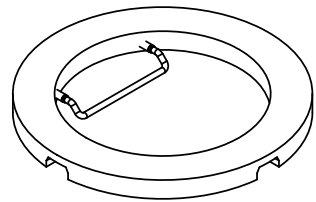
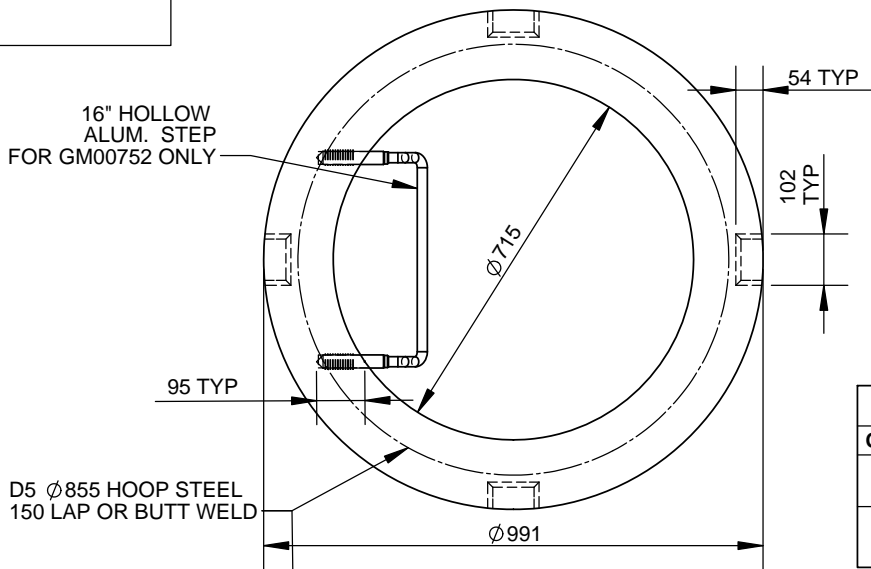


**STENCIL**  
 CCP-OAKVILLE  
 (HEIGHT)  
 (DATE OF MFG)

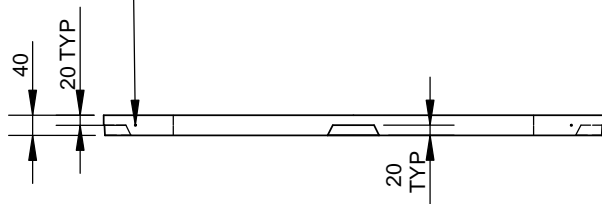


**ISOMETRIC VIEW**

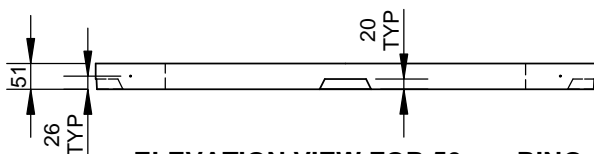


**PLAN VIEW**

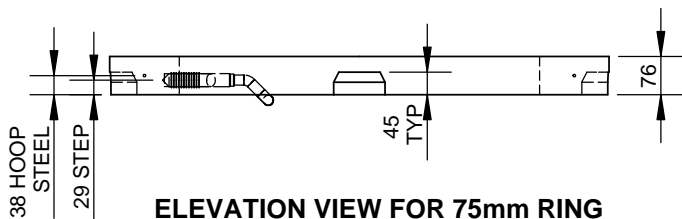
MATERIAL LIST			
QTY	TYPE	DESCRIPTION	REMARK
1	E	16" HOLLOW ALUMIN. STEP	FOR 75mm ONLY
1	E	HOOP STEEL RD. 855 X D5	



