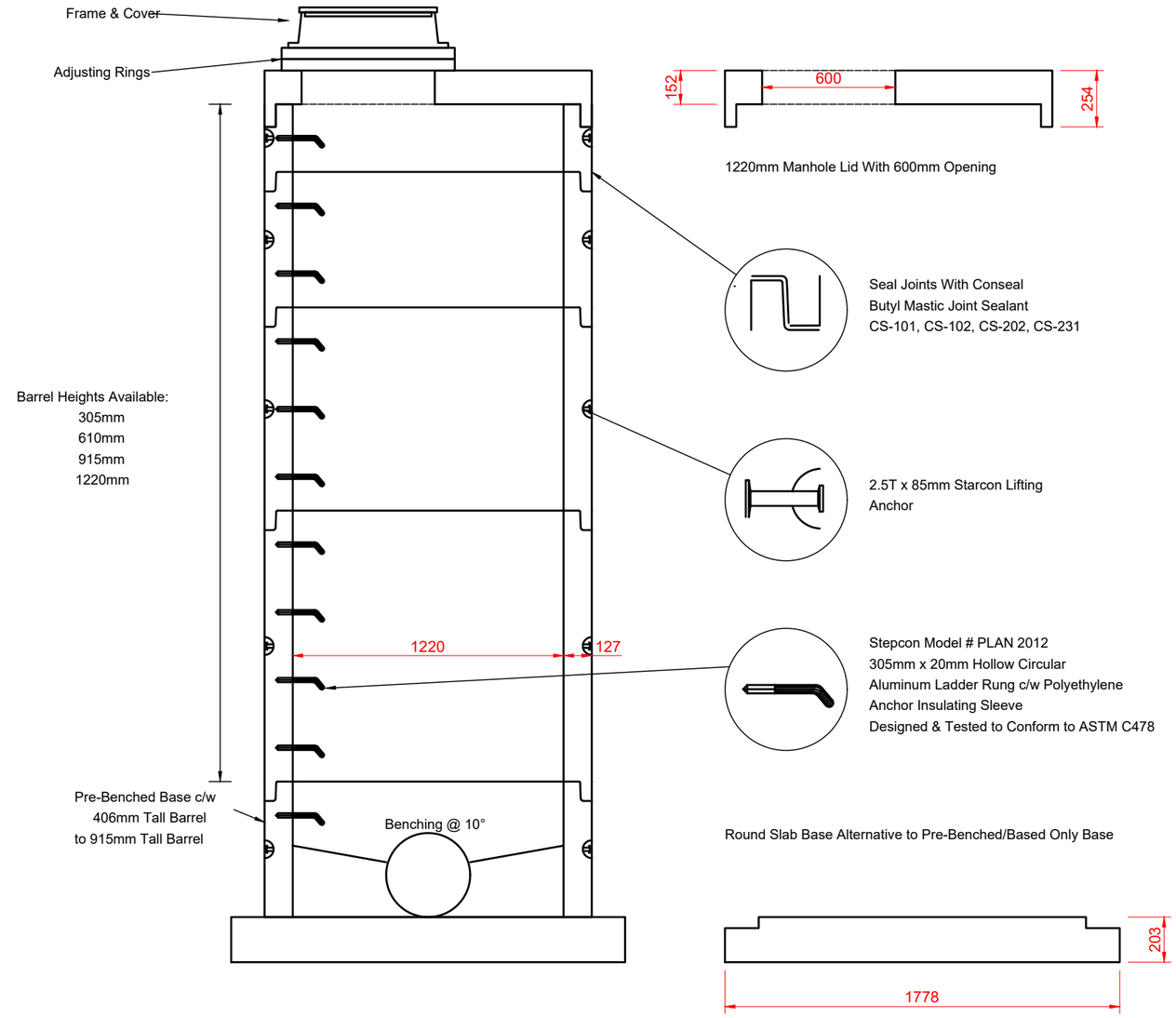



**Tri-Kon Precast Products Ltd.**
601 Patterson Street West
Cranbrook BC V1C 6T3
250-426-8162
info@trikonprecast.com
trikonprecast.com

