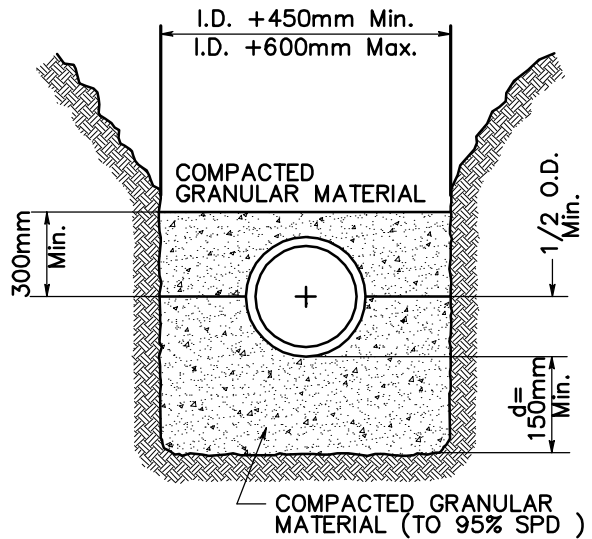
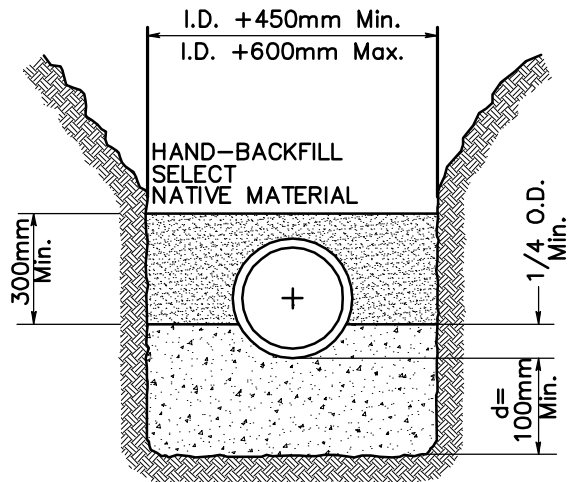


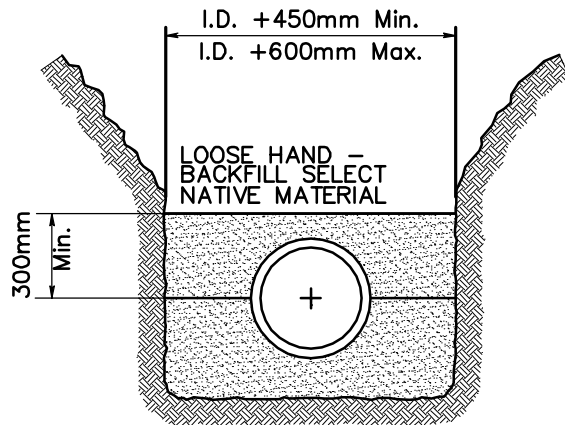
CLASS 'A'



CLASS 'B'
(WATER AND SEWER MAINS)



CLASS 'C'
P.V.C. SEWER SERVICE



CLASS 'D'
(WATER AND SEWER MAINS)

NOTE: ALL GRANULAR BEDDING AND BACKFILL MATERIALS TO BE COMPACTED TO 95% S.P.D.


NOTES:

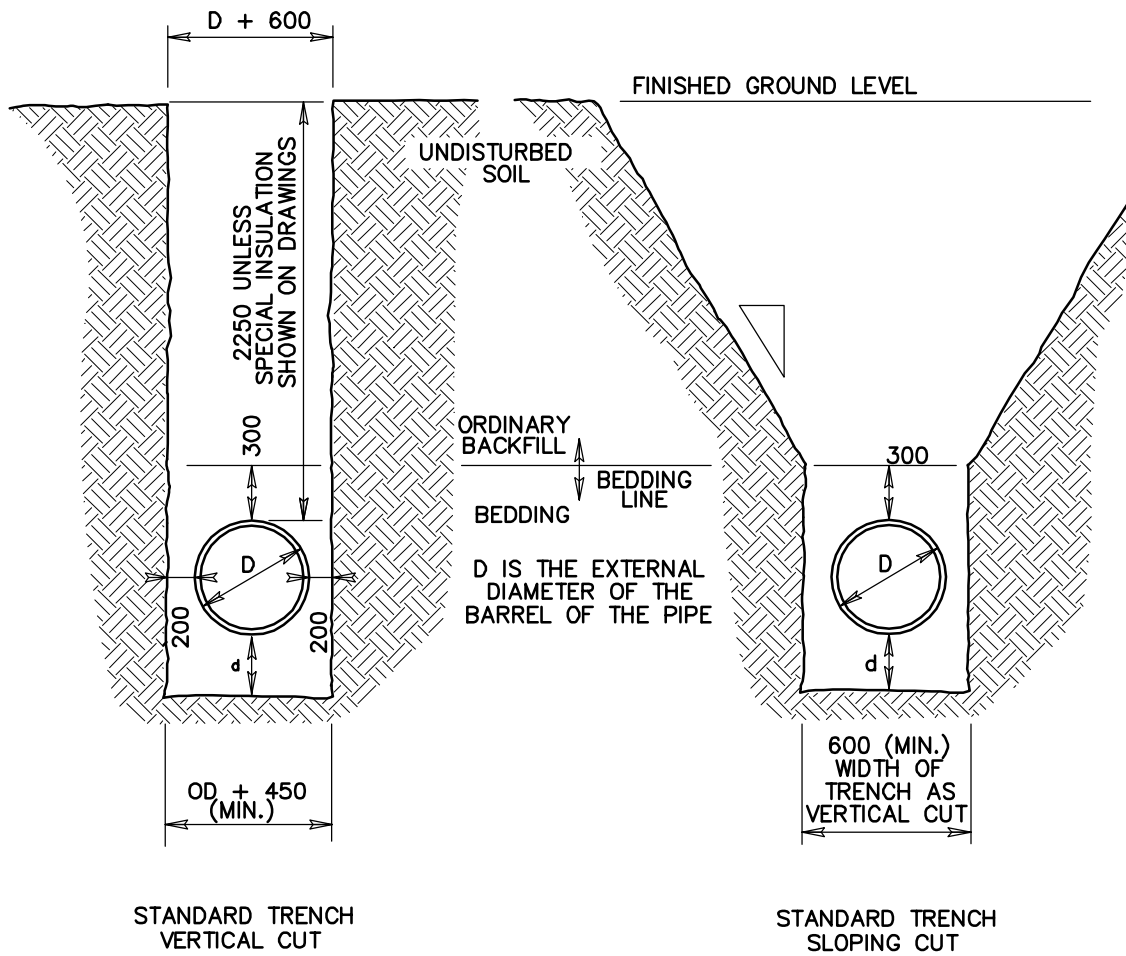
1. W=TRENCH WIDTH - O.D. + 450mm (MINIMUM)
 - 1000mm Max. FOR PIPES UP TO AND INCLUDING 400mm DIAMETER.
 - O.D. + 400mm Max. (ON EITHER SIDE {800mm TOTAL}) FOR PIPE DIAMETERS 450mm and ABOVE.
2. O.D. = OUTSIDE PIPE DIAMETER.
3. I.D. = INSIDE PIPE DIAMETER.
4. d = DEPTH OF BEDDING BELOW PIPE.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIAL MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	PIPE BEDDING DETAILS	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-01
Date: 2009-04-16	Drawn: TLB	Scale NTS		