**ELEVATION VIEW FOR 40mm RING**



**ELEVATION VIEW FOR 50mm RING**



**ELEVATION VIEW FOR 75mm RING**

PRODUCT VARIABLES				
PART ID	BUNDLE QTY	UNIT HEIGHT	MASS (kg)	STEP QTY
GM00401	1	40	34	0
GM00501	1	51	43	0
GM00751	1	76	64	0
GM00752	1	76	64	1
GMB00401	12	40	413	0
GMB00501	12	51	516	0
GMB00751	8	76	512	0
GMB00752	8	76	512	8

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm  
 DRAWINGS ARE NOT TO SCALE  
 ALL VIEW AS POURED UNLESS SPECIFIED  
 CDW TO ASTM A1064 Fy=485 MPa  
 CDW Fy = 485 MPa  
 SHIPPED IN BUNDLE

MIN. CONC STRENGTH 30 MPa  
 TOLERANCES TO CSA A257  
 DRY CAST MIX  
 CEMENT TYPE HS<sub>e</sub>  
 \*H=40 NOT ON OPSD LIST

**CON CAST PIPE (CCP) STANDARD DRAWING**

STD. OPSD 704.010 NOV 2014 REV3 PART GM00XXX

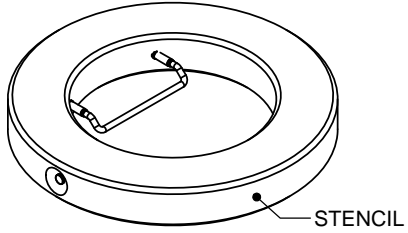
TITLE  
**MANHOLE GRADE RING**  
 HEIGHT = 40mm\*, 50mm, 75mm  
 75mm WITH STEP

REV.	DESCRIPTION	ENG.	DATE
3	CDW SPECIFICATION REFERENCED	MS	25APR2016
2	ADDED GM00401/GMB00401	SM	19/OCT/15
1	UPDATE MASS	KE	15/SEP/15

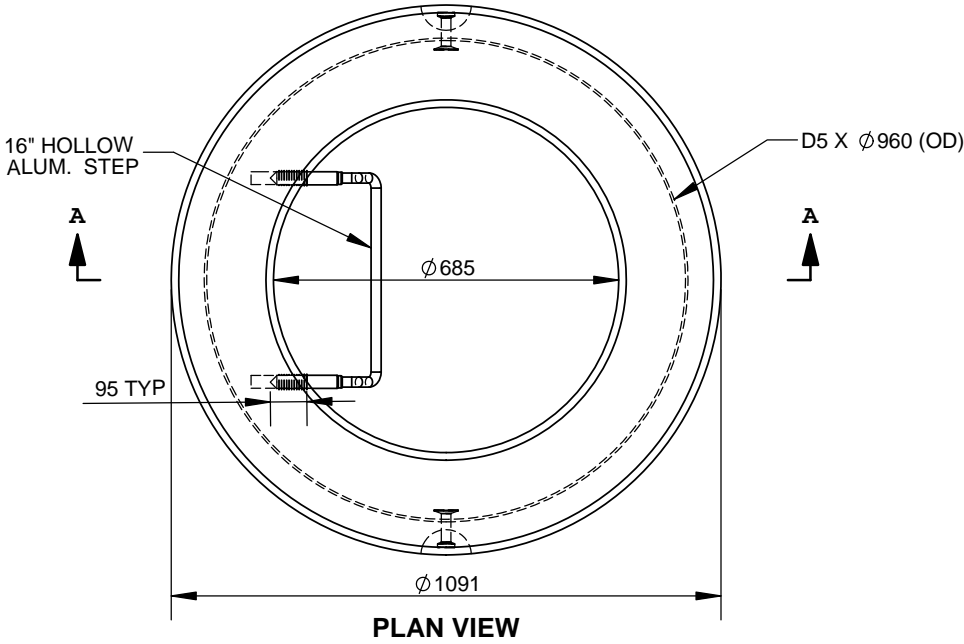
DRAWN BY	CHECKED BY	DATE	FILE	PAGE
SW	BA	29/FEB/12	MH RING	1 OF 1

