



# KNELSEN | PRECAST

—  
YOUR CONSTRUCTION  
SOLUTIONS SUPPLIER

STANDARD PRECAST PRODUCT GUIDE / 2019 / PRAIRIE REGION

## PRECAST CONSTRUCTION MATERIALS

STANDARD & CUSTOM SOLUTIONS FOR ALL YOUR  
CONSTRUCTION NEEDS



—  
BARRIERS  
PARKING CURBS  
STACKING BLOCKS  
GUARD POSTS  
BOLLARDS  
PEDESTALS

—  
LIGHT POLE BASES  
DUCT BANKS & SLEEPERS  
PIPE PROTECTION SLABS  
SUMP TANKS & CISTERNS  
PITS & CHAMBERS  
SPLASH PADS

—  
PRECAST STEPS  
TREE PLANTERS  
BOAT RAMP SLABS  
CUSTOM ARCHITECTURAL  
CUSTOM STRUCTURAL

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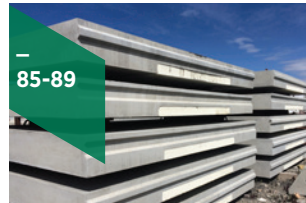
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**KNELSEN** | PRECAST

### CONTACT INFORMATION

Central Sales Desk  
403-279-8161

Tender Email Address  
[Precast.Tenders@Knelsen.com](mailto:Precast.Tenders@Knelsen.com)

### PRAIRIE REGION PRECAST PLANTS

CALGARY  
8916 - 48th Street SE  
Calgary, Alberta T2C 2P9C

ACHESON / Edmonton  
205 - 26229 Twp. Road 531A  
Acheson, Alberta T7X 5A4

# KNELSEN PRECAST BUSINESS UNITS

## **SP** STANDARD PRECAST

### UNDERGROUND ELECTRICAL & COMMUNICATION UTILITY

- Manholes / Vaults, Pull Boxes/Pits
- Risers & Adapter Rings
- Cabinet & Switching Cubicle Bases
- Transformer Bases
- Light Pole, Traffic & Signal Bases
- Pedestals, Bollards & Guard Posts
- Duct Banks & Trenches
- Cable Trays & Sleepers (Conduit)
- Solar Panel Bases

### MECHANICAL MATERIALS

- Sump Tanks & Sump Pump Pits
- Manholes / Vaults & Chambers
- Pipe Trays & Sleepers (Pipe)

### RAIL & LRT MATERIALS

- Crossing Planks
- Signal & Communication Bases
- Manhole / Vaults & Pull Boxes
- Duck Banks & Trenches

### CONSTRUCTION MATERIALS

- Jersey Barriers & TL3 Barriers
- Low Profile Barriers & Stack Blocks
- Pedestals, Bollards & Guard Posts
- Parking Curbs & Splash Pads

### NATURAL RESOURCES / ENERGY & INFRASTRUCTURE

- Compressor Pads
- Pipeline Protection Slabs
- Pipeline Weights & Pipe Anchors
- Pipe Racks & Trenches
- Sleepers (Pipe & Conduit)
- Utility Markers

### RESIDENTIAL BUILDINGS

- Custom Steps & Decks
- Stairwells & Window Wells
- Standard Steps
- Garage Beams
- Concrete & Steel Brackets

### LANDSCAPE & PARK MATERIALS

- Benches, Tables & Tree Planters
- Splash Pads & Boat Ramps

### CUSTOM SOLUTIONS

- Architectural & Structural
- Stair Pads & Ladder Pads
- Foundation Blocks
- Headwalls

## **EP** ENGINEERED PRECAST

### PRECAST CONCRETE BUILDINGS AND VENUES

- Architectural Precast Elements
- Insulated and Solid Wall Panels
- Solid Precast Slabs
- Stadium/Arena - Pre-stressed Bleachers

### BRIDGE MATERIAL

- BEBO Concrete Arches
- Box Culverts
- Box Girders
- Pedestrian Bridges
- Precast Deck Panels
- Bridge Piers and Abutment Caps
- Pipe Line Crossing Structures
- Railway Structural Elements

### NATURAL RESOURCES / ENERGY & INFRASTRUCTURE

- Trenches & Sumps
- Containment Walls
- Dike Walls
- Secondary Containment Structures
- Pile Caps and Pipe Racks
- Compressor Slabs
- Retaining Walls
- Blast Resistant Structures

### CUSTOM SOLUTIONS

- Architectural & Structural

LOCATIONS

CALGARY

EDMONTON



## KNELSEN PRECAST CUSTOM SOLUTIONS

All Knelsen plants within the Prairie region operate full carpentry and welding shops to support customization of existing products and small scale custom applications. All work is done in accordance to **CPCI standards and specifications**. The department includes journeymen trade staff, modern carpentry and welding equipment, as well as extensive form design experience - if it can be drawn, Knelsen can create the form.

## KNELSEN QUALITY CONTROL

Quality control plays an important role at all Knelsen precast concrete operations and is supported by both external (**CPCI**) and internal standards, which have contributed to key tender awards requiring high levels of quality control management.

### KNELSEN PLANT **CPCI** CERTIFICATION

#### CALGARY

since August 12, 2010

#### Associations

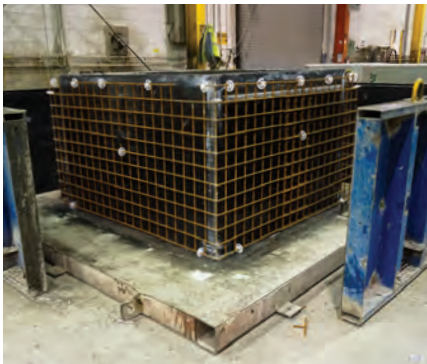


### CANADIAN PRECAST/PRESTRESSED CONCRETE INSTITUTE (**CPCI**)

The **CPCI certification program** is the only program in Canada designed to qualify manufacturers who fabricate architectural, structural and specialty precast concrete products to meet the requirements of both **CSA Standard A23.4-09, including Annexes A and B**, together with (United States - Precast/Prestressed Concrete Institute) **PCI MNL-116 and 117** and **CPCI certification** requirements. Manufacturers are evaluated on their quality system, documentation, production procedures, engineering, personnel, equipment, and finished products. Plants are audited twice annually, on the more stringent requirements of either program, on a clause-by-clause basis. All CPCI audits are two days, regardless of the size of the plant and regardless of the type of product. The other certification program's enhancements only consider some prestressed bridge and commercial products as "advanced" to warrant two annual two-day audits. CPCI considers all product categories and precast facilities unique to warrant two-day audits for all.

## KNELSEN PRECAST ENGINEERING

The Knelsen Precast Engineering Department provides engineering support for the designed use and handling considerations of all precast concrete. In addition to this role, the Engineering Department provides assessment and design of plant hardware, including spreader beams, X-braces, etc. The Engineering Department also provides a similar role for the field erection crews. The designs produced may be for any stage of a job (estimation, preliminary project work, post install review, repair, etc). accelerated installation schedules.



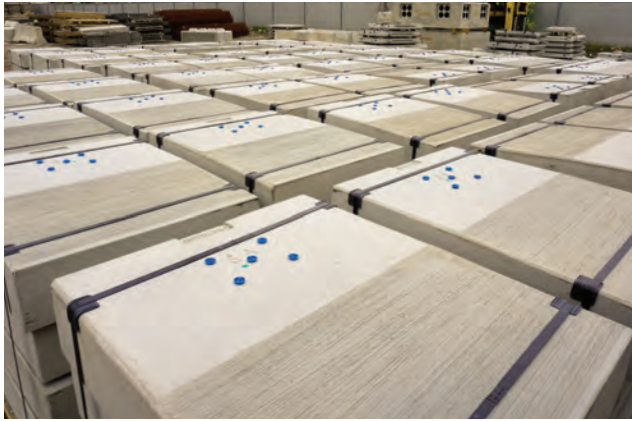
As it applies to **STANDARD PRODUCTS**, the Engineering Department will provide support in the determination of:

- Modifying products
- Creating new products
- Assessing changes in the use of a product
- Assessing structural integrity
- Advising on repair procedures
- Providing designs for plant equipment
- Providing installation instructions



In terms of **SPECIFIC SUPPORTIVE** functions, Knelsen Engineers may provide the following:

- Assist with coordinating drawing changes
- Assess design requirements and change reinforcing to suite changes in use or design requirements, or to alter product dimensions to fit these needs
- Review field issues
- Review forces applied by the precast (soil bearing pressure for transformer bases)
- Help identify ways of addressing clients' issues
- Design lift-hooks and lifting mechanics
- Design prestressing equipment, if needed
- Design engineered lifting hardware
- Check the capacity of existing designs for new or alternative loading situations

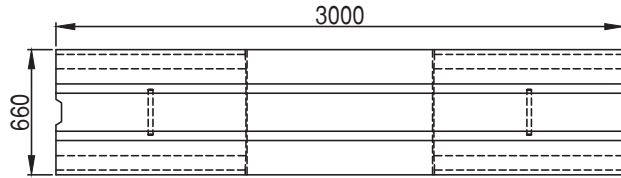


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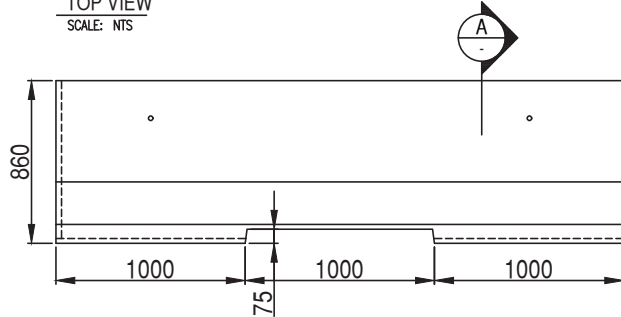
BARRIERS (Standard)

**Notes**

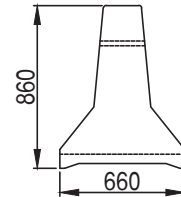
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



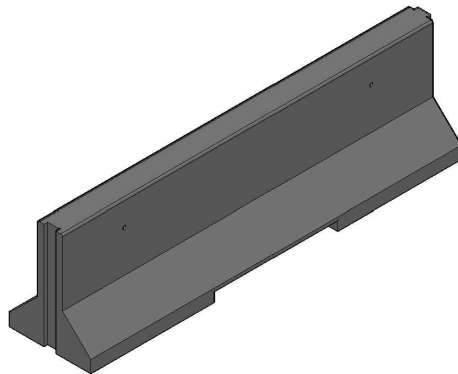
TOP VIEW  
SCALE: NTS



ELEVATION  
SCALE: NTS



SECTION A  
SCALE: NTS



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	2,044 kg (4,497 lbs)

**Product Detail**

Outside Dimension	3000 x 660 x 860
Connection Type	Keyway
Max. Length	3048mm or 10'
Lift Holes	(2)-25mm Dia

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

Revision Date April. 01 2019



**10' NEW JERSEY BARRIER (TYPE 1)**

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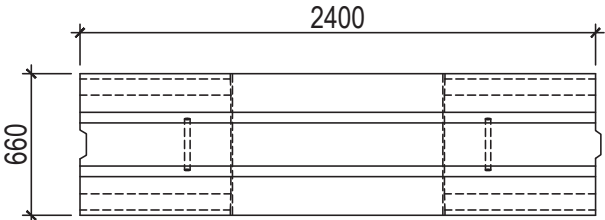
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SAP No. **405107**

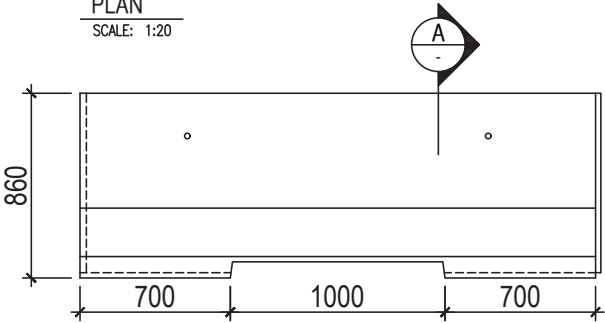


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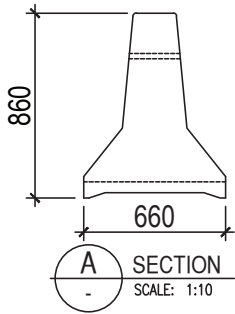
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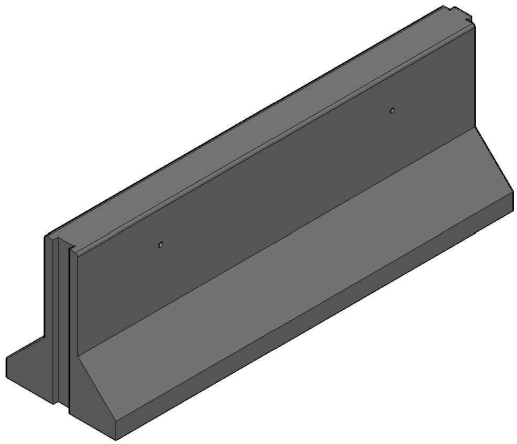
PLAN  
SCALE: 1:20



ELEVATION  
SCALE: 1:20



SECTION A-A  
SCALE: 1:10



**Technical Detail**

CPIC Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	1,014 kg (2,230 lbs)

**Product Detail**

Outside Dimension	2400 x 660 x 860
Connection Type	Keyway
Max. Length	2400mm or 8'
Lift Mechanism	2 x 25mm Dia

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

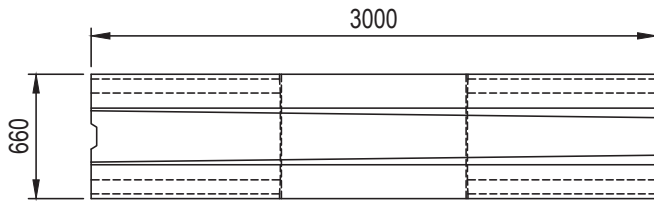
**Revision Date**      **April. 01 2019**

	<p><b>8' NEW JERSEY BARRIER (TYPE 1)</b></p>	<p>Dwg. No.      -</p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No.      <b>412175</b></p>

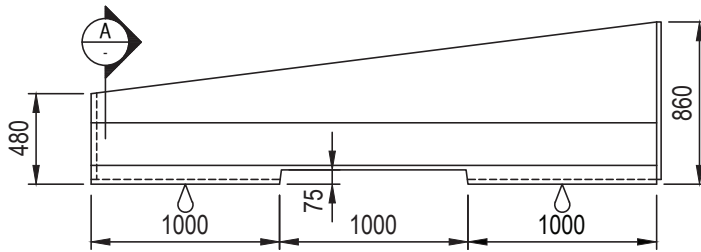
Tel: (403) 279-8161  
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**Notes**

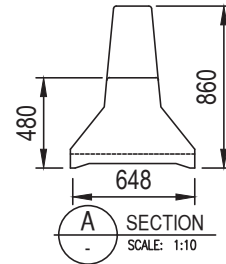
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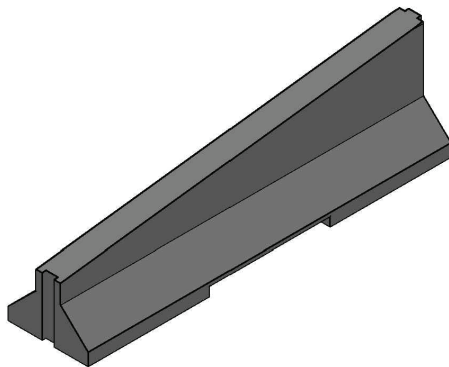
PLAN  
SCALE: 1:20



ELEVATION  
SCALE: 1:20



SECTION  
SCALE: 1:10



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,715 kg (3,781 lbs)

**Product Detail**

Outside Dimension	3000 x 660 x 860-480
Connection Type	Keyway
Max. Length	3048mm or 10'
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

Revision Date **April. 01 2019**



**NJ BARRIER TRANSITION (TYPE 1)**

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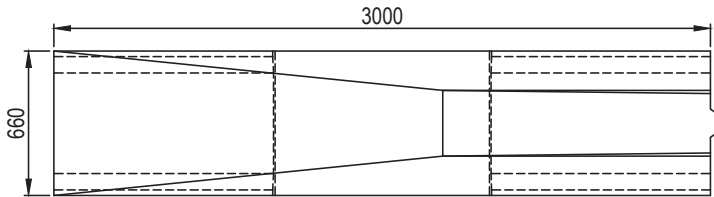
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Fax: (403) 279-6027

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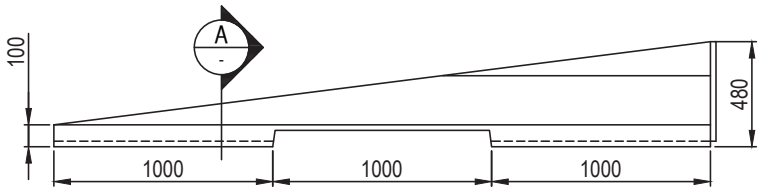
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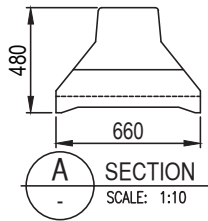
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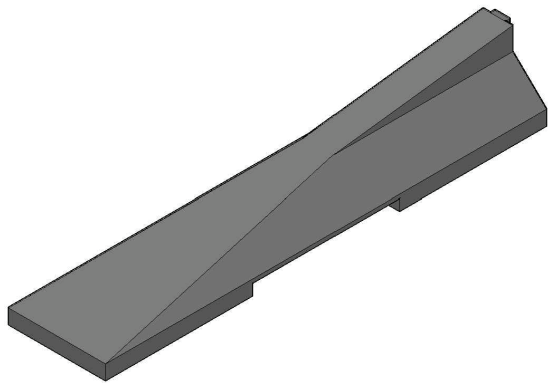
**PLAN**  
SCALE: 1:20



**ELEVATION**  
SCALE: 1:20



**SECTION**  
SCALE: 1:10



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,014 kg (2,230 lbs)

**Product Detail**

Outside Dimension	3000 x 660 x 860
Connection Type	Keyway
Max. Length	3048mm or 10'
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

**Revision Date**      **April. 01 2019**



**NJ BARRIER TRASITION TYPE TWO**

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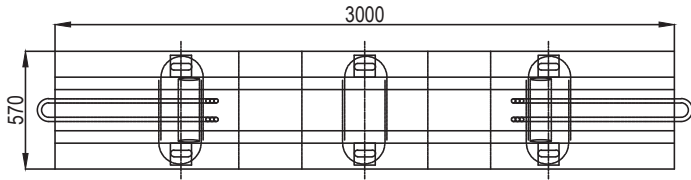
**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

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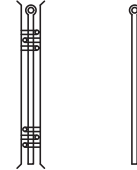
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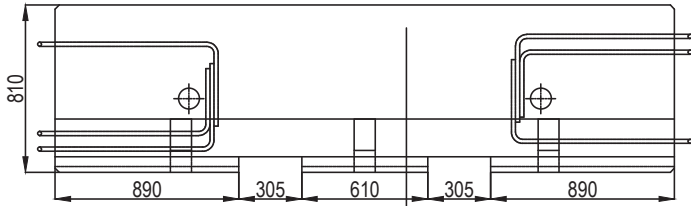
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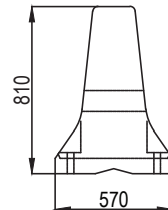
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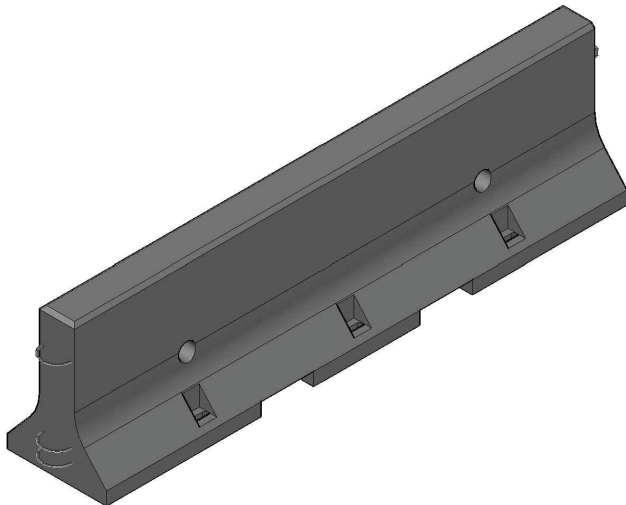
BARRIER CONNECTION  
SCALE: -



ELEVATION  
SCALE: 1:15



SECTION  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	1,905 kg (4,190 lbs)

**Product Detail**

Outside Dimension	3000 x 570 x 810
Connection Type	Loop & Pin
Pinn Item Number	411744
Lift Hole	(2) - 102mm Dia