(ALL EXCAVATIONS TO BE SLOPED OR SHORED AS PER OCCUPATIONAL HEALTH AND SAFETY STANDARDS)


- MAXIMUM TRENCH WIDTHS FOR SINGLE PIPES**
 1000mm – UP TO AND INCLUDING 400mm DIAMETER PIPE
 600mm + OD – >400mm DIAMETER PIPE
- DEPTH OF BEDDING BELOW PIPE BARREL (d)**
 75mm – EXTERNAL DIAMETER OF 700mm AND BELOW
 100mm – EXTERNAL DIAMETER GREATER THAN 700mm

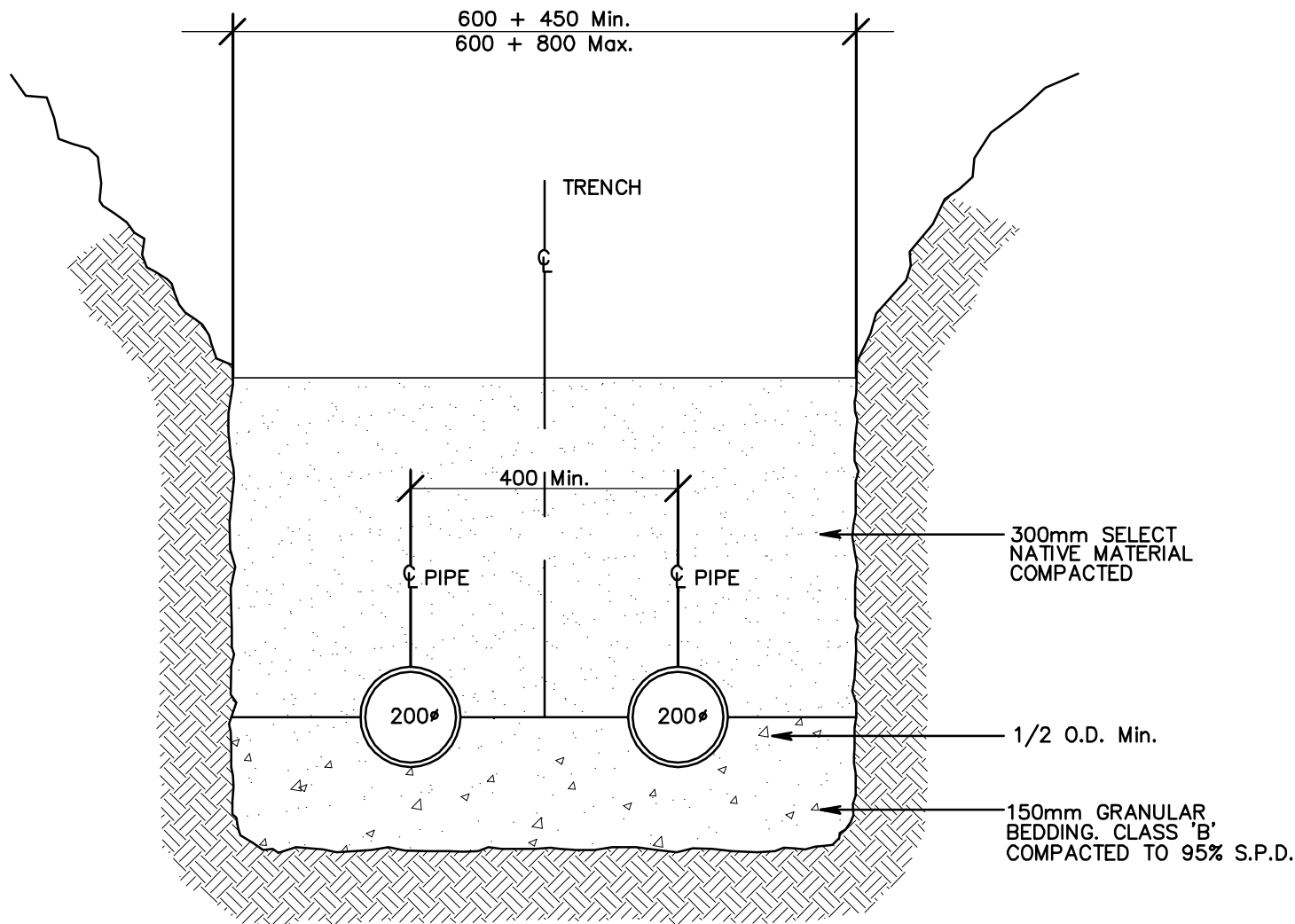
NOTE:
 1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STANDARD TRENCH DIMENSIONS FOR CIRCULAR PIPE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-02A
Date: 2009-04-16	Drawn:	Scale NTS		