**STENCIL**  
 CCP-OAKVILLE  
 CSA A257.4 /  
 OPSD 704.010  
 685 X 152  
 TYPE HSe  
 DATE OF MFG  
 213 KG

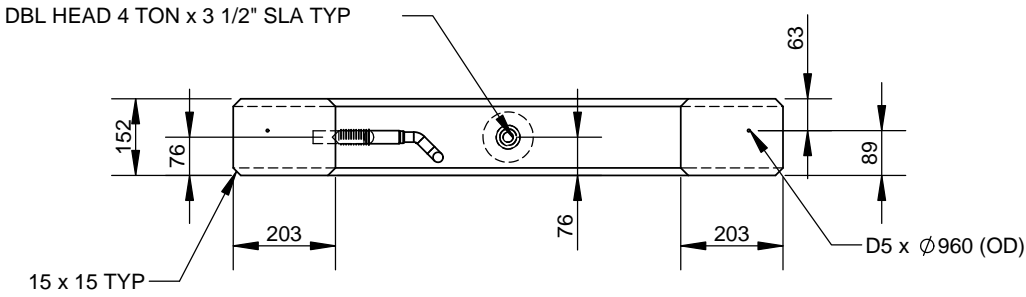
MATERIAL LIST		
QTY	TYPE	DESCRIPTION
2	E	4TON x 3 1/2" SLA DBL HEAD
1	E	16" HOLLOW ALUM. STEP
1	E	D5 X Ø960 (RD) HOOP STL



**ISOMETRIC VIEW**



**PLAN VIEW**



**SECTION A**

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm  
 DRAWINGS ARE NOT TO SCALE  
 ALL VIEW AS POURED UNLESS SPECIFIED  
 CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa  
 TOLERANCES TO CSA A257.4  
 DRY CAST  
 CEMENT TYPE HSe  
 MASS = 213 kg

**CON CAST PIPE (CCP) STANDARD DRAWING**

STD. OPSD 704.010	NOV 2014 REV3	PART GM01502
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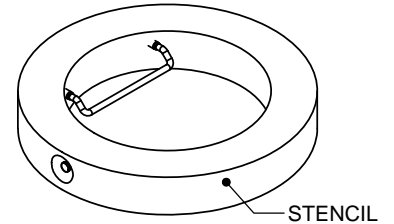
TITLE  
**MANHOLE GRADE RING  
 HEIGHT = 152mm  
 WITH STEP**

1	CDW SPECIFICATION REFERENCED	MS	25APR2016
0	INITIAL RELEASE FOR 152 HEIGHT ONLY	SW	11/AUG/15
REV.	DESCRIPTION	ENG.	DATE

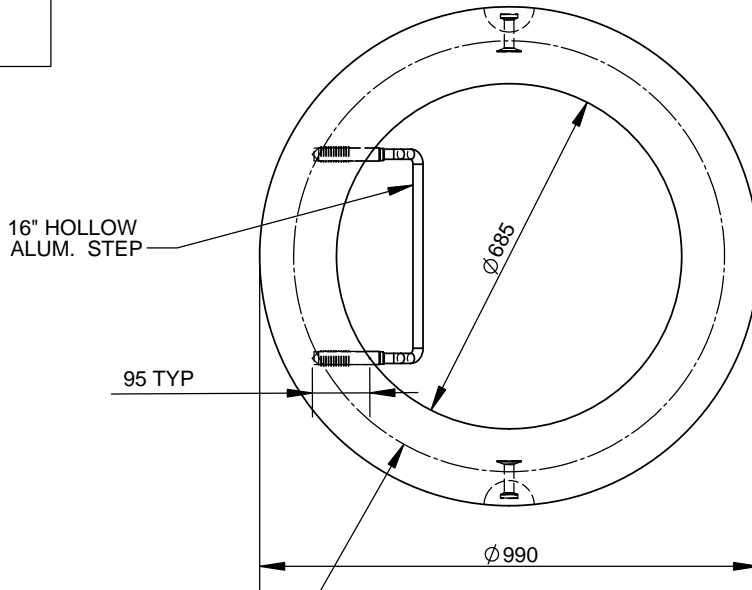
DRAWN BY KE	CHECKED BY SW	DATE 11/AUG/15	FILE MH RING 305	PAGE 1 OF 1
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**STENCIL**

