PLAN NO. 102-0029-057r001 |



ROW (RIGHT-OF-WAY) REQUIRED:6m

A: DRIVING LANES - 2 DRIVING LANES USED FOR ACCESS TO PRIVATE PROPERTY, UTILITY ACCESS ETC. MAY BE USED FOR LOADING/UNLOADING ACTIVITIES IN COMMERCIAL AREAS.

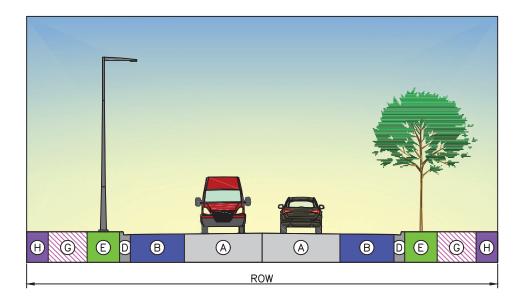
OR
SHARED SPACE, ALL MODES; NO DELINEATION, NO SEPARATION.

| | PLAN DESCRIPTION/REVISION | DATE | BY |
|---|---------------------------|-------------|-----|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-03 | SJK |
| | | | |
| - | | | - |
| - | | | |
| | | | |
| | | | |



INDICATIVE CROSS—SECTION LANE

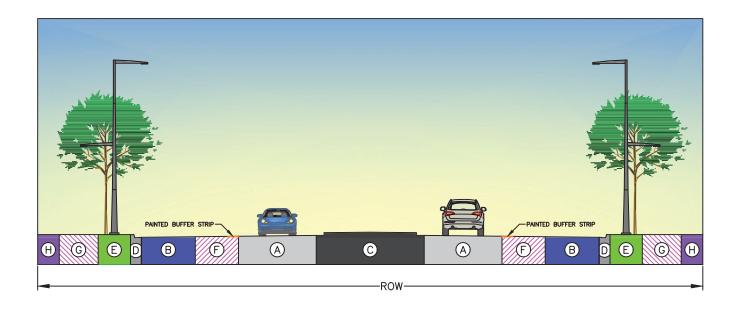
| APPROVALS | | | | | | | | | |
|-------------------------|------------------|--------------------------|--|--|--|--|--|--|--|
| Melo | 5 | M | | | | | | | |
| Chelsea NAME | Lanning | Jay Magus | | | | | | | |
| Feb 24 | 2020 | Feb 24, 2020 DATE SIGNED | | | | | | | |
| SCALES: HOR VERT. | PLAN NO. 102- | -0029-058r001 | | | | | | | |



ROW (RIGHT-OF-WAY) REQUIRED: 15m-22m

- A: DRIVING LANES 1 OR 2 DRIVING LANES.
- B: PARKING LANE UNMARKED, BOTH SIDES. DOES NOT INCLUDE CURB AND GUTTER WIDTH.
- D: CURB & GUTTER IF REAR LANES ARE PROVIDED FOR ADJACENT DEVELOPMENT, 150mm VERTICAL CURB, ELSE ROLLED CURB.
- E: AMENITY STRIP MAY CONTAIN ROADWAY LIGHTING, STREET TREES & OTHER AMENITIES.
- G: SIDEWALK PEDESTRIAN FACILITY REQUIRED ON BOTH SIDES OF STREET.
- H: BOULEVARD MAY CONTAIN ROADWAY LIGHTING & OTHER AMENITIES.

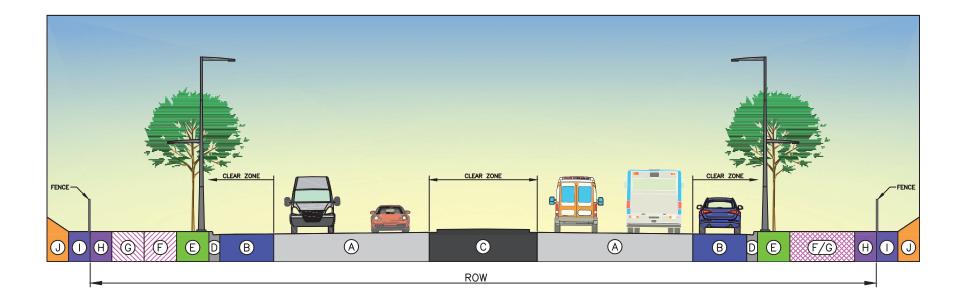
| L | PLAN DESCRIPTION/REVISION | DATE | BY | Saskatoon | | APPR | OVALS |
|---|---------------------------|-------------|-----|--------------------------|--------------|-----------------|------------------------------|
| Г | ORIGINAL STANDARD DRAWING | 2020-FEB-03 | SJK | Sackatoon | Sapieha, Die | gitally signed | Nathalie Digitally signed by |
| | REVISED STANDARD NOTES | 2024-DEC-02 | SJK | Saskatoon | Katio Da | ate: 2025.04.14 | Date: 2025.05.01 |
| L | | | | Transportation | SIGNATURE 07 | :56:53 -06'00' | SIGNATURE 15:52:33 -06'00' |
| L | | | | * | SIGNATURE | | SIGNATURE |
| L | | | | INDICATIVE CROSS-SECTION | NAME | | NAME |
| L | | | | | IVAME | | NAME |
| L | | | | LOCAL | DATE SIGNED | | DATE SIGNED |
| L | | | | | | PLAN NO. | DATE GIGHED |
| L | | | | | HOR | | -0029-059r002 |
| L | | | | | VERT. | 102 | 0029-0391002 |



RIGHT-OF-WAY (ROW) REQUIRED: 21m-41m

- A: DRIVING LANES 2-4 DRIVING LANES.
- B: PARKING LANE UNMARKED, BOTH SIDES. DOES NOT INCLUDE CURB AND GUTTER WIDTH.
- C: MEDIAN MAY BE PRESENT, MAY CONTAIN ROADWAY LIGHTING.
- D: CURB & GUTTER 150mm VERTICAL CURB.
- E: AMENITY STRIP MAY CONTAIN ROADWAY LIGHTING, TRANSIT WAITING AREAS, STREET TREES & OTHER AMENITIES.
- F: CYCLING FACILITY FACILITY MAY BE REQUIRED (SEE AT PLAN), BOTH SIDES.
- G: SIDEWALK PEDESTRIAN FACILITY REQUIRED ON BOTH SIDES OF STREET.
- H: BOULEVARD COULD BE HARD OR SOFT-SCAPED DEPENDING ON ADJACENT LAND USE. MAY CONTAIN UTILITIES.

| L | PLAN DESCRIPTION/REVISION | DATE | BY | Saskatoon | | APPROVALS |
|---|---------------------------|-------------|-----|--------------------------|-----------------|---|
| Е | ORIGINAL STANDARD DRAWING | 2020-FEB-03 | SJK | Sackatoon | Sapieha, Digita | ally signed apieha. Katie Nathalie Digitally signed by Nathalie Baudais |
| L | REVISED STANDARD NOTES | 2024-DEC-02 | SJK | Saskatoun | Katio Date | : 2025.04.14 Raudaic Date: 2025.05.01 |
| L | | | | Transportation | SIGNATURE 08:07 | 7:42 -06'00' Dauuais 15:53:30 -06'00' SIGNATURE |
| L | | | | - | SIGNATURE | SIGNATURE |
| L | | | | INDICATIVE CROSS-SECTION | NAME | NAME |
| L | | | | | I I AME | Trown L |
| ŀ | | | | COLLECTOR | DATE SIGNED | DATE SIGNED |
| ŀ | | | | | | LAN NO. |
| ŀ | | | | | HOR | 102-0029-060r002 |
| 1 | | | | | VERT | 102 0023 0001002 |



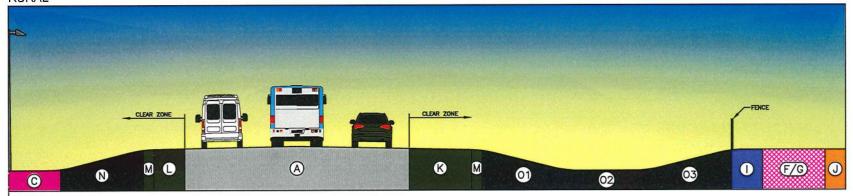
RIGHT-OF-WAY (ROW) REQUIRED: 33m-43m.

- A: DRIVING LANES 4 OR 6 DRIVING LANES. (SEE FUNCTIONAL PLAN)
- B: PARKING LANES MAY BE PRESENT BASED ON LAND USE IF POSTED SPEED LIMIT ≤ 50kph. DOES NOT INCLUDE CURB AND GUTTER WIDTH.
- C: MEDIAN MAY CONTAIN ROADWAY LIGHTING, LEFT TURN BAYS AND ACCESS CONTROL.
- D: CURB & GUTTER VERTICAL CURB. 150mm IF PARKING IS PRESENT, OTHERWISE 200mm.
- E: AMENITY STRIP MAY CONTAIN ROADWAY LIGHTING, TRANSIT WAITING AREAS, BICYCLE PARKING, STREET TREES AND OTHER AMENITIES.
- F: CYCLING FACILITY ALL AGES & ABILITIES (AAA) FACILITY REQUIRED.
- G: SIDEWALK PEDESTRIAN FACILITY REQUIRED ON BOTH SIDES OF STREET.
- F/G: MULTI-USE PATHWAY PEDESTRIAN & CYCLIST COMBINED FACILITY MAY BE APPROPRIATE BASED ON ADJACENT LAND USE.
- H: BOULEVARD COULD BE HARD OR SOFT-SCAPED DEPENDING ON ADJACENT LAND USE. MAY CONTAIN UTILITIES.
- I: BUFFER STRIP IMPLEMENT IF STREET IS FULL ACCESS CONTROLLED.
- J: BERM ONLY IMPLEMENTED IN CONJUNCTION WITH BUFFER STRIP.