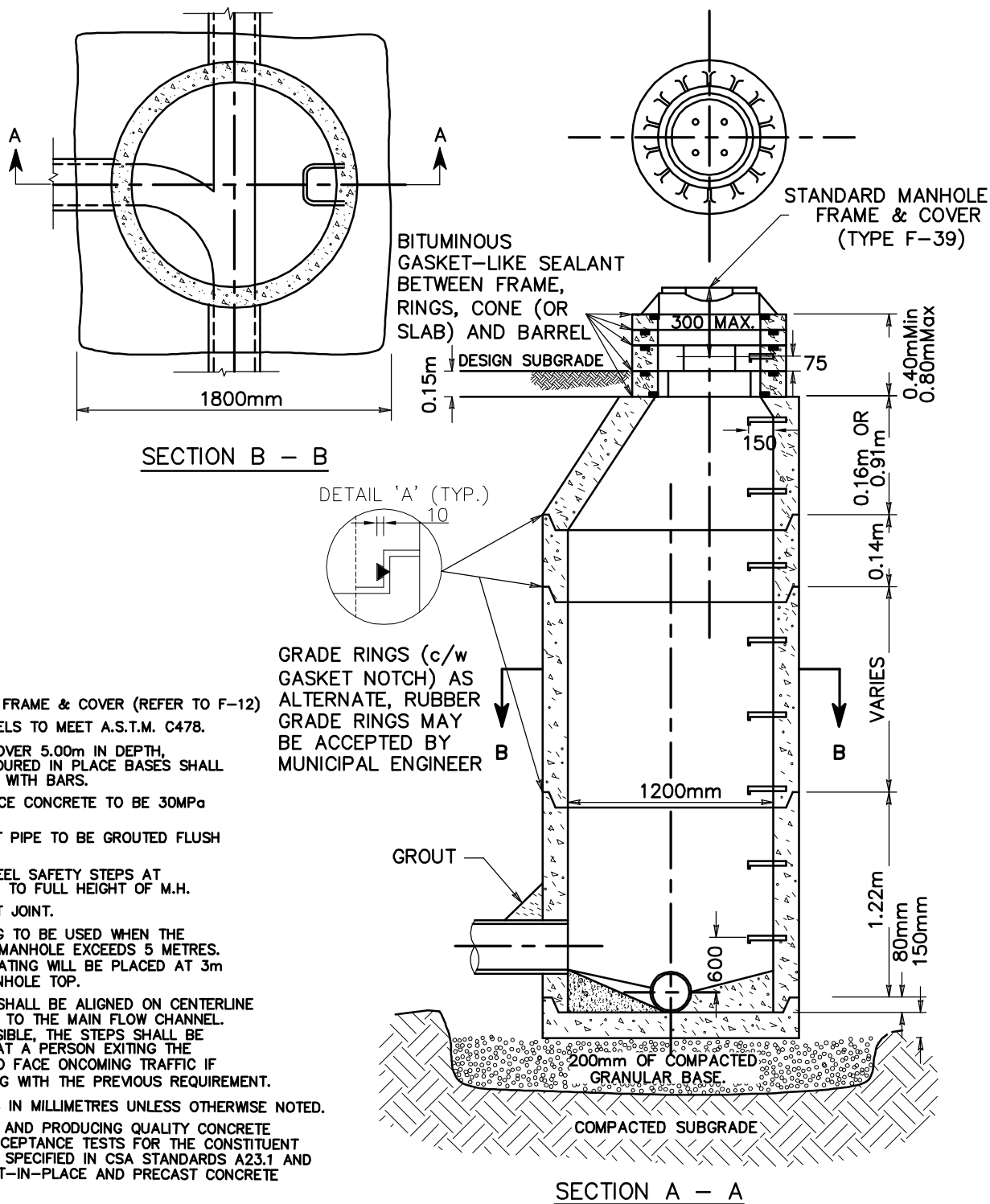
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	PIPE INSTALLED IN COMMON TRENCH	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-02B
Date: 2009-04-16	Drawn: JAD	Scale NTS		




NOTES:

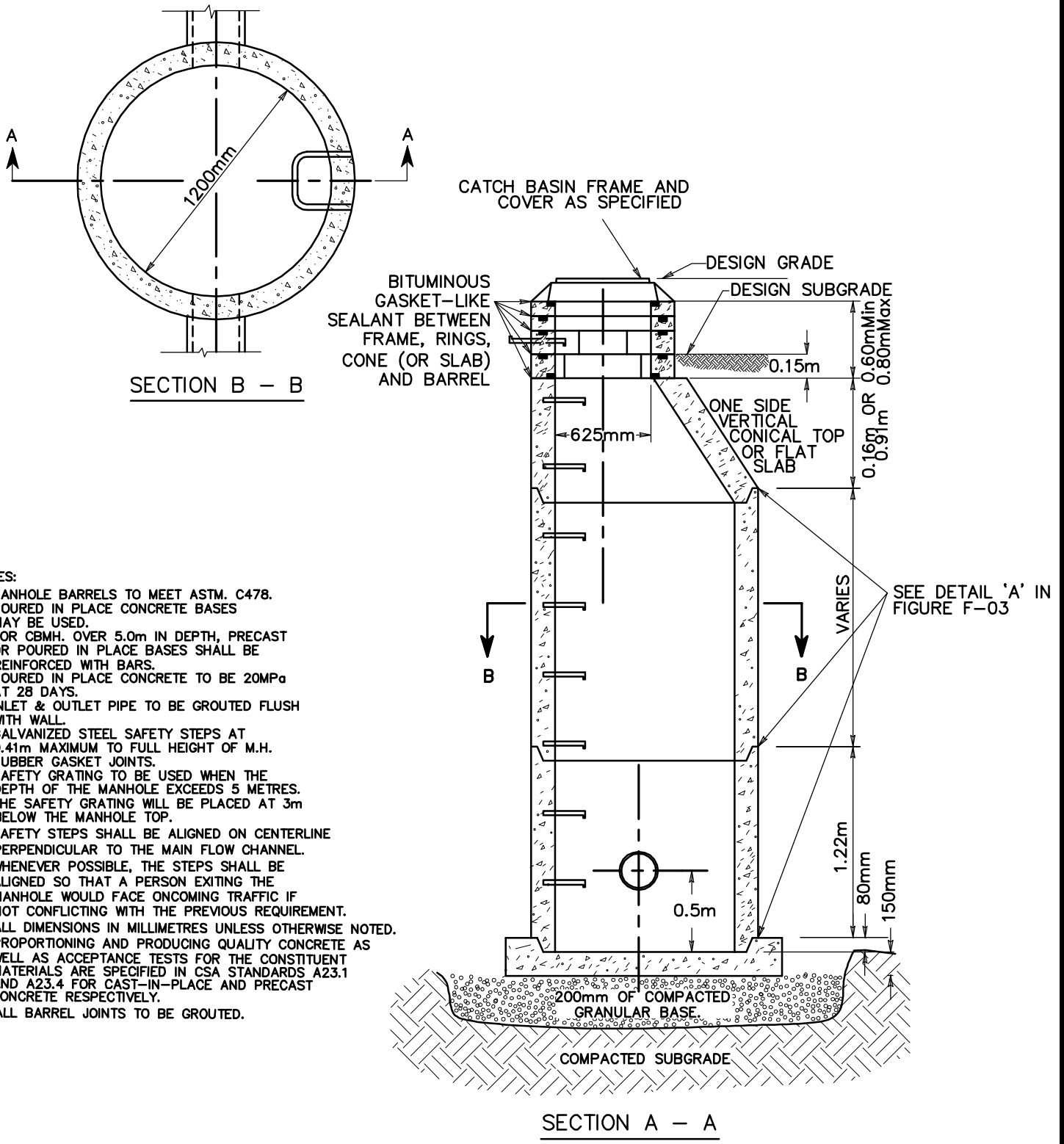
1. STANDARD M.H. FRAME & COVER (REFER TO F-12)
2. MANHOLE BARRELS TO MEET A.S.T.M. C478.
3. FORMANHOLES OVER 5.00m IN DEPTH, PRECAST OR Poured IN PLACE BASES SHALL BE REINFORCED WITH BARS.
4. Poured IN PLACE CONCRETE TO BE 30MPa AT 28 DAYS.
5. INLET & OUTLET PIPE TO BE GROUTED FLUSH WITH WALL.
6. GALVANIZED STEEL SAFETY STEPS AT 0.41m MAXIMUM TO FULL HEIGHT OF M.H.
7. RUBBER GASKET JOINT.
8. SAFETY GRATING TO BE USED WHEN THE DEPTH OF THE MANHOLE EXCEEDS 5 METRES. THE SAFETY GRATING WILL BE PLACED AT 3m BELOW THE MANHOLE TOP.
9. SAFETY STEPS SHALL BE ALIGNED ON CENTERLINE PERPENDICULAR TO THE MAIN FLOW CHANNEL. WHENEVER POSSIBLE, THE STEPS SHALL BE ALIGNED SO THAT A PERSON EXITING THE MANHOLE WOULD FACE ONCOMING TRAFFIC IF NOT CONFLICTING WITH THE PREVIOUS REQUIREMENT.
10. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
11. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
12. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STANDARD 1200mm MANHOLE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-03
Date: 2009-12-22	Drawn:	Scale NTS		



