Manhole & Catch Basin

Standard Drawings

26 drawings

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
Cover

WEIGHT

DRAWING NO.

DATE
As per drawing

SHEET
Cover

UNITS / SCALE
As per drawing

Request A Quote

Drawing Index

26 drawings. Select one to open its sheet.

01	38mm Round Adjusting Ring · MHAR38	10	750mm MOT Catch Basin · SP582-02.01	19	1350mm Manhole · MH1350
02	50mm Round Adjusting Ring · MHAR50	11	750mm Perforated Barrel · MHDR750X915	20	1525mm Manhole · MH1525
03	51mm B-19 Opening Adjusting Ring · MHARB19	12	915mm Catch Basin · MHCB915	21	1525mm Manhole Lid · MH1525L
04	75mm Round Adjusting Ring · MHAR75	13	915mm Catch Basin Lid · MHCB915L	22	1830mm Manhole · MH1830
05	102mm Round Adjusting Ring · MHAR102	14	1050mm Manhole · MH1050	23	1830mm Manhole Lid · MH1830L
06	125mm Round Adjusting Ring · MHAR125	15	1050mm Manhole Lid · MH1050L	24	2135mm Manhole · MH2135
07	450 x 1000 mm Lawn Basin · MHCB450X1000	16	1220mm Manhole · MH1220	25	2440mm Manhole · MH2440
08	750mm Catch Basin · MHCB750	17	1220mm Manhole Lid · MH1220L	26	3050mm Manhole · MH3050
09	750mm Catch Basin Lid · MHCB750L	18	1220mm Perforated Barrel · MHDR1220X915		

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PRODUCT
Manhole & Catch Basin

DRAWING
Drawing Index

WEIGHT

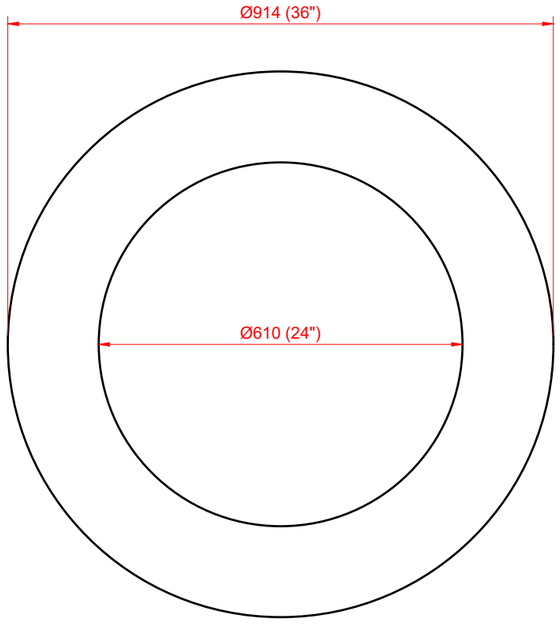
DRAWING NO.

DATE
As per drawing

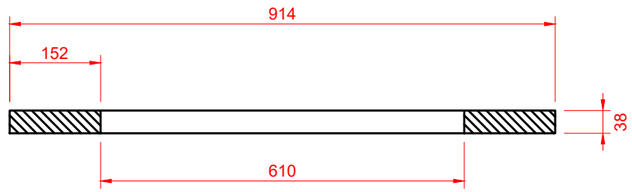
SHEET
Index

UNITS / SCALE
As per drawing

Request A Quote



Plan View



Section

Notes

Round adjusting ring, 38mm (1 1/2") high.
914mm (36") O.D. x 610mm (24") I.D.
Also made 38, 50, 75, 102 and 125mm high (MHAR38 to MHAR125).
Sizes in millimetres.

Tri-Kon Precast Products Ltd.
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trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
38mm Round Adjusting Ring

WEIGHT

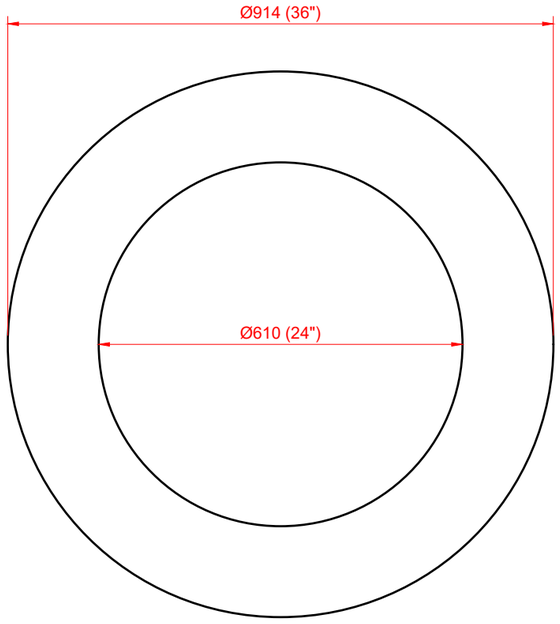
DRAWING NO.
MHAR38

DATE

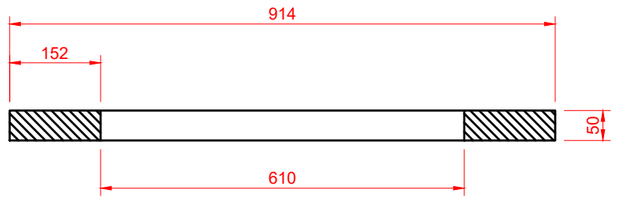
SHEET
23 of 28

UNITS / SCALE
mm / 1:10

Request A Quote



Plan View



Section

Notes

Round adjusting ring, 50mm (2") high.
914mm (36") O.D. x 610mm (24") I.D.
Also made 38, 50, 75, 102 and 125mm high (MHAR38 to MHAR125).
Sizes in millimetres.

Tri-Kon Precast Products Ltd.
601 Patterson Street West
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PRODUCT
Manhole & Catch Basin

DRAWING
50mm Round Adjusting Ring

WEIGHT

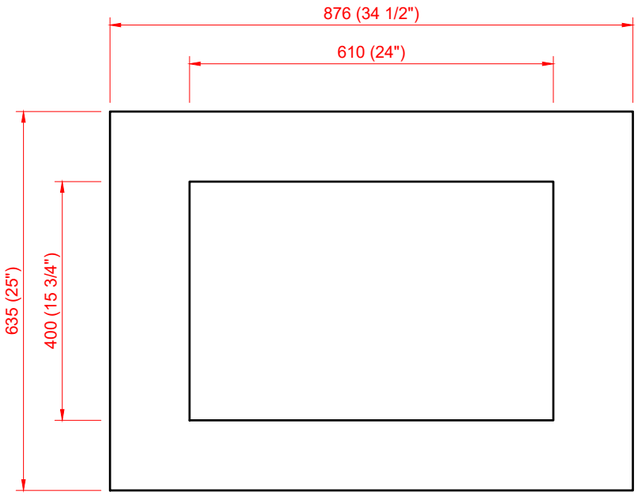
DRAWING NO.
MHAR50

DATE

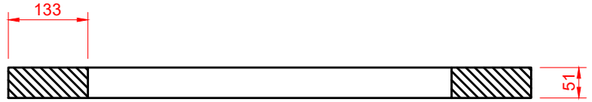
SHEET
24 of 28

UNITS / SCALE
mm / 1:10

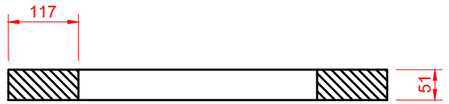
Request A Quote



Plan View



Section Along



Section Across

Notes

B-19 opening adjusting ring: 876mm x 635mm (34 1/2" x 25") with a 610mm x 400mm (24" x 15 3/4") opening for the B-19 frame & grate. 51mm (2") thick.
Sizes in millimetres.

Tri-Kon Precast Products Ltd.
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PRODUCT
Manhole & Catch Basin

DRAWING
B-19 Opening Adjusting Ring

WEIGHT

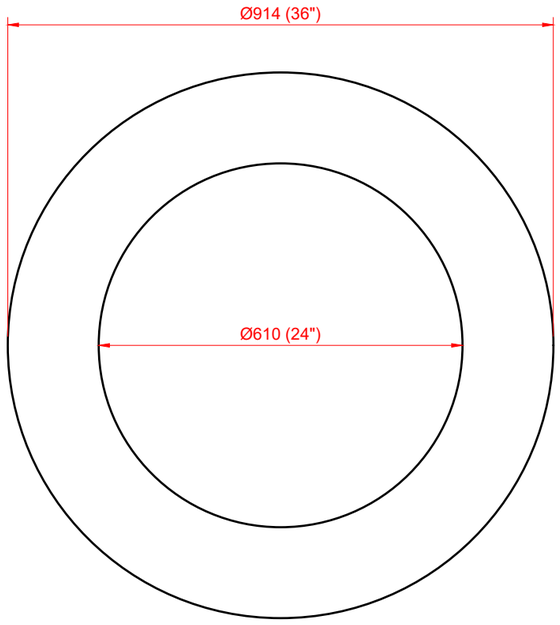
DRAWING NO.
MHARB19

DATE

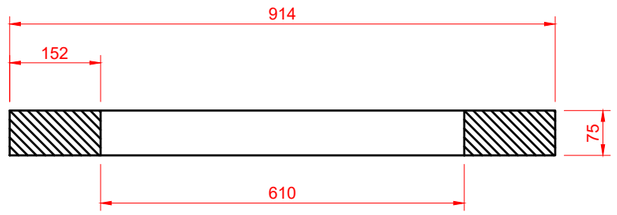
SHEET
28 of 28

UNITS / SCALE
mm / 1:10

Request A Quote



Plan View



Section

Notes

Round adjusting ring, 75mm (3") high.
914mm (36") O.D. x 610mm (24") I.D.
Also made 38, 50, 75, 102 and 125mm high (MHAR38 to MHAR125).
Sizes in millimetres.