CCP-GUELPH  
152 W/ STEP  
(DATE OF MFG)  
TYPE HSe  
151 kg

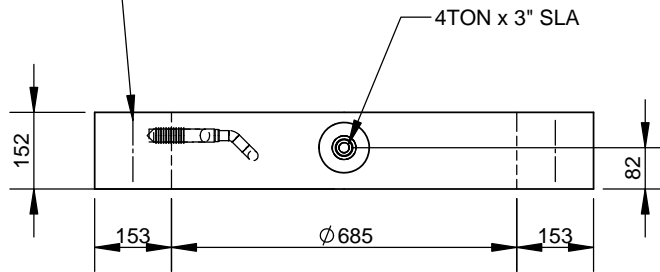


**ISOMETRIC VIEW**



**PLAN VIEW**

3 X 8 6 / 8 WWF  
PLACE CENTRE OF WALL  
LAP 150 MIN OR BUTT WELD  
ALT D5  $\phi 820 \pm 15$



**ELEVATION VIEW**

**MATERIAL LIST**

QTY	TYPE	DESCRIPTION
2	E	4TON x 3" SLA
1	E	16" HOLLOW ALUM. STEP
1	E	3X8 6/8 WWF $\phi 820 \pm 15$ X 125

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm  
DRAWINGS ARE NOT TO SCALE  
ALL VIEW AS POURED UNLESS SPECIFIED  
WWF TO ASTM 1064  
WWF  $F_y = 485\text{MPa}$  (Deformed)

MIN. CONC STRENGTH 30 MPa  
TOLERANCES TO CSA A257.4  
WET CAST MIX  
CEMENT TYPE HSe  
MASS = 151kg

**CON CAST PIPE (CCP) STANDARD DRAWING**

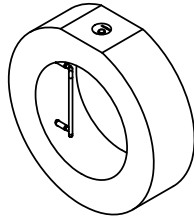
STD. OPSD 704.010 NOV 2014 REV3 PART GM01502-1

TITLE  
**MANHOLE GRADE RING  
HEIGHT = 152mm  
WITH STEP**

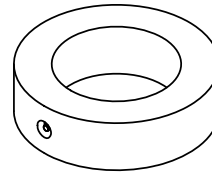
3	REVISED AS PER LATEST STANDARD	MS	25APR2016
2	OD ERROR CORRECTED	KE	9/APR/13
1	ALT. REINFORCEMENT FOR OCP	KE	1/AUG/12
REV.	DESCRIPTION	ENG.	DATE

DRAWN BY KE	CHECKED BY SW	DATE 8/AUG/12	FILE MH RING WC	PAGE 1 OF 1
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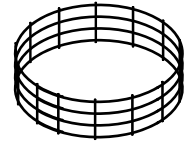
STENCIL  
 CCP-GUELPH  
 685 X 305  
 (DATE OF MFG)  
 A257.4  
 TYPE HSe  
 430 kg



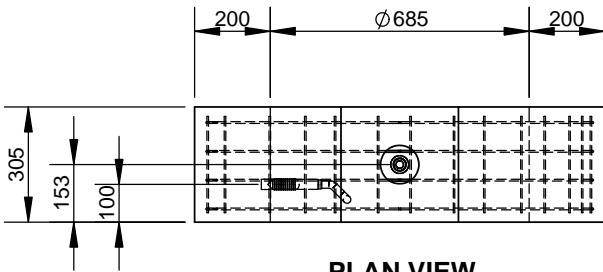
ISOMETRIC VIEW  
 NEW HAMPTON FORM  
 (AS POUR)