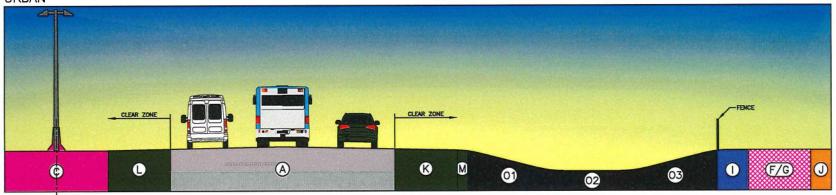
FENCE OPTIONAL

| | PLAN DESCRIPTION/REVISION | DATE | BY | Cityof | AF | PROVALS |
|---------|---------------------------|-------------|-----|--------------------------|--------------------------|-------------------------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-FEB-03 | SJK | | Sapieha, Digitally signe | Nathalie Digitally signed by |
| 2 | REVISED STANDARD NOTES | 2024-DEC-02 | SJK | Saskatoon | Matic Date: 2025.0 | 4.14 Paudais Date: 2025.05.01 |
| | | | | Transportation | SIGNATURE 08:05:38 -061 | 00 13.54.22 -00 00 |
| \perp | | | | • | SIGNATURE | SIGNATURE |
| \perp | | | | INDICATIVE CROSS-SECTION | NAME | NAME |
| \perp | | | | INDICATIVE ON033 SECTION | NAME | NAME |
| \perp | | | | ARTERIAL | DATE SIGNED | DATE SIGNED |
| 1 | | | | | | |
| | | | | | SCALES: PLAN NO | |
| | | | | | VERT 10 | 2-0029-061r002 |

RURAL



URBAN



NOTES:

RIGHT-OF-WAY (ROW) REQUIRED: 75m-125m.

- A: DRIVING LANES 3 DRIVING LANES EACH DIRECTION.
- C: MEDIAN MAY BE DEPRESSED MEDIAN OR BARRIER SYSTEM. MEDIAN CURB INCREASES TO 3.0m IF BARRIER SYSTEM IS USED.
- F/G: MULTI-USE PATHWAY AS PER AT PLAN (IF REQUIRED). IF PRESENT, FENCE LOCATED ON ROAD SIDE OF PATHWAY.
- I: MUNICIPAL BUFFER STRIP ENSURES ACCESS CONTROL.
- J: BERM IMPLEMENTED WITH FENCE OR OTHER BARRIER ALONG ROW.
- K: SHOULDER (RIGHT) ≥ 3.0m.
- L: SHOULDER (LEFT) ≥ 1.5m.
- M: ROUNDING ≥ 0.5m.
- N: SIDE SLOPE 1 4:1 OR FLATTER.
- O1: SIDE SLOPE 2 4:1 OR FLATTER.
- O2: DRAINAGE CHANNEL
- O3: BACK SLOPE 4:1 OR FLATTER

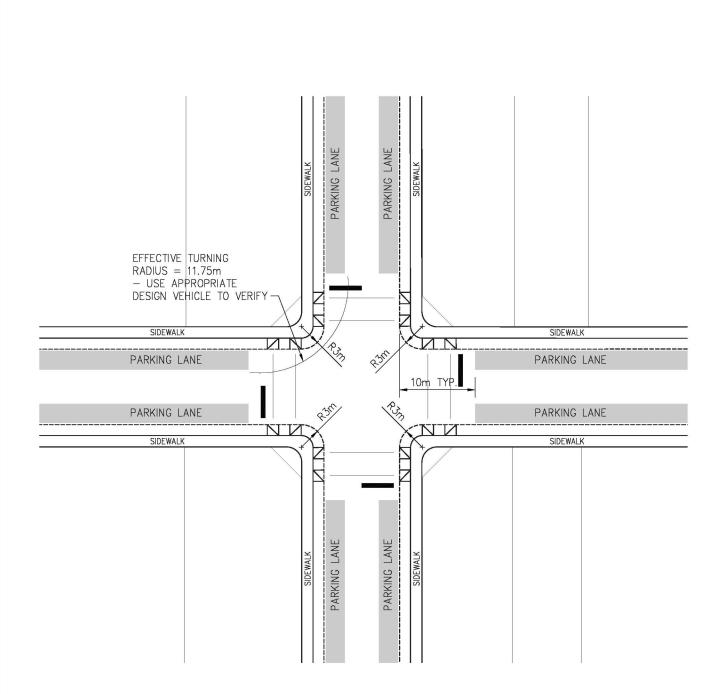
FENCE ALWAYS REQUIRED

| | PLAN DESCRIPTION/REVISION | DATE | BY |
|---|---------------------------|-------------|-----|
| 1 | ORIGINAL STANDARD DRAWING | 2018-NOV-27 | SJK |
| | | | |
| - | | | |
| | | | |
| | | | |
| | | | |

| Cityof |
|-----------|
| |
| Saskatoon |

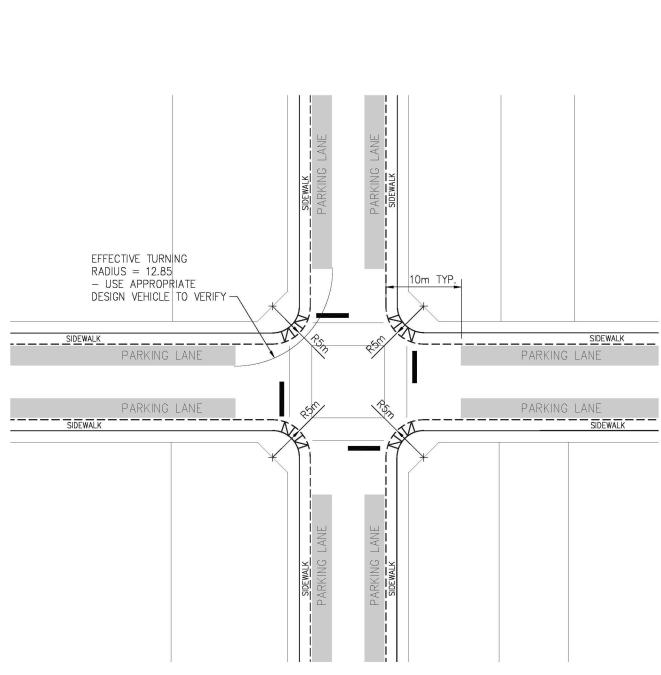
INDICATIVE CROSS—SECTION FREEWAY / EXPRESSWAY

| | APPR | OVALS |
|----------------------------------|-----------------|---|
| STGNATURE CHERE NAME DATE SIGNED | a Lenna 2020 | SIGNATURE Juy Magus NAME FEB 24, 2020 DATE SIGNED |
| SCALES: HOR. | PLAN NO. 102- | -0029-062r001 |



- URBAN, COMMERCIAL, DOWNTOWN APPLICATION, TYPICALLY SIGNALIZED
- CORNER RADIUS 3m TYPICAL
- ON-STREET PARKING ON ALL LEGS
- 4.
- VERIFY DESIGN VEHICLE TURNING REQUIREMENTS
 IF CURB EXTENSIONS OR BUS BULBS ARE INCLUDED, RADIUS MAY INCREASE.

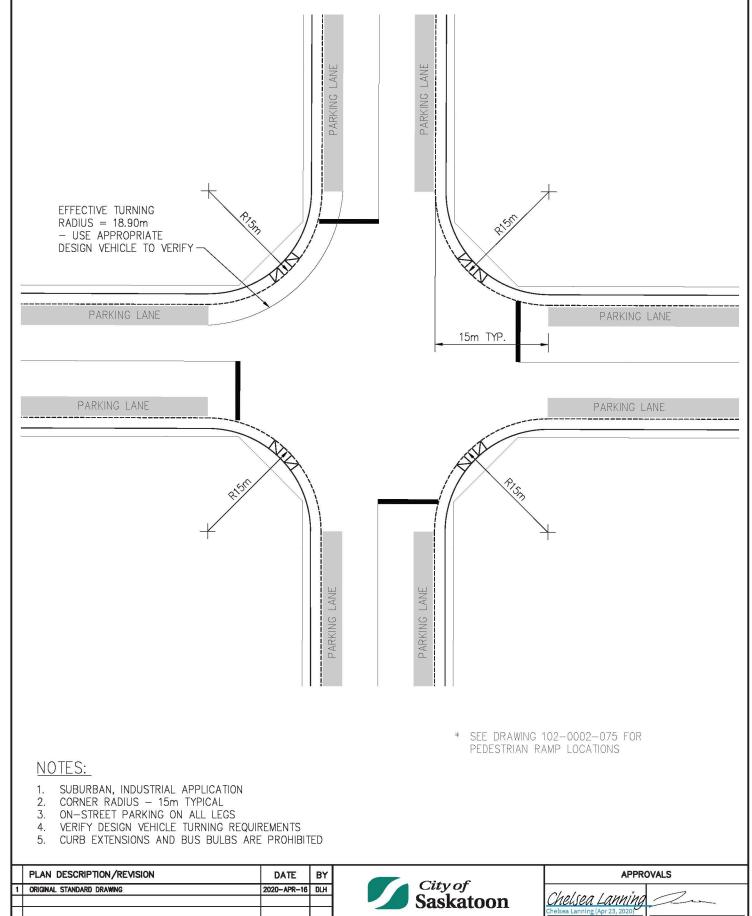
| ı | PLAN DESCRIPTION/REVISION | DATE | BY | | APPF | ROVALS |
|---|---------------------------|-------------|-----|--|--------------------------------|-----------------|
| | ORIGINAL STANDARD DRAWING | 2020-APR-16 | DLH | City of Saskatoon | 0/./ | |
| L | | | | Saskatoon | Chelsea Lanning | |
| ŀ | | | | The second teacher and | Chelsea Lanning (Apr 23, 2020) | SIGNATURE |
| ŀ | | | | | Chelsea Lanning | Matt Jurkiewicz |
| ŀ | | | | COMMERCIAL AND DOWNTOWN STREETS | NAME | NAME |
| ŀ | | | | WITH ON-STREET PARKING ON ALL LEGS | Apr 23, 2020 | Apr 30, 2020 |
| ŀ | | | | WITH ON-SINEET PARKING ON ALL LEGS | DATE SIGNED | DATE SIGNED |
| ľ | | | | CORNER RADIUS = 3m | SCALES: PLAN NO. HOR, 1:500 | 2000 207 204 |
| Ĺ | | | | | VERT. 102 | -0029-063r001 |
| _ | | | | | | |