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trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
75mm Round Adjusting Ring

WEIGHT

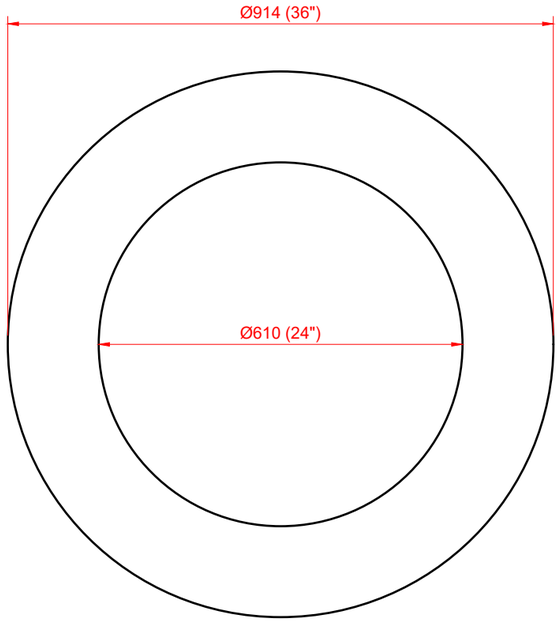
DRAWING NO.
MHAR75

DATE

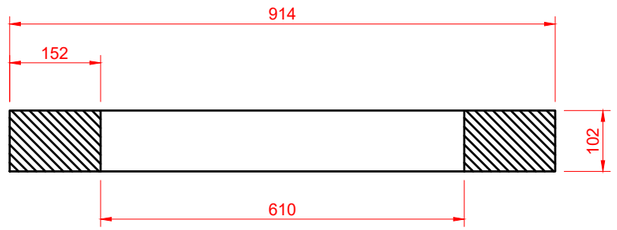
SHEET
25 of 28

UNITS / SCALE
mm / 1:10

Request A Quote



Plan View



Section

Notes

Round adjusting ring, 102mm (4") high.
914mm (36") O.D. x 610mm (24") I.D.
Also made 38, 50, 75, 102 and 125mm high (MHAR38 to MHAR125).
Sizes in millimetres.

Tri-Kon Precast Products Ltd.
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trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
102mm Round Adjusting Ring

WEIGHT

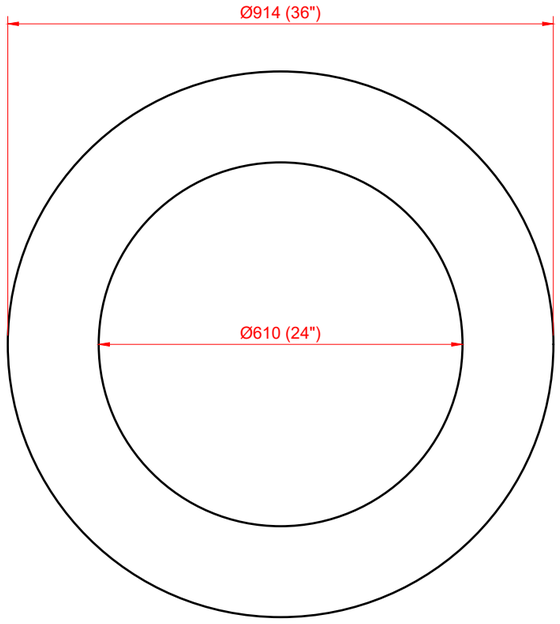
DRAWING NO.
MHAR102

DATE

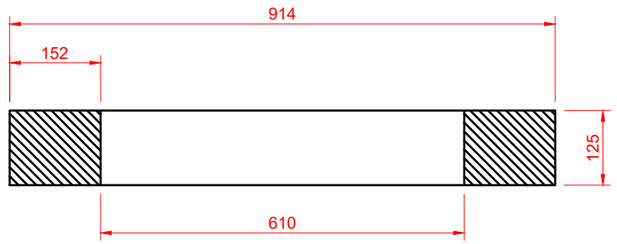
SHEET
26 of 28

UNITS / SCALE
mm / 1:10

Request A Quote



Plan View



Section

Notes

Round adjusting ring, 125mm (5") high.
914mm (36") O.D. x 610mm (24") I.D.
Also made 38, 50, 75, 102 and 125mm high (MHAR38 to MHAR125).
Sizes in millimetres.

Tri-Kon Precast Products Ltd.
601 Patterson Street West
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trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
125mm Round Adjusting Ring

WEIGHT

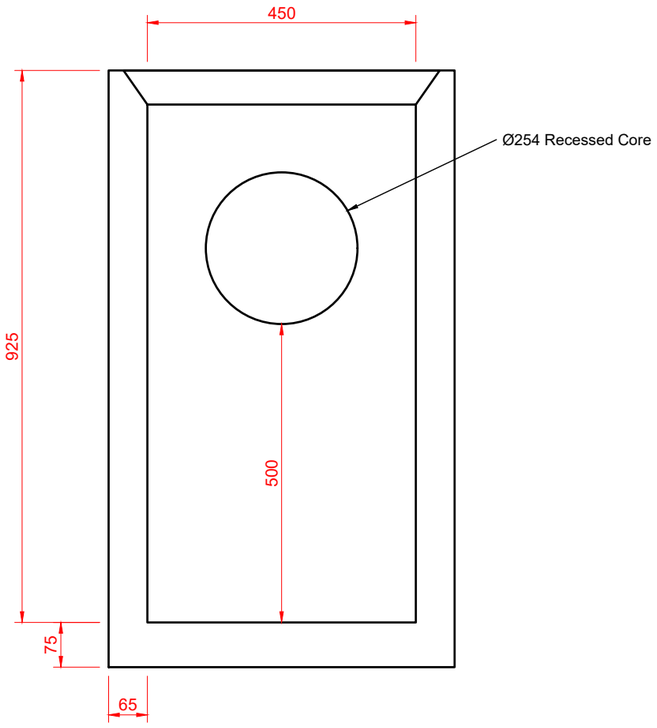
DRAWING NO.
MHAR125

DATE

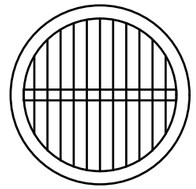
SHEET
27 of 28

UNITS / SCALE
mm / 1:10

Request A Quote



Section



TR27 Cast Iron Grate

Notes

1. Lawn basin is used in non-traffic or occasional load use.
2. Supplied with Ø254 recessed core.
3. Lawn basin accepts TR27 grates.
4. Approx. weight: 630 lbs.
5. Conforms to ASTM C478.
6. All dimensions are in millimetres.

Tri-Kon Precast Products Ltd.
601 Patterson Street West
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trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
450mm x 1000mm Lawn Basin

WEIGHT
630 lbs (approx.)

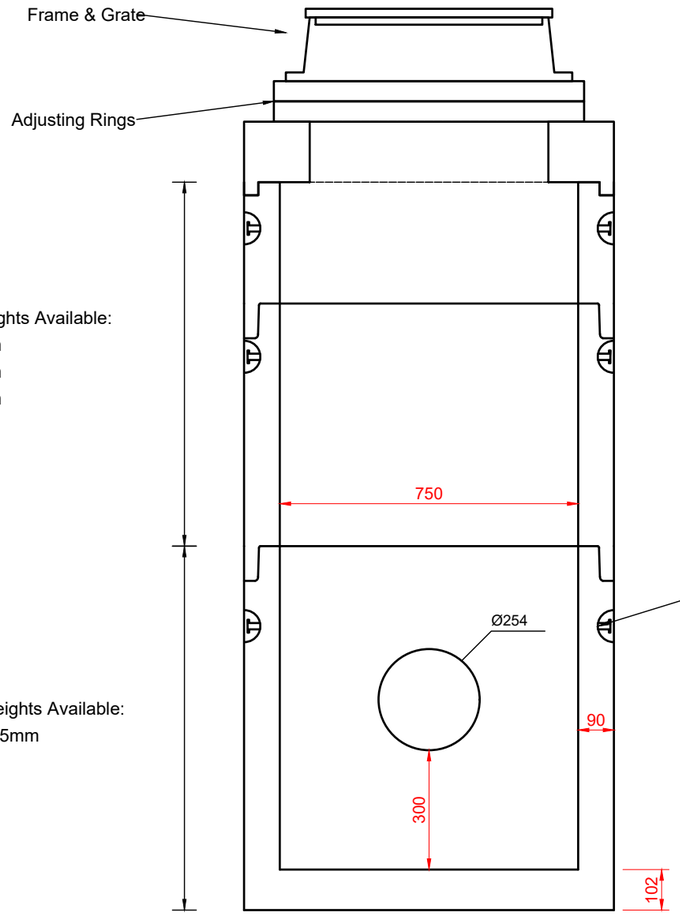
DRAWING NO.
MHCB450X1000

DATE

SHEET
01 of 22

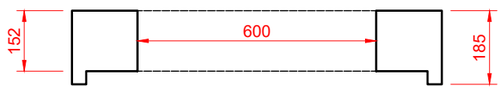
UNITS / SCALE
mm / 1:10

Request A Quote

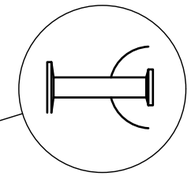


Catch Basin Barrel Heights Available:
305mm
610mm
915mm

Catch Basin Heights Available:
915mm



750mm CB Lid With 600mm Round Opening OR Rectangle Opening for B19/B23 Frame & Grate