PRODUCT
## Manhole & Catch Basin
DRAWING
1220mm Manhole

WEIGHT

DRAWING NO.
**MH1220**

DATE
11-20-2023

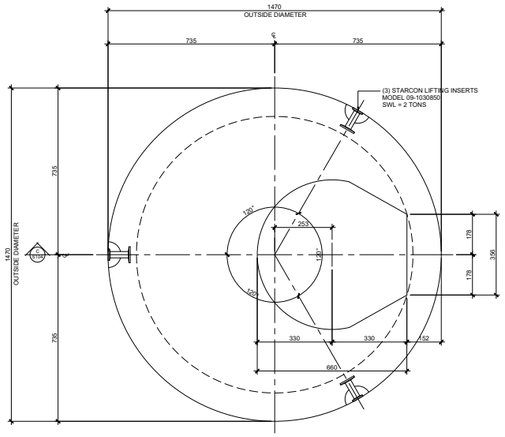
SHEET
**10 of 22**

UNITS / SCALE
mm / 1:25

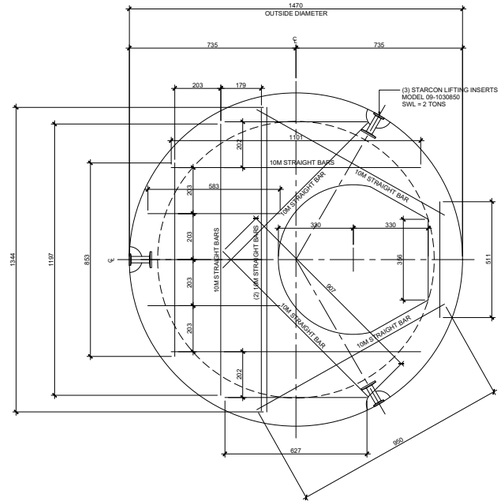
**Request A Quote**

DESIGN PARAMETERS

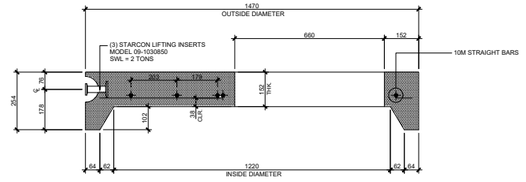
1) DESIGN METHODOLOGY - LSD
2) DESIGN ASSUMES MAXIMUM 600mm GRANULAR COVER
3) DESIGN ASSUMES HS-20 AXLE LOADING
4) SERVICE LIFE SHALL BE 75 YEARS




A S104 1220mmØ PRECAST REINFORCED CONCRETE LID - PLAN VIEW
SCALE: 1:15




B S104 1220mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10




C S104 1220mmØ PRECAST REINFORCED CONCRETE LID - SECTION
SCALE: 1:10

## STRUCTURAL SPECIFICATIONS

### GENERAL

1. ALL CONSTRUCTION SHALL CONFORM TO ASTM C1433M STANDARDS AND SUBSEQUENT REVISIONS.
2. ALL REFERENCES TO STANDARDS SHALL REFER TO THE LATEST REVISED ISSUE.
3. THESE DRAWING PREPARED BY McELHANNEY CONSULTING SERVICES LTD. (McELHANNEY) ARE INTENDED FOR STRUCTURAL REQUIREMENTS OF THIS PROJECT ONLY. ALL OTHER ASPECTS ASSOCIATED WITH THIS PROJECT WHICH INCLUDE, BUT ARE NOT LIMITED TO CIVIL, GEOTECHNICAL, MECHANICAL, ELECTRICAL, ARE TO BE DESIGNED, SPECIFIED AND APPROVED BY OTHERS AND ARE CONSIDERED BEYOND McELHANNEY SCOPE OF WORK
4. STRUCTURAL ELEMENTS PRESENTED ON THESE DRAWINGS ARE FOR PERMANENT STRUCTURE AND FOUNDATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND CONSTRUCTION BRACING AND SUPPORT INCLUDING GEOTECHNICAL REQUIREMENTS UNTIL THE PROJECT IS COMPLETED.
5. REFER TO CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DIMENSIONS, GRADES, SLEEVES, EQUIPMENT, SHAFTS, INSERTS, NAILERS, CHAMFERS, ETC. GRADES, ELEVATIONS AND SLOPES SHOWN ON STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND MUST BE CONFIRMED PRIOR TO CONSTRUCTION.

## FIELD REVIEWS BY McELHANNEY CONSULTING SERVICES LTD.

1. McELHANNEY ASSUMES NO RESPONSIBILITY FOR FIELD REVIEWS OF THE CONSTRUCTION OR VERIFICATION OF THE CONSTRUCTION UNLESS EXPRESSLY RETAINED TO DO SO.
2. McELHANNEY CONSULTING SERVICES LTD. (McELHANNEY) PROVIDE FIELD REVIEWS ONLY FOR THE WORK SHOWN ON THESE DRAWINGS. FIELD REVIEWS BY McELHANNEY ARE PERIODIC AND AT THE SOLE DISCRETION OF McELHANNEY IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE DESIGN DRAWINGS AND SUPPORTING DOCUMENTS.
3. FIELD REVIEWS BY McELHANNEY ARE NOT FOR THE CONTRACTORS BENEFIT NOR DOES IT MAKE McELHANNEY GUARANTORS OF THE CONTRACTORS WORK. IT REMAINS THE CONTRACTORS RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
4. McELHANNEY WILL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
5. IF McELHANNEY IS RETAINED FOR FIELD REVIEWS THEN THE CONTRACTOR IS TO PROVIDE 24 HOUR NOTICE PRIOR TO CONCRETE POURS.