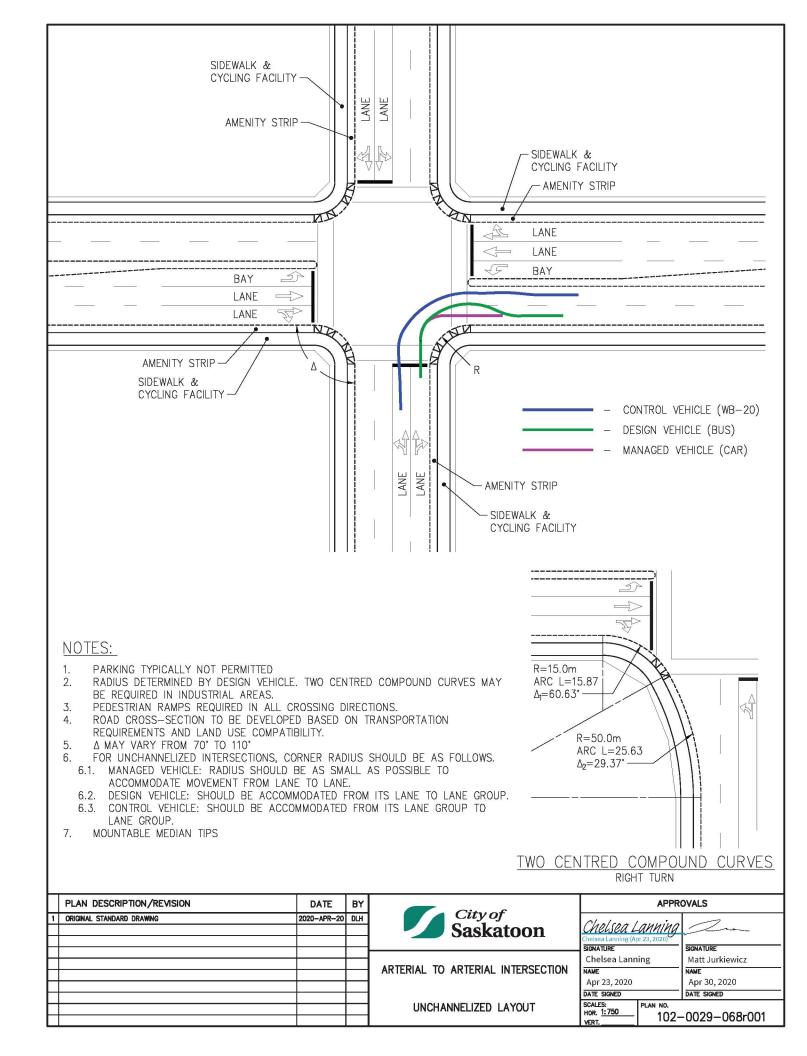
SEE DRAWING 102-0002-075 FOR PEDESTRIAN RAMP LOCATIONS

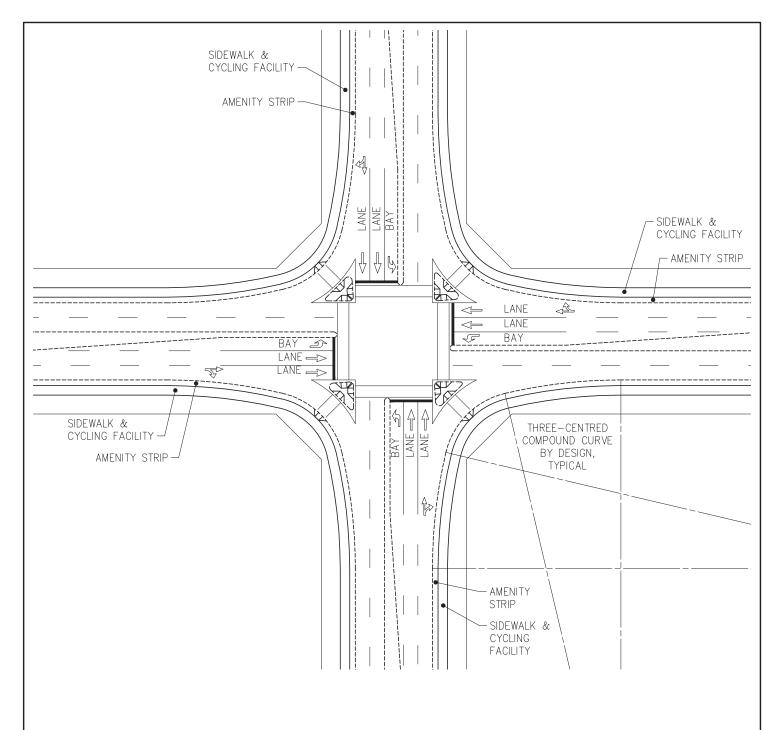
- 1. SUBURBAN, RESIDENTIAL APPLICATION
- CORNER RADIUS 5m TYPICAL
- 2. 3. ON-STREET PARKING ON ALL LEGS
- 4. VERIFY DESIGN VEHICLE TURNING REQUIREMENTS
- IF CURB EXTENSIONS OR BUS BULBS ARE INCLUDED, RADIUS MAY INCREASE.

| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|---|---------------------------|-------------|-----------|------------------------------------|--|-----------------|
| 1 | ORIGINAL STANDARD DRAWING | 2020-APR-16 | DLH | City of Saskatoon | Chalcan Laurine | |
| L | | | \square | Saskatoon | Chelsea Lanning Chelsea Lanning (Apr 23, 2020) | |
| H | | | \vdash | | SIGNATURE | SIGNATURE |
| Н | | | \vdash | | Chelsea Lanning | Matt Jurkiewicz |
| H | | | | LOCAL AND COLLECTOR STREETS | NAME | NAME |
| Г | | | | WITH ON-STREET PARKING ON ALL LEGS | Apr 23, 2020 | Apr 30, 2020 |
| Г | | | | | DATE SIGNED | DATE SIGNED |
| | | | | | SCALES: PLAN NO. | 0000 064-001 |
| L | | | | | VERT. 102- | -0029-064r001 |



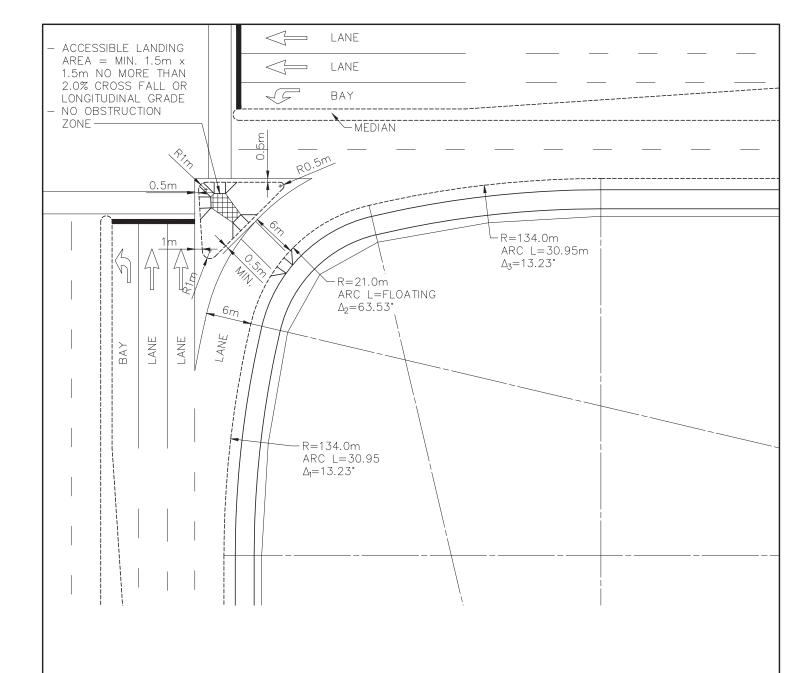
| ш | TEAN DESCRIPTION TREVIOLON | DAIL | ים | City of C | 74111 | OTALO |
|----------|----------------------------|-------------|-----|---------------------|--------------------------------|-----------------|
| 回 | ORIGINAL STANDARD DRAWING | 2020-APR-16 | DLH | City of Saskatoon | Chalcan Laurine | |
| \vdash | | | | Saskatoon | Chelsea Lanning | |
| H | | | | | Chelsea Lanning (Apr 23, 2020) | SIGNATURE |
| Н | | | | | Chelsea Lanning | Matt Jurkiewicz |
| \Box | | | | INDUSTRIAL STREETS | NAME | NAME |
| П | | | | | Apr 23, 2020 | Apr 30, 2020 |
| H | | | | | DATE SIGNED | DATE SIGNED |
| | | | | CORNER RADIUS = 15m | SCALES: PLAN NO. | 0000 005-004 |
| Ш | | | | | VERT. 102- | -0029-065r001 |