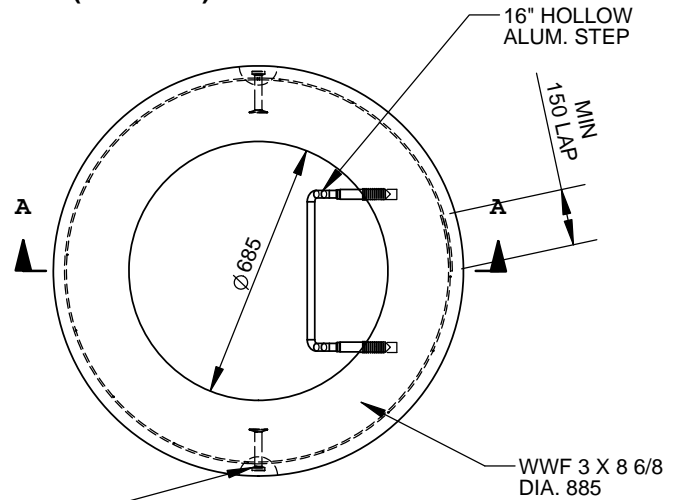
ISOMETRIC VIEW  
 TRADITIONAL FORM  
 (AS POUR)



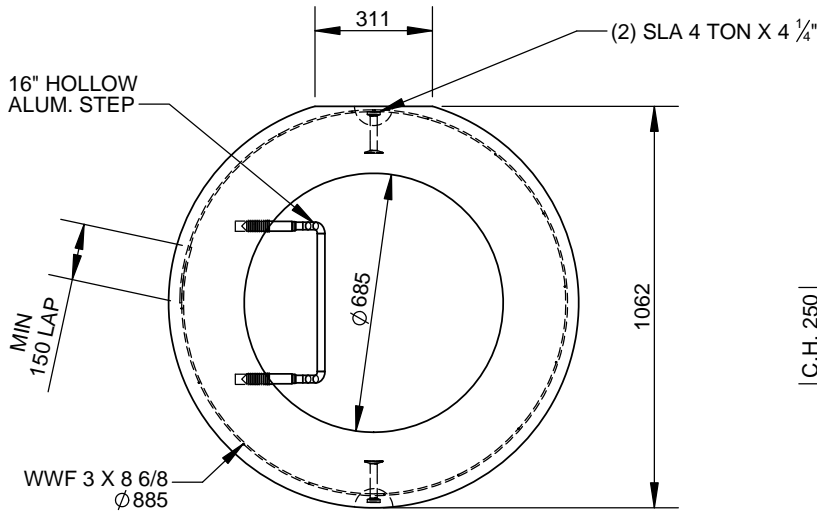
ISOMETRIC VIEW  
 CAGE



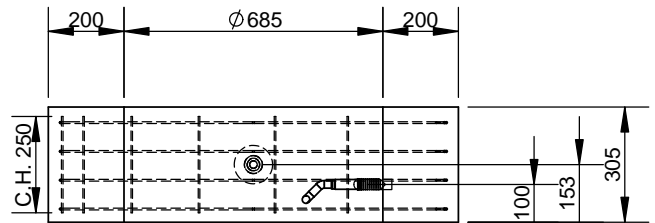
PLAN VIEW  
 NEW HAMPTON FORM  
 (AS POUR)



PLAN VIEW  
 TRADITIONAL FORM  
 (AS POUR)



ELEVATION VIEW  
 NEW HAMPTON FORM  
 (AS POUR)



SECTION A  
 TRADITIONAL FORM  
 (AS POUR)

MATERIAL LIST		
QTY	TYPE	DESCRIPTION
1	E	16" HOLLOW ALUMINUM STEP
2	E	4 TON X 4 1/4" SLA
1	E	3X8 6/8 WWF $\phi 885 \pm 15$ X 250