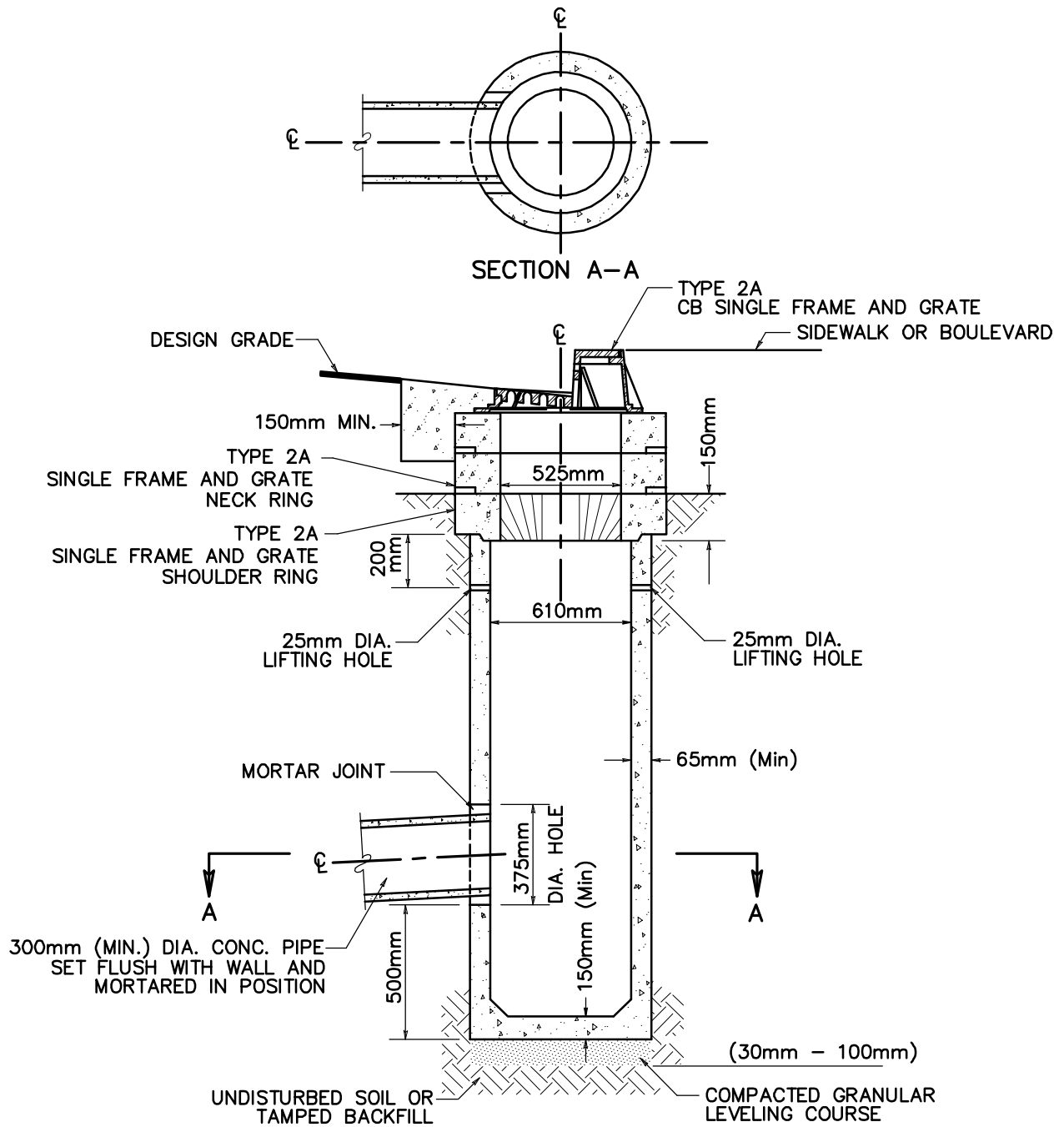
- NOTES:
1. MANHOLE BARRELS TO MEET ASTM. C478.
 2. POURED IN PLACE CONCRETE BASES MAY BE USED.
 3. FOR CBMH. OVER 5.0m IN DEPTH, PRECAST OR POURED IN PLACE BASES SHALL BE REINFORCED WITH BARS.
 4. POURED IN PLACE CONCRETE TO BE 20MPa AT 28 DAYS.
 5. INLET & OUTLET PIPE TO BE GROUTED FLUSH WITH WALL.
 6. GALVANIZED STEEL SAFETY STEPS AT 0.41m MAXIMUM TO FULL HEIGHT OF M.H.
 7. RUBBER GASKET JOINTS.
 8. SAFETY GRATING TO BE USED WHEN THE DEPTH OF THE MANHOLE EXCEEDS 5 METRES. THE SAFETY GRATING WILL BE PLACED AT 3m BELOW THE MANHOLE TOP.
 9. SAFETY STEPS SHALL BE ALIGNED ON CENTERLINE PERPENDICULAR TO THE MAIN FLOW CHANNEL. WHENEVER POSSIBLE, THE STEPS SHALL BE ALIGNED SO THAT A PERSON EXITING THE MANHOLE WOULD FACE ONCOMING TRAFFIC IF NOT CONFLICTING WITH THE PREVIOUS REQUIREMENT.
 10. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 11. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
 12. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STANDARD 1200mm C.B. MANHOLE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-04
Date: 2009-04-16	Drawn:	Scale NTS		




NOTES:

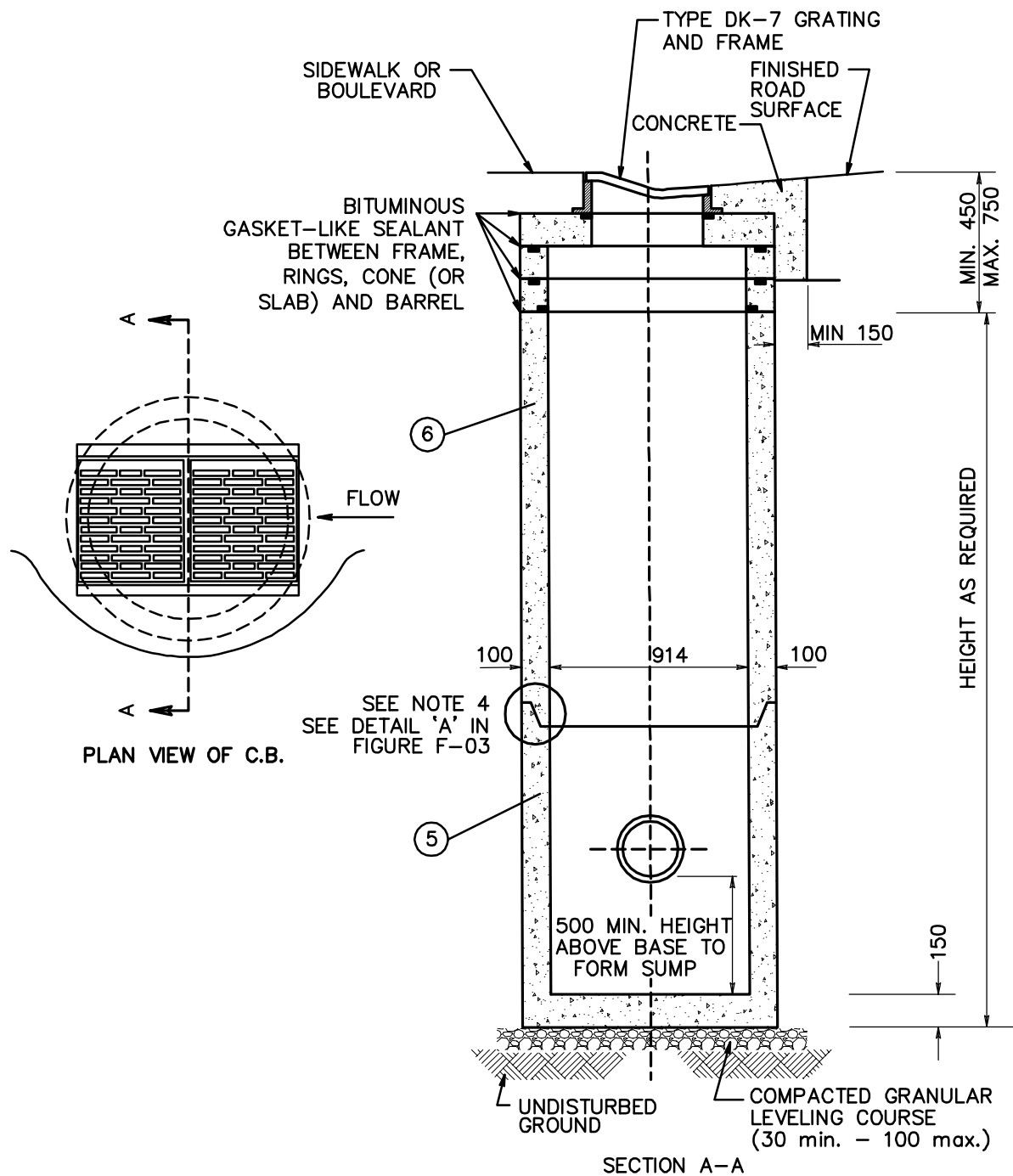
1. RUBBER GASKET, KENT SEAL OR EQUIVALENT TO BE INSTALLED BETWEEN BARREL, ALL SHOULDER AND NECK RINGS AND CATCH BASIN FRAME.
2. ALL ROUGH JOINTS SHALL BE POINTED WITH MORTAR TO ENSURE SMOOTHNESS.
3. ALL CATCH BASIN COMPONENTS TO BE IN ACCORDANCE WITH ASTM C478.
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
5. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>PRECAST 610mm\varnothing CATCH BASIN</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-05
Date: 2009-04-16	Drawn:	Scale NTS		



NOTES:

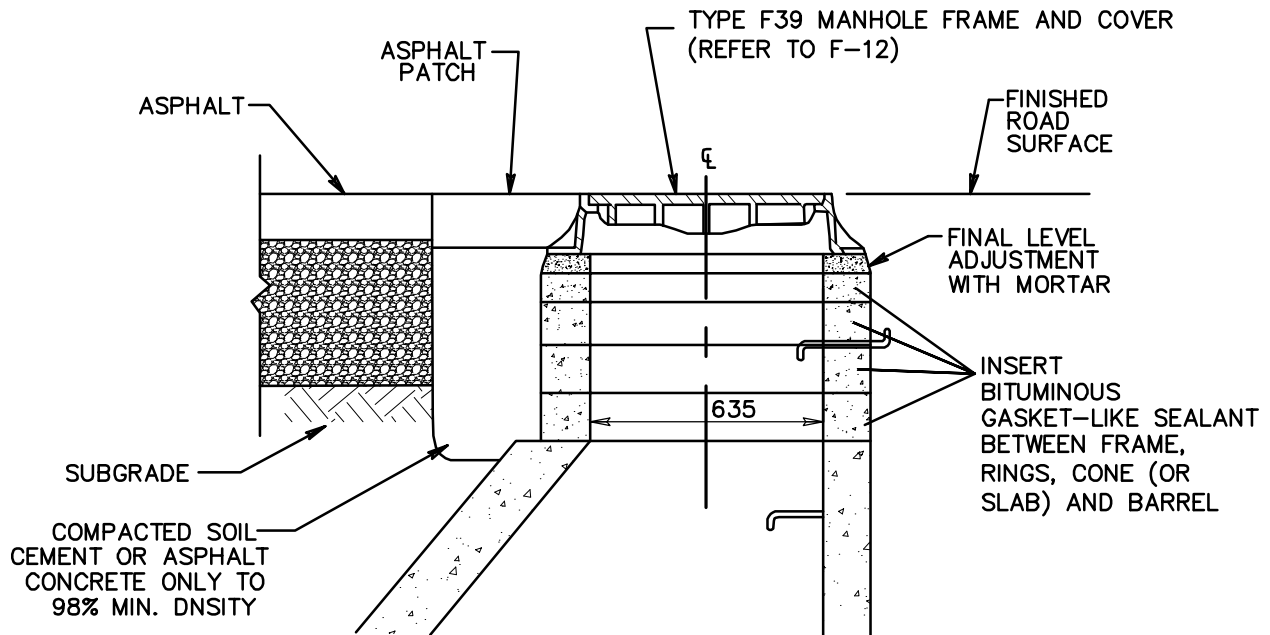
1. ITEM 5 COULD BE MADE UP FROM TWO ITEMS (BASE AND BARREL).
2. ITEM 6 COULD BE MADE UP FROM TWO ITEMS (SHOULDER RING SLAB TOP AND BARREL).
3. ITEMS 5 AND 6 COULD BE MADE AS ONE UNIT.
4. OPPOSITE ORIENTATION OF JOINS IS ACCEPTABLE.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STANDARD 900 CATCH BASIN WITH TYPE DK-7 GRATING AND FRAME	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-06
Date: 2009-04-16	Drawn: TLB	Scale NTS		