**Revision Date** April. 01 2019



**TL3 BARRIER (TYPE F)**

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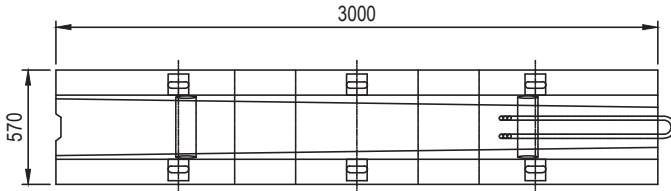
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No.  
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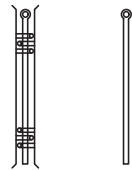
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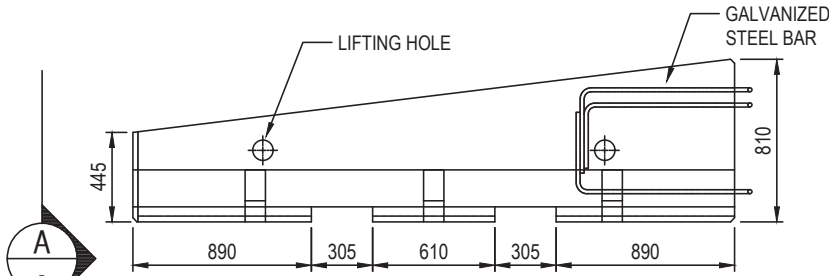
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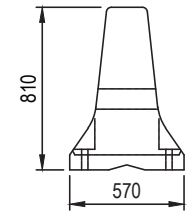
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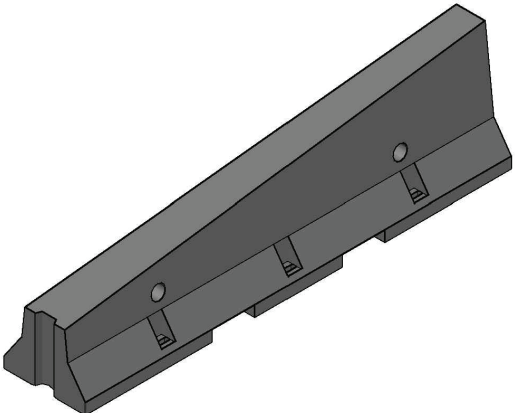
**BARRIER CONNECTION**  
SCALE: -



**ELEVATION**  
SCALE: 1:15



**SECTION A**  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,590 kg (3,505 lbs)

**Product Detail**

Outside Dimension	3000 x 570 x 810-445
Connection Type	Loop & Pin & Keyway
Pin Item Number	411744
Lift Mechanism	(2) - 102mm Dia

**Revision Date** April. 01 2019



**TL3 BARRIER (TYPE F) FEMALE TRANSITION 1 OF 2**

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Dwg. No. **7-0073-5**

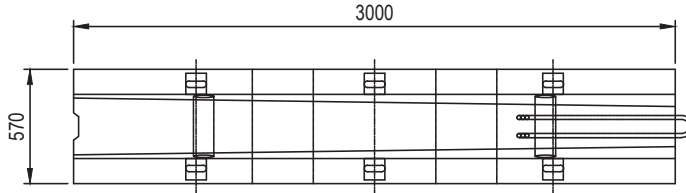
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01

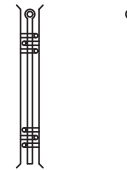
BARRIERS (Standard)

**Notes**

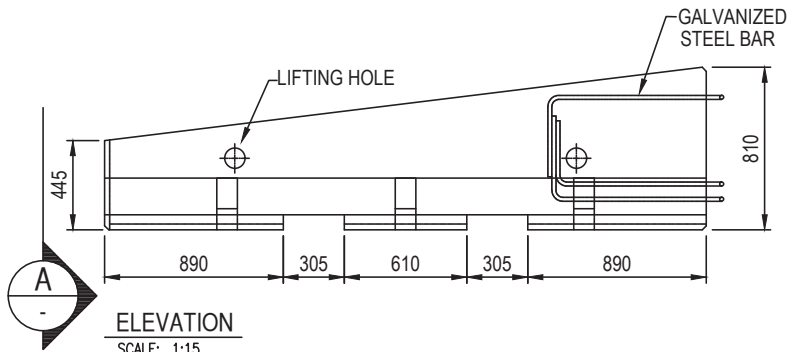
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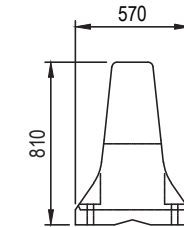
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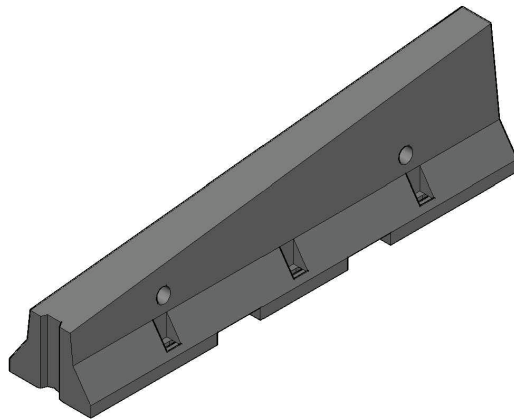
BARRIER CONNECTION  
SCALE: -



ELEVATION  
SCALE: 1:15



SECTION A  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,590 kg (3,505 lbs)

**Product Detail**

Outside Dimension	3000 x 570 x 810-445
Connection Type	Loop & Pin & Keyway
Pin Item Number	411744
Lift Mechanism	(2) - 102mm Dia

**Revision Date**

**April. 01 2019**



**TL3 BARRIER (TYPE F) - MALE TRANSITION 1 OF 2**

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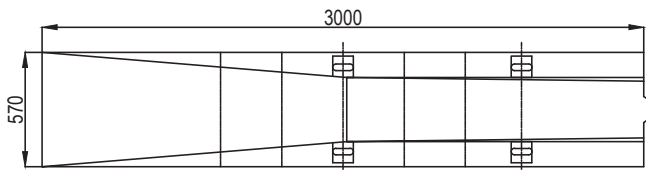
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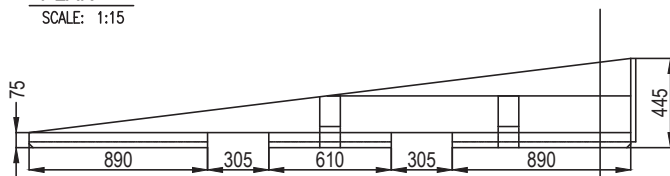
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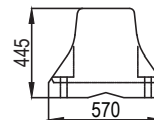
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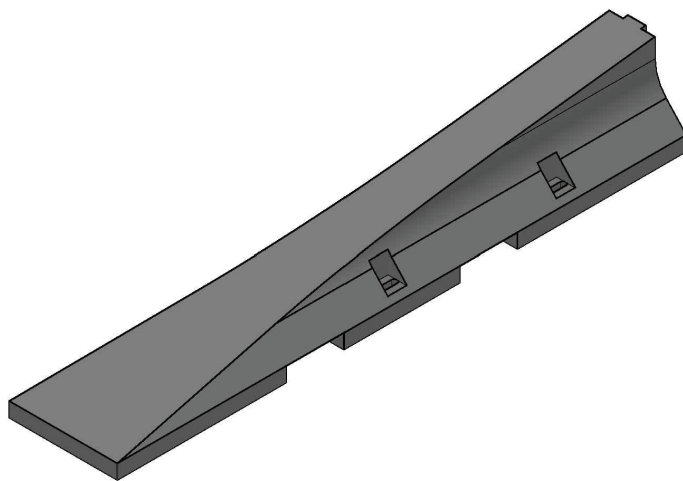
**PLAN**  
SCALE: 1:15



**ELEVATION**  
SCALE: 1:15



**SECTION A**  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	770 kg (1,678 lbs)

**Product Detail**

Outside Dimension	3000 x 570 x 445-75
Connection Type	Keyway

**Revision Date**      **April. 01 2019**

	<p><b>TL3 BARRIER (TYPE F) TRANSITION 2 OF 2</b></p>	<p>Dwg. No. <b>7-0073-6</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No. <b>405112-2</b></p>

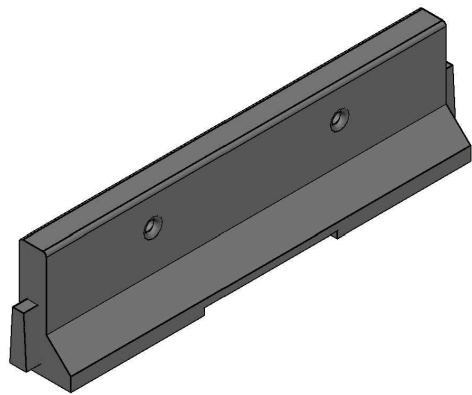
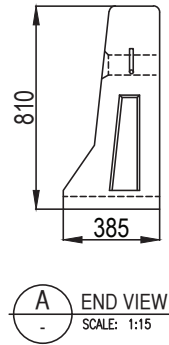
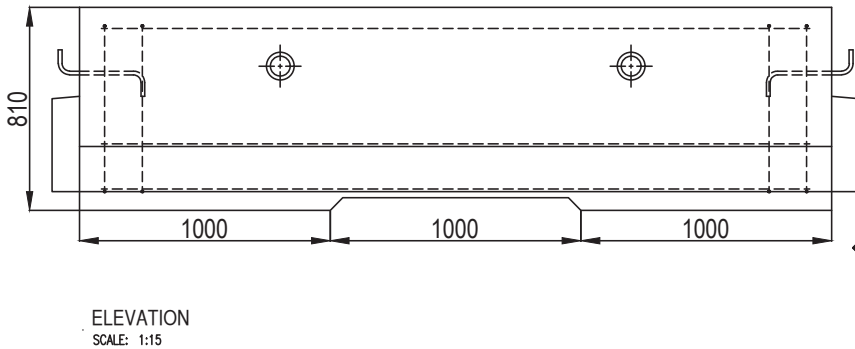
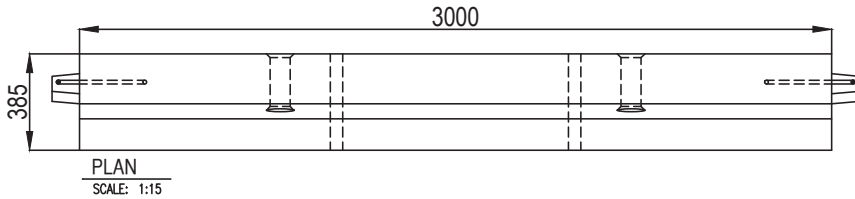
Tel: (403) 279-8161  
Fax: (403) 279-6027

01

BARRIERS (Standard)

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,530 kg (3,365 lbs)

**Product Detail**

Outside Dimension	3000 x 385 x 810
Connection Type	Steel Bar
Lift Holes	(2) - 80mm Dia

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

**Revision Date**      **April. 01 2019**



**HALF 'F' BARRIER - MALE**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
[www.knelsen.com](http://www.knelsen.com)

**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

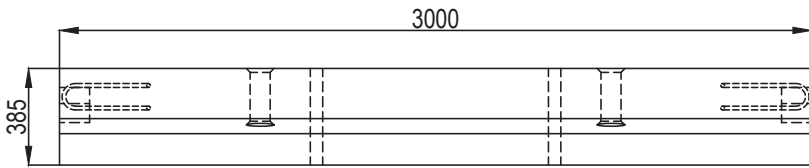
Dwg. No. **7-0072-1**

SAP No. **409597**

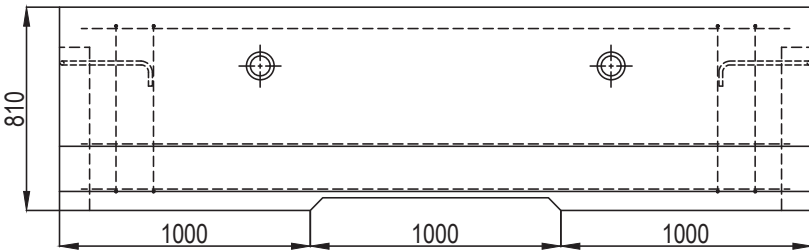


**Notes**

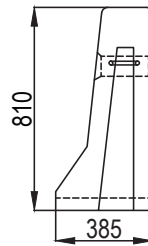
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



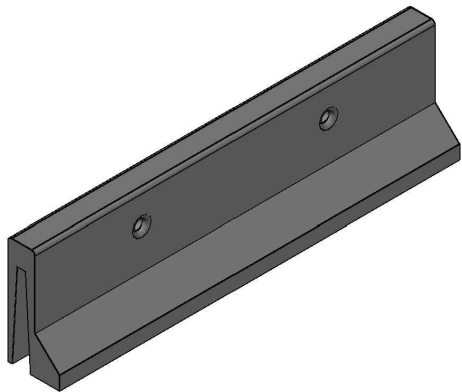
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



A END VIEW  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,468 kg (3,230 lbs)

**Product Detail**

Outside Dimension	3000 x 385 x 810
Connection Type	Steel Bar
Lift Holes	(2) - 80mm Dia

**Optional (Extra)**

Fence Attachment	Insert PVC
Fence Attachment	Insert Corrugated Duct
Fence Attachment	Metal Plate

**Revision Date**      **April. 01 2019**

	<h2>HALF 'F' BARRIER - FEMALE</h2>	Dwg. No. <h3>7-0072-2</h3>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	Tel: (403) 279-8161 Fax: (403) 279-6027

01

BARRIERS (Standard)

**PLAN**  
SCALE: 1:20

**ELEVATION**  
SCALE: 1:20

**END VIEW**  
SCALE: 1:15

**Notes**  
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength    35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant  
                                  S2 Exposure  
 Reinforcement      Grade 400  
 Weight              2,070 kg (4,555 lbs)

**Product Detail**  
 Outside Dimension    5000 x 385 x 810-150  
 Connection Type      Steel Bar  
 Lift Hole              (2) - 80mm Dia

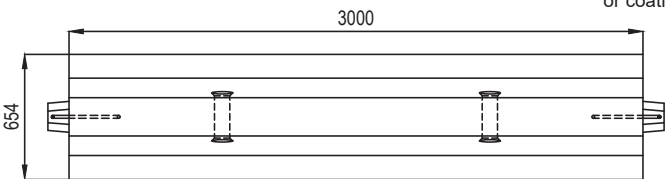
**Optional (Extra)**  
 Fence Attachment    Insert PVC  
 Fence Attachment    Insert Corrugated Duct  
 Fence Attachment    Metal Plate

**Revision Date**      **April. 01 2019**

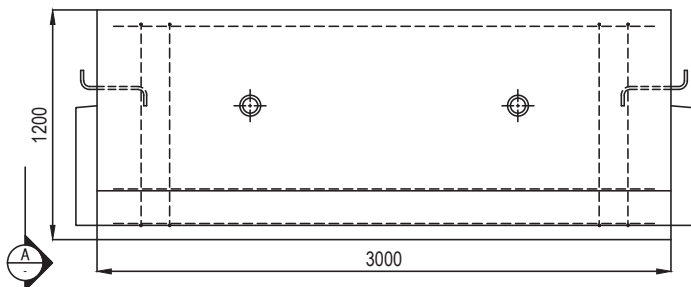
	HALF 'F' BARRIER - MALE	Dwg. No. <b>7-0072-3</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>405109</b> Tel: (403) 279-8161 Fax: (403) 279-6027

**Notes**

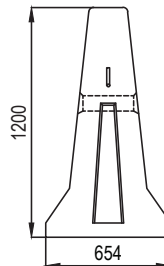
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



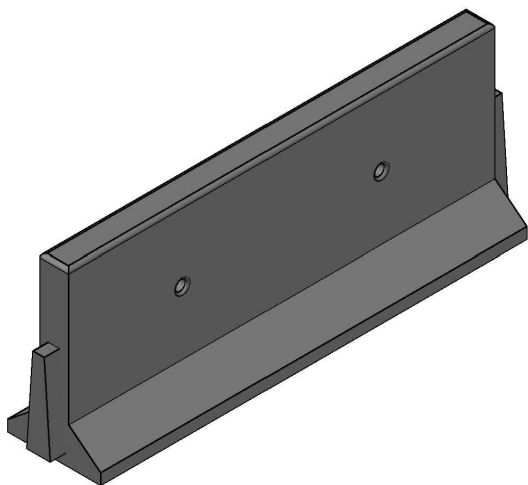
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



END VIEW  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	3,025 kg (6,669 lbs)

**Product Detail**

Outside Dimension	3000 x 654 x 1200
Lift Holes	(2) - 80mm Dia.

Revision Date April. 01 2019



**FULL 'F' BARRIER - MALE**

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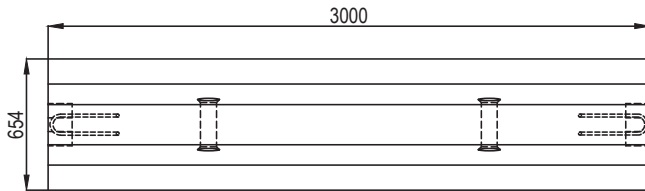
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. 7-0074-1

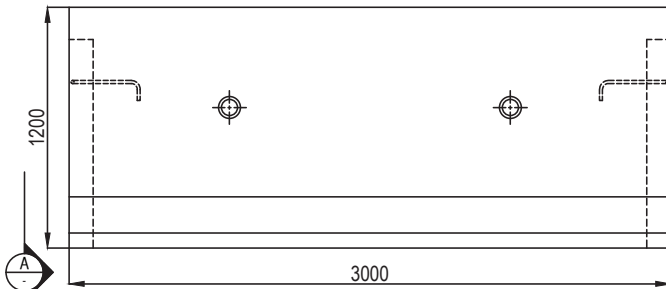
SAP No. 409647

**Notes**

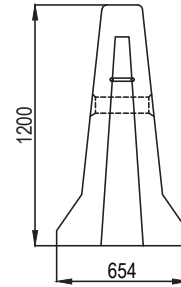
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



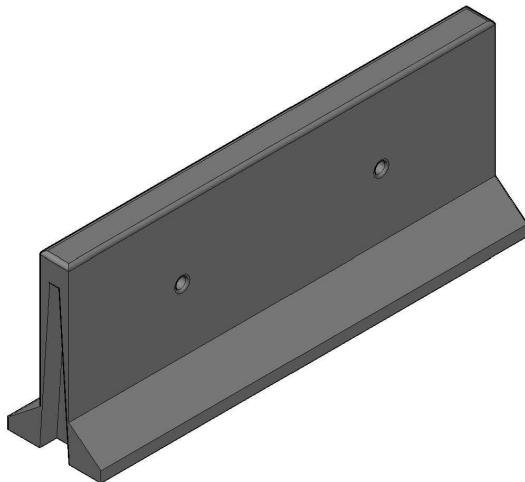
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



END VIEW  
SCALE: 1:15



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	3,025 kg (6,669 lbs)

**Product Detail**

Outside Dimension	1346 x 2030 x 1065
Lift Hole	(2) - 80mm Dia

**Revision Date** April. 01 2019



**FULL 'F' BARRIER - FEMALE**

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[www.knelsen.com](http://www.knelsen.com)

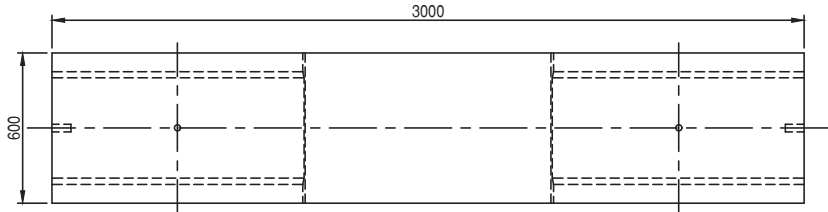
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. **7-0074-2**

SAP No. **409648**

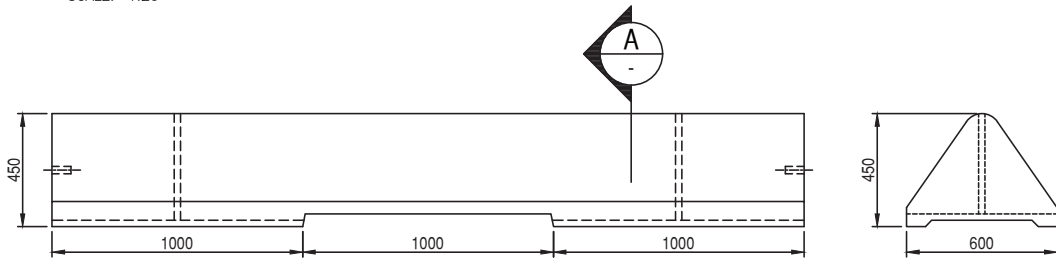
**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**PLAN**

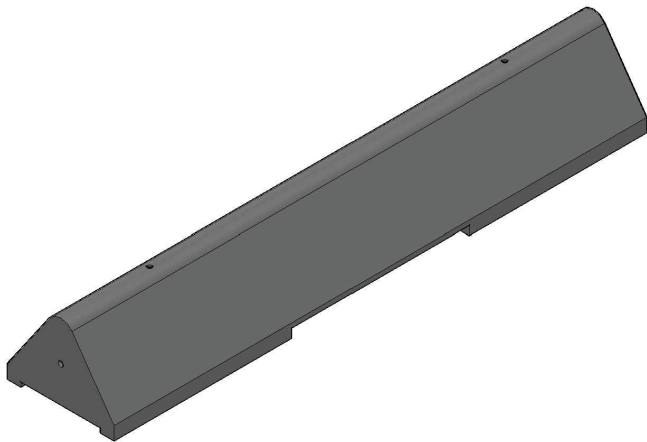
SCALE: 1:20



**ELEVATION**

SCALE: 1:20

A SECTION SCALE: 1:10



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,106 kg (2,434 lbs)

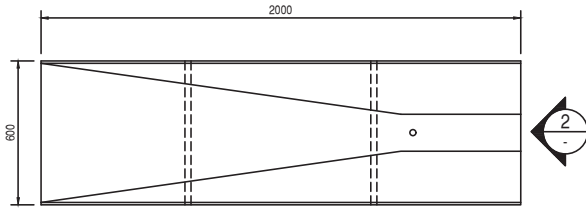
**Product Detail**

Outside Dimension	3000 x 600 x 450
Lift Hole	(2) - 30mm Dia

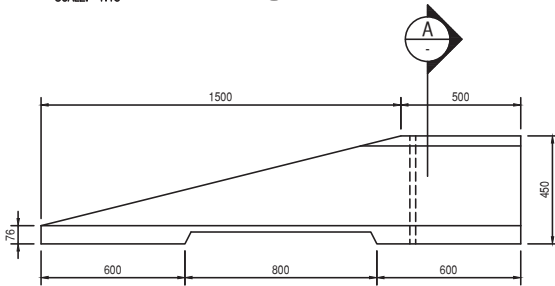
Revision Date April. 01 2019

	<p><b>LOW PROFILE BARRIER (TYPE 4)</b></p>	<p>Dwg. No. <b>7-0076-1</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No. <b>406200</b></p>

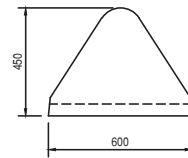
Tel: (403) 279-8161  
 Fax: (403) 279-6027



PLAN  
SCALE: 1:15



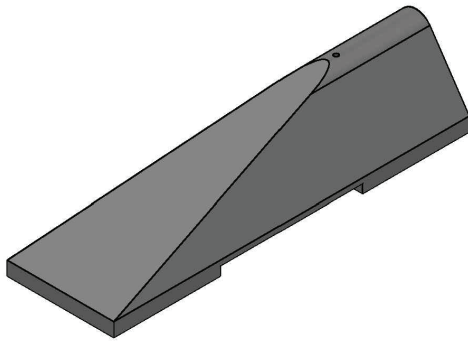
1 ELVATION  
SCALE: 1:15



A SECTION  
SCALE: 1:15

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	765 kg (1,683 lbs)

**Product Detail**

Outside Dimension	2000 x 600 x 450 - 76
Lift Mechanism	(2) - 30mm Dia.