- 1. PARKING NOT PERMITTED
- 2. RIGHT TURN RADIUS DETERMINED BY DESIGN VEHICLE. THREE CENTRED COMPOUND CURVES LIKELY REQUIRED SEE DWG 102-0029-070.
- 3. PEDESTRIAN RAMPS REQUIRED IN ALL CROSSING DIRECTIONS.
- 4. ISLANDS MUST CONTAIN A MINIMUM 1.5m X 1.5m LANDING AREA FREE OF OBSTRUCTION FOR ACCESSIBILITY REQUIREMENT. SEE PLAN 102-0029-070 OR 102-0029-071.
- 5. ROAD CROSS—SECTION TO BE DEVELOPED BASED ON TRANSPORTATION REQUIREMENTS AND LAND USE COMPATIBILITY.
- 6. MOUNTABLE MEDIAN TIPS

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----|---------------------------|-------------|-----|-----------------------------------|---|--|
| Г | ORIGINAL STANDARD DRAWING | 2020-APR-20 | DLH | Cityof | Sapieha, Digitally signed by Sapieha, Katie | Jurkiewi Digitally signed by |
| [2 | REVISED NOTES | 2024-N0V-28 | SJK | | Katie Date: 2025.04.14 08:30:46 -06'00' | cz, Matt Date: 2025.05.01 13:29:58 -06'00' |
| H | | | | | SIGNATURE | SIGNATURE |
| H | | | | ADTEDIAL TO ADTEDIAL INTERCECTION | | |
| r | | | | ARTERIAL TO ARTERIAL INTERSECTION | NAME | NAME |
| Г | | | | | | |
| Г | | | | | DATE SIGNED | DATE SIGNED |
| | | | | CHANNELIZED LAYOUT | SCALES: PLAN NO. 1:1000 | 0000 000 000 |
| | | | | | vert102- | -0029-069r002 |

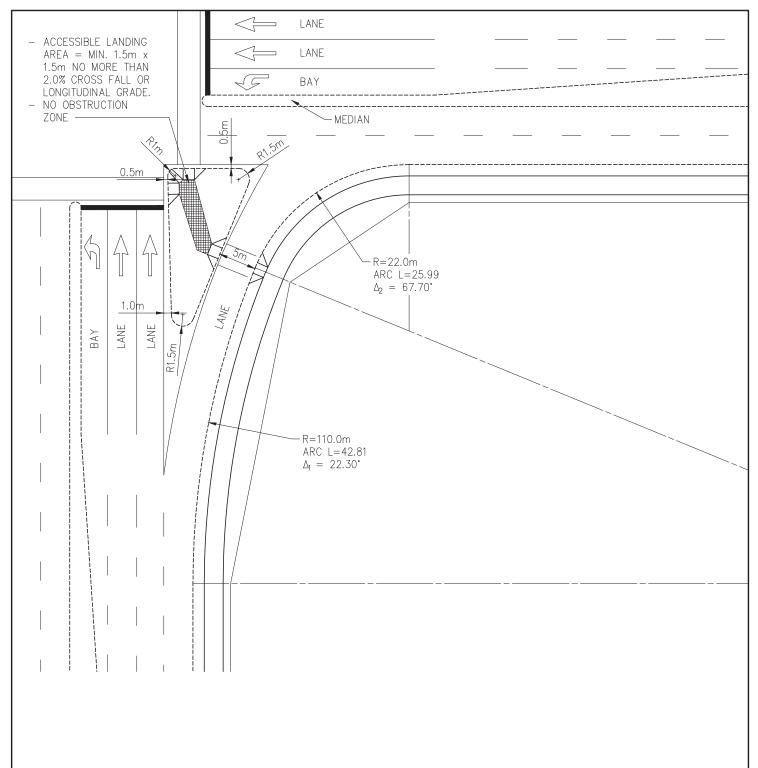


I. YIELD CONTROL TYPICALLY

DESIGN GUIDANCE:

- 1. SELECT APPROPRIATE DESIGN VEHICLE
- 2. ENSURE THAT GEOMETRICS WILL ACCOMMODATE THE SWEPT PATH OF THE SELECTED DESIGN VEHICLE.
 3. THREE—CENTERED CURVES ARE PREFERRED:
- 3. THREE-CENTERED CURVES ARE PREFERRED:
 HOWEVER TWO-CENTERED CURVES OR TAPERED
 SIMPLE CURVES OR CURVES, SPIRALS MAY BE
 CONSIDERED DURING DESIGN

| Г | PLAN DESCRIPTION/REVISION | DATE | BY | | | APPRO | OVALS |
|----------|---------------------------|-------------|-----|-----------------------------------|-----------------------|--|--|
| 1 | ORIGINAL STANDARD DRAWING | 2020-APR-20 | DLH | Cityof | Sapieha, Sa | gitally signed by | Jurkiewic Digitally signed by Jurkiewicz, Matt |
| 2 | REVISED NOTES | 2024-NOV-28 | SJK | City of Saskatoon | | apieha, Katie ate: 2025.04.14 :33:50 -06'00' | 7 Matt Date: 2025.05.01 |
| ┕ | | | | | SIGNATURE 08 | :33:50 -06'00' | Z, IVIALL 13:30:11 -06'00' |
| \vdash | | | | | SIGNATORE | | SIGNATORE |
| L | | | | ARTERIAL CHANNELIZED INTERSECTION | NAME | | NAME |
| | | | | ANTENNE OFFICIALED INTENSECTION | NAME | | NAME |
| | | | | 45° ENTRY ANGLE | | | |
| | | | | TO ENTIRE PROCE | DATE SIGNED | | DATE SIGNED |
| Н | | | | LANE DROP | SCALES: HOR. 1:500 | PLAN NO. | |
| Г | | | | | VERT | 102- | -0029-070r002 |

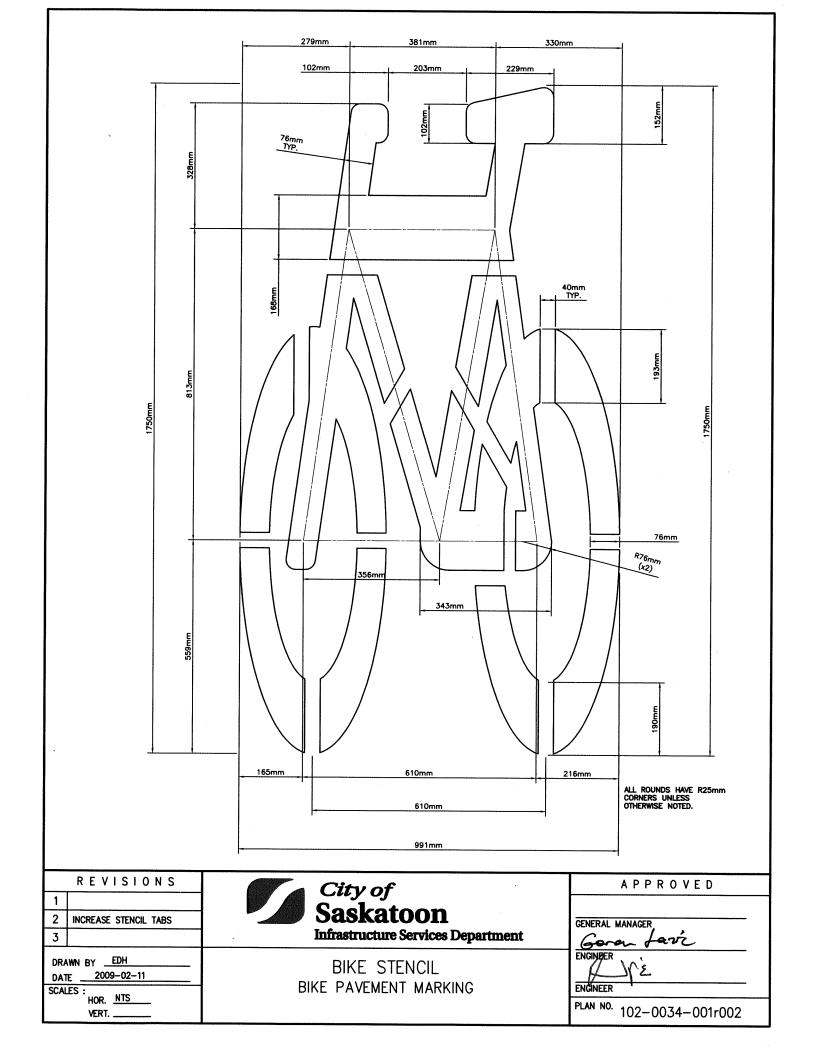


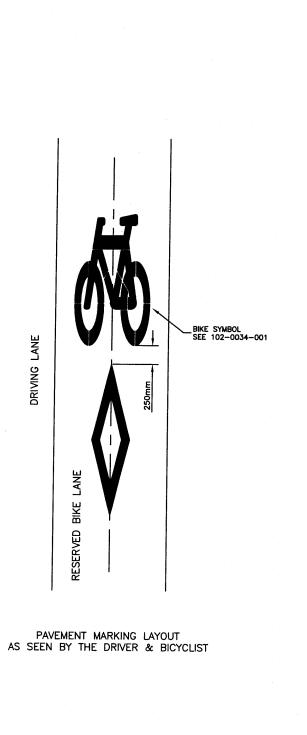
- 1. YIELD CONTROL TYPICALLY
- 2. 60° HIGH ENTRY ANGLE DESIGN PREFERRED
- 3. HIGH ENTRY ANGLE CONFIGURATION SLOWS RIGHT TURN APPROACH SPEEDS & INCREASES VISIBILITY.