2.5T x 45mm Starcon Lifting Anchor

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
750mm Catch Basin

WEIGHT

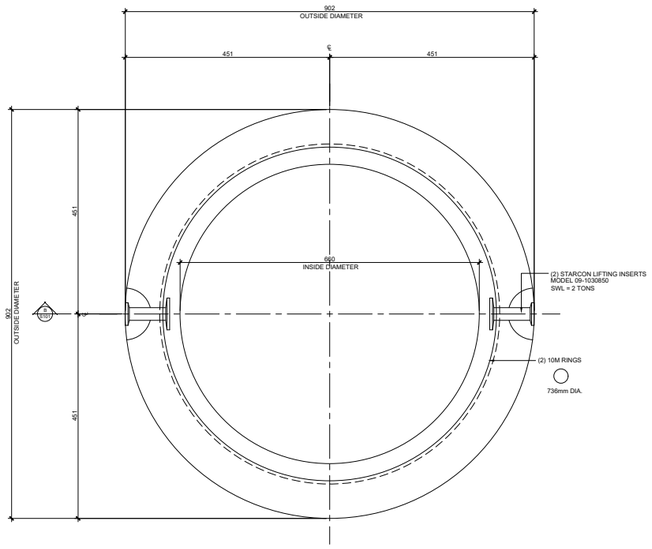
DRAWING NO.
MHCB750

DATE
11-20-2023

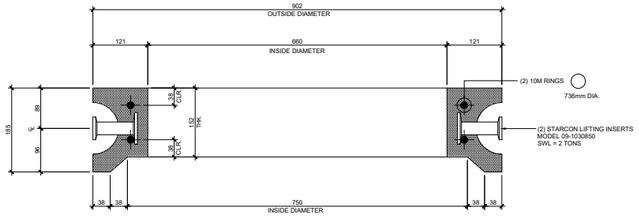
SHEET
02 of 22

UNITS / SCALE
mm / 1:15

Request A Quote



A S101 750mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10



B S101 750mmØ 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 CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S 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	brm	brm
0	FEB 26, 2018	ISSUED FOR "CONSTRUCTION"	bpr	brm	brm

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THIS DRAWING IS PART OF A COMPLETE SET OF DRAWINGS AND IS TO BE READ IN CONJUNCTION WITH ALL SHEETS WITHIN THE DRAWING SET. REFER TO ALL SHEETS INCLUDING STRUCTURAL NOTES PROVIDED ON SHEET S101.

THIS DRAWING IS INTENDED FOR THE STRUCTURAL CONSTRUCTION OF THIS PARTICULAR PROJECT AND IS NOT INTENDED TO BE USED AS A RECORD DRAWING UNLESS SPECIFICALLY NOTED AS SUCH.

McELHANNEY RECOMMENDS THE OWNER ENGAGES ALL PROFESSIONAL ASPECTS FOR THIS PROJECT FOR ALL APPLICABLE DISCIPLINES INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL AND GEOTECHNICAL PROFESSIONS.

THE PROFESSIONAL SEAL APPLIED TO THESE DRAWINGS APPLIES ONLY TO THE STRUCTURAL ASPECT OF THIS PROJECT. OTHER ELEMENTS SHOWN ON THIS DRAWING IS FOR REFERENCE ONLY AND IS SPECIFIED BY OTHERS AND IS NOT WITHIN THE SCOPE OF WORK OF BY McELHANNEY.

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 B. R. NELSON
February 1, 2021
Approved Sealed

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

PRECAST REINFORCED CONCRETE MANHOLE LIDS
750mmØ LID
REINFORCING LAYOUT AND SECTION

Drawing No. S101
Project Number 2441-00705-00
Rev. 1

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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
750mm Catch Basin Lid

WEIGHT

DRAWING NO.
MHCB750L

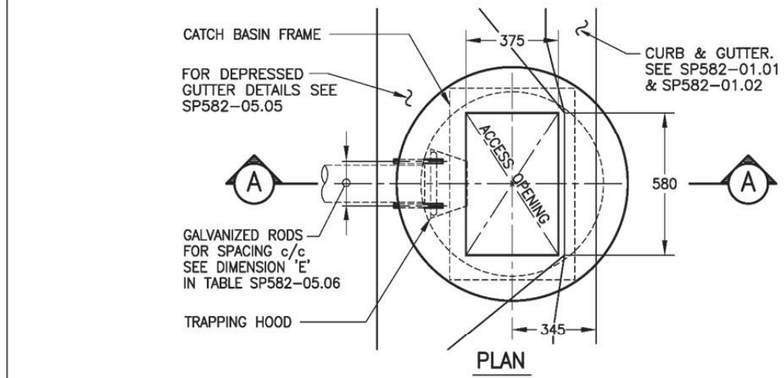
DATE
As per drawing

SHEET
09 of 26

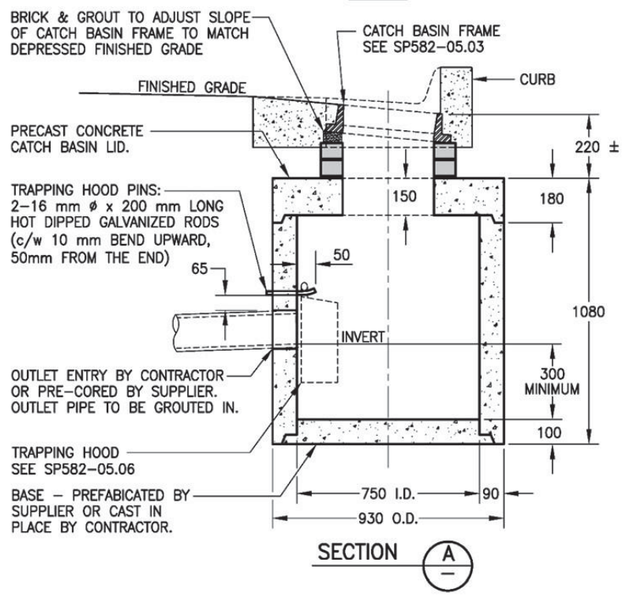
UNITS / SCALE
As per drawing

Request A Quote

PRECAST REINFORCED CONCRETE CATCH BASIN — SP582–02.01



PLAN



SECTION A–A

NOTES:

1. ALL PRECAST WORK TO CONFORM TO ASTM C478 OR CSA A257.
2. CATCH BASIN LID TO WITHSTAND HIGHWAY LIVE LOADING IN ACCORDANCE WITH THE APPLICABLE CLAUSES OF SS 582.
3. TRAPPING HOOD PINS SHALL BE SECURELY FASTENED TO THE PRECAST CONCRETE CATCH BASIN BARREL

NOT TO SCALE
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

BRITISH COLUMBIA | Ministry of Transportation & Infrastructure

TRI KON Precast Concrete Products

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
750mm MOT Catch Basin

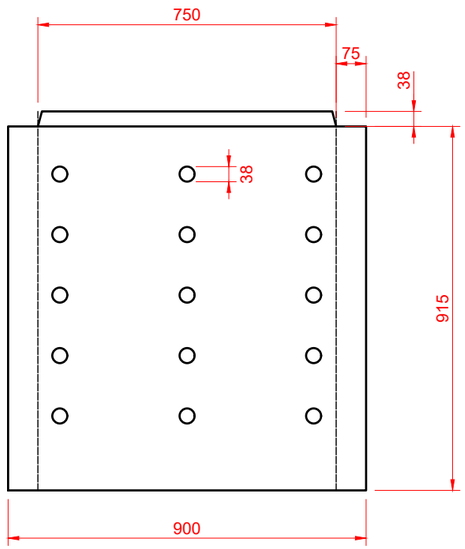
WEIGHT

DRAWING NO.
SP582-02.01
SHEET
10 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



Perforated Barrel

Notes

Barrel 36" (915mm) high, 35 1/2" (900mm) OD, 29 1/2" (750mm) ID.
1 1/2" (38mm) perforations.
Lid 7" (178mm) thick, 25 1/2" (650mm) opening.
Our perforated barrel is also compatible with our 30" catch basin barrel sections and lids and base.
Conforms to ASTM C478.

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PRODUCT
Manhole & Catch Basin

DRAWING
30 in Perforated Drywell

WEIGHT

DRAWING NO.
MHDR750X915

DATE

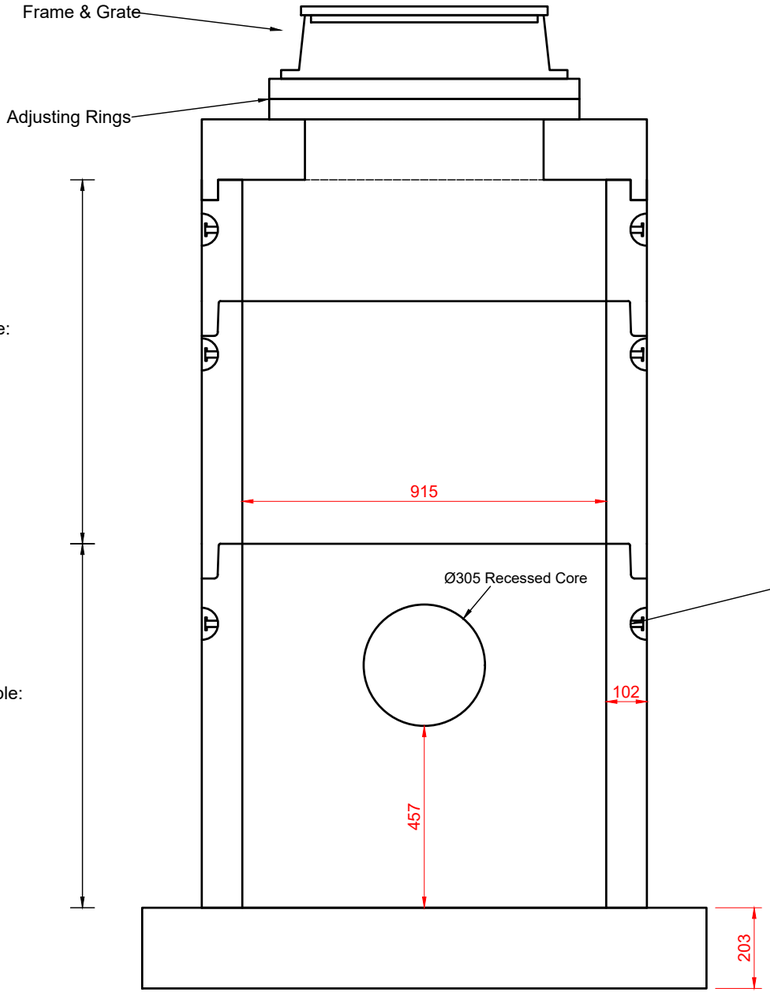
SHEET
05 of 22

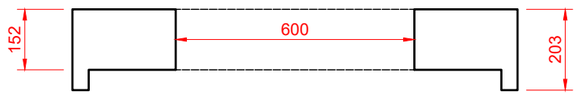
UNITS / SCALE
mm / 1:15

Request A Quote

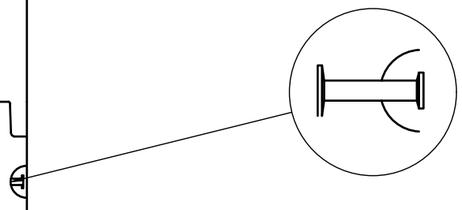
Catch Basin Barrel Heights Available:
152mm
305mm
610mm