Revision Date April. 01 2019



**LOW PROFILE BARRIER TRANSITION (TYPE 4)**

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[www.knelsen.com](http://www.knelsen.com)

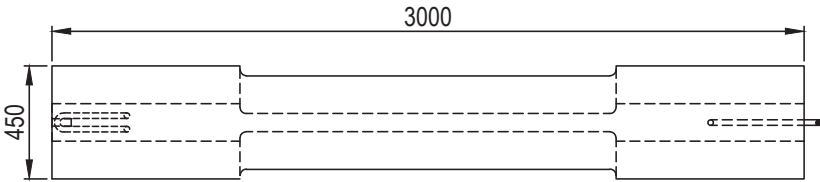
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. **7-0076-2**

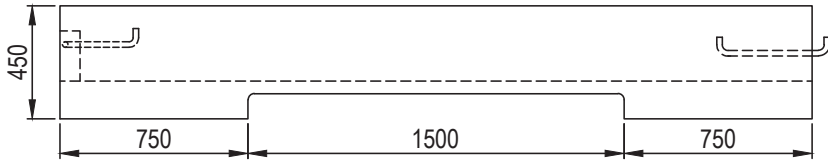
SAP No. **406201**

**Notes**

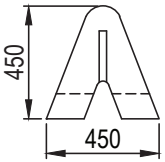
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



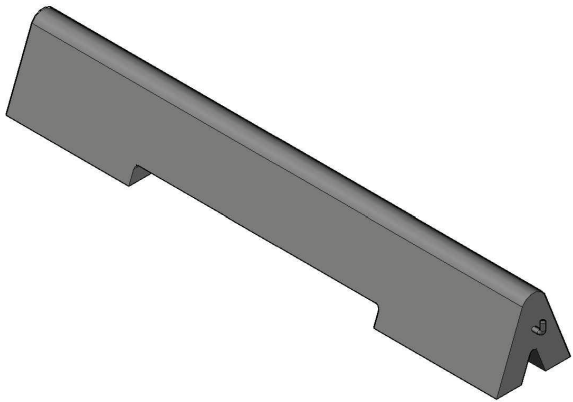
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



END VIEW  
SCALE: 1:10



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	675 kg (1,488 lbs)

**Product Detail**

Outside Dimension 3000 x 450 x 450

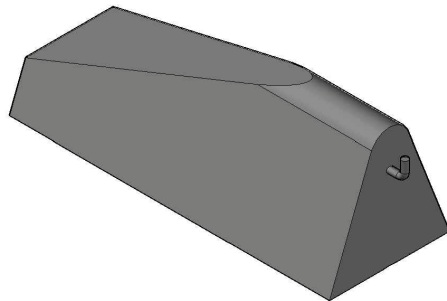
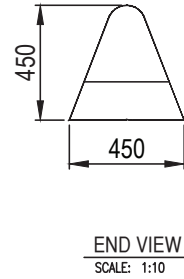
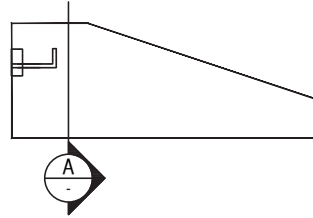
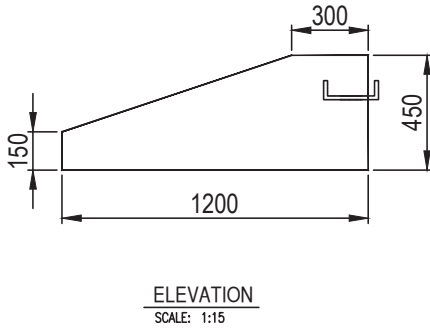
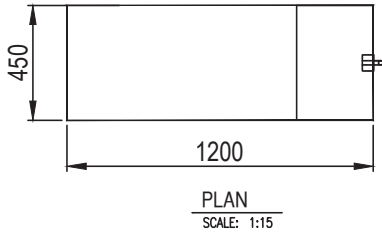
Revision Date April. 01 2019

	<p><b>MINI BARRIER</b></p>	<p>Dwg. No. <b>SP35410</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No. <b>406202</b></p>

Tel: (403) 279-8161  
Fax: (403) 279-6027

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	300 kg (660 lbs)

**Product Detail**

Outside Dimension 1200 x 450 x 450-150

Revision Date April. 01 2019



**MINI BARRIER TRANSITION**

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Tel: (403) 279-8161  
Fax: (403) 279-6027

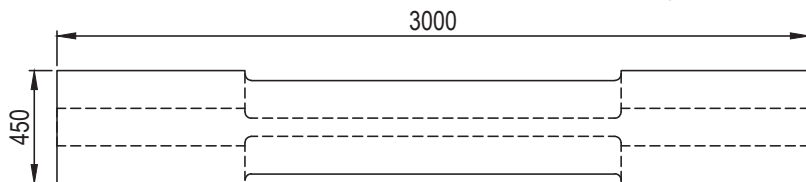
Dwg. No. **SP35411**

SAP No. **406203**

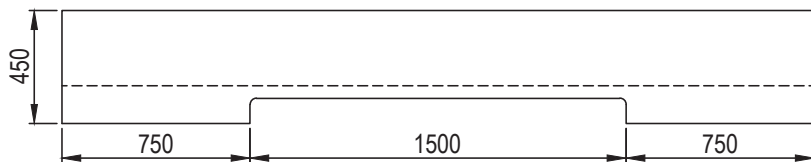


**Notes**

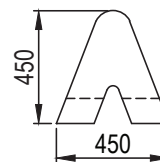
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



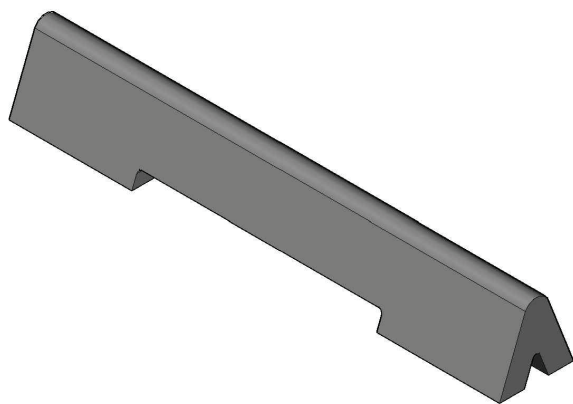
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



A END VIEW  
SCALE: 1:10



**Technical Detail**

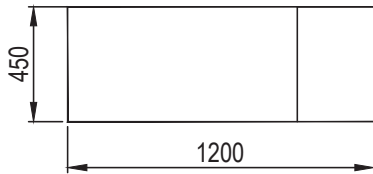
CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	675 kg (1,488 lbs)

**Product Detail**

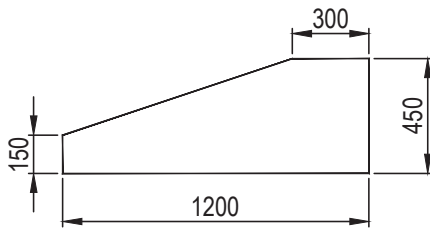
Outside Dimension 3000 x 450 x 450

Revision Date April. 01 2019

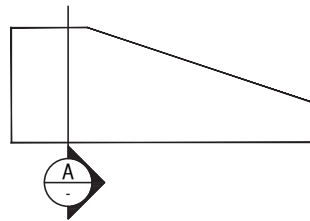
	<p><b>MINI BARRIER</b></p>	Dwg. No.	-
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No.</p> <p style="font-size: 1.2em;"><b>413250</b></p>	<p>Tel: (403) 279-8161                  Fax: (403) 279-6027</p>



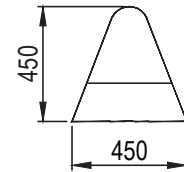
PLAN  
SCALE: 1:15



ELEVATION  
SCALE: 1:15



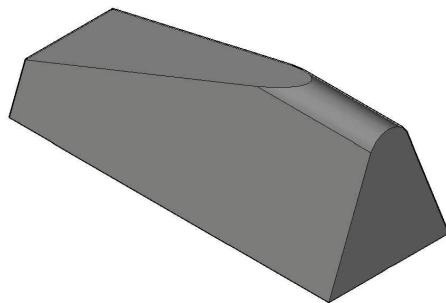
ELEVATION  
SCALE: 1:15



END VIEW  
SCALE: 1:10

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	300 kg (660 lbs)

**Product Detail**

Outside Dimension 1200 x 450 x 450-150

Revision Date April. 01 2019



**MINI BARRIER TRANSITION**

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www.knelsen.com

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Fax: (403) 279-6027

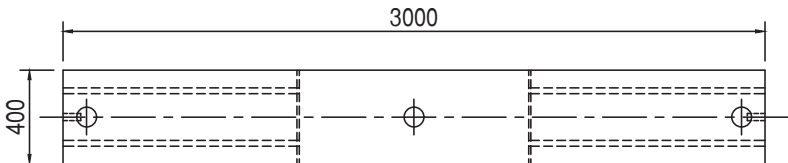
Dwg. No.

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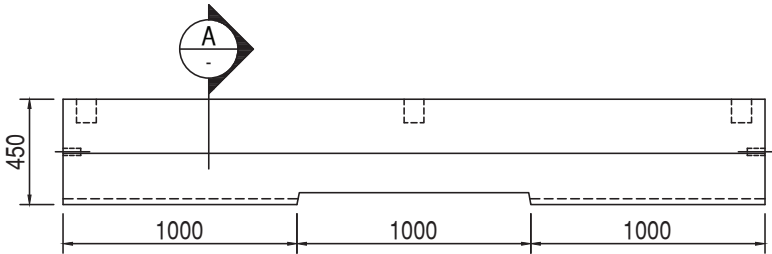
SAP No.

413250

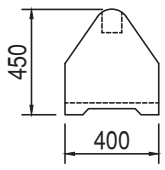
**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



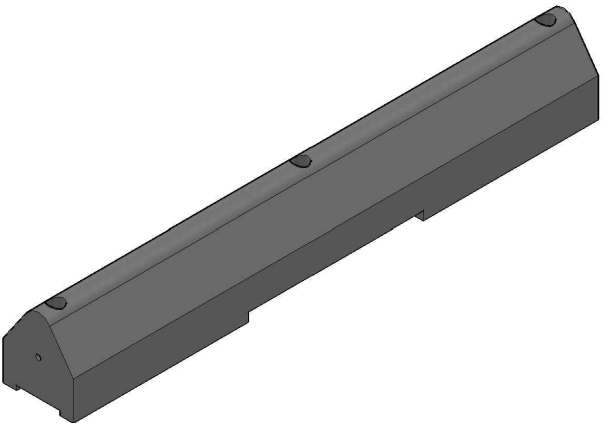
**PLAN**  
 SCALE: 1:20



**ELEVATION**  
 SCALE: 1:20



**A SECTION**  
 SCALE: 1:10



**Technical Detail**  
 CPCI Standard Group S  
 CSA Standard A23.3-14, A23.4-09  
 Concrete Strength 35 MPa @ 28 Days  
 Concrete Type Sulphate Resistant S2 Exposure  
 Reinforcement Grade 400  
 Weight 765 kg (1,683 lbs)

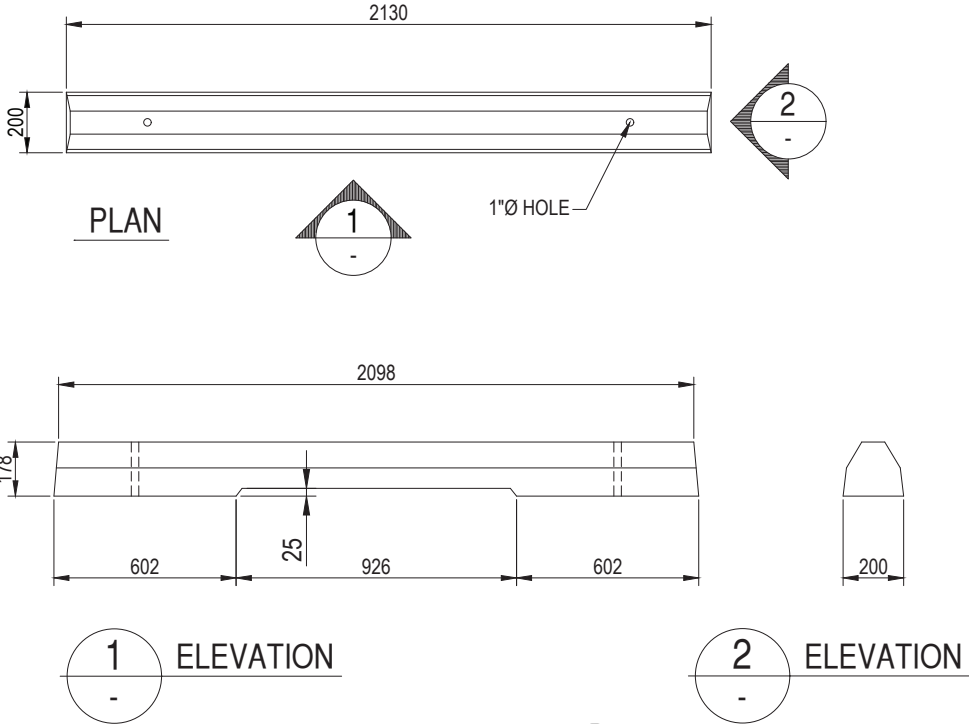
**Product Detail**  
 Dimension 3000 x 400 x 450  
 Lift Holes (2) - 30mm Dia

**Revision Date** April. 01 2019

	<h2>TYPE 4 MEDIAN BARRIER</h2>	Dwg. No.	-
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No.

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	145 kg (319 lbs)

**Product Detail**

Dimension	200 x 2130 x 178
Anchor Type	Rebar Pin

**Revision Date**      **April. 01 2019**



**HIGH PROFILE PARKING CURB**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)

[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
Fax: (403) 279-6027

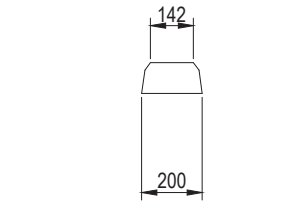
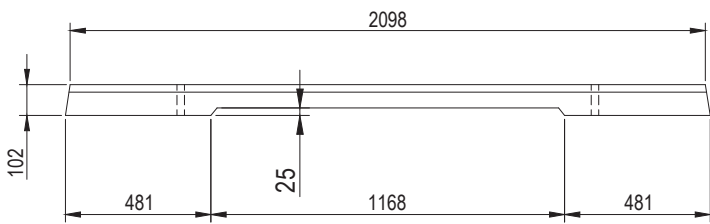
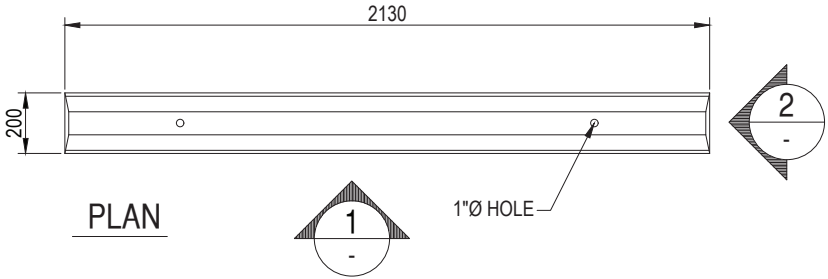
Dwg. No.

-

SAP No.

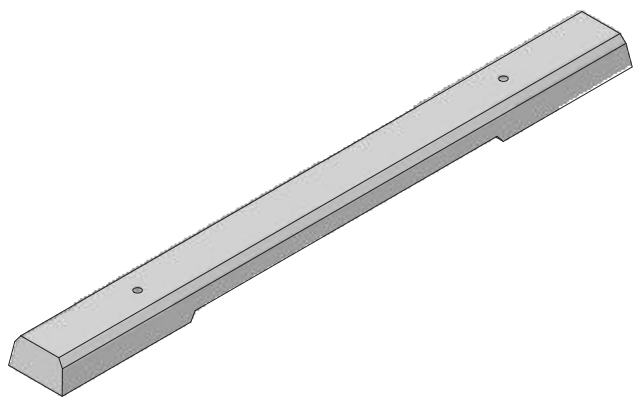
**406191**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



1 ELEVATION

2 ELEVATION



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	105 kg (231 lbs)

**Product Detail**

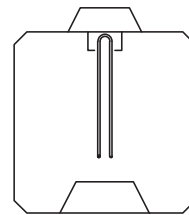
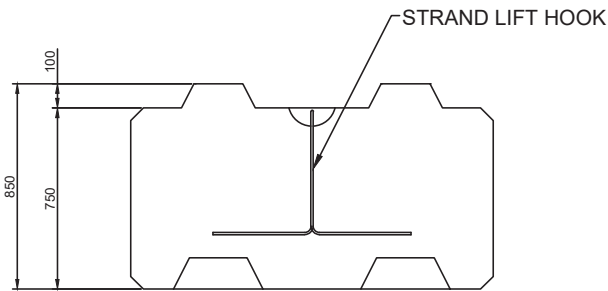
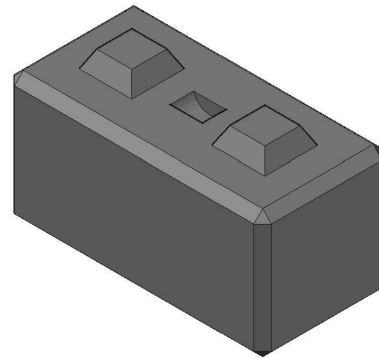
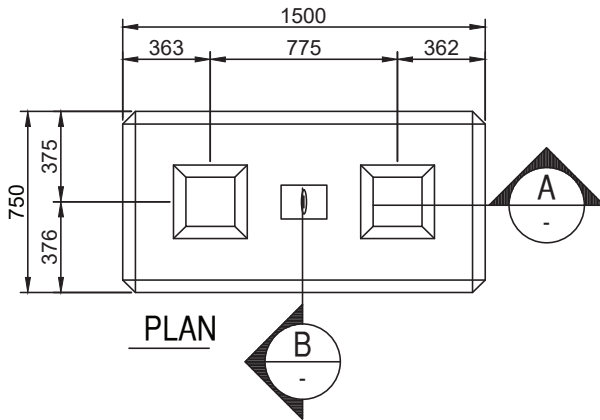
Dimension	200 x 2130 x 102
Anchor Type	Rebar Pin

**Revision Date**      **April. 01 2019**

	<p><b>LOW PROFILE PARKING CURB</b></p>	<p>Dwg. No.      -</p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a>                  Tel: (403) 279-8161                  Fax: (403) 279-6027</p>	<p>SAP No.      <b>406192</b></p>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**A SECTION**

**B SECTION**

**Class A**

Block is manufactured using a full consist concrete mix meeting a minimum 35 MPa. Allowable Vertical Load: 165 Tons ( based on equal bearing on the two nubs or sides ).

**Class B**

Block is manufactured using residual concrete from various mixes within the plant, which can contribute to visible changes in appearance or layering look. The load capacity of these blocks are generally close to the Class A block, however there is no guarantee of the MPa or Breakage.