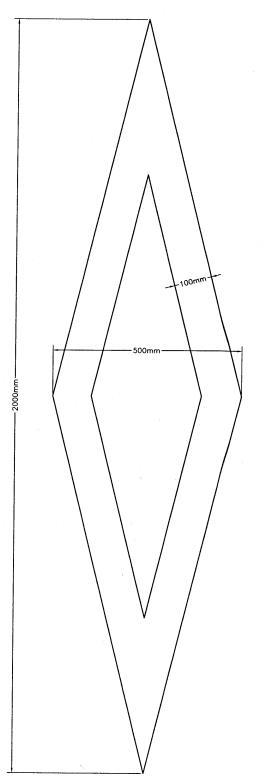
DESIGN GUIDANCE:

- 1. SELECT APPROPRIATE DESIGN VEHICLE
- 2. ENSURE THAT GEOMETRICS WILL ACCOMMODATE THE SWEPT PATH OF THE SELECTED DESIGN VEHICLE.

| | PLAN DESCRIPTION/REVISION | DATE | BY | | APPR | OVALS |
|----------|---------------------------|-------------|----------|-----------------------------------|--|--|
| | ORIGINAL STANDARD DRAWING | 2020-APR-20 | DLH | Cityof | Sapieha Digitally signed | Jurkiewic Digitally signed by Jurkiewicz, Matt |
| 2 | REVISED NOTES | 2024-NOV-28 | SJK | | Katie Date: 2025.04.14 08:31:14 -06'00' | z, Matt Date: 2025.05.01 13:30:38 -06'00' |
| \vdash | | | \vdash | | SIGNATURE | SIGNATURE |
| ┢ | | | \Box | ADTEDIAL CHANNELIZED INTERCECTION | | |
| Г | | | | ARTERIAL CHANNELIZED INTERSECTION | NAME | NAME |
| | | | | HIGH ENTRY ANGLE | DATE GIOVED | |
| L | | | | | DATE SIGNED | DATE SIGNED |
| | | | | LANE DROP | SCALES: PLAN NO. | 0000 071-000 |
| L | | | oxdot | | VERT. | -0029-071r002 |





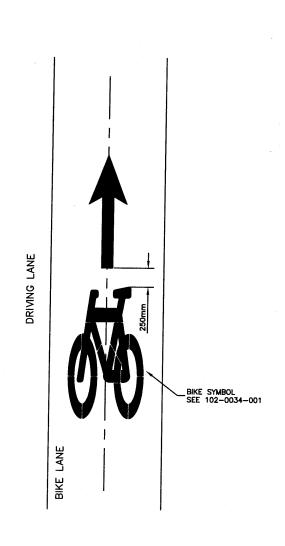


REVISIONS City of Saskatoon 2 Infrastructure Services Department 3 BAJ BIKE DIAMOND SYMBOL STENCIL 2009-06-19 DATE SCALES : HOR. NTS

VERT. _

RESERVED BIKE LANE PAVEMENT MARKING

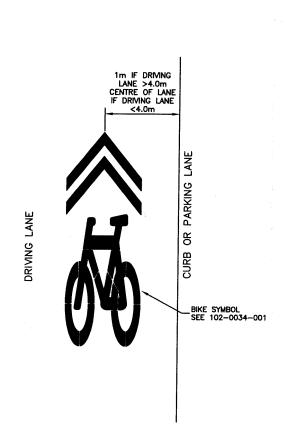
| APPROVED |
|---------------------------|
| GENERAL MANAGER |
| ENGINEER |
| ENGINEER |
| PLAN NO. 102-0034-002r001 |

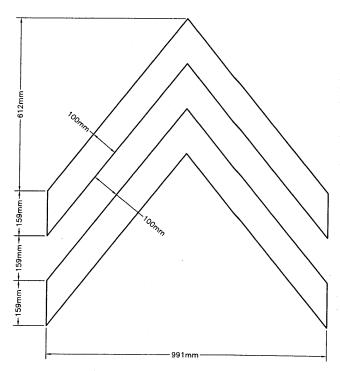


-150mm-

PAVEMENT MARKING LAYOUT AS SEEN BY THE DRIVER & BICYCLIST

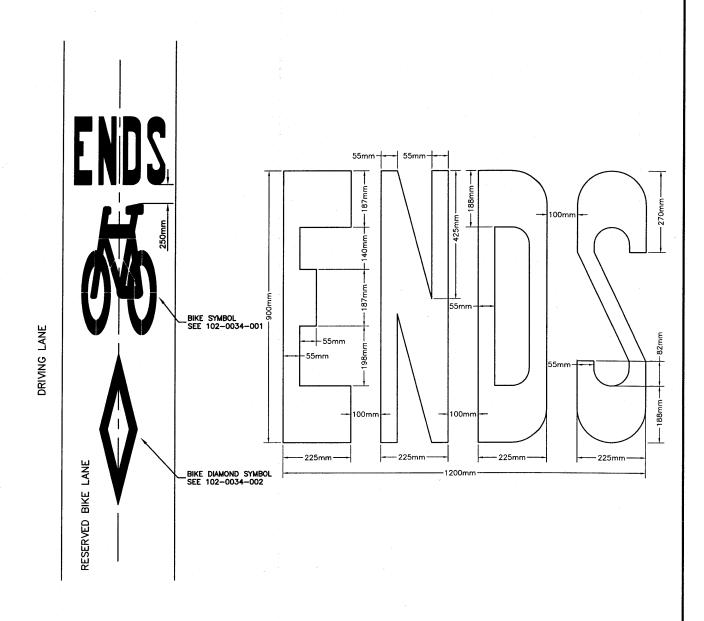
| R E V I S I O N S 1 | City of Saskatoon Infrastructure Services Department | APPROVED |
|----------------------|---|---|
| DRAWN BYBAJ | BIKE ARROW STENCIL BIKE DIRECTION PAVEMENT MARKING | ENGINEER ENGINEER PLAN NO. 102-0034-003r001 |





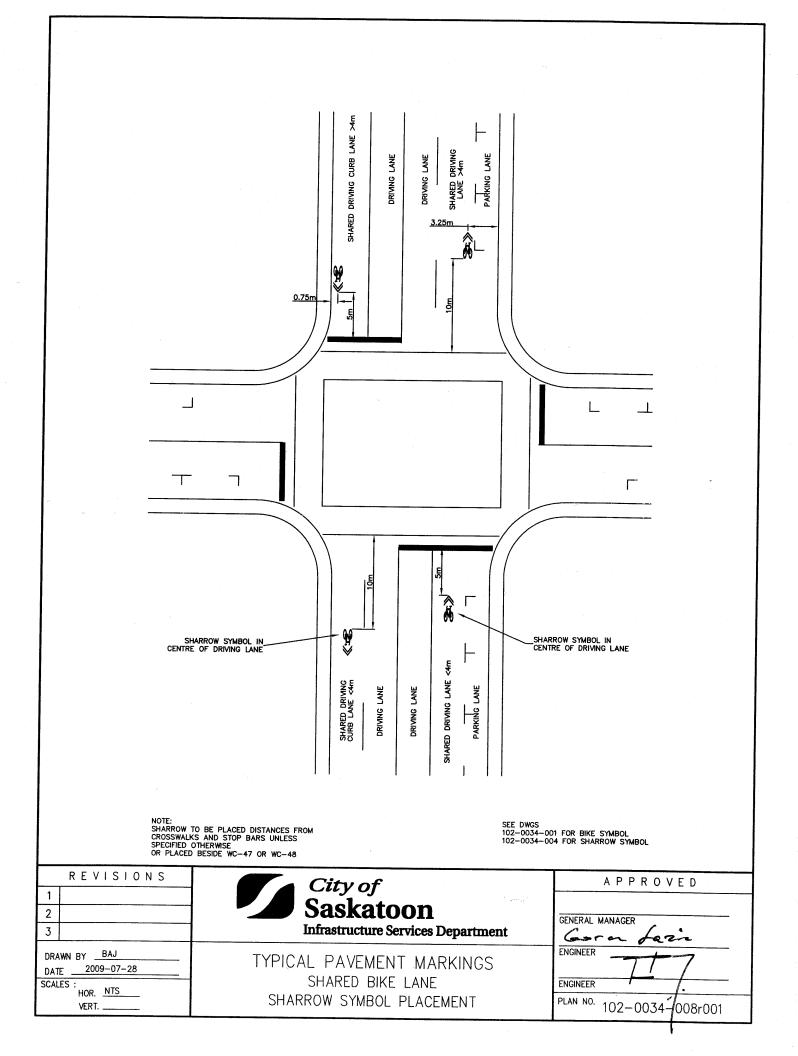
PAVEMENT MARKING LAYOUT AS SEEN BY THE DRIVER & BICYCLIST