Catch Basin Heights Available:
915mm
1220mm





915mm CB Lid With 600mm Hole



2.5T x 55mm Starcon Lifting Anchor

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PRODUCT
Manhole & Catch Basin

DRAWING
915mm Catch Basin

WEIGHT

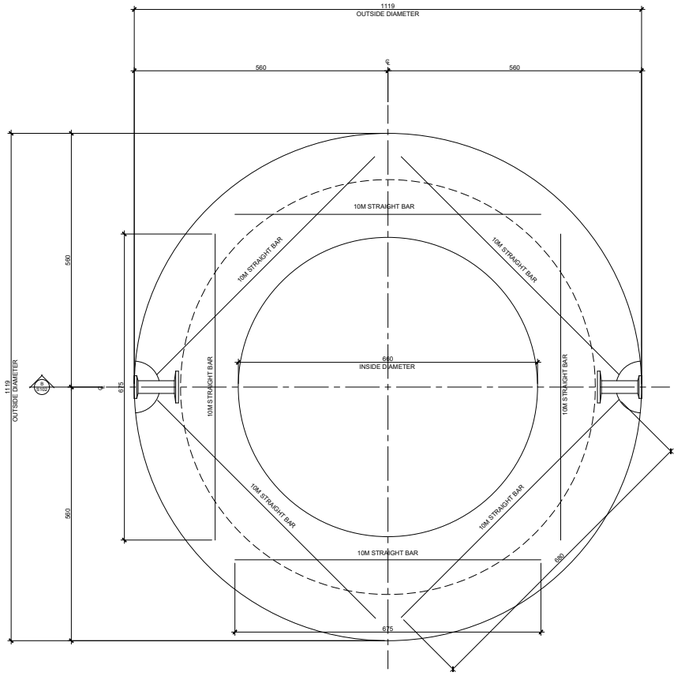
DRAWING NO.
MHCB915

DATE
11-20-2023

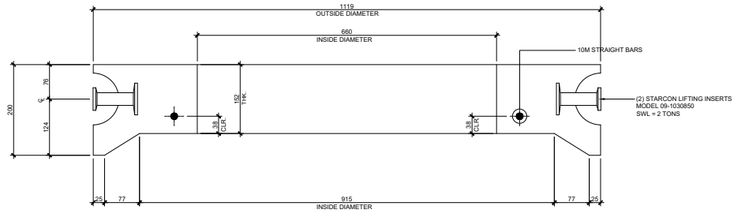
SHEET
06 of 22

UNITS / SCALE
mm / 1:15

Request A Quote



A S102 915mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10



B S102 915mmØ 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.
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CONCRETE

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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.
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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 B. R. WILSON
February 1, 2021
Approved Sealed

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

PRECAST REINFORCED CONCRETE MANHOLE LIDS
915mmØ LID
REINFORCING LAYOUT AND SECTION

Drawing No. S102
Project Number: 2441-00705-00
Rev. 1

CONTRACTOR ALL DIMENSIONS TO BE VERIFIED ON SITE

TRI KON Precast Concrete Products

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601 Patterson Street West
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info@trikonprecast.com
trikonprecast.com

PRODUCT
Manhole & Catch Basin
DRAWING
915mm Catch Basin Lid

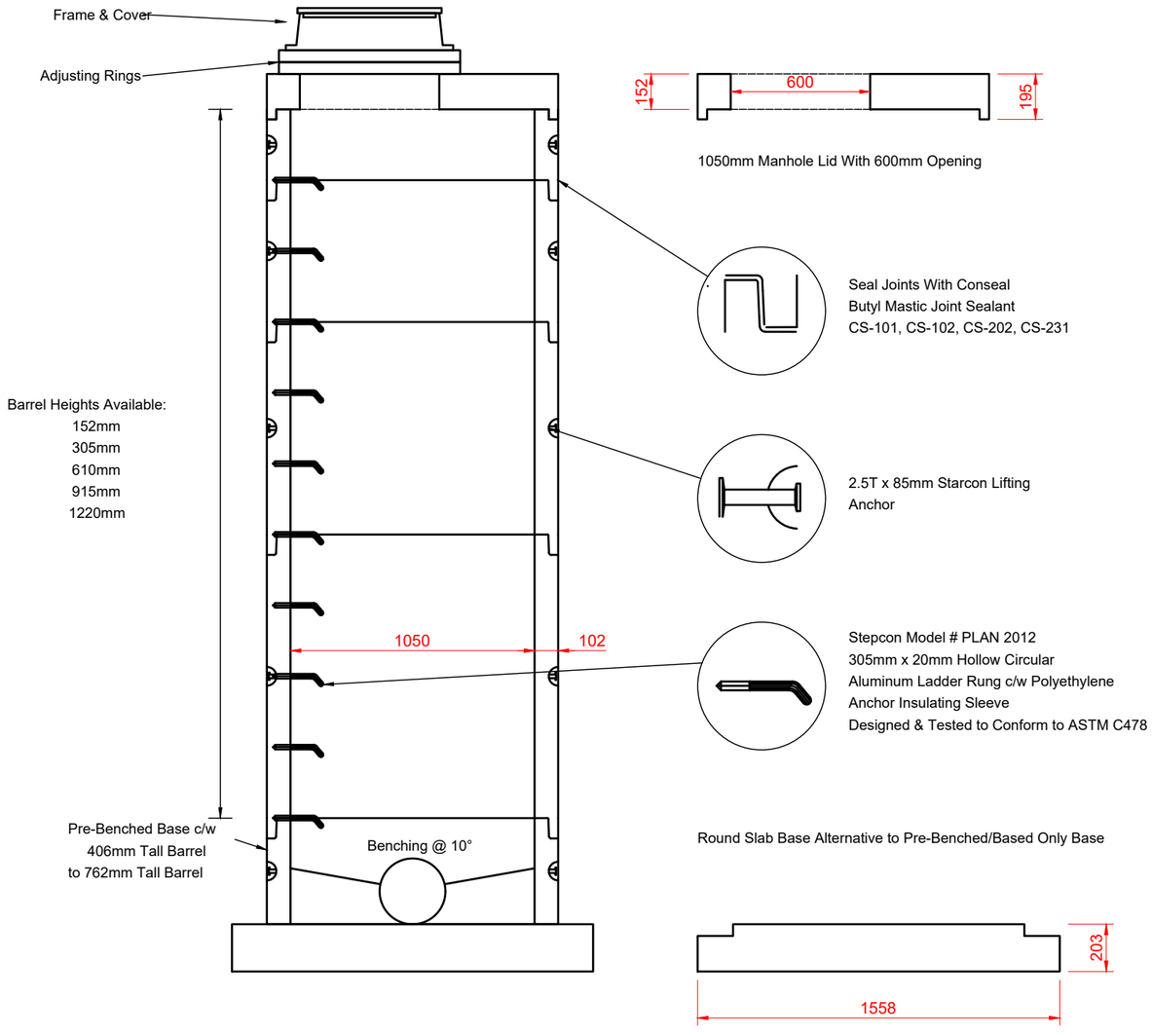
WEIGHT

DRAWING NO.
MHCB915L
SHEET
13 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



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601 Patterson Street West
Cranbrook BC V1C 6T3
250-426-8162
info@trikonprecast.com
trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
1050mm Manhole

WEIGHT

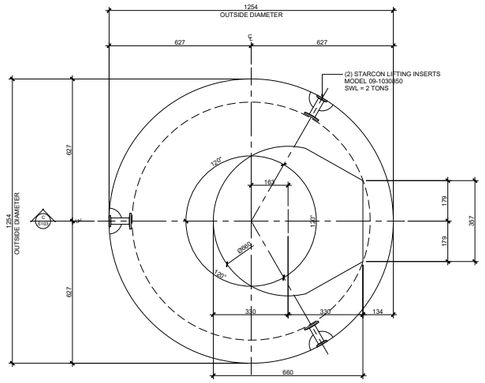
DRAWING NO.
MH1050

DATE
11-20-2023

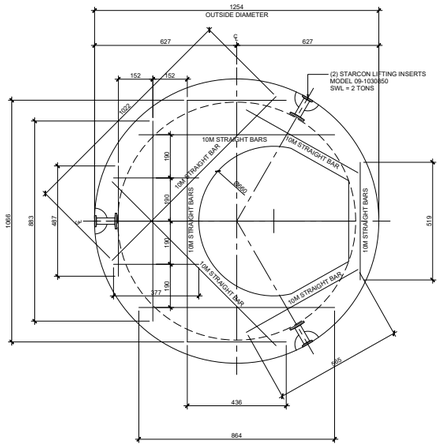
SHEET
08 of 22

UNITS / SCALE
mm / 1:25

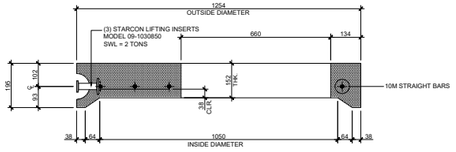
Request A Quote



A S103 1050mmØ PRECAST REINFORCED CONCRETE LID - PLAN VIEW
SCALE: 1:15



B S103 1050mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10



C S103 1050mmØ PRECAST REINFORCED CONCRETE LID - SECTION
SCALE: 1:10

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GENERAL

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

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Rev	Date	Description	Drawn	Design	App'd
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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
February 1, 2021
Approved Sealed