**Technical Detail**

CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1970 kg (4343 lbs)
<b>Load Rating</b>	<b>Pedestrian</b>

**Product Detail**

Dimension	1500 x 750 x 750
Lift Mechanism	Strand

**Revision Date** April. 01 2019



**METRIC STACKING BLOCK (FULL)**

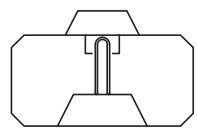
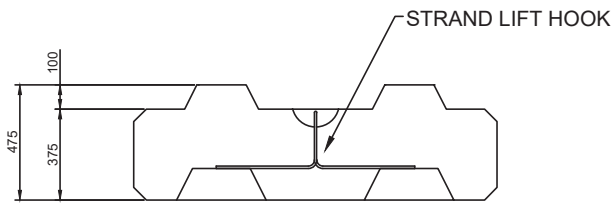
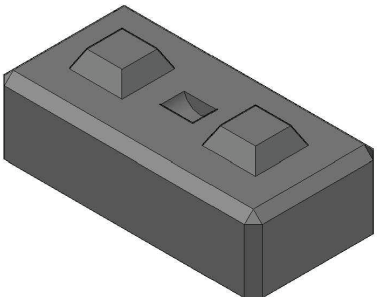
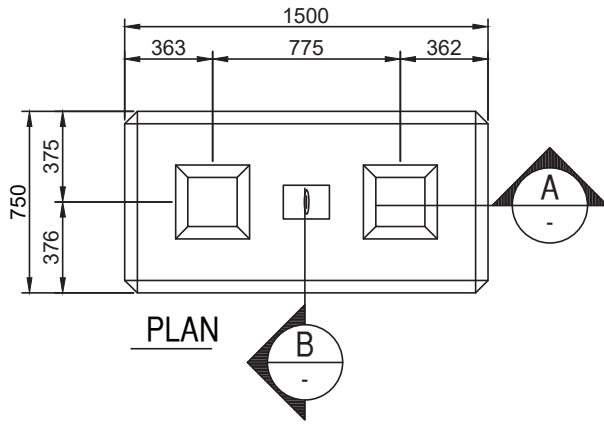
KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. **9-0025-1**

SAP No. **405962**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**A SECTION**

**B SECTION**

**Class A**  
 Block is manufactured using a full consist concrete mix meeting a minimum 35 MPa.  
 Allowable Vertical Load: 165 Tons ( based on equal bearing on the two nubs or sides ).

**Class B**  
 Block is manufactured using residual concrete from various mixes within the plant, which can contribute to visible changes in appearance or layering look.  
 The load capacity of these blocks are generally close to the Class A block, however there is no guarantee of the MPa or Breakage.

**Technical Detail**

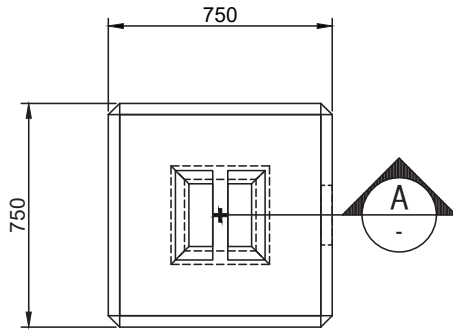
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1970 kg (4343 lbs)
<b>Load Rating</b>	<b>Pedestrian</b>

**Product Detail**

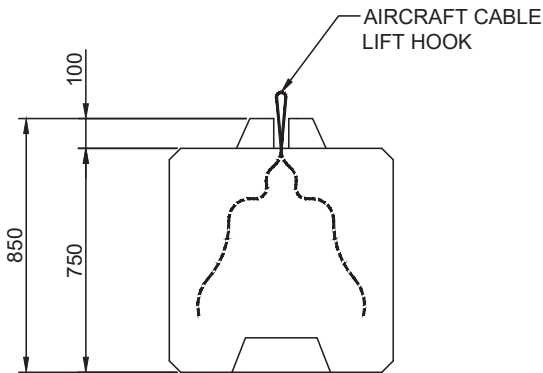
Dimension	1500 x 750 x 750
Lift Mechanism	Strand

**Revision Date**      **April. 01 2019**

	<h2>METRIC STACKING BLOCK (HALF)</h2>	Dwg. No. <b>9-0025-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405962</b>



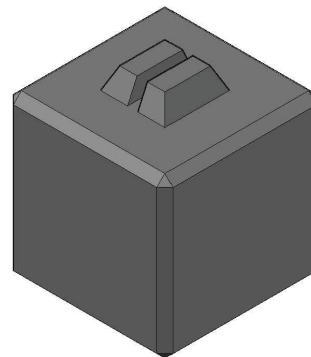
PLAN



A SECTION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Class A**

Block is manufactured using a full consist concrete mix meeting a minimum 35 MPa. Allowable Vertical Load: 165 Tons ( based on equal bearing on the two nubs or sides ).

**Class B**

Block is manufactured using residual concrete from various mixes within the plant, which can contribute to visible changes in appearance or layering look. The load capacity of these blocks are generally close to the Class A block, however there is no guarantee of the MPa or Breakage.

**Technical Detail**

CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1008 kg (2222 lbs)
Load Rating	Pedestrian

**Product Detail**

Dimension	750 x 750 x 750
Lift Mechanism	Aircraft Cable

**Revision Date** April. 01 2019



**METRIC STACKING BLOCK (SQUARE)**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
www.knelsen.com

Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. **9-0025-2**

SAP No. **405963**



**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	311 kg (685 lbs)

**Product Detail**

Overall Dimension	410 x 410 x 2020
Base Dimension	410 x 410 x 700
Pipe Dimension	102Ø x 1320
Pipe Finish	Galvanized
Pipe Fill	Concrete
Lift Mechanism	Aircraft Cable

**Revision Date**      **April. 01 2019**

	<b>410 x 410 Guard Post</b>	Dwg. No. <b>9-0081-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405132</b>

05

GUARD POSTS

**TOP VIEW**

410

410

1

2

1320

700

100Ø GALV. PIPE

AIRCRAFT CABLE LIFT HOOK

GROUNDING STUD c/w NUT & WASHER

1 ELEVATION

2 ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

YELLOW SLEEVE PVC WITH TWO RED REFLECTIVE STRIPES PART No. 112134

3 PROTECTIVE SLEEVE

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	311 kg (685 lbs)

**Product Detail**

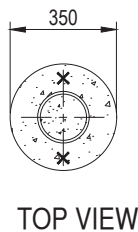
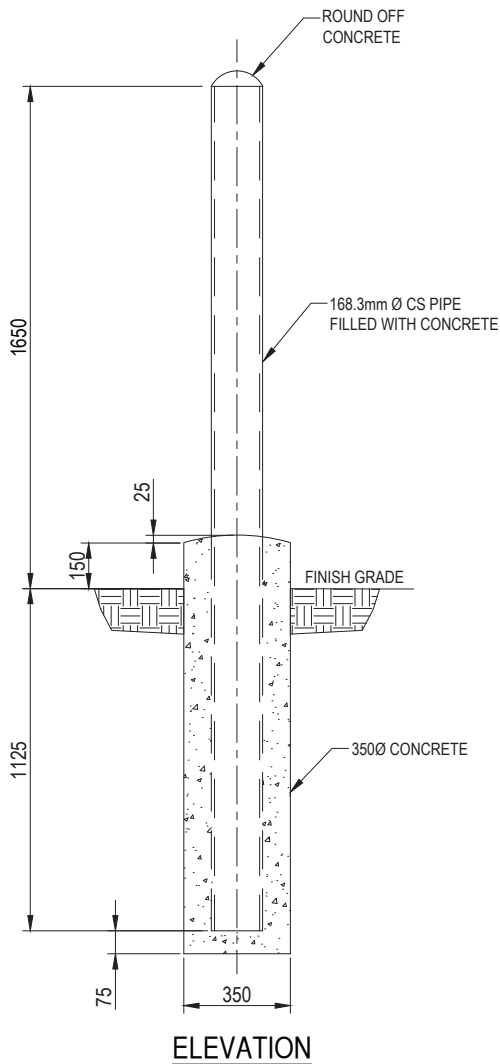
Overall Dimension	410 x 410 x 2020
Base Dimension	410 x 410 x 700
Pipe Dimension	102Ø x 1320
Pipe Finish	Galvanized
Pipe Fill	Concrete
Pipe Sleeve	Yellow PVC w/Red stripes
Lift Mechanism	Aircraft Cable

**Revision Date**      **April. 01 2019**

	<b>410 x 410 Guard Post</b>	Dwg. No. <b>9-0081-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>412114</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	460 kg (1,012 lbs.)

**Product Detail**

Overall Dimension	350 x 2850
Base Dimension	350 x 1375
Pipe Standard Dia.	168mm x 2400mm
Pipe Finish	Steel Pipe Galvanized
Pipe Fill	Concrete
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

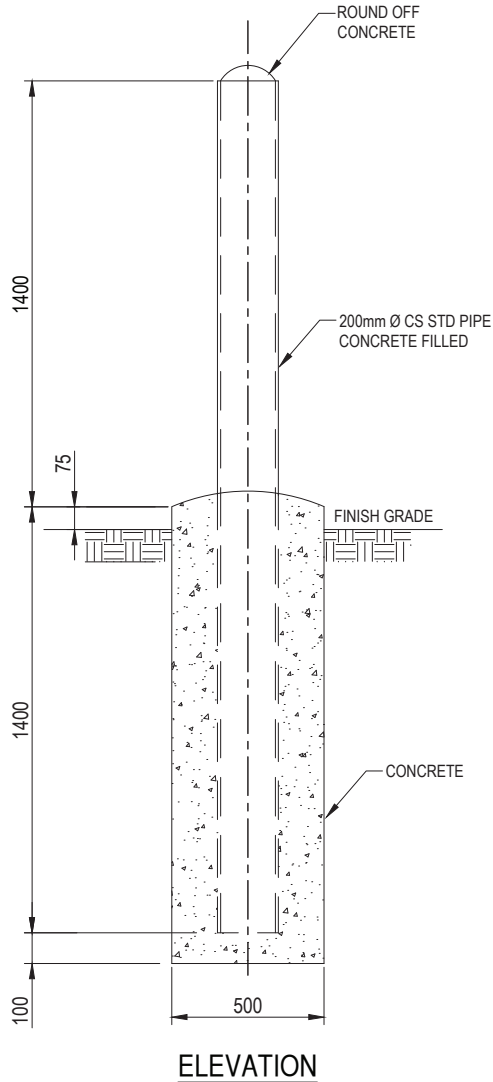
Pipe Finish	Safety Yellow
Pipe Finish	Flourescent Orange

**Revision Date**      **April. 01 2019**

	<h2>350mm Guard Post</h2>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

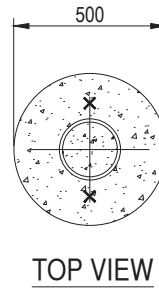
05

GUARD POSTS



**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	

**Product Detail**

Overall Dimension	500 x 2900
Base Dimension	500 x 1525
Pipe Standard Dia.	200mm x 2700mm
Pipe Finish	Steel Pipe Galvanized
Pipe Fill	Concrete
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

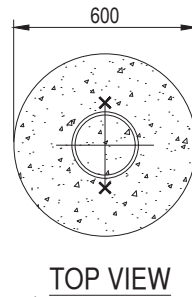
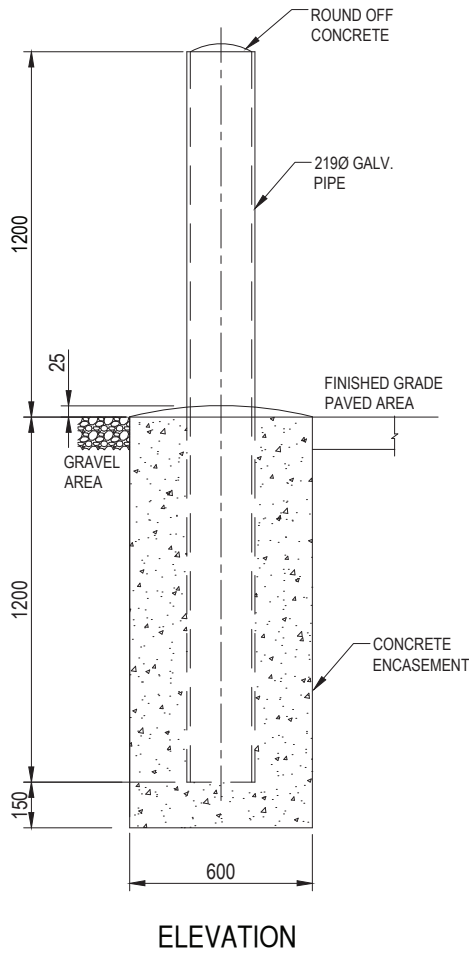
Pipe Finish	Safety Yellow
Pipe Finish	Flourescent Orange

**Revision Date**      **April. 01 2019**

	<h3>500mm Guard Post</h3>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>500000</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	1,082 kg (2,380 lbs.)

**Product Detail**

Overall Dimension	600 x 2550
Base Dimension	600 x 1375
Pipe Standard Dia.	219mm x 2400mm
Pipe Alternative Dia.	168mm x 2400mm
Pipe Finish	Steel Pipe Galvanized
Pipe Fill	Concrete
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

Pipe Finish	Safety Yellow
Pipe Finish	Flourescent Orange

**Revision Date**      **April. 01 2019**

	<h3>600mm Guard Post</h3>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**TOP VIEW**

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,205 kg (2,650 lbs.)

**Product Detail**

Overall Dimension	610 x 2700
Base Dimension	610 x 1550
Pipe Standard Dia.	200mm x 2600mm
Pipe Finish	Steel Pipe Galvanized
Pipe Fill	Concrete
Lift Mechanism	Aircraft Cable

**Optional (Extra)**

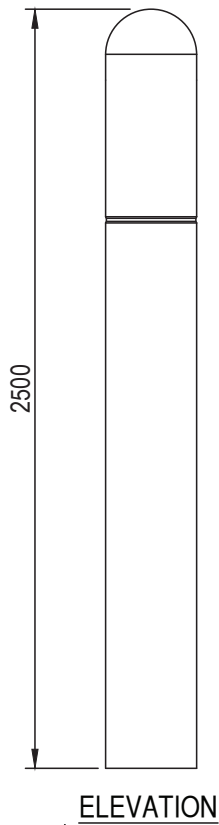
Pipe Finish	Safety Yellow
Pipe Finish	Flourescent Orange

**Revision Date**      **April. 01 2019**

	<b>610mm Guard Post</b>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	423 kg (930 lbs.)

**Product Detail**

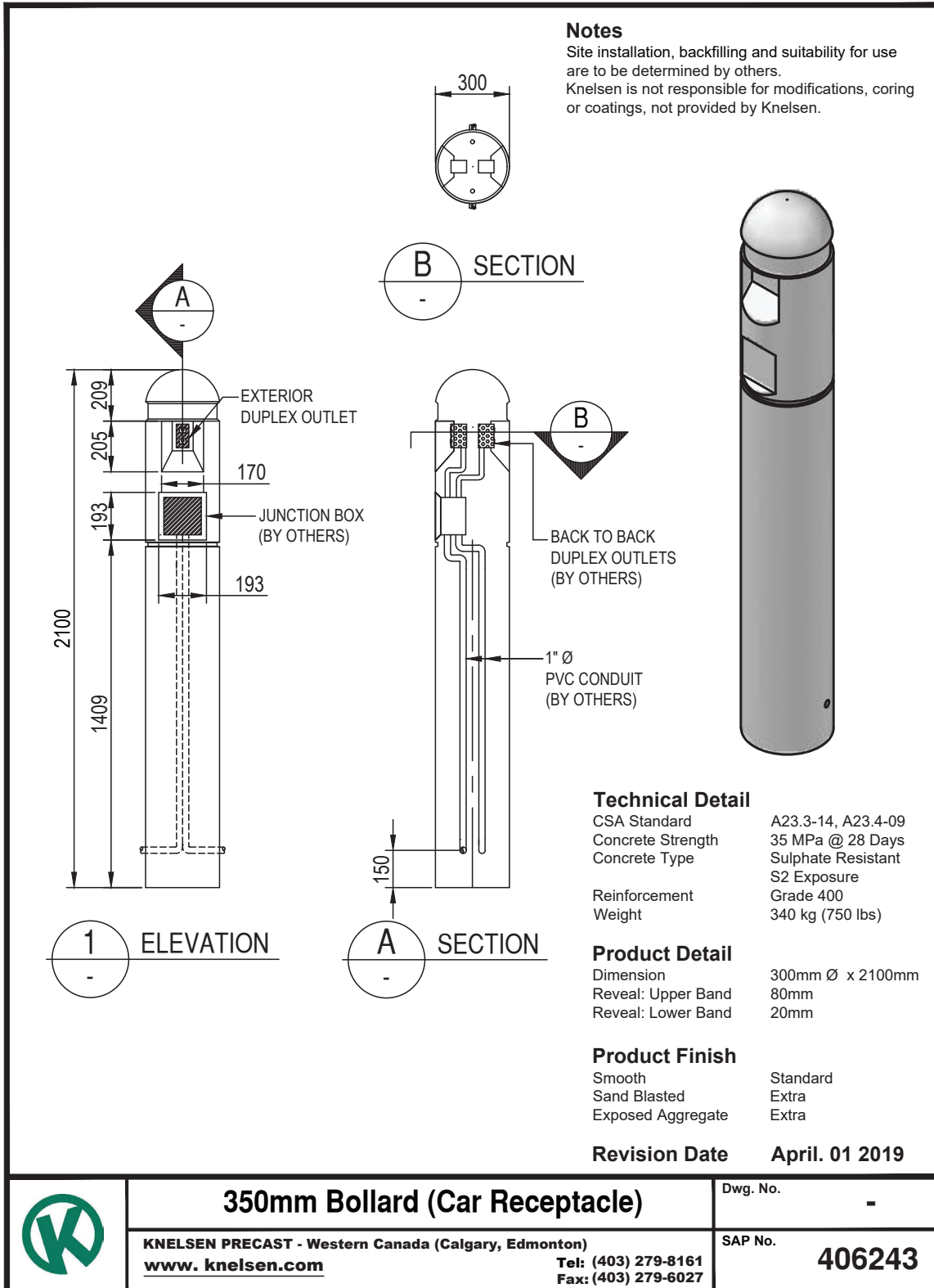
Dimension	300mm x 2500mm
Reveal: Upper Band	20mm

**Product Finish**

Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

**Revision Date**      **April. 01 2019**

	<h3>300mm Bollard</h3>	Dwg. No.	-
	<p><b>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)</b>  <a href="http://www.knelsen.com">www.knelsen.com</a>  <b>Tel: (403) 279-8161</b>  <b>Fax: (403) 279-6027</b></p>	SAP No.	<b>500000</b>

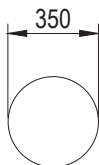


	<b>350mm Bollard (Car Receptacle)</b>	Dwg. No. -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>406243</b>

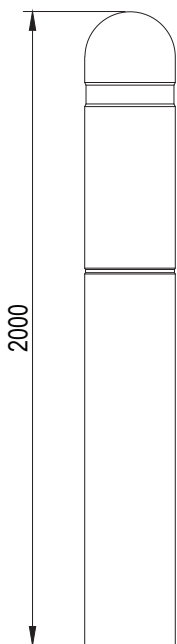


**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



PLAN



ELEVATION



**Technical Detail**

CPCI Standard	Group S
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	340 kg (750 lbs)


**Product Detail**

Dimension	350mm Ø x 2000mm
Reveal: Upper Band	80mm
Reveal: Lower Band	20mm

**Product Finish**

Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

**Revision Date**      **April. 01 2019**

	<h3>350mm Bollard</h3>	Dwg. No. <b>SP97000</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	Tel: (403) 279-8161 Fax: (403) 279-6027

**ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**OPTIONAL HEAD DETAIL  
RAIL ONE SIDE**

**OPTIONAL HEAD DETAIL  
RAIL BOTH SIDES**

**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	402 kg (886 lbs.)

**Product Details**

Dimensions	400mm x 1500mm
Reval: Upper Band	150mm
Access Hole	52mm PVC
Rail Openings*	60mm

**Product Finish**

Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

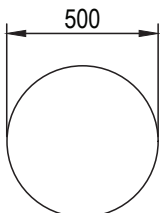
**Revision Date**      **April. 01 2019**

**\*NOTE**  
Customer to Supply Railing Material

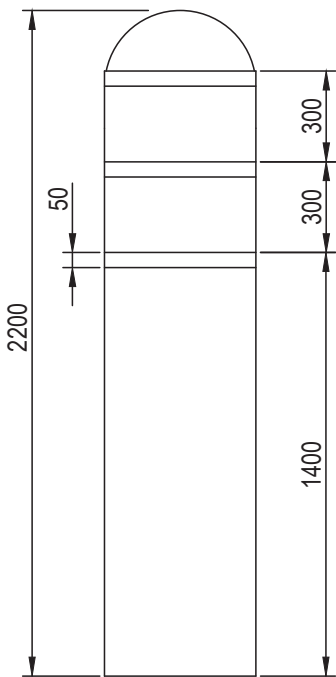
	<b>400mm Bollard</b>	Dwg. No. -
	<b>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)</b> <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**Notes**

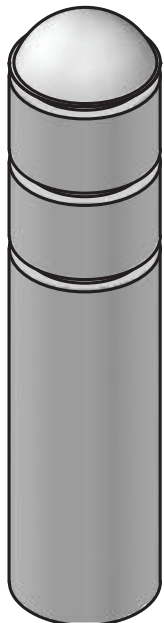
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



PLAN



ELEVATION



**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	922 kg (2,029 lbs.)


**Product Detail**

Dimension	500mm x 2200mm
Reveal: Upper Band	50mm
Reveal: Lower band	50mm
Reveal: Middle band	50mm

**Product Finish**

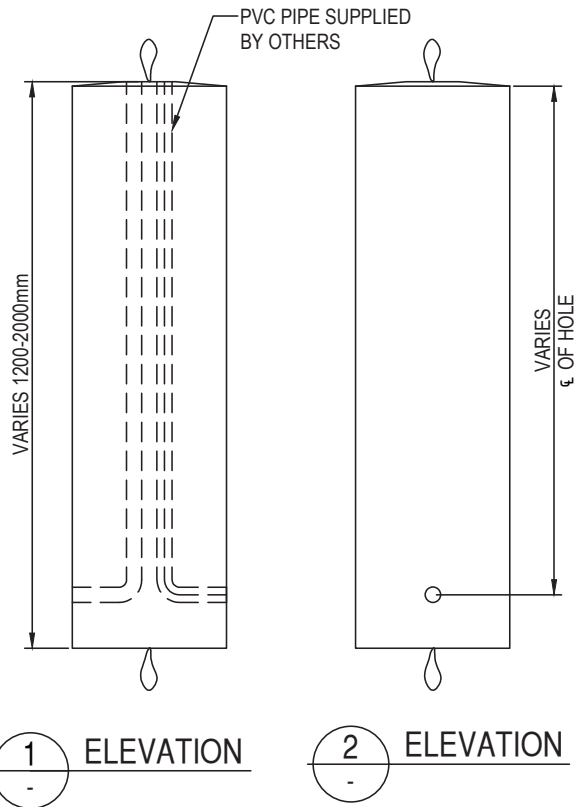
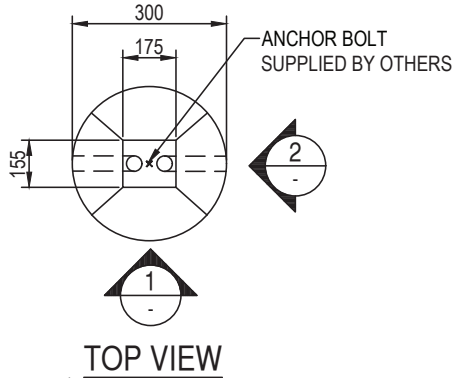
Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

**Revision Date**      **April. 01 2019**

	<h3>500mm Bollard</h3>	Dwg. No.	-
	<p><b>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)</b>  <a href="http://www.knelsen.com">www.knelsen.com</a>                  Tel: (403) 279-8161                  Fax: (403) 279-6027</p>	SAP No.	<b>500000</b>

07

PEDESTAL BASES



**Notes**

Site installation, backfilling and suitability for use are to be determined by others.  
Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Lift Mechanism	Aircraft Cable

**Product Options**

Anchor Bolt	Customer Supplied
Conduit	Customer Supplied

**Product Finish**

Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

**Available Sizes**

- 300mm x 1200mm
- 300mm x 1500mm
- 300mm x 2000mm

**Weight**

- 204 kg (449 lbs.)
- 225 kg (560 lbs.)
- 338 kg (744 lbs.)