ALL DIMENSIONS ARE IN mm  
 DRAWINGS ARE NOT TO SCALE  
 WWF SHEETS TO ASTM A1064  
 WWF Fy = 485MPa (Deformed) 450MPa (Smooth)

MIN. CONC STRENGTH 35 MPa  
 CLEAR COVER = 25 mm  $\pm$  5 mm  
 TOLERANCES TO CSA A257.4  
 APPROX. MASS 430 kg  
 STRIP CONC. STRENGTH 20 MPa  
 AIR ENTRAINMENT 5% TO 8%  
 CEMENT TYPE HSe

CON CAST PIPE (CCP) STANDARD DRAWING

STD. OPSD 704.010 NOV 2014 REV3 PART GM03002

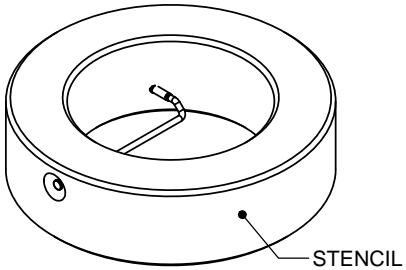
TITLE  
 305 MANHOLE GRADE RING  
 $\phi 685$

6	REVISED AS PER LATEST STANDARDS	MS	25APR2016
5	UPDATE SHEET FRMT / ADD GEOMETRY FOR NEW FORM	CW	05/APR/11
REV.	DESCRIPTION	ENG.	DATE

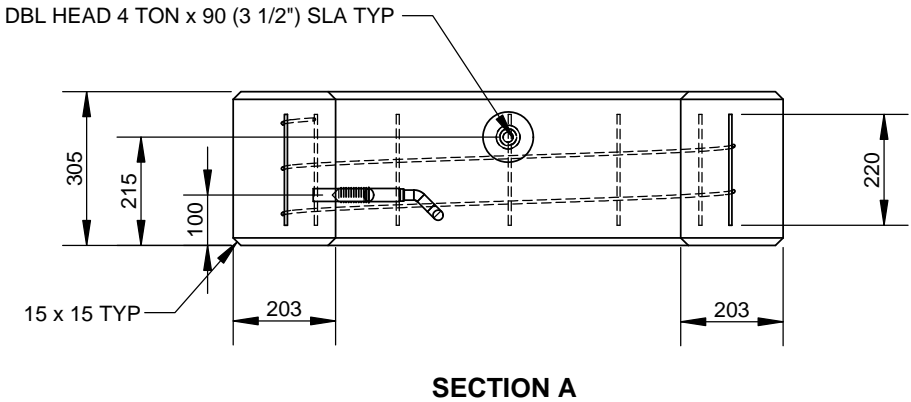
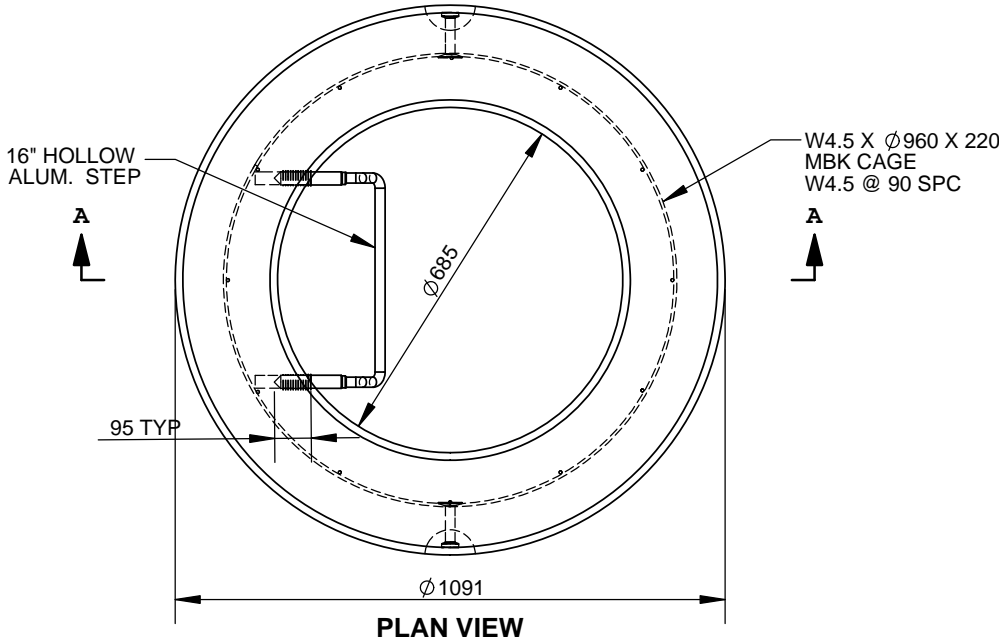
DRAWN BY CW	CHECKED BY SW	DATE 05/APR/11	FILE GM03002	PAGE 1 OF 1
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**STENCIL**  
 CCP-OAKVILLE  
 CSA A257.4 /  
 OPSD 704.010  
 685 X 305  
 TYPE HSe  
 DATE OF MFG  
 425 KG