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

PRECAST REINFORCED CONCRETE MANHOLE LIDS
1050mmØ LID
PLAN VIEW, REINFORCING LAYOUT AND SECTION

Drawing No.
S103

Project Number	Rev.
2441-00705-00	1

K:\2021\TRI-KON\2441-00705-00\DWG\S103.DWG

TRI KON Precast Concrete Products

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PRODUCT
Manhole & Catch Basin
DRAWING
1050mm Manhole Lid

WEIGHT

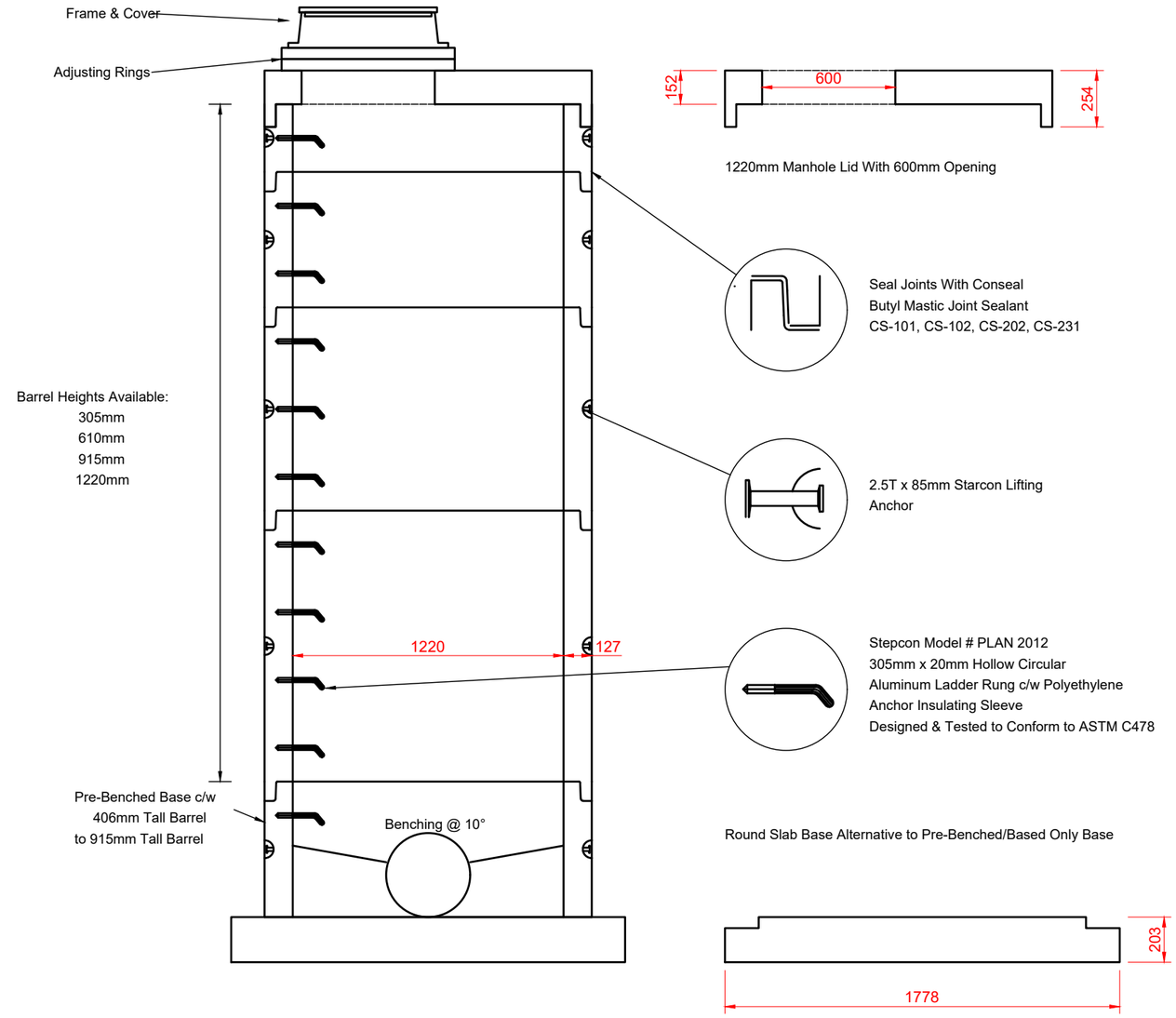
DRAWING NO.
MH1050L
SHEET
15 of 26

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



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Cranbrook BC V1C 6T3
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PRODUCT
Manhole & Catch Basin

DRAWING
1220mm Manhole

WEIGHT

DRAWING NO.
MH1220

DATE
11-20-2023

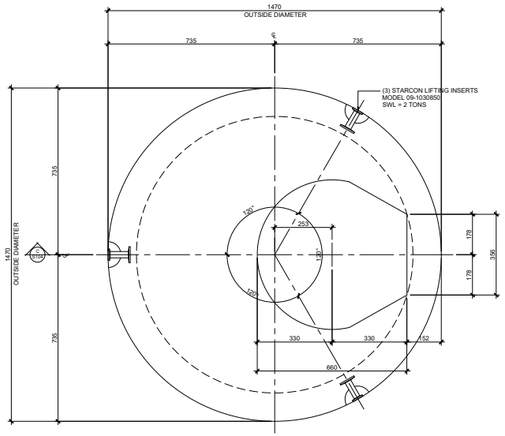
SHEET
10 of 22

UNITS / SCALE
mm / 1:25

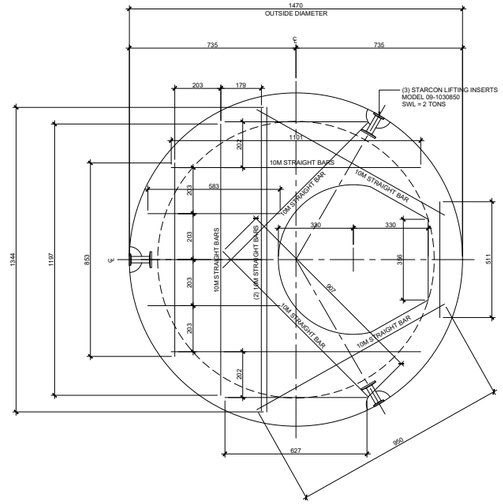
Request A Quote

DESIGN PARAMETERS

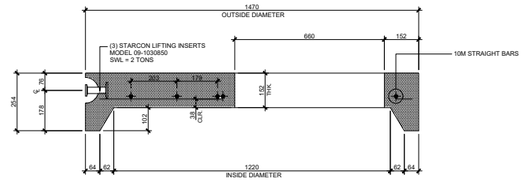
1) DESIGN METHODOLOGY - LSD
2) DESIGN ASSUMES MAXIMUM 600mm GRANULAR COVER
3) DESIGN ASSUMES HS-20 AXLE LOADING
4) SERVICE LIFE SHALL BE 75 YEARS



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.

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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 RECOMMENDS THE OWNER ENGAGES ALL PROFESSIONAL ASPECTS FOR THIS PROJECT FOR ALL APPLICABLE DISCIPLINES INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL AND GEOTECHNICAL PROFESSIONS.

THE PROFESSIONAL SEAL APPLIED TO THESE DRAWINGS APPLIES ONLY TO THE STRUCTURAL ASPECT OF THIS PROJECT. OTHER ELEMENTS SHOWN ON THIS DRAWING IS FOR REFERENCE ONLY AND IS SPECIFIED BY OTHERS AND IS NOT WITHIN THE SCOPE OF WORK OF BY McELHANNEY.

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 — 39 — SCIENTIST
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.
601 Patterson Street West
Cranbrook BC V1C 6T3
250-426-8162
info@trikonprecast.com
trikonprecast.com

PRODUCT
Manhole & Catch Basin
DRAWING
1220mm Manhole Lid

WEIGHT

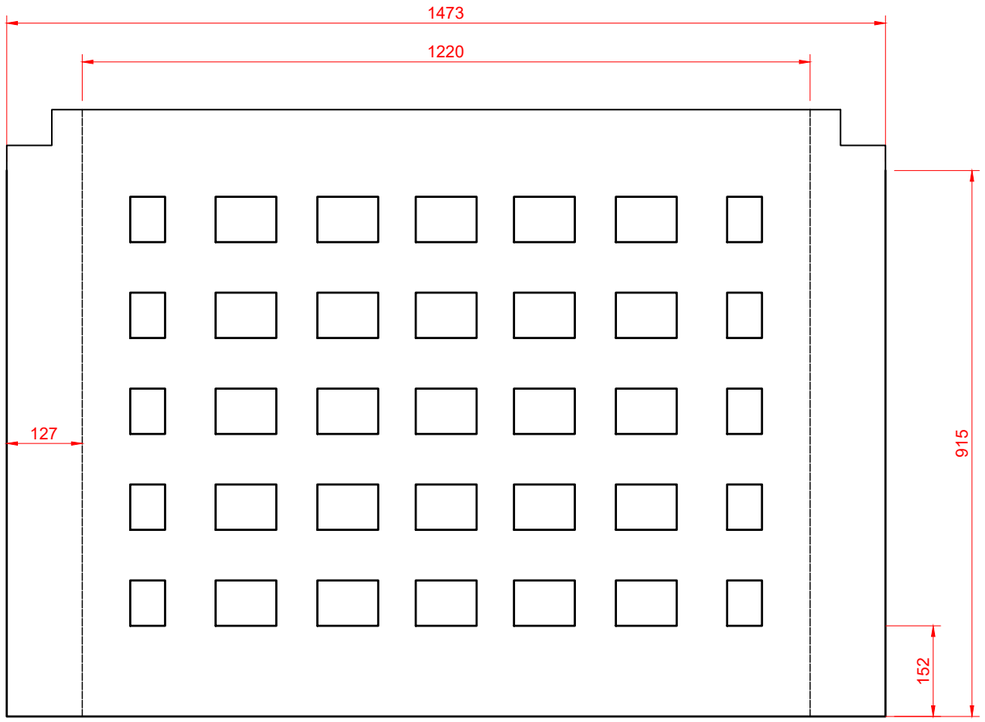
DRAWING NO.
MH1220L
SHEET
17 of 26

DATE
As per drawing
UNITS / SCALE
As per drawing

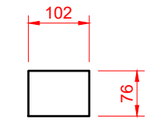
Request A Quote

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

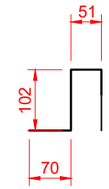
trikonprecast.com



Front View



Hole Detail



Joint Detail

Notes

58" [1473] OD, 48" [1220] ID, 5" [127] wall, 36" [915] high.
4" x 3" [102 x 76] holes, a total of 100 holes.
Conforms to ASTM C478.