**Revision Date**

April. 01 2019



**300mm PEDESTAL BASE**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No.

-

SAP No.

**500000**

**TOP VIEW**

**1 ELEVATION**      **2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standards      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength      35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant  
 Reinforcement      S2 Exposure  
 Lift Mechanism      Grade 400  
                                  Aircraft Cable

**Product Options**  
 Anchor Bolt      Customer Supplied  
 Conduit      Customer Supplied

**Product Finish**  
 Smooth      Standard  
 Sand Blasted      Extra  
 Exposed Aggregate      Extra

**Available Sizes**      **Weight**  
 350mm x 1500mm  
 350mm x 2000mm

**Revision Date**      **April. 01 2019**

	<b>350mm PEDESTAL BASE</b>	Dwg. No. -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**TOP VIEW**

**1 ELEVATION**      **2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standards      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength      35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant S2 Exposure  
 Reinforcement      Grade 400  
 Lift Mechanism      Aircraft Cable

**Product Options**  
 Anchor Bolt      Customer Supplied  
 Conduit      Customer Supplied

**Product Finish**  
 Smooth      Standard  
 Sand Blasted      Extra  
 Exposed Aggregate      Extra

**Available Sizes**      **Weight**  
 400mm x 1200mm  
 400mm x 1500mm

**Revision Date**      **April. 01 2019**

	<b>400mm PEDESTAL BASE</b>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standards: Group S  
 CSA Standard: A23.3-14, A23.4-09  
 Concrete Strength: 35 MPa @ 28 Days  
 Concrete Type: Sulphate Resistant S2 Exposure  
 Reinforcement: Grade 400  
 Lift Mechanism: Aircraft Cable

**Product Options**  
 Anchor Bolt: Customer Supplied  
 Conduit: Customer Supplied

**Product Finish**  
 Smooth: Standard  
 Sand Blasted: Extra  
 Exposed Aggregate: Extra

**Available Sizes**     **Weight**  
 457mm x 1200mm  
 457mm x 1500mm  
 457mm x 1700mm  
 457mm x 2000mm

**Revision Date**     **April. 01 2019**

	<b>457mm PEDESTAL BASE</b>	Dwg. No. -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>500000</b>

**TOP VIEW**

**1 ELEVATION**      **2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others.  
 Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	880 kg (1,940 lbs)

**Product Detail**

Outside Dimension	508 Ø x 1865
Access Hole	102 mm or 4"
PVC Pipe	100 Dia.
Lift Mechanism	Aircraft Cable

**Revision Date**      **April. 01 2019**

	<b>508mm PEDESTAL BASE</b>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>413104</b>



**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Lift Mechanism	Aircraft Cable

**Product Options**

Anchor Bolt	Customer Supplied
Conduit	Customer Supplied

**Product Finish**

Smooth	Standard
Sand Blasted	Extra
Exposed Aggregate	Extra

**Available Sizes**

550mm x 2000mm	<b>Weight</b>
550mm x 2400mm	

**Revision Date**      **April. 01 2019**

**550mm PEDESTAL BASE**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)      Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No.      -

SAP No.      **500000**

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	731 kg (1608 lbs)

**Product Detail**

Outside Dimension	508Ø x 1500
Bolt Circle Dia.	280 mm or 11"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Mechanism	n/a

**Revision Date**      **April. 01 2019**

	Foundation S/L Base	Dwg. No. <b>8-0061-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>409956</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard                      Group S  
 CSA Standard                      A23.3-14, A23.4-09  
 Concrete Strength                  35 MPa @ 28 Days  
 Concrete Type                      Sulphate Resistant  
    S2 Exposure  
 Reinforcement                      Grade 400  
 Weight                                927 kg (2,040 lbs)

**Product Detail**  
 Outside Dimension                508 Ø x 1900  
 Bolt Circle Dia.                    280 mm or 11"  
 Access Hole                        102 mm or 4"  
 Anchor Bolt                        25.4 mm or 1" Dia.  
 Lift Mechanism                    Aircraft Cable

**Revision Date**                    **April. 01 2019**

**NOTE: NOT FOR RESALE, SEE 412306**

	<b>Street Light Pole Base (Type 'B1')</b>	Dwg. No. <b>8-0077-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405118</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	927 kg (2,040 lbs)

**Product Detail**

Outside Dimension	508 Ø x 1900
Bolt Circle Dia.	280 mm or 11"
Access Hole	102 mm or 4"
Anchor Bolt	25.4mm (1" Dia.)
Lift Mechanism	Aircraft Cable

**Optional Sizes**

508mm x 1500mm	731kg (1608 lbs.)
508mm x 1900mm	930kg (2045 lbs.)
508mm x 2400mm	1170kg (2575 lbs.)
508mm x 2800mm	1362kg (2994 lbs.)

**Revision Date**      **April. 01 2019**

	Street Light Pole Base (Type 'AB1')	Dwg. No. <b>8-0077-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>412306</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1371 kg (3,016 lbs)

**Product Detail**

Outside Dimension	550 Ø x 2400
Bolt Circle Dia.	330 mm or 13"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Mechanism	Aircraft Cable

**NOTE: NOT FOR RESALE, SEE 412305**

**Revision Date**    **April. 01 2019**

	<b>Street Light Pole Base (Type 'C')</b>	Dwg. No. <b>8-0075-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405117</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1371 kg (3,016 lbs)

**Product Detail**

Outside Dimension	550 Ø x 2400
Bolt Circle Dia.	330 mm or 13"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Mechanism	Aircraft Cable

**Revision Date**      **April. 01 2019**

**Street Light Pole Base (Type 'AC')**

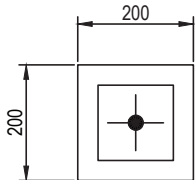
KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)      Tel: (403) 279-8161      Fax: (403) 279-6027

Dwg. No.      **8-0075-1**

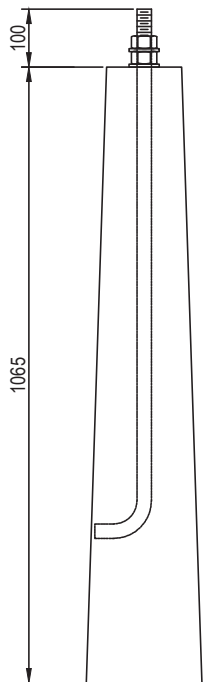
SAP No.        **412305**

**Notes**

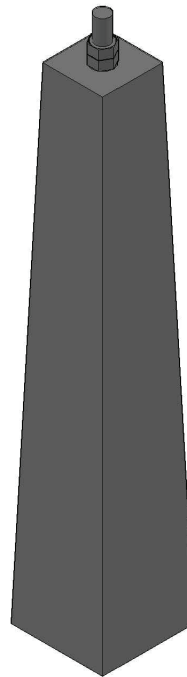
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



TOP VIEW



ELEVATION



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	76 kg (168 lbs)

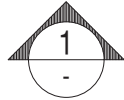
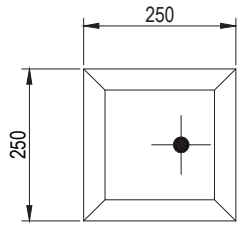
**Product Detail**

Outside Dimension	200 x 200 x 1065
Lift Mechanism	Aircraft Cable

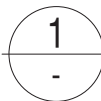
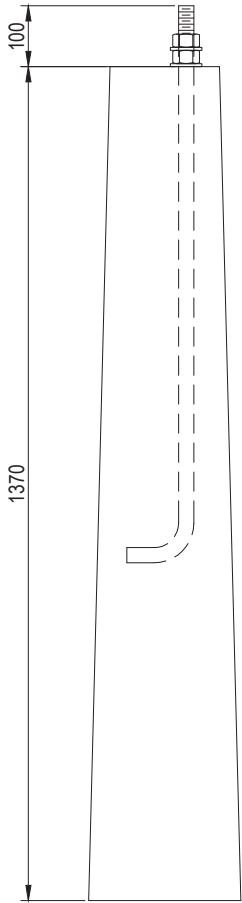
**Revision Date**      **April. 01 2019**

	<p><b>TYPE 2 SIGNAL BASE</b></p>	<p>Dwg. No. <b>886-01</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No. <b>405113</b></p>

Tel: (403) 279-8161  
 Fax: (403) 279-6027



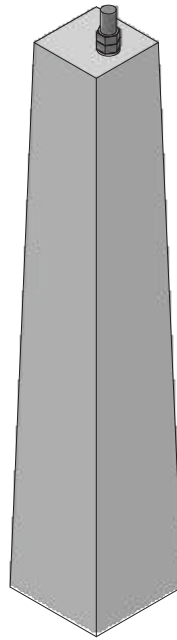
TOP VIEW



ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	170 kg (375 lbs)

**Product Detail**

Outside Dimension	250 x 250 x 1370
Anchor Bolt	25.4mm or 1" Dia.
Lift Mechanism	n/a

**Revision Date**      **April. 01 2019**



**Signal Base Type '1'**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
[www.knelsen.com](http://www.knelsen.com)

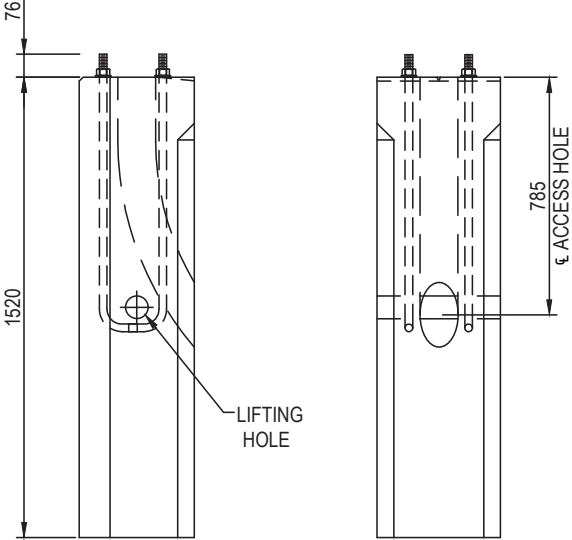
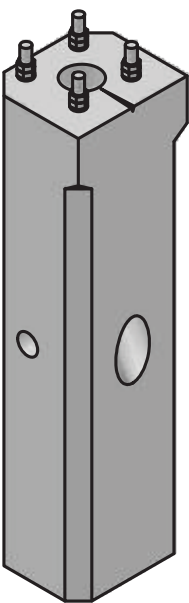
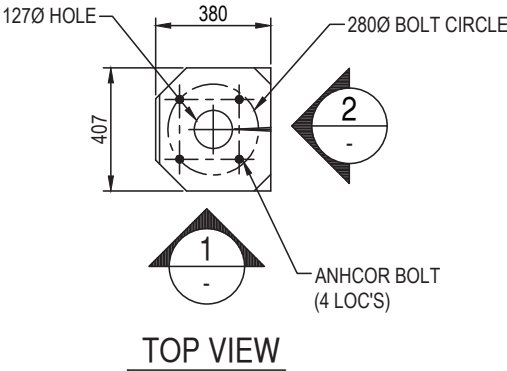
**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

**Dwg. No. 8-0065-1**

**SAP No. 400418**



**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



1 ELEVATION      2 ELEVATION

**Technical Detail**  
 CPCI Standard      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength      35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant S2 Exposure  
 Reinforcement      Grade 400  
 Weight      518 kg (1,140 lbs)

**Product Detail**  
 Outside Dimension      407 x 380 x 1520  
 Bolt Circle Dia.      280 mm or 11"  
 Access Hole      127 mm or 5"  
 Anchor Bolt      25.4 mm or 1" Dia.  
 Lift Hole      50 mm

**Revision Date**      April. 01 2019

	<h2>Street Light Pole Base</h2>	Dwg. No. <b>8-0082-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	Tel: (403) 279-8161 Fax: (403) 279-6027

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others.  
 Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	795 kg (1,753 lbs)

**Product Detail**

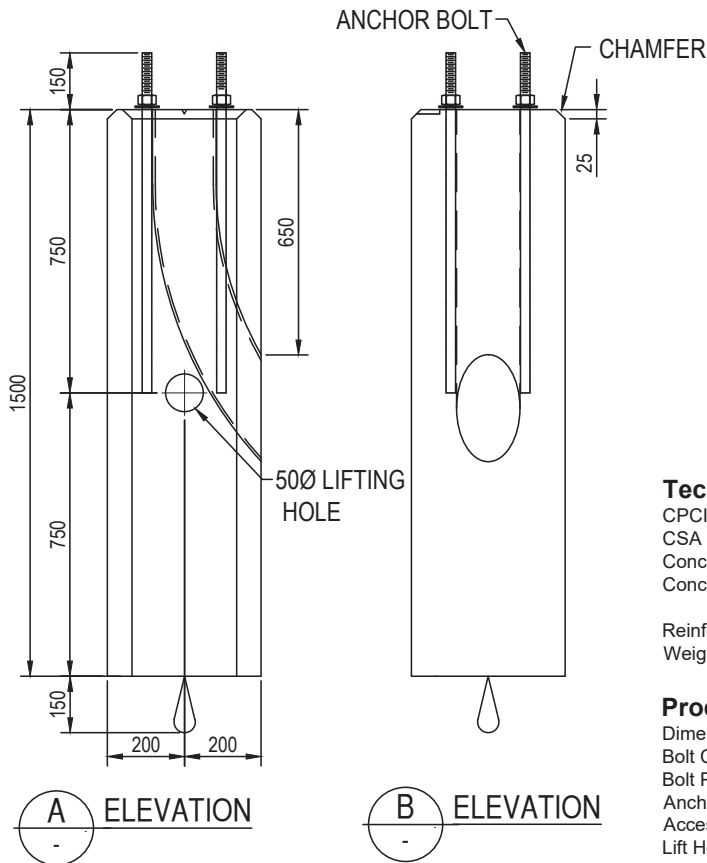
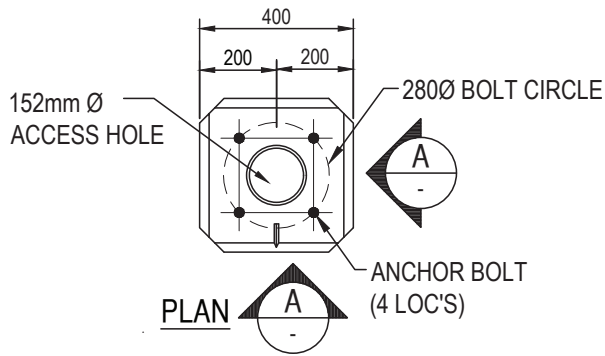
Outside Dimension	380 x 407 x 2150
Bolt Circle Dia.	280 mm or 11"
Access Hole	127 mm or 5"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	Street Light Pole Base	Dwg. No. <b>8-0082-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>412112</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	877 kg (1,930 lbs.)

**Product Details**

Dimensions	400 x 400 x 1500
Bolt Circle Diameter	280mm (11")
Bolt Projection	150mm (5.90")
Anchor Bolt	25.4 mm or (1")
Access Hole	1 x 150 mm or (6")
Lift Hole	50mm (2")

**Revision Date April. 01 2019**



**Traffic Pole Base**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
[www.knelsen.com](http://www.knelsen.com)  
**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

Dwg. No. -  
 SAP No. **413308**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

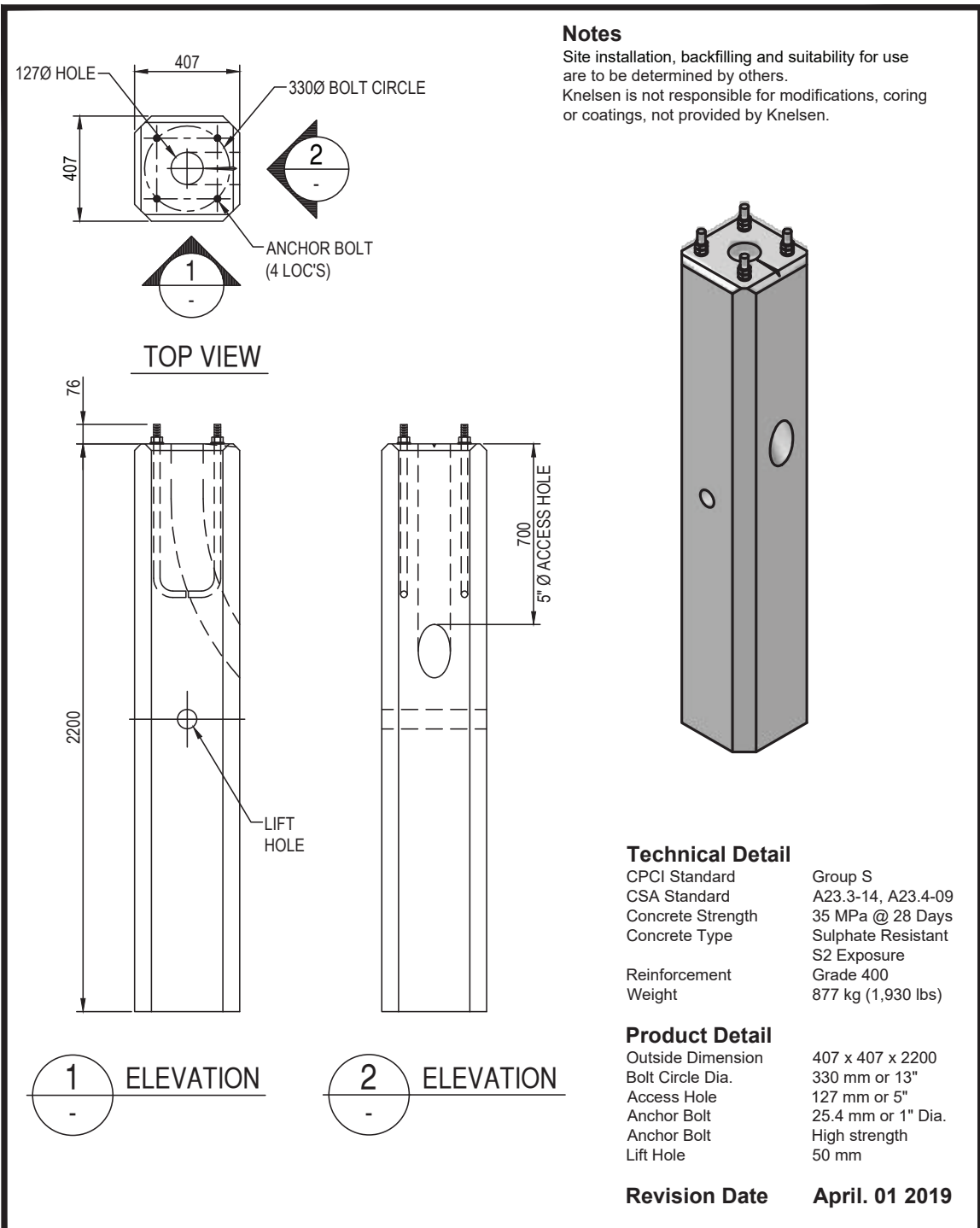
**Technical Detail**  
 CPCI Standard                      Group S  
 CSA Standard                        A23.3-14, A23.4-09  
 Concrete Strength                    35 MPa @ 28 Days  
 Concrete Type                        Sulphate Resistant  
     S2 Exposure  
 Reinforcement                        Grade 400  
 Weight                                 877 kg (1,930 lbs)