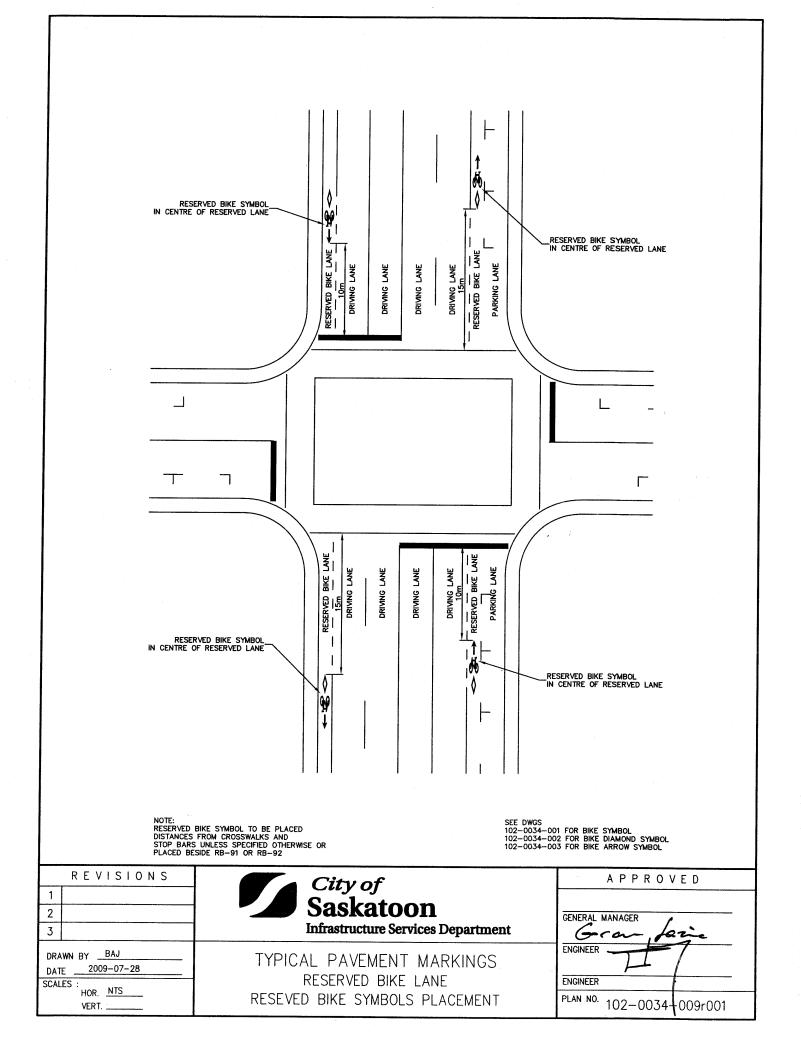
| R E V I S I O N S 1 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
|----------------------|--|---|
| DRAWN BYEDH | SHARROW STENCIL SHARED BIKE LANE PAVEMENT MARKING | ENGINEER ENGINEER PLAN NO. 102-0034-004r001 |

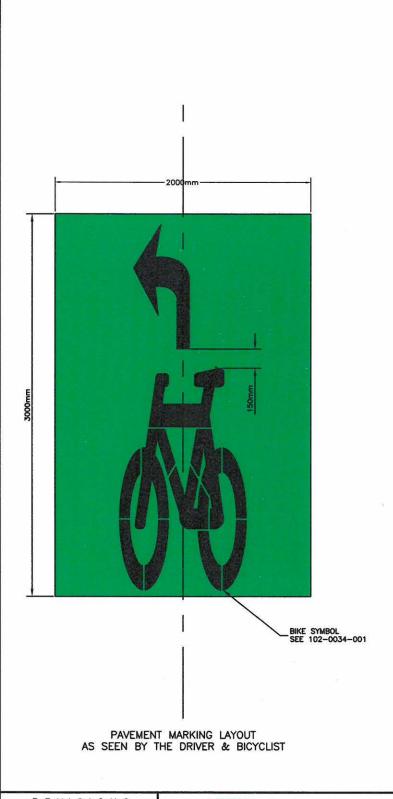


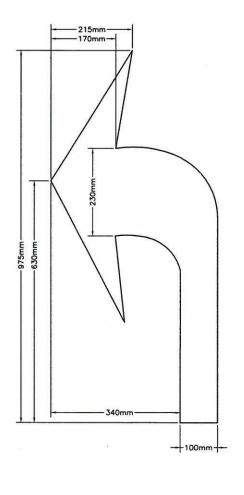
PAVEMENT MARKING LAYOUT AS SEEN BY THE DRIVER & BICYCLIST

| REVISIONS | City of | APPROVED |
|--------------------------------------|--|---------------------------|
| 2 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
| DRAWN BY BAJ DATE 2009-06-19 SCALES: | BIKE ENDS STENCIL RESERVED BIKE LANE ENDS PAVEMENT MARKING | ENGINEER |
| HOR. NTS VERT. | | PLAN NO. 102-00 4-007r001 |







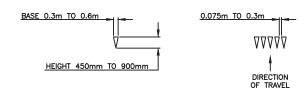


| R E VISIONS 1 2 3 | City of Saskatoon Infrastructure Services Department | GENERAL MANAGER |
|--------------------|---|------------------------------------|
| DRAWN BY | TWO-STAGE TURN BIKE BOX BIKE DIRECTION PAVEMENT MARKING | ENGINEER PLAN NO. 102-0034-016r001 |

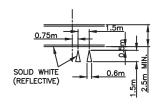
LONGITUDINAL DASHED LANE LINE (100mm WIDE) HIGH SPEED (80km/h OR ABOVE) LANE LINE (100mm WIDE) TURN BAY LINE (100mm WIDE) SOLID LINE (100mm WIDE) WIDE SOLID LINE (200mm WIDE) BUS BAY LINE (100mm WIDE) GUIDING LINE (100mm WIDE) CONTINUITY LANE LINE (200mm WIDE) ROUNDABOUT YIELD LINE - SINGLE LANE EXPRESS (WHITE) ROUNDABOUT YIELD LINE - MULTI LANE EXPRESS (WHITE) DASHED BIKE LANE LINE (100mm WIDE) ELEPHANTS FEET BICYCLE CROSSING LINE (200mm WIDE) BIKE LANE BUFFER STRIP SOLID LINE 100mm WIDE DIAGONAL HATCHING 100mm WIDE VARIES - DIAGONAL HATCHING ANGLED AT A 1:1 OR 2:1 RATIO

| PLAN DESCRIPTION/REVISIONS | City of | APPROVED |
|--|--------------------------------|--|
| | | Sapieha, Katie Date: 2025.04.14 08:07:04 -06'00' |
| | Transportation | ENGINEER Digitally signed by Nathalie |
| 2 UPDATED LONGITUDINAL PAVEMENT MARKINGS SJK | | Natifalle Baudais |
| DRAWN BYSJK | LONGITUDINAL PAVEMENT MARKINGS | Baudais Date: 2025.05.01 15:55:21 |
| DATE 2019-NOV-29 | | ENGINEER |
| SCALE : HOR. 1:500 VERT. 1:500 | | PLAN NO. 102-0034-017r002 |

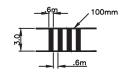
<u>TRANSVERSE</u>



ADVANCE YIELD TO PEDESTRIAN LINE (WHITE)



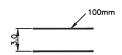
SPEED HUMP WARNING MARKINGS (WHITE)



LADDER CROSSWALKS (WHITE)



ZEBRA CROSSWALKS (WHITE)



STANDARD CROSSWALKS (WHITE)



STOP BAR (WHITE)