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 Drywell

WEIGHT

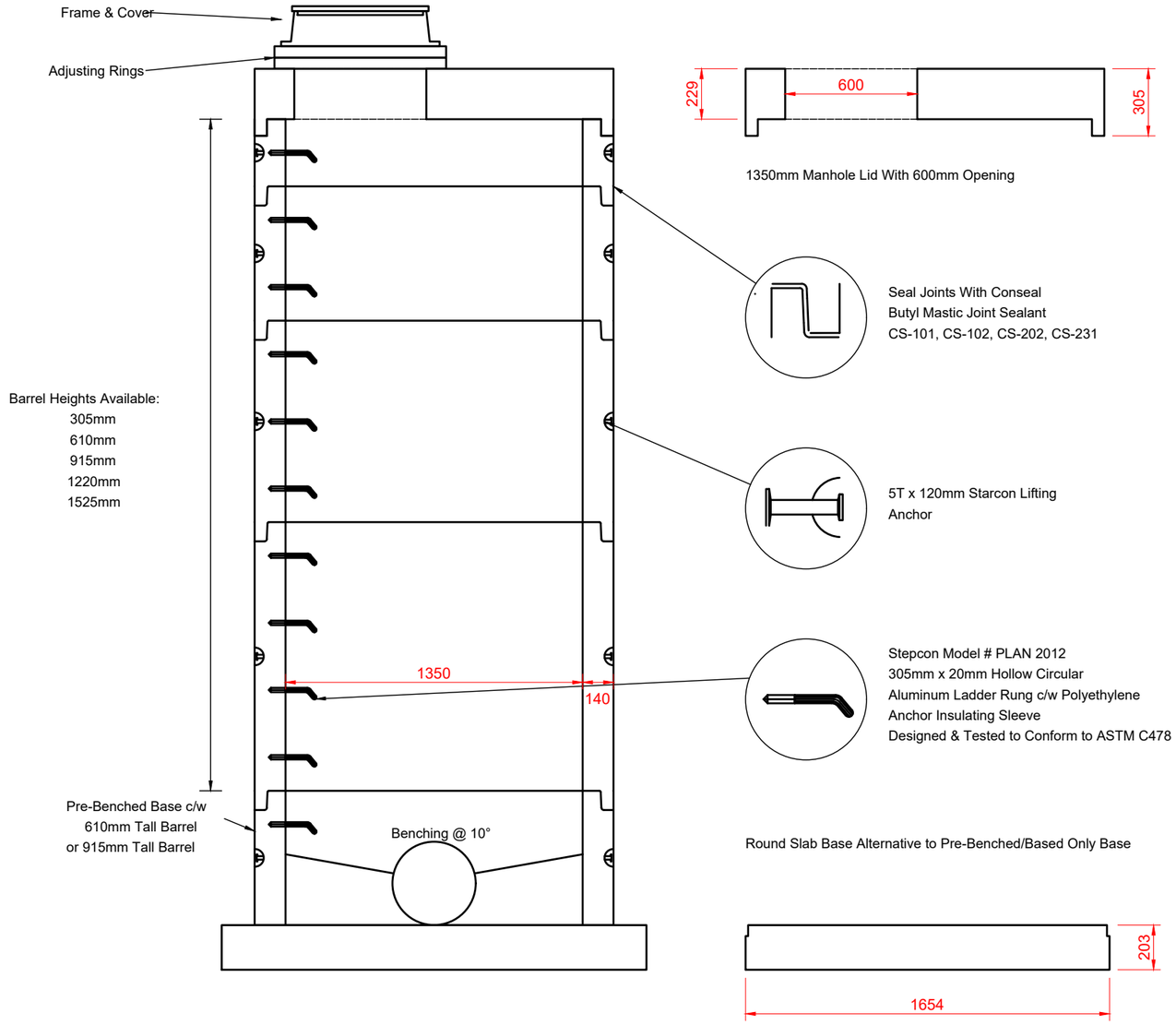
DRAWING NO.
MHDR1220X915

DATE
AUGUST 23, 2013

SHEET
12 of 22

UNITS / SCALE
mm / 1:10

Request A Quote



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
1350mm Manhole

WEIGHT

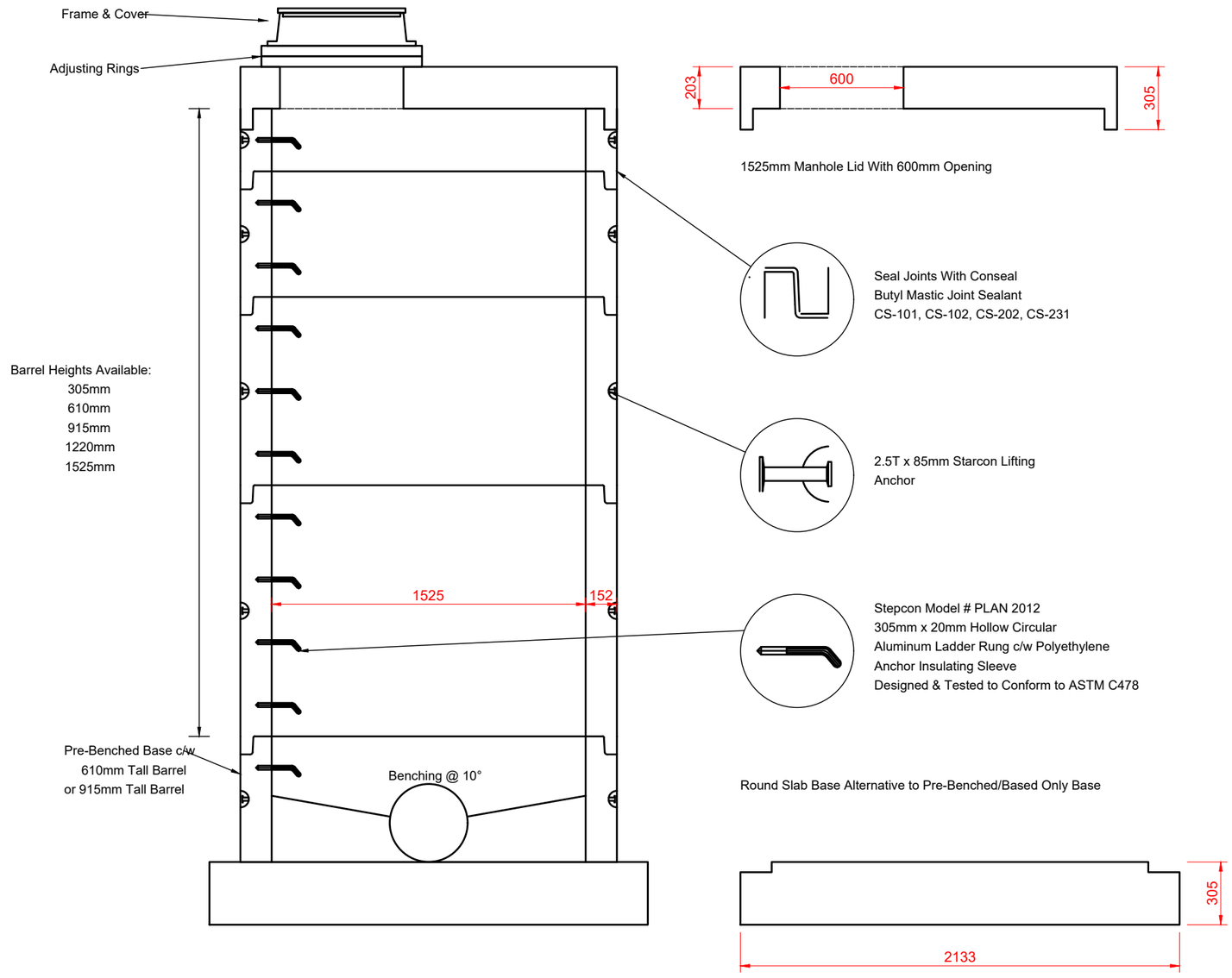
DRAWING NO.
MH1350

DATE
11-20-2023

SHEET
13 of 22

UNITS / SCALE
mm / 1:25

Request A Quote



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601 Patterson Street West
Cranbrook BC V1C 6T3
250-426-8162
info@trikonprecast.com
trikonprecast.com