### CONCRETE

1. PREPARATION, PLACING, FINISHING AND TESTING OF CONCRETE IS TO CONFORM TO CSA A23.1. AND CSA A23.2
2. BEFORE PLACING CONCRETE, THE CONTRACTOR SHALL CHECK ALL APPLICABLE DRAWINGS FOR ANCHOR BOLTS, INSERTS, EMBEDS, RECESSES AND BLOCKOUTS. THEIR LOCATIONS SHALL BE CONFIRMED BY THE VARIOUS SUBTRADES.
3. CONCRETE COVER OVER REINFORCING IS TO BE AS SHOWN ON DRAWINGS.
4. CONCRETE PROPERTIES:

| ITEM | 28 DAY STRENGTH | EXPOSURE | W/C | AIR (%) | CEMENT TYPE | AGG. SIZE (mm) |
|---|---|---|---|---|---|---|
| PRECAST CONCRETE | 30 MPa | F1 | .40 | 4 - 7 | HS | 20 |

### REINFORCING STEEL

1. REINFORCING STEEL IS TO CONFORM TO CSA G30.12M - GRADE 400 MPa.
2. REINFORCING STEEL BENDS AND OTHER DETAILS OF REINFORCEMENT PLACEMENT SHALL BE IN ACCORDANCE WITH CAN/CSA A.23.1. AND ALSO THE REINFORCING STEEL INSTITUTE OF CANADA "MANUAL OF STANDARD PRACTICE".
3. REINFORCING STEEL IS TO BE PLACED AS DETAILED TO 10mm TOLERANCE AND IS TO BE SUPPORTED BY METAL OR PLASTIC SUPPORTS AND/OR HANGERS IN ACCORDANCE WITH CAN/CSA A23.1
4. LAP ALL REINFORCING BAR SPLICES 32 BAR DIAMETERS MINIMUM UNLESS INDICATED OTHERWISE ON THESE DRAWINGS.
5. REINFORCING STEEL IS TO BE CLEAN, FREE OF CORROSION AND UNDAMAGED.
6. DO NOT WELD BARS OR USE HEAT TO BEND REINFORCING STEEL.
7. UNLESS NOTED OTHERWISE MINIMUM CONCRETE COVER IS TO BE 38mm CLEAR

### PRECAST COMPONENT LIFTING AND RIGGING

1. THE PRECAST CONTRACTOR IS RESPONSIBLE FOR ALL RIGGING AND LIFTING PROCEDURES REQUIRED TO ENSURE SAFE LIFTING AND PLACEMENT OF PRECAST CONCRETE COMPONENTS IN ACCORDANCE WITH INDUSTRY STANDARDS AND WORKSAFE BC REQUIREMENTS.
2. THE CONTRACTOR IS TO ENSURE THAT THE HOISTING DEVICES INCLUDING ALL ASSOCIATED ACCESSORIES (SHACKLES, SLINGS, PINS ETC.) ARE RATED TO THE APPLICABLE LOAD AND ARE IN GOOD WORKING CONDITION.
3. THE CONTRACTOR IS TO ENSURE THAT ALL PERSONNEL OPERATING OR WORKING WITH THE HOISTING DEVICES ARE PROPERLY TRAINED , EXPERIENCED AND CERTIFIED ON THE HOISTING DEVICE.

| Rev | Date | Description | Drawn | Design | App'd |
|---|---|---|---|---|---|
| 1 | FEB 1, 2021 | CONCRETE STRENGTH REVISED | bpr | brn | brn |
| 0 | FEB 26, 2018 | ISSUED FOR "CONSTRUCTION" | bpr | brn | brn |

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McElhanney
1800 Willowbrook Drive
Cranbrook, BC
Canada V1C 7H9
Tel (250) 489-3013

ORIGINAL DWG SIZE: ARCH D (24" x 36") - DO NOT SCALE THIS DRAWING

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — R. R. NELSON — 31 — SCIENCE
February 1, 2021
Approved Sealed

TRI-KON PRECAST PRODUCTS LTD.
601 PATTERSON STREET WEST, CRANBROOK, BC

PRECAST REINFORCED CONCRETE MANHOLE LIDS
1220mmØ LID
PLAN VIEW, REINFORCING LAYOUT AND SECTION

Drawing No.
S104

Project Number: 2441-00705-00
Rev.: 1

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TRI KON Precast Concrete Products

**Tri-Kon Precast Products Ltd.**
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trikonprecast.com

PRODUCT
**Manhole & Catch Basin**
DRAWING
1220mm Manhole Lid

WEIGHT

DRAWING NO.
**MH1220L**
SHEET
**17 of 26**
DATE
As per drawing
UNITS / SCALE
As per drawing

**Request A Quote**

Dimensions and specifications as per drawing. Confirm handling weights before lifting.
trikonprecast.com