MATERIALS LIST		
QTY.	TYPE	DESCRIPTION
1	E	16" HOLLOW ALUM. STEP
2	E	4TON x 90 (3 1/2") SLA DBL HEAD
1	E	W4.5 @ 90 X Ø960 X 220 MBK CAGE



**ISOMETRIC VIEW**



ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm  
 DRAWINGS ARE NOT TO SCALE  
 ALL VIEW AS POURED UNLESS SPECIFIED  
 CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa  
 TOLERANCES TO CSA A257.4  
 DRY CAST  
 CEMENT TYPE HSe  
 MASS = 425 kg

**CON CAST PIPE (CCP) STANDARD DRAWING**

STD. OPSD 704.010 NOV 2014 REV3 PART GM03002K

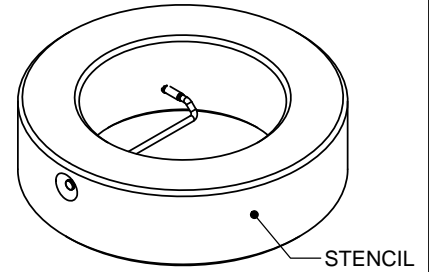
TITLE  
**MANHOLE GRADE RING  
 HEIGHT = 305mm  
 WITH STEP**

1	CDW SPECIFICATION REFERENCE	MS	25APR2016
0	INITIAL RELEASE FOR 305 HEIGHT ONLY	KE	11/AUG/15
REV.	DESCRIPTION	ENG.	DATE

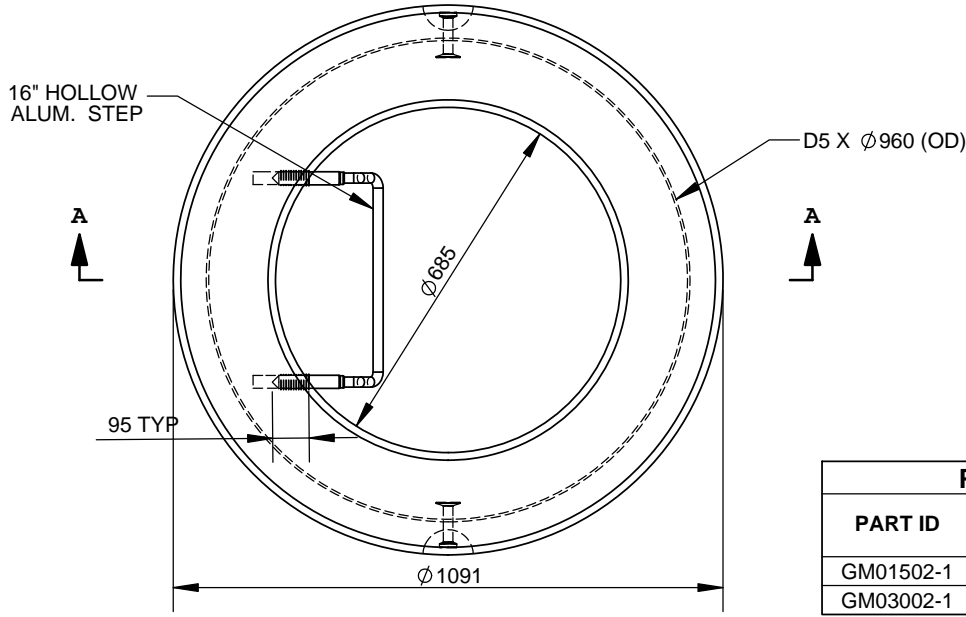
DRAWN BY KE	CHECKED BY SW	DATE 11/AUG/15	FILE MH RING 305	PAGE 1 OF 1
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**STENCIL**  
 CCP-OAKVILLE  
 CSA A257.4 /  
 OPSD 0704.010  
 685 X H  
 TYPE HSe  
 DATE OF MFG  
 (MASS) KG