**Product Detail**  
 Outside Dimension                    407 x 407 x 2200  
 Bolt Circle Dia.                        330 mm or 13"  
 Access Hole                            127 mm or 5"  
 Anchor Bolt                            25.4 mm or 1" Dia.  
 Lift Hole                                50 mm

**Revision Date**                      April. 01 2019

**1** ELEVATION                      **2** ELEVATION

	Street Light Pole Base	Dwg. No. <b>8-0083-3</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405125</b>



	<h3>Street Light Pole Base</h3>	Dwg. No. <b>8-0083-4</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405126</b>

**TOP VIEW**

102Ø HOLE

407

254Ø BOLT CIRCLE

407

ANCHOR BOLT (4 LOC'S)

85

2200

LIFT HOLE

650

4" Ø ACCESS HOLE

1 ELEVATION

2 ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	877 kg (1,930 lbs)

**Product Detail**

Outside Dimension	407 x 407 x 2200
Bolt Circle Dia.	245 mm or 10"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	<b>Street Light Pole Base</b>	Dwg. No. <b>8-0083-5</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405127</b>

102Ø HOLE

407

280Ø BOLT CIRCLE

407

2

ANCHOR BOLT (4 LOC'S)

1

**TOP VIEW**

85

2200

LIFT HOLE

650

4" Ø ACCESS HOLE

1 ELEVATION

2 ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	877 kg (1,930 lbs)

**Product Detail**

Outside Dimension	407 x 407 x 2200
Bolt Circle Dia.	280 mm or 11"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	<b>Street Light Pole Base</b>	Dwg. No. <b>8-0083-6</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405128</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,300 kg (2,860 lbs)

**Product Detail**

Outside Dimension	500 x 552 x 2000
Bolt Circle Dia.	413 mm or 16.25"
Access Hole	152 mm or 6"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	<b>Street Light Pole Base</b>	Dwg. No. <b>8-0080-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405122</b>



**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,300 kg (2,860 lbs)

**Product Detail**

Outside Dimension	500 x 552 x 2000
Bolt Circle Dia.	413 mm or 16.25"
Access Hole	152 mm or 6"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **Jan. 01 2018**

**Street Light Pole Base**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)  
 Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No.      **8-0080-2**

SAP No.        **405123**

**TOP VIEW**

540

254Ø BOLT CIRCLE

540

ANCHOR BOLT (4 LOC'S)

1

75

1950

1063 CONDUIT

500Ø CONDUIT

LIFT HOLE

1 ELEVATION

2 ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

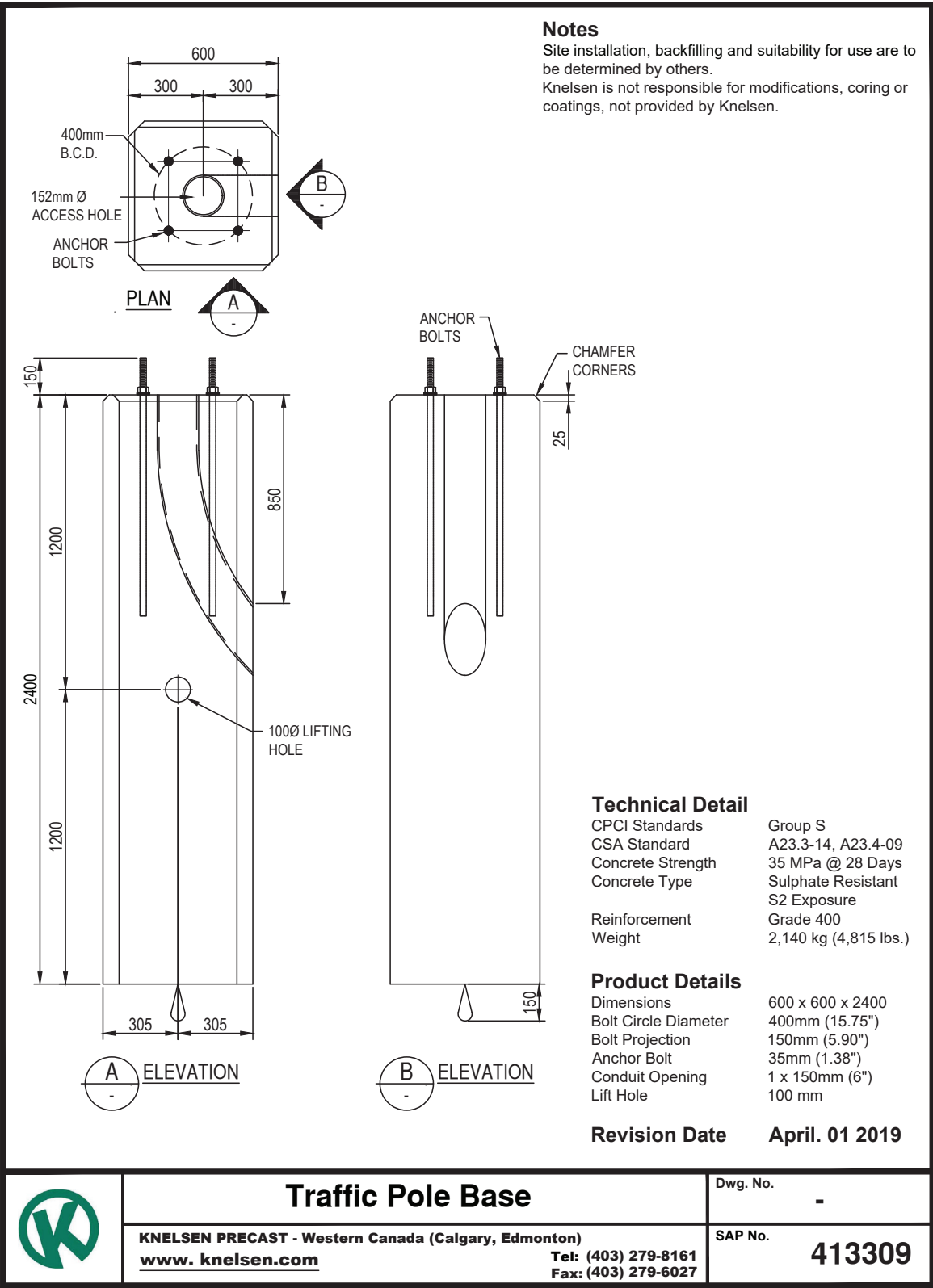
CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,325 kg (2,915 lbs)

**Product Detail**

Outside Dimension	540 x 540 x 1950
Bolt Circle Dia.	254 mm or 10"
Access Hole	50 mm or 2"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	<b>Traffic Signal Base</b>	Dwg. No. <b>8-0078-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405120</b>



**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

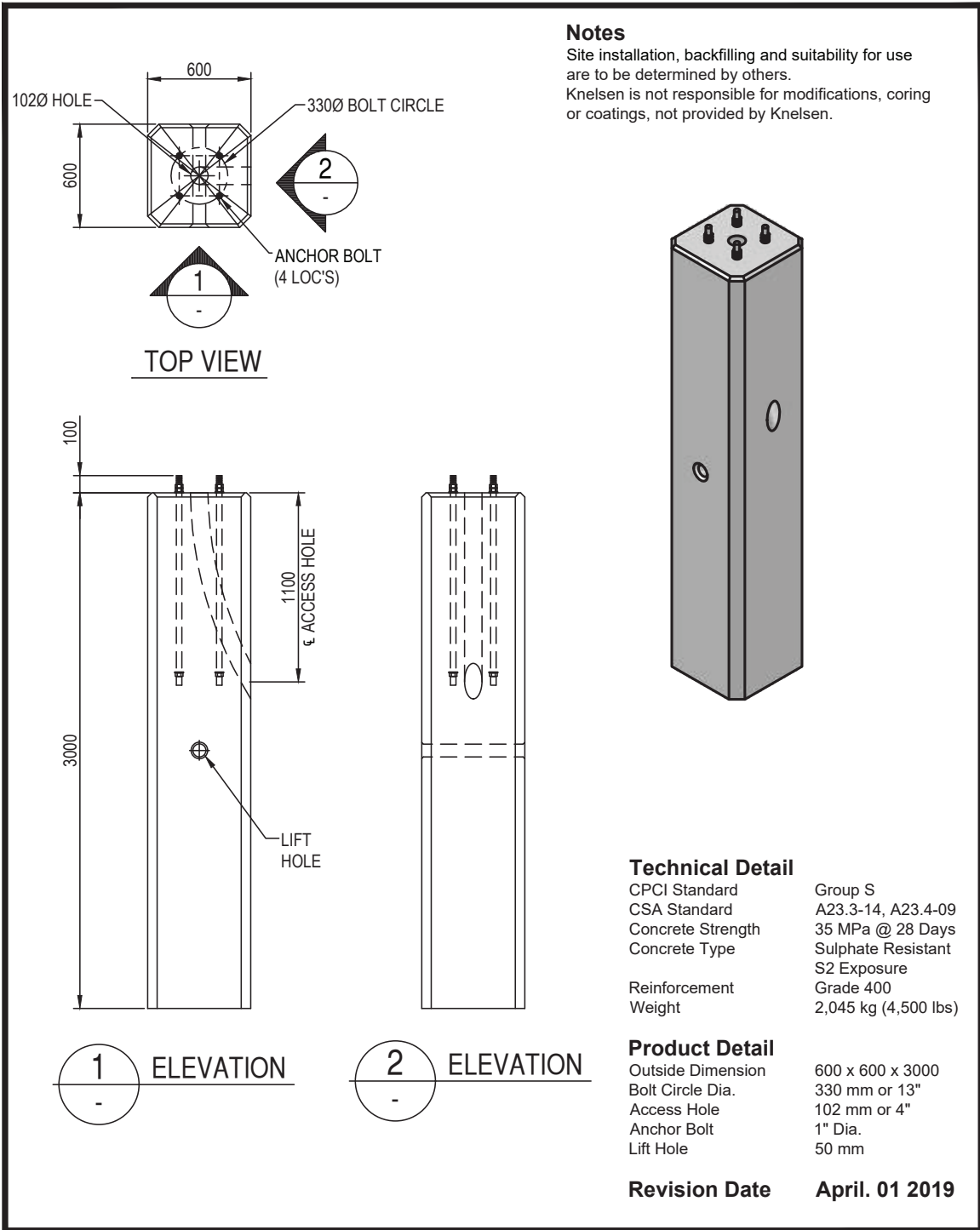
CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	2,600 kg (5,735 lbs)

**Product Detail**

Outside Dimension	600 x 600 x 3000
Bolt Circle Dia.	330 mm or 13"
Access Hole	102 mm or 4"
Anchor Bolt	1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

	<b>Road Way Light Pole Base</b>	Dwg. No.      -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No.      413407



	<h2>Road Way Light Pole Base</h2>	Dwg. No.	-
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No.	<h1>411035</h1>

**TOP VIEW**

**1 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,016 kg (2,235 lbs)

**Product Detail**

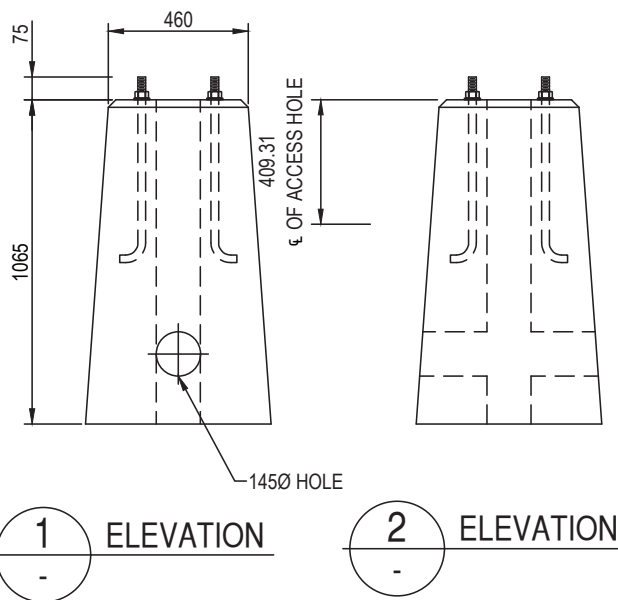
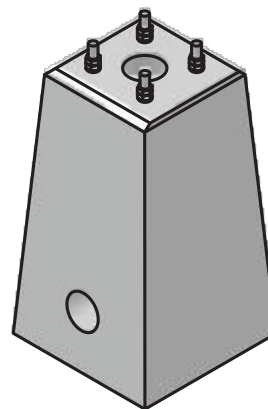
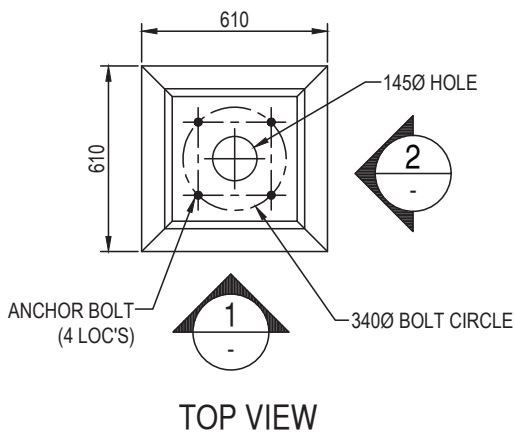
Outside Dimension	610 x 610 x 990
Bolt Circle Dia.	424 mm or 16.5"
Access Hole	145mm or 5" Dia.
Anchor Bolt	25.4 mm or 1" Dia.
Lift Mechanism	N/A

**Revision Date**      **April. 01 2019**

	<b>Signal Base Type '3'</b>	Dwg. No. <b>8-0067-2</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>400421</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	745 kg (1,640 lbs)

**Product Detail**

Outside Dimension	610 x 610 x 1065
Bolt Circle Dia.	340 mm or 13.5"
Access Hole	127 mm or 5"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Mechanism	N/A

**Revision Date**      **April. 01 2019**

	<p><b>Signal Base (Type '3')</b></p>	<p>Dwg. No.      <b>8-0067-1</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  <a href="http://www.knelsen.com">www.knelsen.com</a>                  Tel: (403) 279-8161                  Fax: (403) 279-6027</p>	<p>SAP No.      <b>405114</b></p>

**TOP VIEW**

102Ø HOLE

610

610

330Ø BOLT CIRCLE

ANCHOR BOLT (4 LOC'S)

**1 ELEVATION**

95

2200

1099,5

702 ACCESS HOLE

40Ø LIFTING HOLE

**2 ELEVATION**

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,927 kg (4,240 lbs)

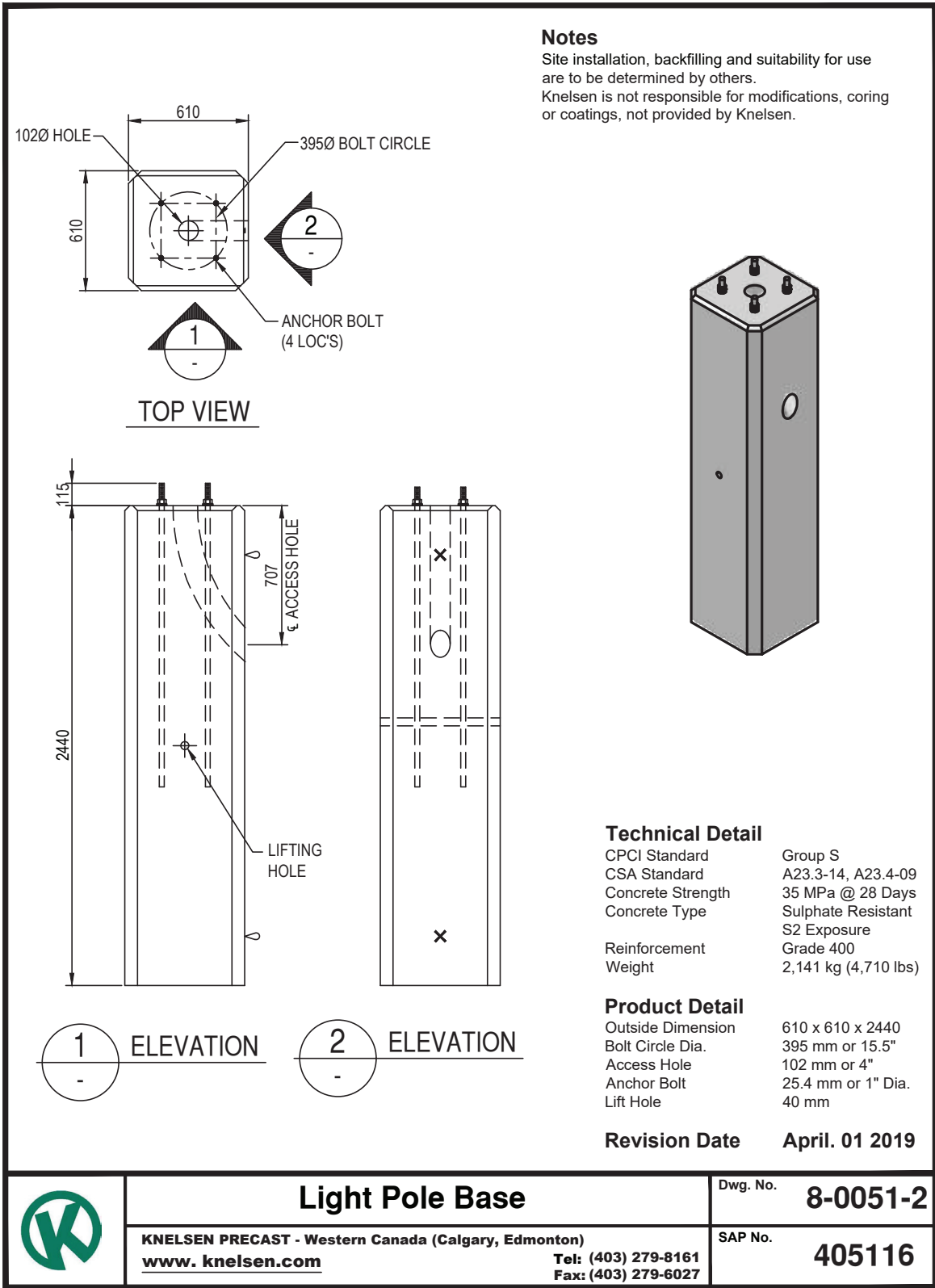
**Product Detail**

Outside Dimension	610 x 610 x 2200
Bolt Circle Dia.	330 mm or 13"
Access Hole	102 mm or 4"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	40 mm

**Revision Date**      **April. 01 2019**

	<b>Light Pole Base</b>	Dwg. No. <b>8-0051-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405115</b>





**TOP VIEW**

660

660

457Ø BOLT CIRCLE

ANCHOR BOLTS (4 LOC'S)

1980

76

LIFT HOLE

760

2" Ø ACCESS HOLE

1 ELEVATION

2 ELEVATION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
Reinforcement	S2 Exposure
Weight	Grade 400
	2,050 kg (4,510 lbs)

**Product Detail**

Outside Dimension	660 x 660 x 1980
Bolt Circle Dia.	457 mm or 18"
Access Hole	50 mm or 2"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	100 mm

**Revision Date**      **April. 01 2019**

	Street Light Pole Base	Dwg. No. <b>8-0084-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>405129</b>

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	2,932 kg (6,450 lbs)

**Product Detail**

Outside Dimension	660 x 660 x 2850
Bolt Circle Dia.	382 mm or 15"
Access Hole	102 mm or 4" & 50 mm or 2"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

**Traffic Signal Base (Type 'S')**

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**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

Dwg. No.      **8-0079-1**

SAP No.        **405121**

**TOP VIEW**

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

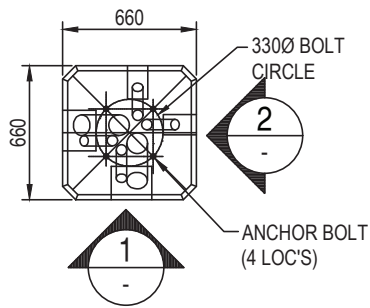
CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	3,077 kg (6,770 lbs)

**Product Detail**

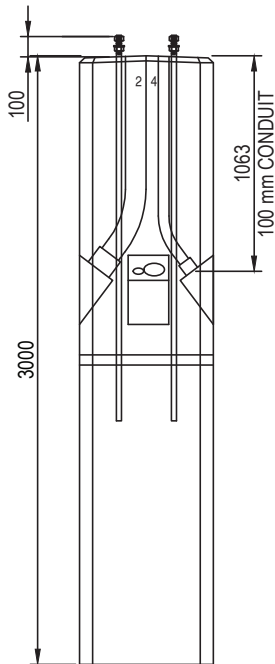
Outside Dimension	660 x 660 x 3000
Bolt Circle Dia.	382 mm or 15"
Access Hole	102 mm or 4" & 50 mm or 2"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

**Revision Date**      **April. 01 2019**

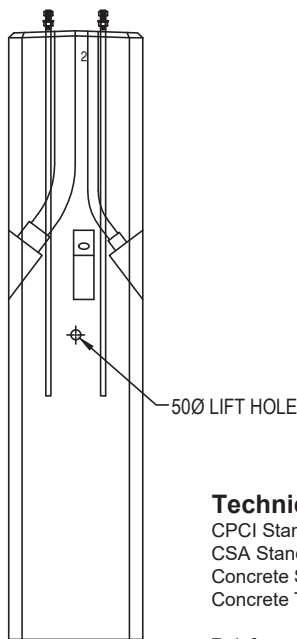
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	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>400428</b>



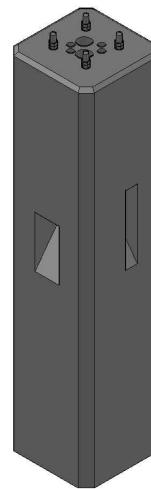
TOP VIEW



1 ELEVATION



2 ELEVATION



**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	3,077 kg (6,770 lbs)

**Product Detail**

Outside Dimension	660 x 660 x 3000
Bolt Circle Dia.	330 mm or 13"
Access Hole	102 mm or 4" & 50 mm or 2"
Anchor Bolt	25.4 mm or 1" Dia.
Lift Hole	50 mm

Revision Date April. 01 2019



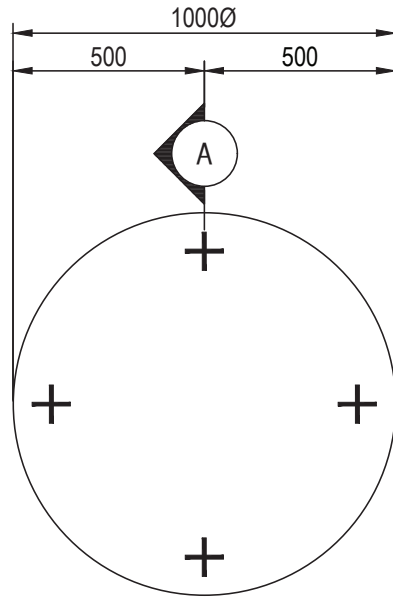
**Traffic Signal Base (Type 'S')**

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www.knelsen.com

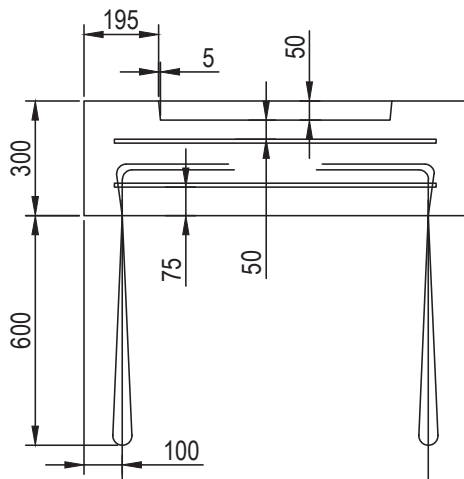
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. **8-0079-3**

SAP No. **400429**



PLAN



SECTION

**Notes**

Site installation, backfilling and suitability for use are to be determined by others.  
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**Technical Detail**

CPCI Standards	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	536 kg (1,180 lbs.)