PRODUCT
Manhole & Catch Basin

DRAWING
1525mm Manhole

WEIGHT

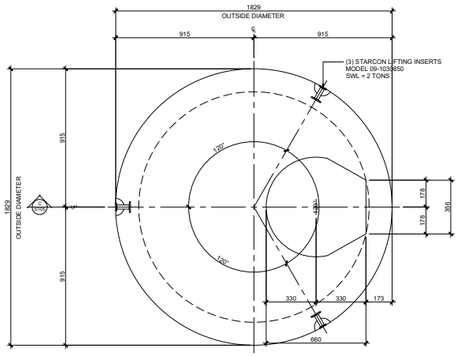
DRAWING NO.
MH1525

DATE
11-20-2023

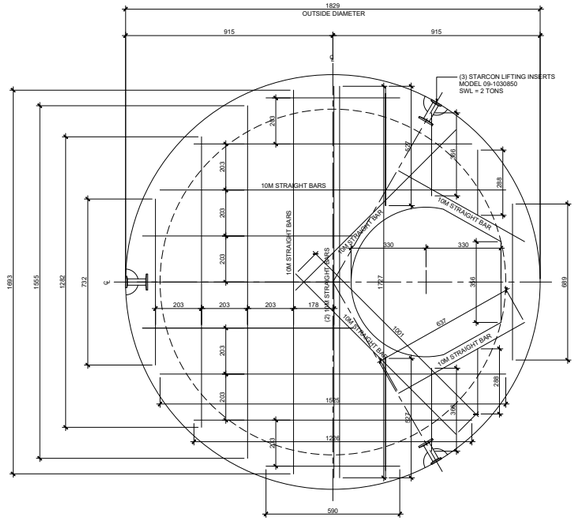
SHEET
14 of 22

UNITS / SCALE
mm / 1:25

Request A Quote



A S105 1525mmØ PRECAST REINFORCED CONCRETE LID - PLAN VIEW
SCALE: 1:15


1829
OUTSIDE DIAMETER
915
915
(3) STARCON LIFTING INSERTS
MODEL 09-1030650
SWL = 2 TONS
10M STRAIGHT BARS
10M STRAIGHT BARS
10M STRAIGHT BARS
10M STRAIGHT BARS
10M STRAIGHT BARS
10M STRAIGHT BARS
1693
1555
1238
712
203
203
203
203
203
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1727
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1067
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632
1067
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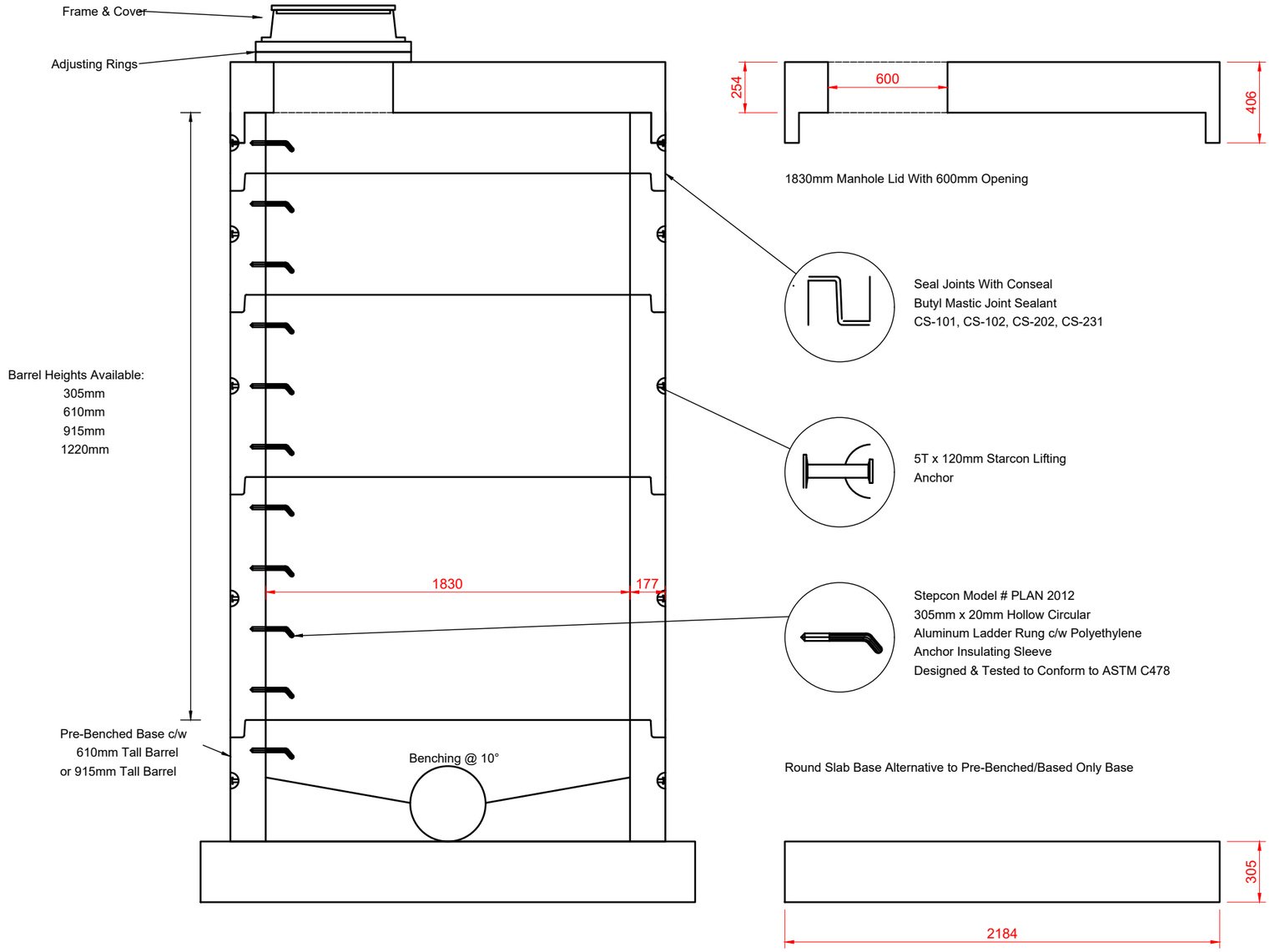
1067



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
1830mm Manhole

WEIGHT

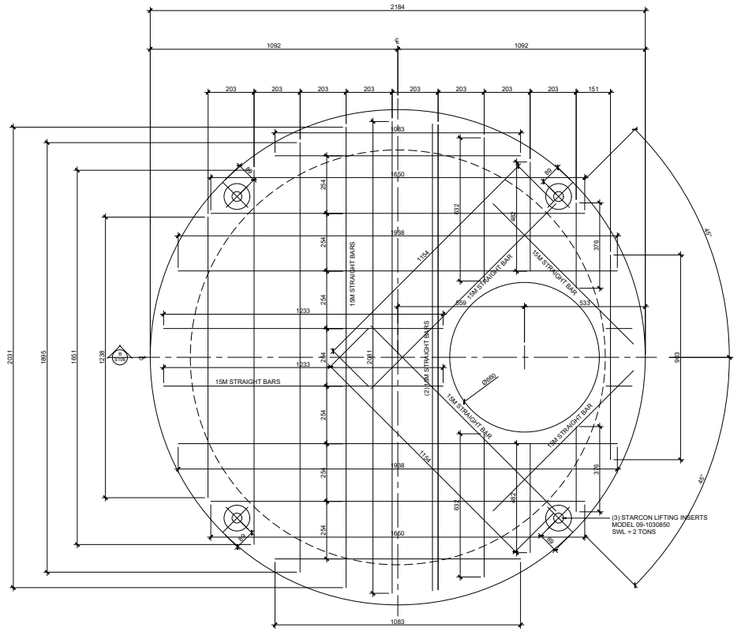
DRAWING NO.
MH1830

DATE
11-20-2023

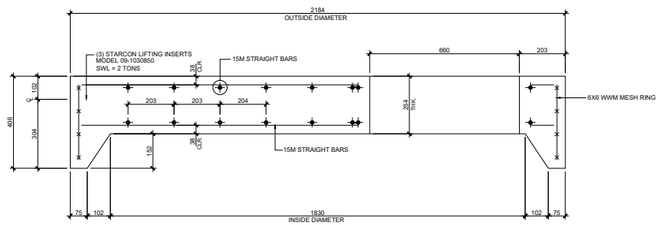
SHEET
16 of 22

UNITS / SCALE
mm / 1:25

Request A Quote



A S106 1830mmØ PRECAST REINFORCED CONCRETE LID - REINFORCING LAYOUT
SCALE: 1:10



B S106 1830mmØ PRECAST REINFORCED CONCRETE LID - SECTION
SCALE: 1:10

STRUCTURAL SPECIFICATIONS

GENERAL

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CONCRETE

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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.
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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 B. R. MASON 39987
February 1, 2021
Approved Sealed

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

PRECAST REINFORCED CONCRETE MANHOLE LIDS
1830mmØ LID
REINFORCING LAYOUT AND SECTION

Drawing No. S106
Project Number 2441-00705-00
Rev. 1

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TRI KON Precast Concrete Products

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

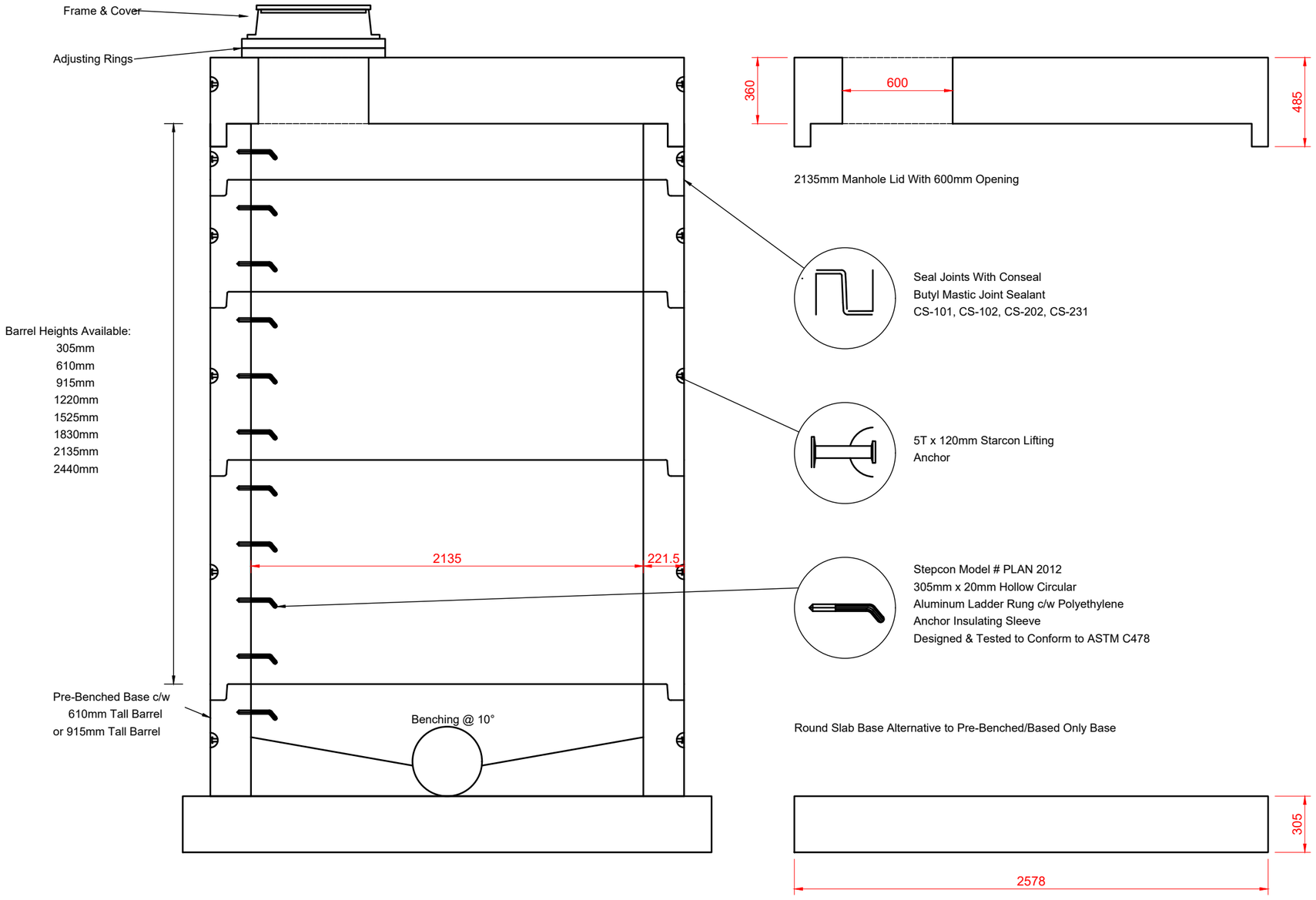
PRODUCT
Manhole & Catch Basin
DRAWING
1830mm Manhole Lid