QTY.	TYPE	DESCRIPTION
X	E	D5 X Ø960 (OD) HOOP STEEL (FOR 305)
1	E	16" HOLLOW ALUM. STEP
2	E	4TON x 3 1/2" SLA

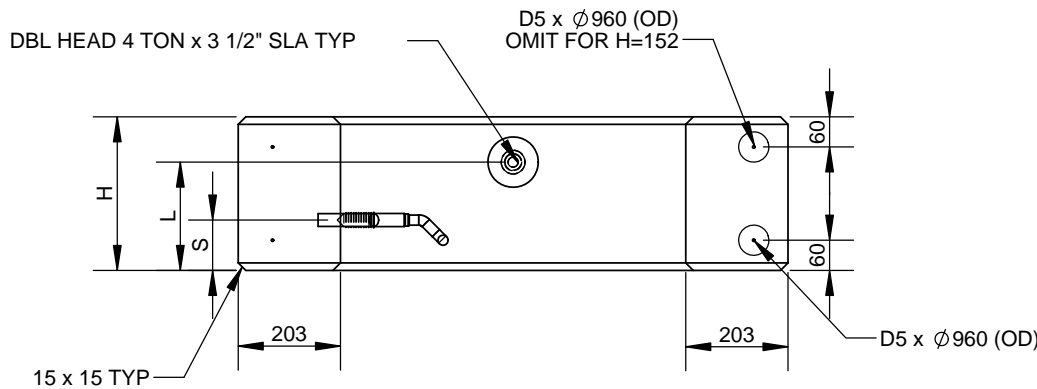


**ISOMETRIC VIEW**



**PLAN VIEW**

PART ID	VARIABLE DIMENSIONS				MASS (kg)
	H	S	L	X	
GM01502-1	152	76	89	1	213
GM03002-1	305	100	215	2	425



**SECTION A**

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm  
 DRAWINGS ARE NOT TO SCALE  
 ALL VIEW AS POURED UNLESS SPECIFIED  
 CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa  
 TOLERANCES TO CSA A257.4  
 DRY CAST  
 CEMENT TYPE HSe

**CON CAST PIPE (CCP) STANDARD DRAWING**

STD. OPSD 704.010	NOV 2014 REV3	PART GM0XXX2
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TITLE  
**MANHOLE GRADE RING  
 HEIGHT = 152, 305mm  
 WITH STEP**

3	CDW SPECIFICATION REFERENCED	MS	25APR2016
2	REMOVE GM01252-1	SM	29JUN2015
1	INITIAL RELEASE	MS	15JUNE2015
REV.	DESCRIPTION	ENG.	DATE

DRAWN BY SM	CHECKED BY SW	DATE 29JUN2015	FILE MH RING 305	PAGE 1 OF 1
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