**Product Details**

Dimensions	300mm x 1000mm
Lift Mechanism	1/2 " Aircraft Cable

**Product Finish**

Smooth	Standard
--------	----------

**Revision Date**      **April. 01 2019**



**Base Plate (Wood Pole)**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
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**Fax: (403) 279-6027**

Dwg. No.      **934-01**

SAP No.      **410916**

**TOP VIEW**

508Ø  
50Ø HOLE  
280Ø BOLT CIRCLE  
ANCHOR BOLT (4 LOC'S)

95  
2400  
1700  
(4) - 2Ø CONDUIT

508  
AIRCRAFT CABLE LIFT HOOK

**1 ELEVATION**

**2 ELEVATION**

**Notes**  
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1170 kg (2575 lbs)

**Product Detail**

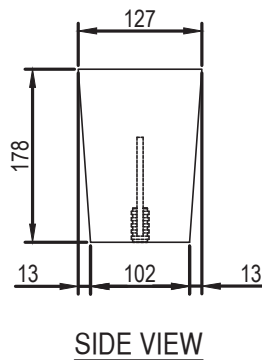
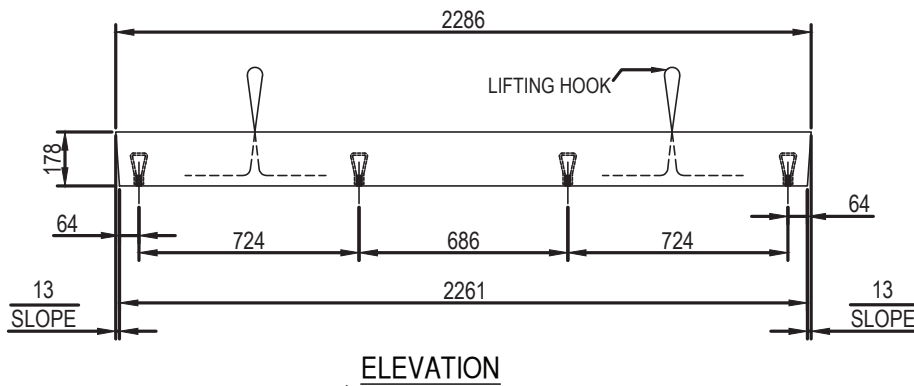
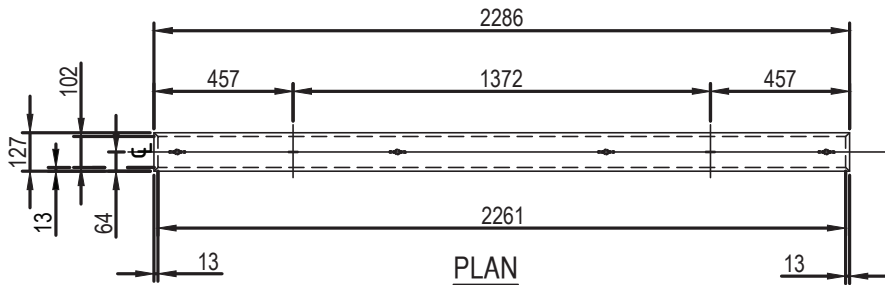
Outside Dimension	508 Ø x 2400
Bolt Circle Dia.	228 mm or 9"
Conduit Opening	51 mm or 2"
Lift Mechanism	Aircraft Cable

**Revision Date**      **April. 01 2019**

	Light Pole Base (Type 'B1')	Dwg. No. <b>8-0077-4</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>410878</b>

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400

**Product Detail**

Insert	LF: 1/2"
Lift Mechanism	Aircraft Cable

**Available Sizes**

127 x 1143 x 179	55 kg (124 lbs.)
127 x 2286 x 179	110 kg (248 lbs.)
Custom Lengths Available Upon Request	

**Weight**

**Revision Date**      **April. 01 2019**



**Sleeper (Pipe & Conduit)**

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[www.knelsen.com](http://www.knelsen.com)

**Tel: (403) 279-8161**  
**Fax: (403) 279-6027**

Dwg. No.

-

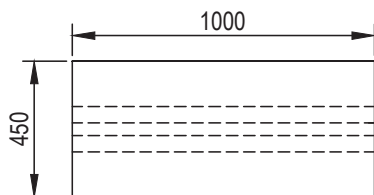
SAP No.

**409650**

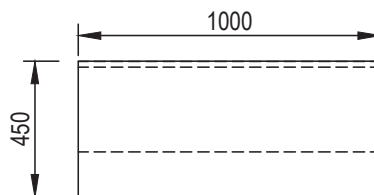


**Notes**

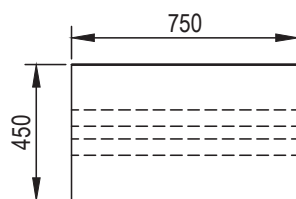
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



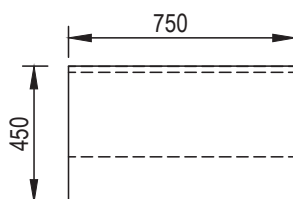
TOP VIEW



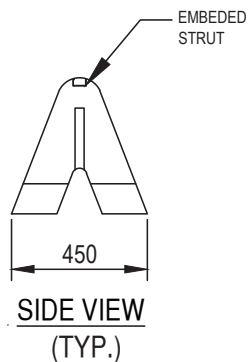
ELEVATION



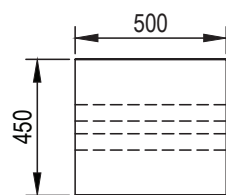
TOP VIEW



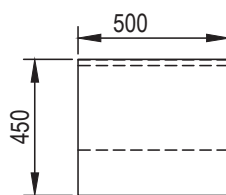
ELEVATION



SIDE VIEW (TYP.)



TOP VIEW



ELEVATION

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400

**Product Detail**

Strut	1 5/8 x 7/8" Galvanized
Lift Mechanism	Rope or Aircraft Cable

**Available Sizes Weight**

450 x 450 x 1000  
 450 x 450 x 750  
 450 x 450 x 500  
 Custom Lengths Available Upon Request

**Revision Date** April. 01 2019



**Sleeper (Pipe & Conduit)**

Dwg. No. **SP35410**

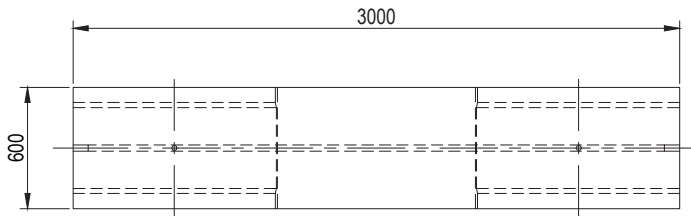
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[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

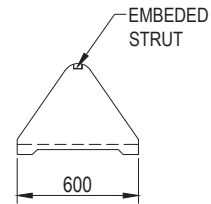
SAP No. **500000**

**Notes**

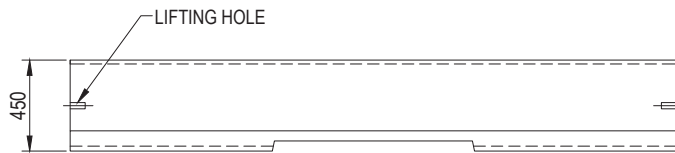
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



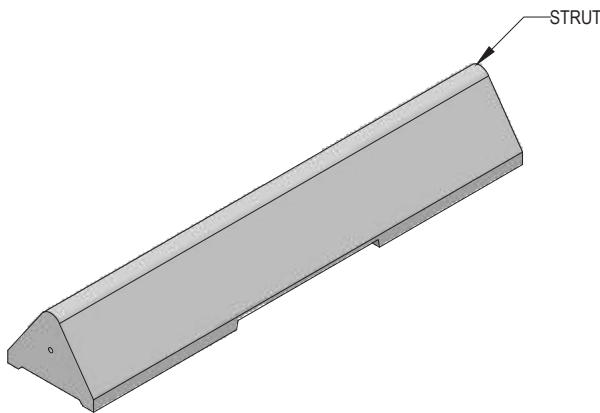
TOP VIEW



SIDE VIEW



ELEVATION



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,106 kg (2,434 lbs)

**Product Detail**

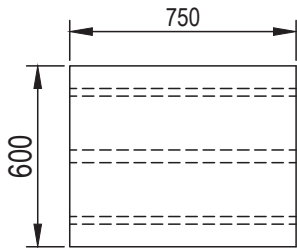
Strut	1 5/8 x 7/8" Galvanized
Dimension	3000 x 600 x 450
Lifting Holes	(2) - 30mm Dia.

**Revision Date**      **April. 01 2019**

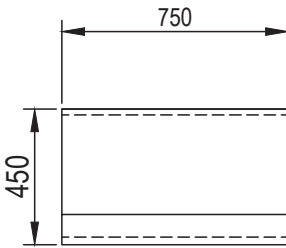
	<p><b>Sleeper (Pipe &amp; Conduit)</b></p>	<p>Dwg. No.      -</p>
	<p><b>KNELSEN PRECAST - Western Canada (Calgary, Edmonton)</b>  <a href="http://www.knelsen.com">www.knelsen.com</a>                  Tel: (403) 279-8161                  Fax: (403) 279-6027</p>	<p>SAP No.      <b>409200</b></p>

**Notes**

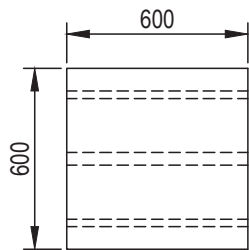
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



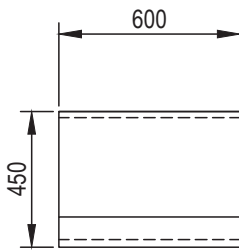
TOP VIEW



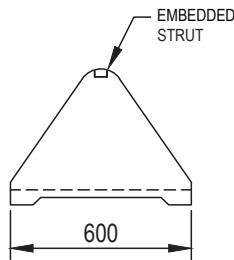
ELEVATION



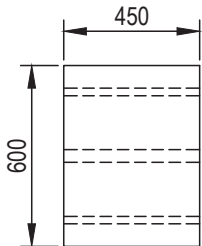
TOP VIEW



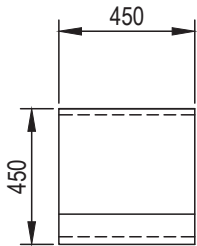
ELEVATION



SIDE VIEW  
(TYP.)



TOP VIEW



ELEVATION

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400

**Product Detail**

Strut	1 5/8 x 7/8" Galvanized
Lift Mechanism	Rope or Aircraft Cable

**Available Sizes Weight**

450 x 600 x 750  
 450 x 600 x 600  
 450 x 600 x 450  
 Custom Lengths Available Upon Request

**Revision Date**      **April. 01 2019**



**Sleeper (Pipe & Conduit)**

Dwg. No.      **7-0076-1**

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SAP No.      **500000**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others.  
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**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400

**Product Detail**

Strut	2" Galvanized
Lift Mechanism	Rope or Aircraft Cable

**Available Sizes**

- 460 x 600 x 600
- 460 x 600 x 1200
- 460 x 600 x 2000
- 460 x 600 x 2400

\*Custom Lengths Available Upon Request

**Weight**

**Revision Date**      **April. 01 2019**

**Sleeper (Pipe & Conduit)**

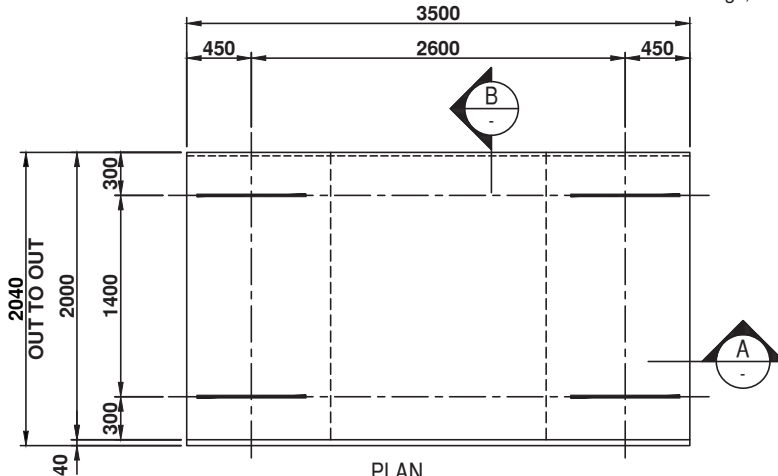
KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)  
 Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No.      **928-01**

SAP No.        **500000**

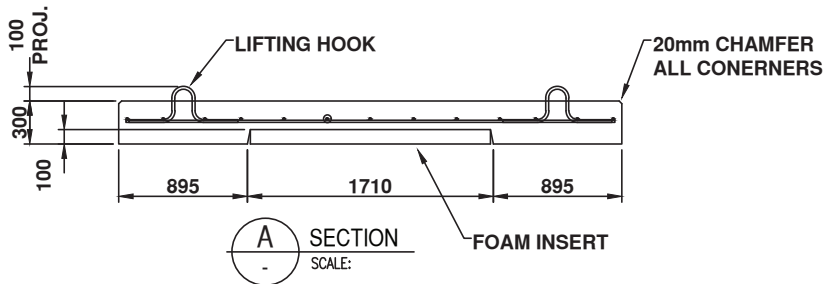
**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



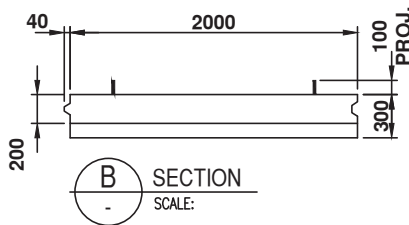
PLAN

SCALE:



A SECTION

SCALE:



B SECTION

SCALE:

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	4,225 kg (9,295 lbs)
Load Rating	Traffic: CS-750

**Product Detail**

Outside Dimension	2000 x 3500 x 300
Foam Insert	1670 x 2000 x 100
Connection Type	Keyway
Lift Mechanism	A2002 (20M)

Revision Date April. 01 2019



**PIPELINE PROTECTION SLAB (ALBERTA TRANS)**

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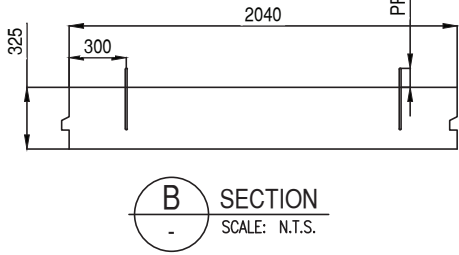
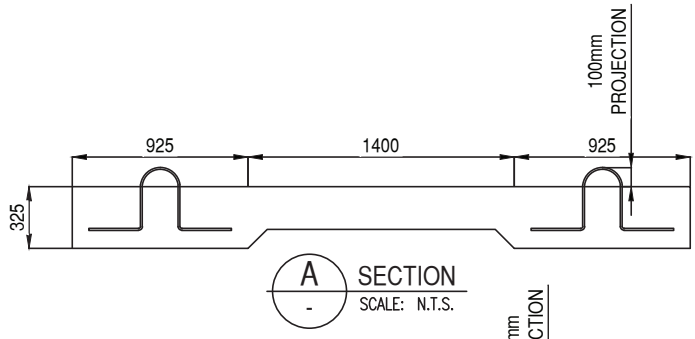
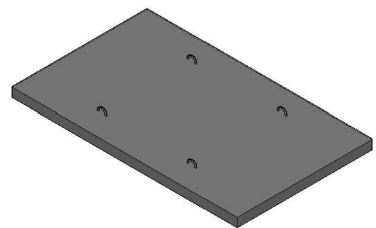
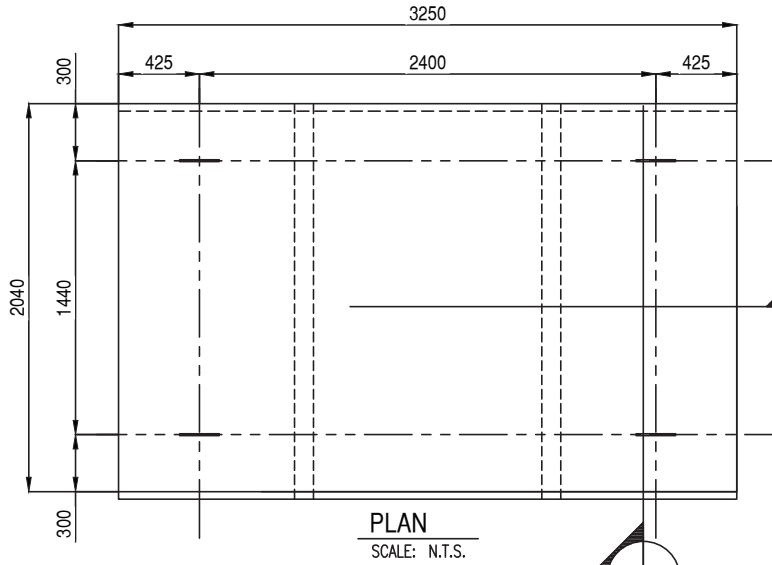
Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. -

SAP No. 410032

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard Group S  
 CSA Standard A23.3-14, A23.4-09  
 Concrete Strength 35 MPa @ 28 Days  
 Concrete Type Sulphate Resistant  
 S2 Exposure

Reinforcement Grade 400  
**Load Rating CL-800**

**Product Detail**

Minimum Cover 200mm  
 Min. Pipe Cover 150mm  
 Max Pipe Cover 300mm

**Revision Date April. 01 2019**



**PIPELINE PROTECTION SLAB (ATCO 1-L TYPE 1)**

**KNELSEN PRECAST - Western Canada (Calgary, Edmonton)**  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. -

Item No. **500000**

**PLAN**  
SCALE: -

**SECTION A**  
SCALE: -

**SECTION B**  
SCALE: -

**Notes**  
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	4,318 kg (9,500 lbs)

**Optional**  
Load Rating: Traffic: CL-625 or CL-800

**Product Detail**

Outside Dimension	2000 x 3000 x 350
Foam Inserts	1500 x 2000 x 100
Connection Type	Keyway
Lift Mechanism	Burke Cable Lift Hooks