WEIGHT

DRAWING NO.
MH1830L
SHEET
23 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



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
2135mm Manhole

WEIGHT

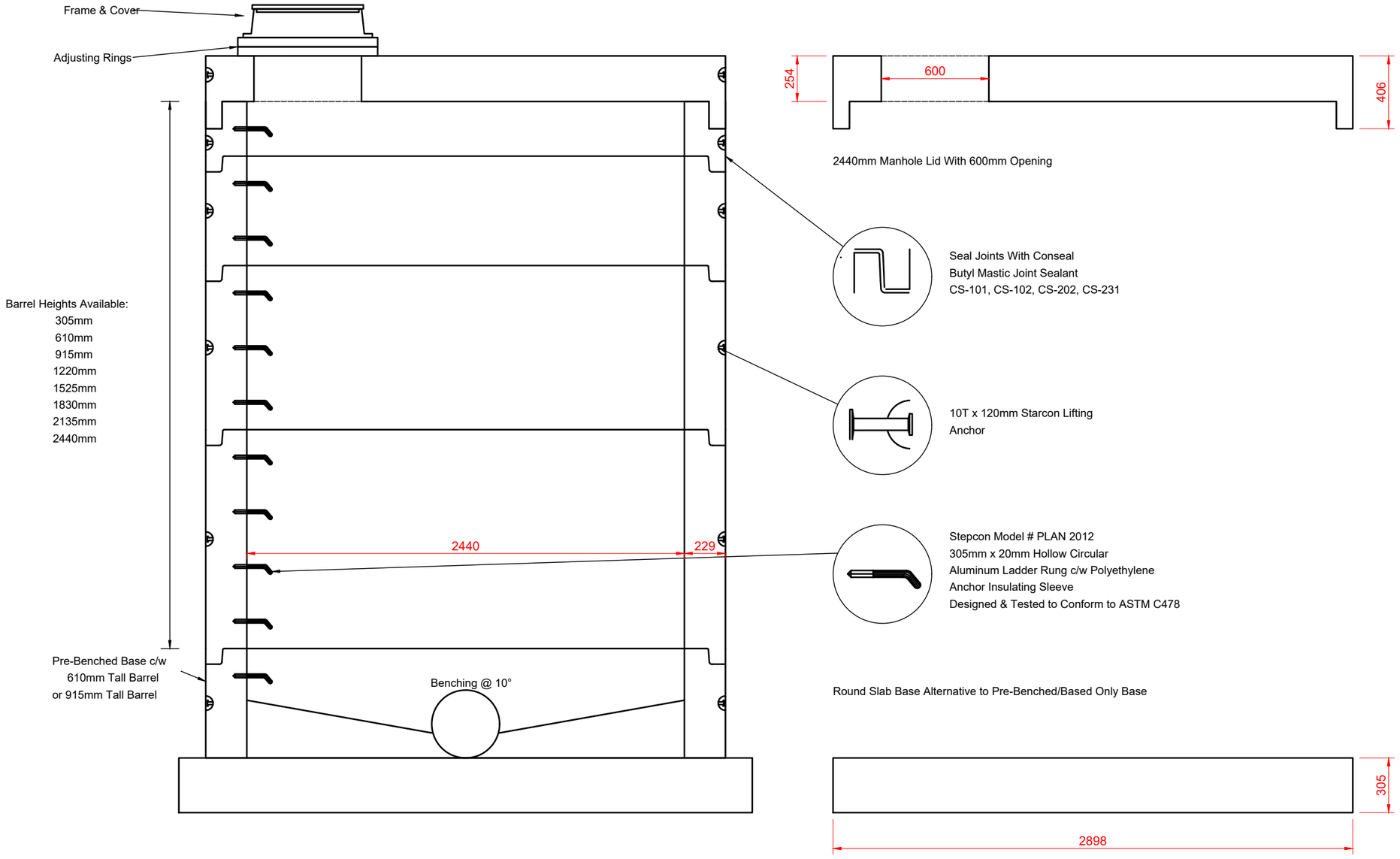
DRAWING NO.
MH2135

DATE
11-20-2023

SHEET
18 of 22

UNITS / SCALE
mm / 1:25

Request A Quote



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
2440mm Manhole

WEIGHT

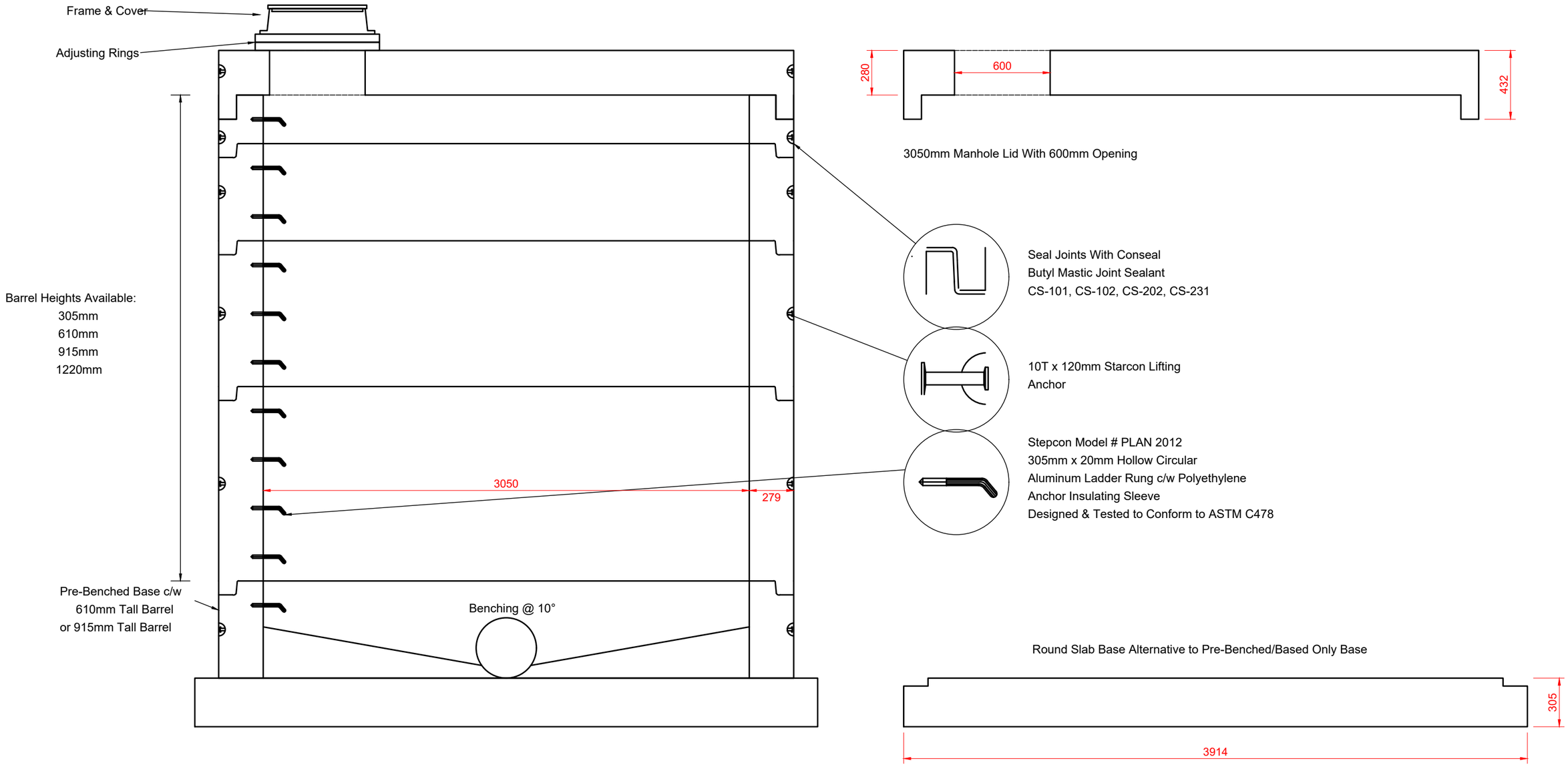
DRAWING NO.
MH2440

DATE
11-20-2023

SHEET
20 of 22

UNITS / SCALE
mm / 1:25

Request A Quote



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
3050mm Manhole

WEIGHT

DRAWING NO.
MH3050

DATE
11-20-2023

SHEET
21 of 22

UNITS / SCALE
mm / 1:25

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