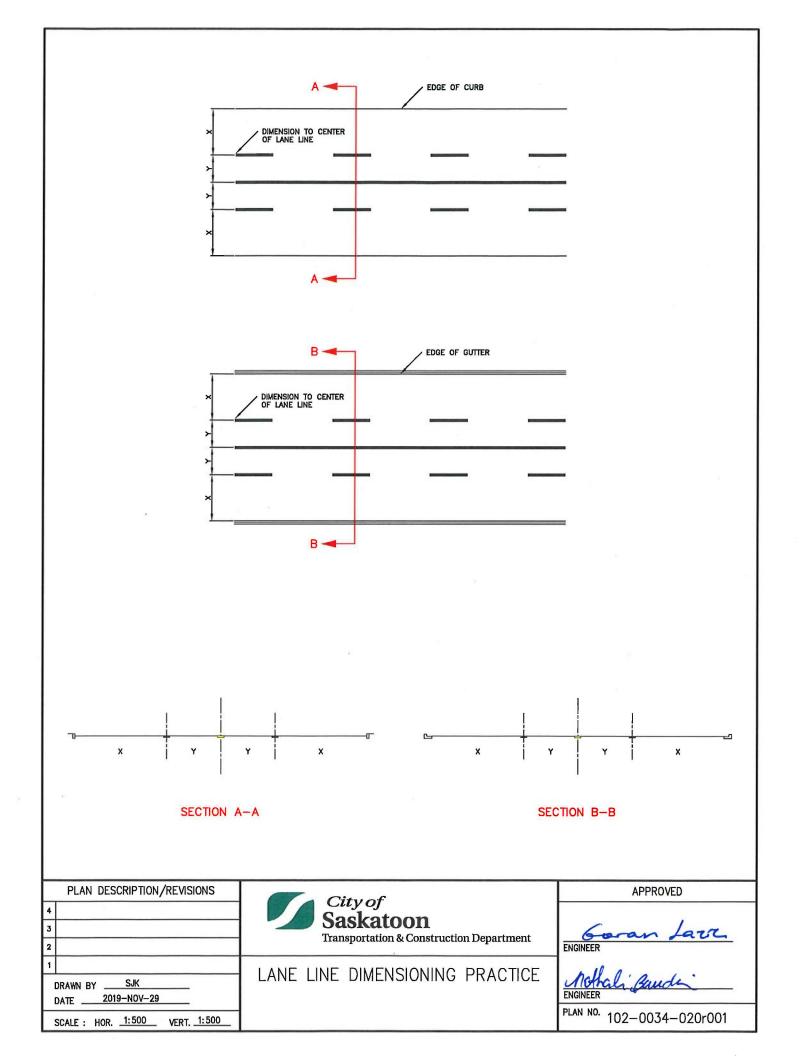


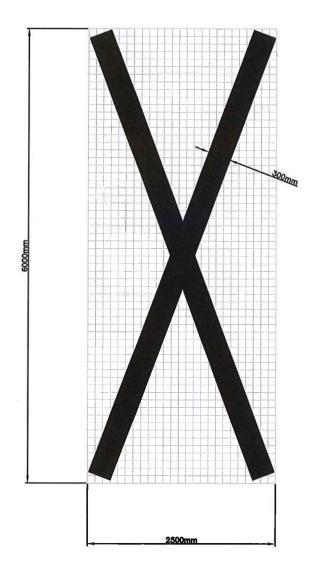
PEDESTRIAN STOP BAR (WHITE)

| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED | |
|--|-----------------------------------|-----------------|---|
| | | Sapieha, Katie | Digitally signed by Sapieha, Katie Date: 2025.04.14 08:06:40 -06'00' |
| | Transportation | ENGINEER | Digitally signed by Nathalie |
| 2 UPDATED TRANSVERSE PAVEMENT MARKINGS 2024—NOV—26 SJK | TDANICY/EDOE DAY/EMENT MADIZINIOC | Nathalie | Baudais |
| DRAWN BYSJK | TRANSVERSE PAVEMENT MARKINGS | Baudais | Date: 2025.05.01 15:56:12 -06'00' |
| DATE 2019-NOV-29 | | ENGINEER | |
| SCALE : HOR. 1:500 VERT. 1:500 | | PLAN NO. 102-00 | 34-018r002 |

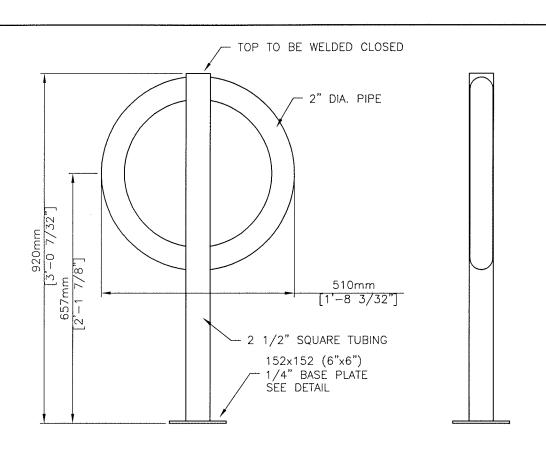
WITHOUT DIAGONAL LINES MERGING **DIVERGING** -100mm OR 200mm WHITE LINE -100mm OR 200mm WHITE LINE DIRECTION OF TRAVEL DIRECTION OF TRAVEL WITH OPTIONAL DIAGONAL LINES **MERGING DIVERGING** 1 DIRECTION OF TRAVEL CONVERGING GORE AREA MARKINGS DIVERGING GORE AREA MARKINGS < 70km/hr 2000mm SPACING > 70km/hr 3000mm SPACING < 70km/hr 2000mm SPACING ≥ 70km/hr 3000mm SPACING NOTE: WHITE EDGE LINE AND FIRST THREE CHEVRONS TO BE PERMANENT MARKINGS. GORE AREA FOR OBJECT IN CENTRE OF ROADWAY WITHOUT DIAGONAL LINES WITH OPTIONAL DIAGONAL LINES -100mm TO 150mm YELLOW LINES 6m MAX. DETAIL OF APPROACH PAVEMENT MARKINGS DETAIL OF APPROACH PAVEMENT MARKINGS 0.5m PLAN DESCRIPTION/REVISIONS **APPROVED** Cityof

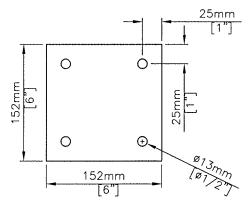
| 3 2 | Saskatoon Transportation & Construction Department | Goran Jazz |
|--|--|---------------------------|
| DRAWN BYSJK DATE2019-NOV-29 | GORE MARKS | Mothali Band. |
| SCALE : HOR. <u>1:500</u> VERT. <u>1:500</u> | | PLAN NO. 102-0034-019r001 |





| PLAN DESCRIPTION/REVISIONS | Cityof | APPROVED |
|--------------------------------|--|---------------------------|
| | City of Saskatoon Transportation & Construction Department | Goran Lavor |
| DRAWN BYSJK DATE2020-JAN-09 | STANDARD SPECIFICATION RAILWAY CROSSING SYMBOL | Yollali Baud. |
| SCALE : HOR. NTS VERT. NTS | | PLAN NO. 102-0034-021r001 |





BASE PLATE DETAIL
SCALE 1:5

FRONT VIEW

SIDE VIEW

NOTES:

1. BICYCLE STAND TO BE GALVANIZED

| | PLAN DESCRIPTION/REVISIONS | |
|---|--|-----|
| 4 | | |
| 3 | | |
| 2 | | |
| 1 | ISSUED FOR TENDER | |
| | DRAWN BY <u>BAJ</u> DATE <u>2012–FEB–15</u> | SUF |
| | SCALE : HOR. 1:10 VERT. | |