**Revision Date**      **April. 01 2019**

**PIPELINE PROTECTION SLAB (SYNCRUDE)**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. -

SAP No. **411372**

**PLAN**  
SCALE: -

**SECTION A**  
SCALE: -

**SECTION B**  
SCALE: -

**Notes**  
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength    35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant  
                                  S2 Exposure  
 Reinforcement      Grade 400  
 Weight              6,864 kg (15,100 lbs)  
**Load Rating**

**Optional**  
 Load Rating              Traffic: CL-625 or CL-800

**Product Detail**  
 Outside Dimension    2000 x 4000 x 400  
 Foam Inserts          1700 x 2000 x 100  
 Connection Type      Keyway  
 Lift Mechanism        Burke Cable Lift Hooks

**Revision Date**      **April. 01 2019**

	<b>PIPELINE PROTECTION SLAB (SYNCRUDE)</b>	Dwg. No. -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a> Tel: (403) 279-8161 Fax: (403) 279-6027	SAP No. <b>411043</b>



**PLAN**  
SCALE: N.T.S.

**SECTION A**  
SCALE: N.T.S.

**SECTION B**  
SCALE: N.T.S.

**Notes**  
Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400

**Load Rating**

**Product Detail**

Minimum Cover	450mm
Min. Pipe Cover	300mm
Max Pipe Cover	500mm
Concrete Colour	Yellow

PART NUMBER	PIPE DIAMETER	SLAB WIDTH mm	WEIGHT (KG)	WEIGHT (LBS)
PS2500-01T-R01	NPS 24 (610) OR LESS	2500	900	1985
PS2900-01T-R01	NPS 30 (762)	2900	1050	2315
PS3300-01T-R01	NPS 36 (914)	3300	1190	2625
PS3600-01T-R01	NPS 42 (1067)	3600	1300	2870
PS4000-01T-R01	NPS 48 (1219)	4000	1440	3175

**Revision Date**      **April. 01 2019**

**PIPELINE PROTECTION SLAB (TRANSCANADA)**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. -

SAP No. **Various**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard      Group S  
 CSA Standard      A23.3-14, A23.4-09  
 Concrete Strength    35 MPa @ 28 Days  
 Concrete Type      Sulphate Resistant  
                                  S2 Exposure  
 Reinforcement      Grade 400  
 Weight              1,424 kg (3,140 lbs)  
**Load Rating**              **Traffic: CL-625**

**Working Capacities**  
 Chamber              250 Liter (55 Gallon)  
 Effluent Chamber    250 Liter (55 Gallon)  
 Siphon Volume      N/A

**Product Detail**  
 Outside Dimension    1548 x 834 x 1166  
 Compartment Dimension 630 x 630 x 966  
 Max Water Level      782mm  
 Mechanical Openings Multiple

**Steel Cover**  
 Dimension              1548 x 834 x 1166  
 Perforation              20mm (3/4")

**Revision Date**      **April. 01 2019**

	<b>SUMP TANK (2 COMPARTMENT)</b>	Dwg. No. <b>TA1001</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>406331</b> Tel: (403) 279-8161 Fax: (403) 279-6027

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others.  
 Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard Group S  
 CSA Standard A23.3-14, A23.4-09  
 Concrete Strength 35 MPa @ 28 Days  
 Concrete Type Sulphate Resistant S2 Exposure  
 Reinforcement Grade 400  
 Weight 581 kg (1,280 lbs)  
 Load Rating **Traffic: CL-625**

**Working Capacities**  
 Chamber 250 Liter (55 Gallon)

**Product Detail**  
 Outside Dimension 750 x 770 x 1140  
 Compartment Dimension 546 x 566 x 940  
 Max Water Level 790mm  
 Mechanical Openings Multiple

**Steel Cover**  
 Dimension 675 x 675 x 10  
 Perforation 20mm (3/4")

**Revision Date April. 01 2019**

**SUMP TANK (1 COMPARTMENT)**  
 KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
 www.knelsen.com  
 Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. **TA1010**  
 SAP No. **406334**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 CPCI Standard                      Group S  
 CSA Standard                      A23.3-14, A23.4-09  
 Concrete Strength                  35 MPa @ 28 Days  
 Concrete Type                      Sulphate Resistant  
    S2 Exposure  
 Reinforcement                      Grade 400  
 Weight                                  386 kg (850 lbs)

**Product Detail**  
 Outside Dimension                  3050 x 350 x 162  
 Connection                              Chain  
 Hardware                                Customer Supplied

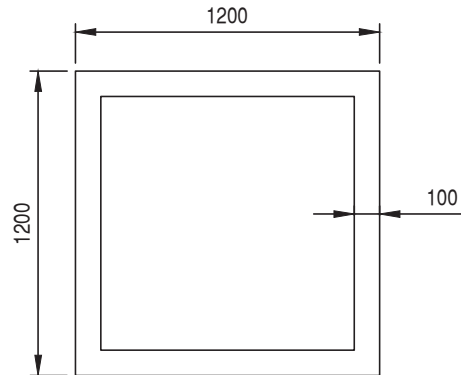
**Product Finish**  
 Standard                                Grooved  
 Optional                                 Broom

**Revision Date**                      April. 01 2019

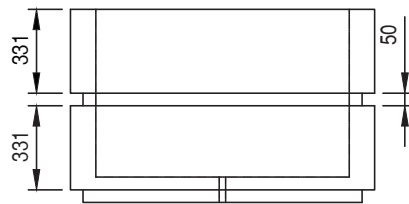
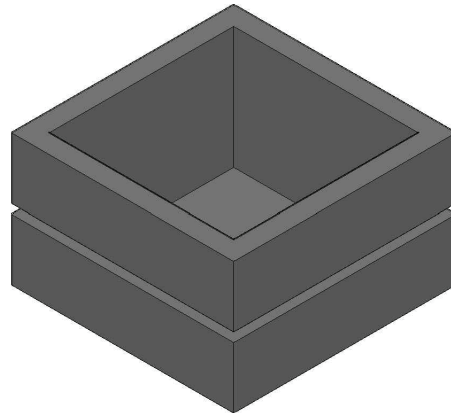
	3M BOAT RAMP SLAB	Dwg. No. <b>9-0029-1</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>405131</b>
Tel: (403) 279-8161 Fax: (403) 279-6027		

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**PLAN**



**SIDE VIEW**

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	1,059 kg (2,330 lbs)

**Product Detail**

Outside Dimension	1200 x 1200 x 762
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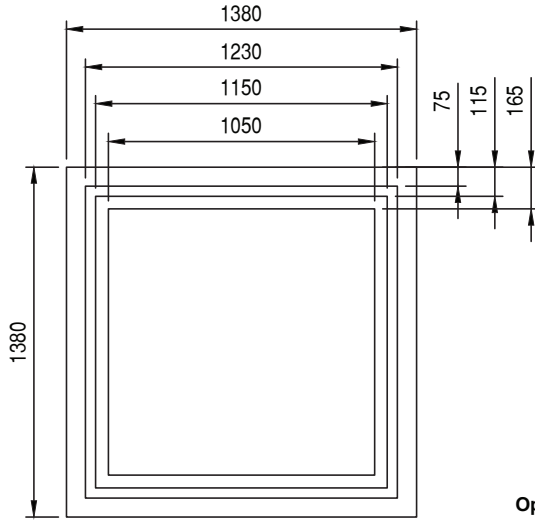
**Product Finish**

Smooth	Standard
Sandblasted	Extra
Exposed Aggregate	Extra

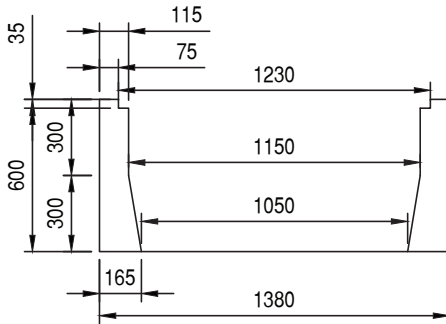
**Revision Date**      **April. 01 2019**

	<p><b>TREE PLANTER (CLOSED BOTTOM)</b></p>	<p>Dwg. No. <b>SP40210</b></p>
	<p>KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a></p>	<p>SAP No. <b>406237</b></p>

Tel: (403) 279-8161  
Fax: (403) 279-6027



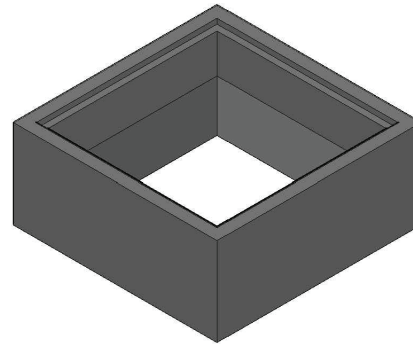
**PLAN**



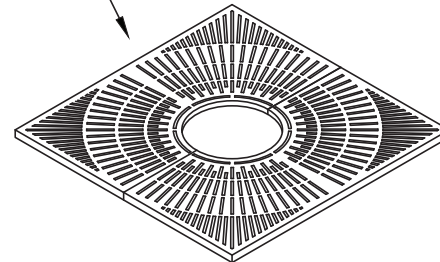
**SIDE VIEW**

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



Optional Item  
Tree Grate 406215



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	875 kg (1,925 lbs)

**Product Detail**

Outside Dimension	1380 x 1380 x 600
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**Product Finish**

Smooth	Standard
Sandblasted	Extra
Exposed Aggregate	Extra

**Optional Extra**

Tree Grate	406215
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**Revision Date** April. 01 2019



**TREE PLANTER (OPEN BOTTOM)**

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Tel: (403) 279-8161  
Fax: (403) 279-6027

Dwg. No. **SP40200**

SAP No. **406214**

**PLAN**

**SECTION**

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

**Technical Detail**  
 Weight (Kit) 90 kg (203 lbs)  
 Load Rating Traffic: CL-625

**Product Detail**  
 Design 2 - Piece  
 Total Dimension 1220 x 1220 x 38  
 Material Cast Iron

**Product Finish**  
 Bare Standard  
 Black Paint Extra  
 Galvanized Extra

**Optional (Extra)**  
 Grate Frame 1237 x 1237 x 38  
 Tree Guard 280mm x 1200mm

**Revision Date** April. 01 2019

	<b>CAST IRON TREE GRATE</b>	Dwg. No. <b>TF-48C</b>
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>406215</b> Tel: (403) 279-8161 Fax: (403) 279-6027

**Notes**  
 Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.

SECTION A  
SCALE: N.T.S.

SAP NO.	DRAWING NO.	LENGTH	WIDTH	HEIGHT	WEIGHT KG	WEIGHT LBS
406217	SP50603	600mm	300mm	76mm	36	79
406219	SP50903	900mm	300mm	76mm	43	95
406220	SP51203	1200mm	300mm	76mm	51	112
409446*	INTERLOCKING	815mm	300mm	76mm	40	89

**Technical Detail**  
 CPCI Standard  
 CSA Standard  
 Concrete Strength  
 Concrete Type  
 Reinforcement

Group S  
 A23.3-14, A23.4-09  
 35 MPa @ 28 Days  
 Sulphate Resistant  
 S2 Exposure  
 Grade 400

**Product Detail**  
 Interlocking connection is Shiplap

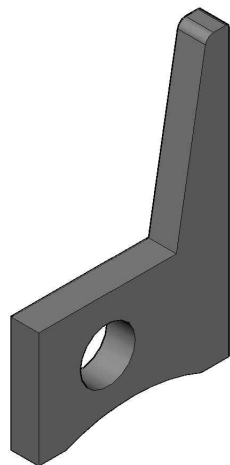
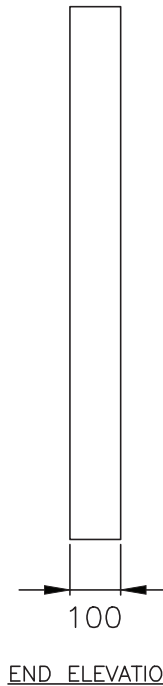
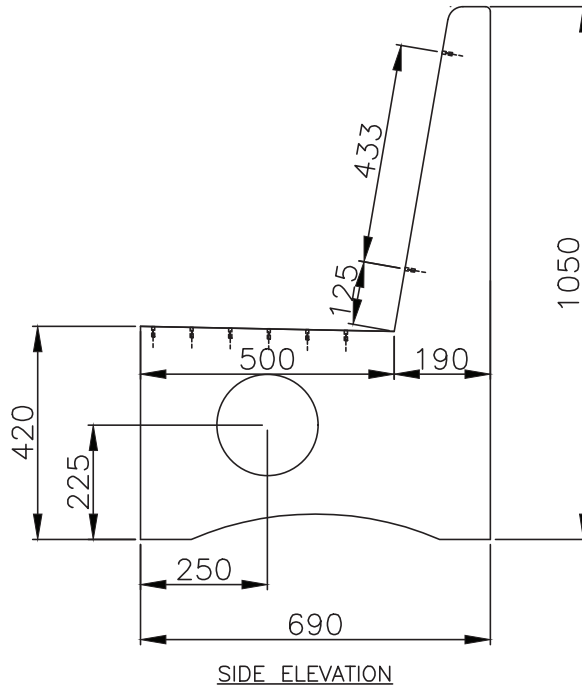
**Revision Date**      **April. 01 2019**

	<b>SPLASH PAD</b>	Dwg. No. -
	KNELSEN PRECAST - Western Canada (Calgary, Edmonton) <a href="http://www.knelsen.com">www.knelsen.com</a>	SAP No. <b>Various</b>



**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	79 kg (174 lbs)

**Product Options**

Dimension	1050 x 690 x 100
Inserts	3/8" x 2 3/4"

**Product Finish**

Smooth	Standard
Sandblasted	Extra
Exposed Aggregate	Extra

**Revision Date** April. 01 2019



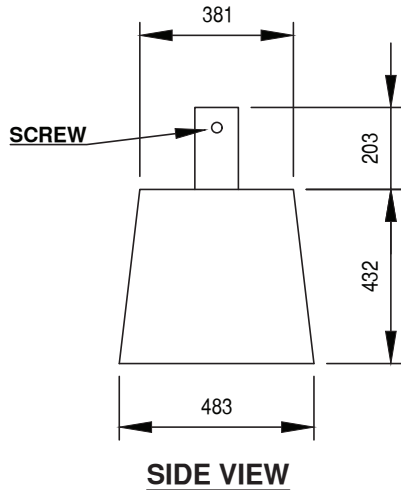
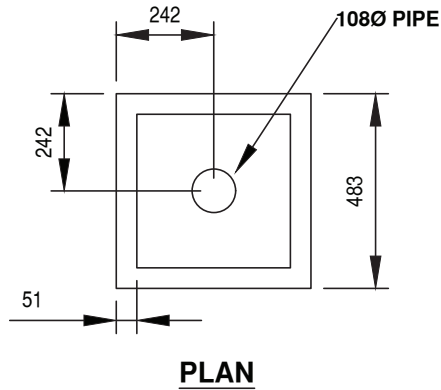
**BENCH LEG**

Dwg. No. **SP71510**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

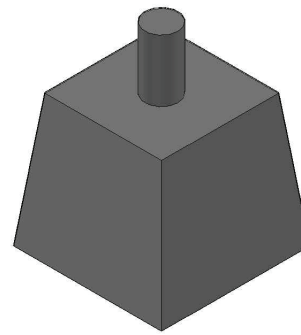
Tel: (403) 279-8161  
 Fax: (403) 279-6027

SAP No. **406235**



**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant S2 Exposure
Reinforcement	Grade 400
Weight	195 kg (429 lbs)

**Product Detail**

Dimension	483 x 483 x 432
Sleeves Diameter	2 1/2"

**Product Finish**

Smooth	Standard
Sandblasted	Extra
Exposed Aggregate	Extra

**Revision Date** April. 01 2019



**FLAG POLE BASE**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

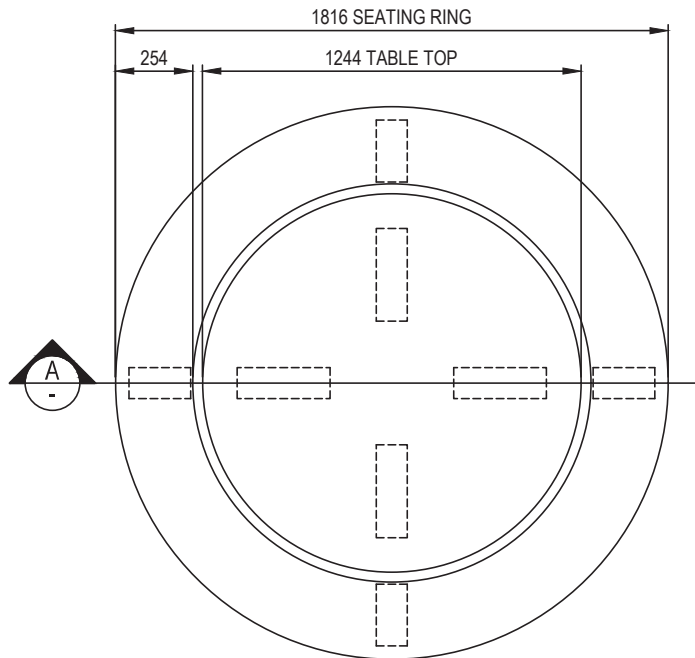
Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. **SP90200**

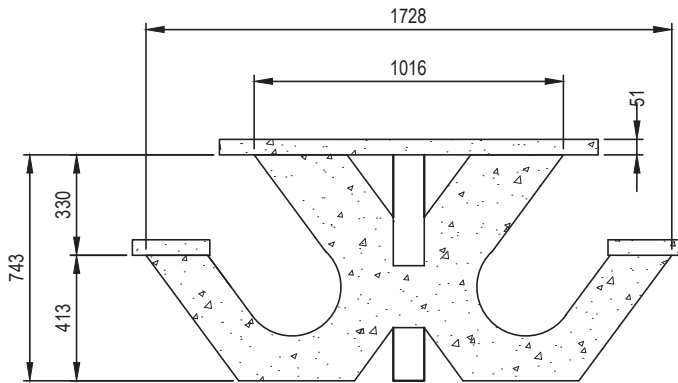
SAP No. **406241**

**Notes**

Site installation, backfilling and suitability for use are to be determined by others. Knelsen is not responsible for modifications, coring or coatings, not provided by Knelsen.



PLAN



SECTION A

**Technical Detail**

CPCI Standard	Group S
CSA Standard	A23.3-14, A23.4-09
Concrete Strength	35 MPa @ 28 Days
Concrete Type	Sulphate Resistant
	S2 Exposure
Reinforcement	Grade 400
Weight	600 kg (1,112 lbs)

**Product Detail**

Table Top	1244mm
Seating Ring	1816mm
Table Height	743mm
Seating Height	413mm

**Product Finish**

Smooth	Standard
Sandblasted	Extra
Exposed Aggregate	Extra

**Revision Date** April. 01 2019



**Picnic Table (Round)**

KNELSEN PRECAST - Western Canada (Calgary, Edmonton)  
[www.knelsen.com](http://www.knelsen.com)

Tel: (403) 279-8161  
 Fax: (403) 279-6027

Dwg. No. **SP-71500**

SAP No. **409889**



PRECAST 3x4 DUCT BANK

## PRECAST DUCT BANKS

Duct banks are an integral part of the underground utility market, providing owners protection from future excavation, drilling, traffic loads while giving the ability to replace, upgrade or repair existing infrastructure without excavating. Precast duct banks produced by Armtec provide benefits that exceed that of traditional construction materials. In addition, using a specialized proprietary technique we ensure pieces fit together onsite for a no hassle install.



### BENEFITS OF PRECAST DUCT BANKS vs TRADITIONAL MATERIALS

#### COST SAVINGS

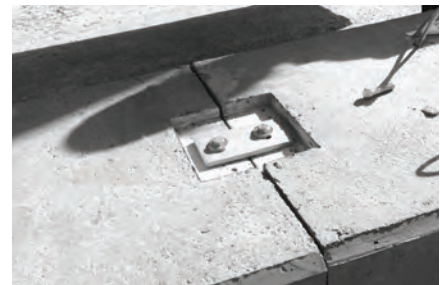
- Heating & hoarding costs eliminated
- Accelerated project schedule due to pre-fabrication
- No wasted raw materials, as product is custom built for size
- Product can be stored on-site, or delivered and installed just in time allowing installation as schedules permit
- Backfill can occur immediately after installation

#### QUALITY ASSURANCE:

- Material is unaffected by cave-ins
- Engineered to ensure a perfect fit
- Produced in a quality controlled & certified environment

#### SAFETY:

- Reduced on-site labour for install
- Reduced exposure to workers time spent in open trench



### DUCT BANK PRODUCT SPECIFICATIONS:

Configuration	PVC size	Weight kg	Weight lbs
1x4	4"	720	1584
1x4	5"	720	1584
1x4	6"	720	1584
3x3	4"	1368	3009
3x3	5"	1368	3009
3x3	6"	1368	3009
3x4	4"	2112	4646
3x4	5"	2112	4646
3x4	6"	2112	4646
4x4	4"	3432	7550
4x4	5"	3432	7550
4x4	6"	3432	7550







## **KNELSEN** | PRECAST

—  
Knelsen is a leading provider of infrastructure solutions that deliver social, environmental and economic benefits for an ever-changing world.

403.279.8161 | [KNELSEN.COM](http://KNELSEN.COM)

—  
Drawings and product details are for information and/or illustrative purposes only, and may vary. Please contact your local Knelsen representative for the most current product information.

—  
**UNDERGROUND & UTILITIES / PRECAST CONSTRUCTION MATERIALS 2019**  
PROD-C09-G08-P06-PG-2019-06-E