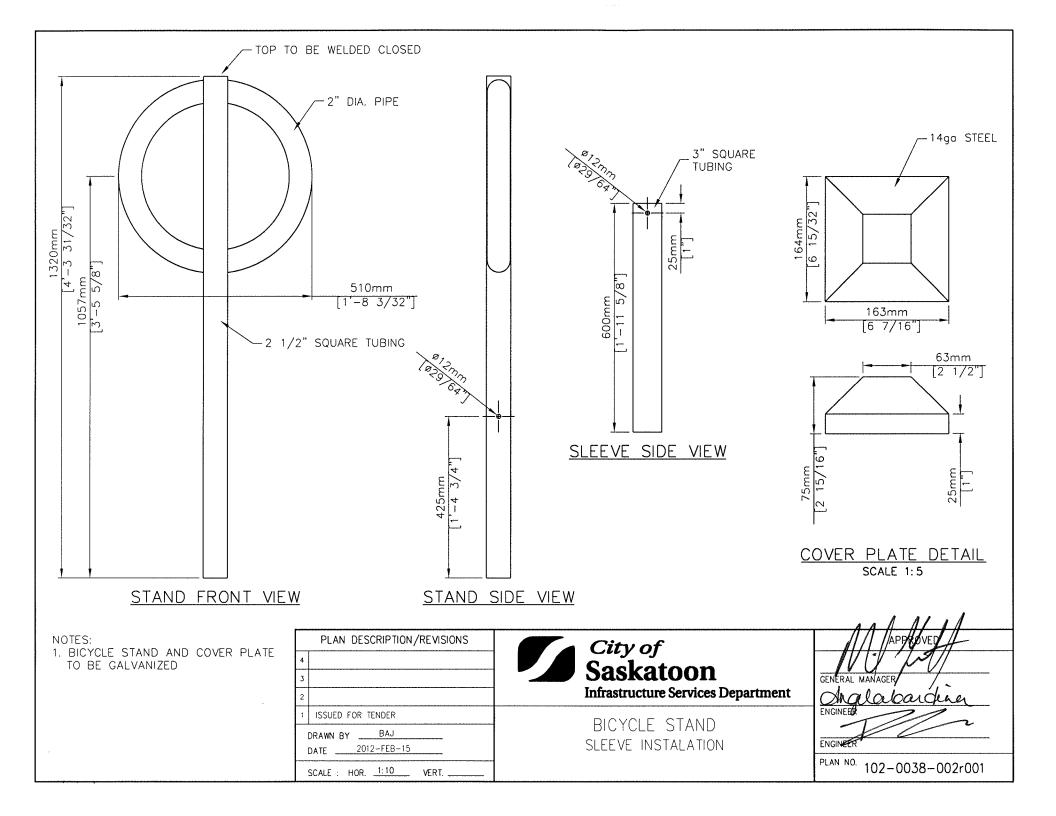


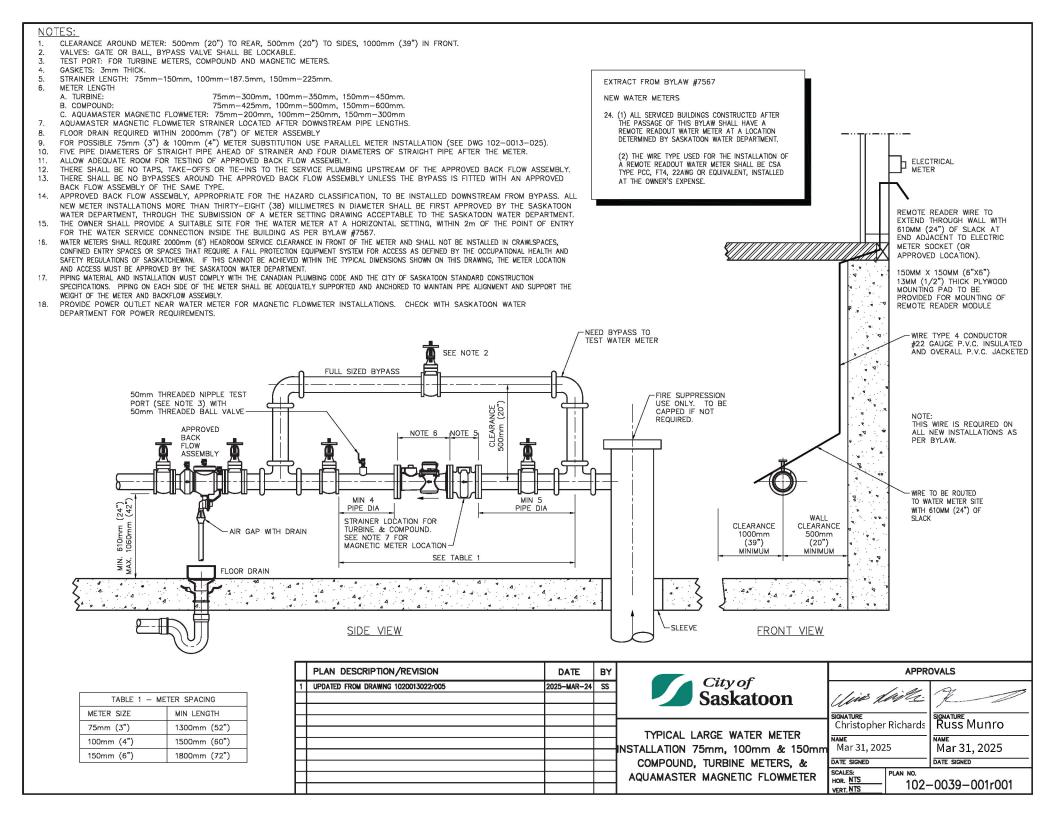
BICYCLE STAND SURFACE MOUNT INSTALLATION GENERAL MANAGER

CHARLAGER

ENGINEER

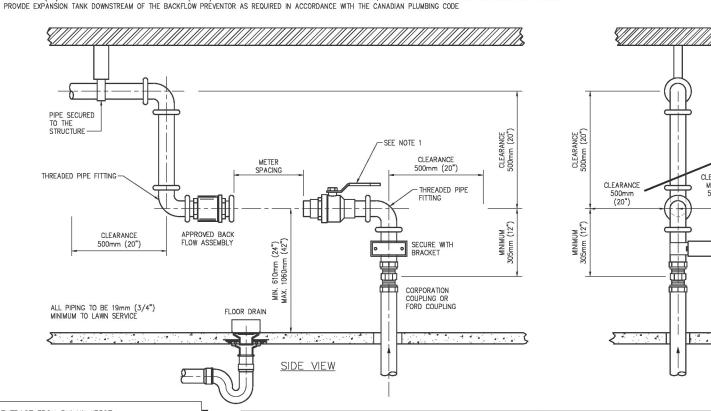
PLAN NO. 102-0038-001r001





NOTES:

- FULL PORT BALL VALVE UPSTREAM.
- METER MUST BE SITUATED IN AN ACCESSIBLE LOCATION WITH NO PERMANENT FIXTURES WITHIN 500mm (20") OF THE METER.
- *BYPASS IS NOT REQUIRED.* CONTACT WATER METER SECTION FOR APPROVAL REQUIREMENTS.
- METER SPACING (F.I.P. TO F.I.P.)
 - 19mm (3/4") = 330mm (13")
 - 25mm (1") = 380mm (15")
- FLOOR DRAIN REQUIRED WITHIN 2000mm (78") OF METER ASSEMBLY
- ALLOW ADEQUATE ROOM FOR TESTING OF APPROVED BACK FLOW ASSEMBLY.
- THERE SHALL BE NO TAPS. TAKE-OFFS OR TIE-INS TO THE SERVICE PLUMBING UPSTREAM OF THE APPROVED BACK FLOW ASSEMBLY.
- THERE SHALL BE NO BYPASSES AROUND THE APPROVED BACK FLOW ASSEMBLY UNLESS THE BYPASS IS FITTED WITH AN APPROVED BACK FLOW ASSEMBLY OF THE SAME 8.
- APPROVED BACK FLOW ASSEMBLY, APPROPRIATE FOR THE HAZARD CLASSIFICATION MUST BE INSTALLED WITHIN 3m OF SERVICE ENTRY DOWNSTREAM OF THE METER.
- THE OWNER SHALL PROVIDE A SUITABLE SITE FOR THE WATER METER AT A HORIZONTAL SETTING, WITHIN 2m OF POINT OF ENTRY FOR THE WATER SERVICE CONNECTION INSIDE THE BUILDING AS PER BYLAW #7567.
- WATER METERS SHALL REQUIRE 2000mm (6') HEADROOM SERVICE CLEARANCE IN FRONT OF THE METER AND SHALL NOT BE INSTALLED IN CRAWLSPACES, CONFINED ENTRY SPACES OR SPACES THAT REQUIRE A FALL PROTECTION EQUIPMENT SYSTEM FOR ACCESS AS DEFINED BY THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS OF SASKATCHEWAN. IF THIS CANNOT BE ACHIEVED WITHIN THE TYPICAL DIMENSIONS SHOWN ON THIS DRAWING, THE METER LOCATION AND ACCESS MUST BE APPROVED BY THE SASKATOON WATER DEPARTMENT.
- PIPING MATERIAL AND INSTALLATION MUST COMPLY WITH THE CANADIAN PLUMBING CODE AND THE CITY OF SASKATOON STANDARD CONSTRUCTION SPECIFICATIONS. PIPING ON EACH SIDE OF THE METER SHALL BE ADEQUATELY SUPPORTED AND ANCHORED TO MAINTAIN PIPE ALIGNMENT AND SUPPORT THE WEIGHT OF THE METER AND BACKFLOW ASSEMBLY.
- CORPORATION COUPLING/PIPING MUST BE SECURED SO THAT THE SERVICE IS HELD FIRMLY IN PLACE.
- CURB COCK (CC) MUST BE BETWEEN 150mm & 230mm (6"-9") FROM BELOW FINISHED BACK OF SIDEWALK GRADE, AND POLY PIPE MARKER LEFT IN PLACE AND EXPOSED.



REMOTE READER WIRE TO EXTEND THROUGH WALL WITH 610mm (24") OF SLACK AT END ADJACENT TO ELECTRIC METER SOCKET (OR APPROVED LOCATION) 150MM X 150MM (6"X6") 13MM (1/2") THICK PLYWOOD MOUNTING PAD TO BE PROVIDED FOR MOUNTING OF REMOTE READER MODULE WIRE TYPE 4 CONDUCTOR #22 GAUGE P.V.C. INSULATED AND OVERALL P.V.C. JACKETED THIS WIRE IS REQUIRED ON ALL NEW INSTALLATIONS AS PER BYLAW. CLEARANCE MINIMUM WIRE TO BE ROUTED TO WATER METER SITE WITH 610MM (24") OF SLACK FRONT VIEW

EXTRACT FROM BYLAW #7567

NEW WATER METERS

24. (1) ALL SERVICED BUILDINGS CONSTRUCTED AFTER THE PASSAGE OF THIS BYLAW SHALL HAVE A REMOTE READOUT WATER METER AT A LOCATION DETERMINED BY SASKATOON WATER DEPARTMENT.

(2) THE WIRE TYPE USED FOR THE INSTALLATION OF À REMOTE READOUT WATER METER SHALL BE CSA TYPE PCC, FT4, 22AWG OR EQUIVALENT, INSTALLED AT THE OWNER'S EXPENSE.

| | PLAN DESCRIPTION/REVISION | DATE | BY |
|---|-------------------------------------|-------------|----|
| 1 | UPDATED FROM DRAWING 1020013023r005 | 2025-MAR-24 | SS |
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City of Saskatoon

TYPICAL SMALL WATER METER INSTALLATION 19mm & 25mm (3/4" - 1" METER)

Christopher Richards

ELECTRICAL

Mar 31, 2025 DATE SIGNED

SIGNATURE Russ Munro Mar 31, 2025

SCALES: HOR. NTS VERT, NTS

102-0039-002r001

DATE SIGNED

APPROVALS