NOTES:

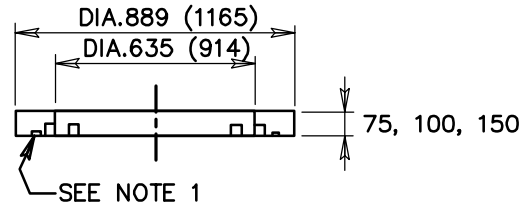
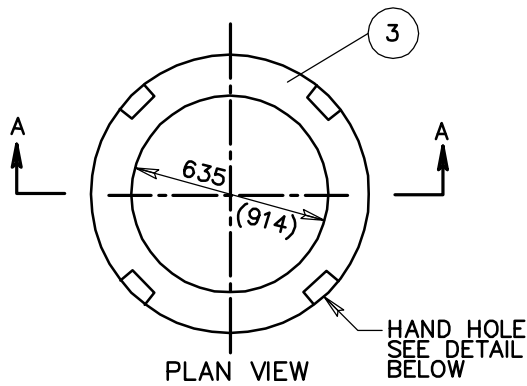
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	NECK SECTION DETAILS FOR STANDARD 1200 MANHOLE		
Rev.			File No.: GP6033068	Design:	Approved:
Rev.			Date: 2009-04-16	Drawn:	Scale: NTS



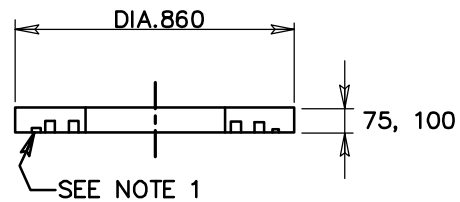
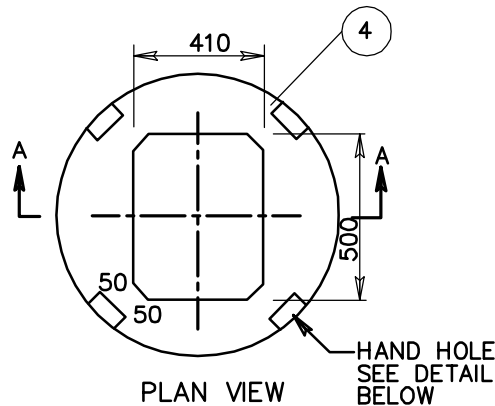
SECTION A-A

635/900 GRADE RINGS

(GRADE RING FOR USE WITH TYPES 4A,6,6A,8,NF-80,NF-90,F-51 FRAMES AND COVERS/GRATINGS)

NOTE:

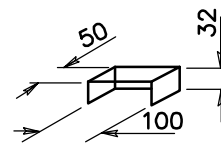
900 GRADE RING DIMENSIONS ARE SHOWN IN BRACKETS.



SECTION A-A

K-7 RING/TOP

(RING FOR USE WITH TYPE K-7 OR F-51 WITHOUT SIDE INLET FRAMES AND GRATINGS)



HAND HOLE DETAIL


NOTES:

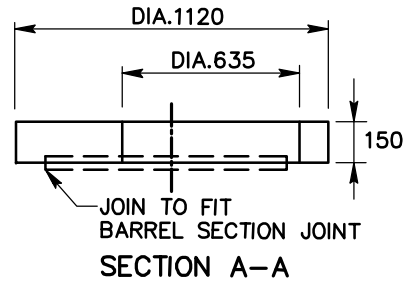
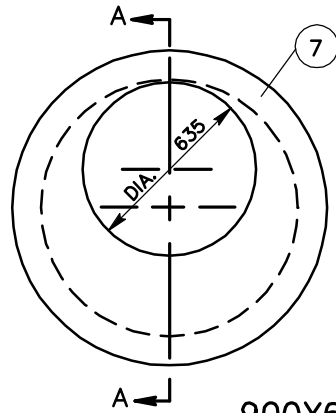
1. A CONCENTRIC GROOVE LOCATED AT MID CROSS SECTION, SUITABLE FOR SEALANT IS REQUIRED FOR GRADE RINGS AND EXTENSION RINGS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards

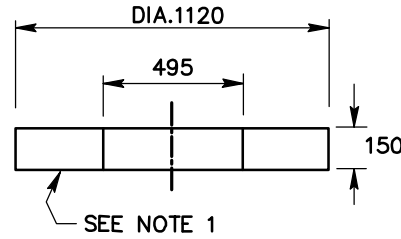
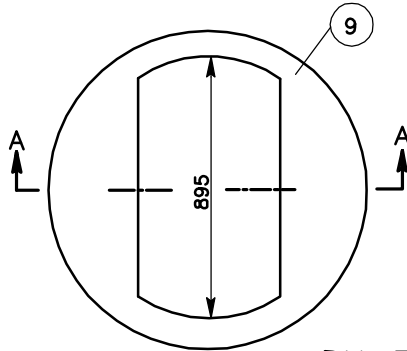


Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>GRADE RING</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn:	Scale NTS		



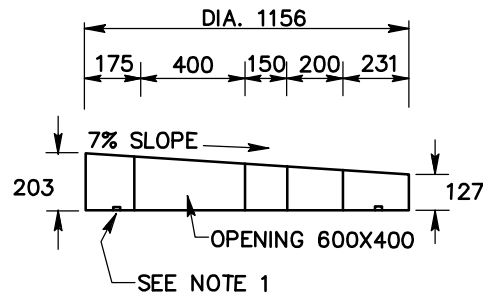
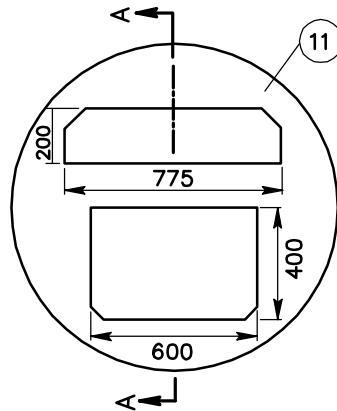
900X635 SLAB TOP

(TOP BELOW NECK FOR USE WITH 4A, 6, 8 FRAME AND GRATING)



DK-7 TOP

(SLAB TOP FOR USE WITH DK-7 FRAME AND GRATING)



T-TOP

(TEE TOP FOR USE WITH F-5I WITH SIDE INLET)


NOTES:

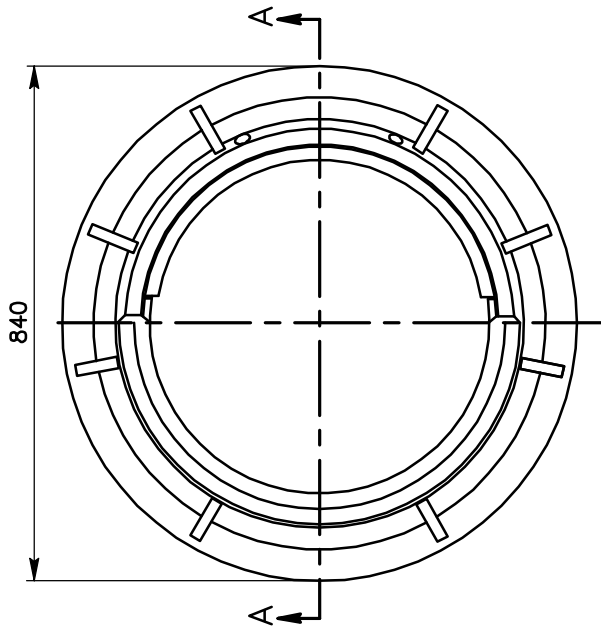
1. A CONCENTRIC GROOVE LOCATED AT MID CROSS SECTION, SUITABLE FOR SEALANT IS REQUIRED FOR NECK RINGS AND EXTENSION RINGS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

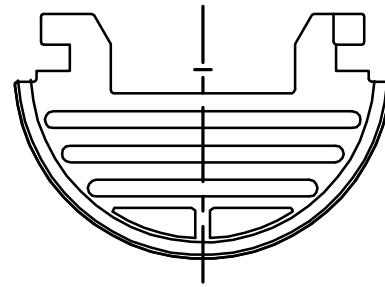
General Municipal Servicing Standards



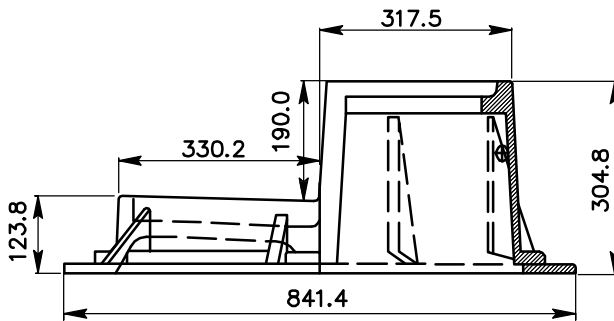
Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	SLAB TOPS FOR STANDARD 900 CATCH BASIN	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-09
Date: 2009-04-16	Drawn:	Scale NTS		



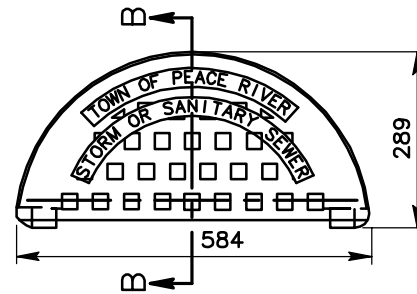
TOP VIEW (FRAME)



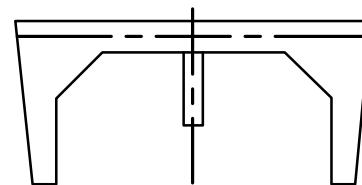
TOP VIEW - COVER (PART A)



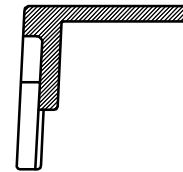
SECTION A-A



TOP VIEW - COVER (PART B)



FRONT VIEW - COVER (PART B)



NOTES:

1. MATERIALS:

FRAME: GRAY IRON CLASS 20B.

COVER: PART A IRON CLASS 20B.


PART B DUCTILE IRON GRADE 65-45-12.

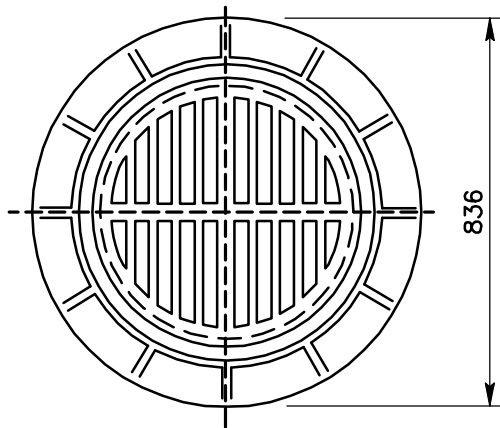
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

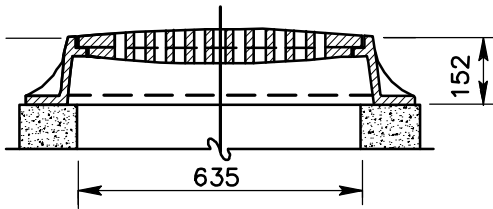
General Municipal Servicing Standards



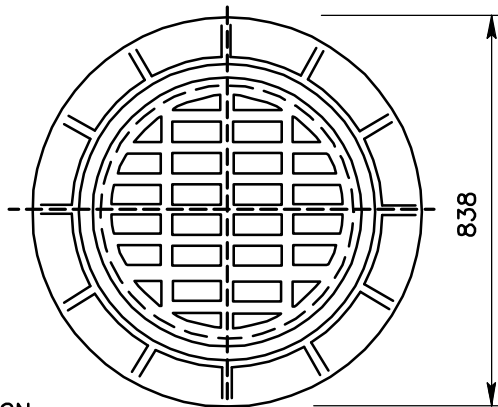
Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	TWO PIECE TYPE 4A GRATING AND FRAME	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-10
Date: 2009-04-16	Drawn:	Scale NTS		



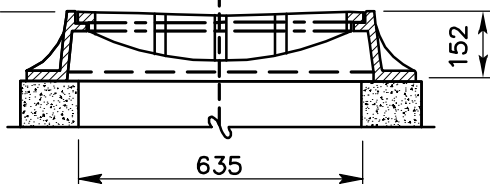
MATERIAL: GRAY IRON
 FRAME: CLASS 20B
 COVER: CLASS 20B



NO.6 ROUND TOP CATCHBASIN
 OR MH FRAME & COVER



MATERIAL: GRAY IRON
 FRAME: CLASS 20B
 COVER: CLASS 20B



NO.8 LARGE PAVING AND CURB RAMP
 CATCHBASIN OR MH FRAME & COVER


NOTES:

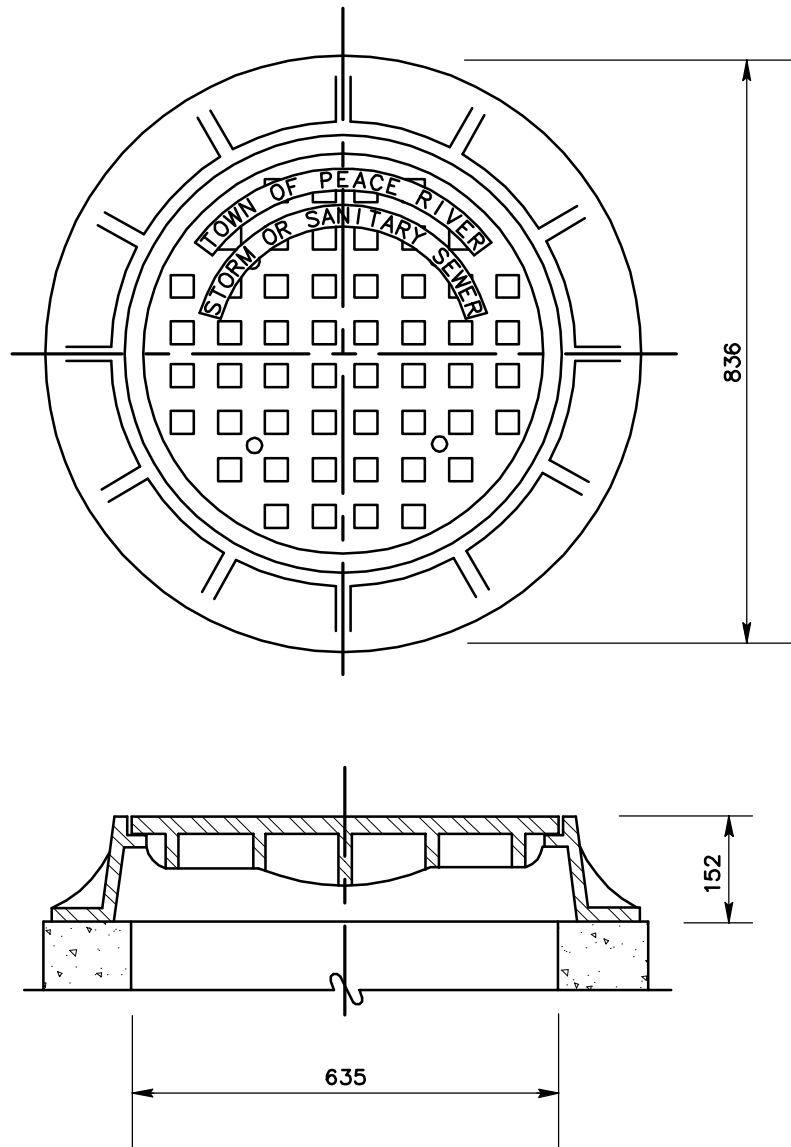
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	FRAME AND GRATING TYPE 6 AND 8	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-11
Date: 2009-04-16	Drawn:	Scale NTS		




NOTES:

1. MATERIALS:
 FRAME: GRAY IRON CLASS 20B.
 COVER: GRAY IRON CLASS 20B.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

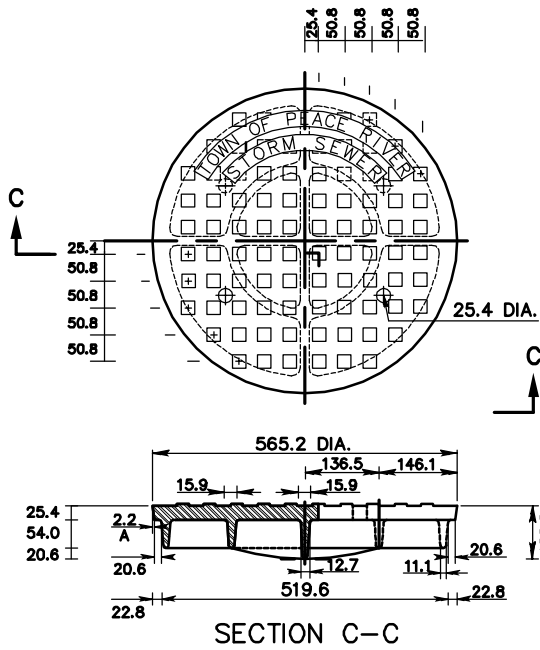
TOWN OF PEACE RIVER

General Municipal Servicing Standards

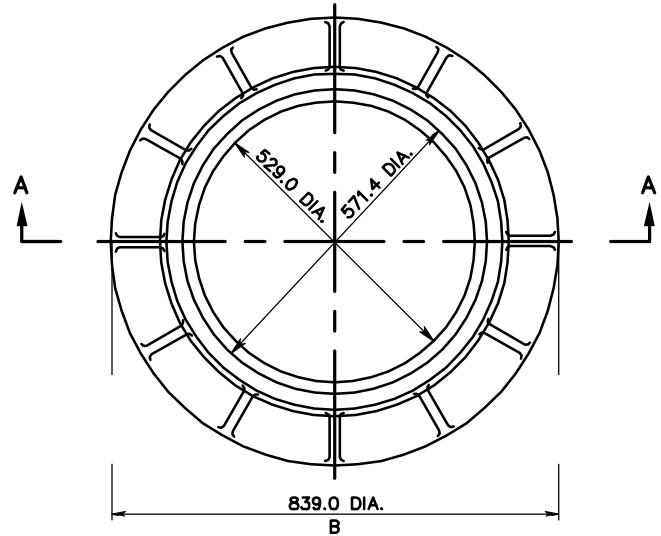


Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	TYPE F39 COVER AND FRAME	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-12
Date: 2009-04-16	Drawn:	Scale NTS		

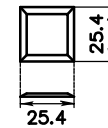
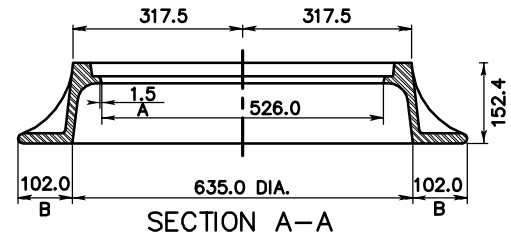
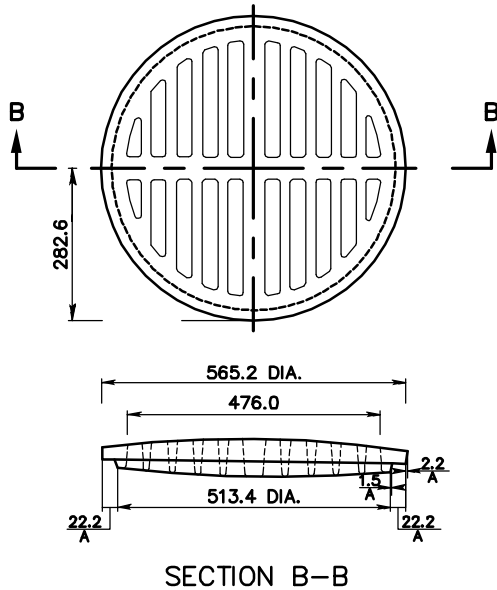
No. 6A STANDARD MANHOLE COVER



No.6 STANDARD FRAME FOR MANHOLE AND ROUND CATCH BASIN TOP



No. 6B STANDARD ROUND CATCH BASIN TOP



DETAIL OF CHECKERS

NOTES:

1. MATERIAL SPECIFICATION:
DUCTILE IRON TO CONFORM TO A.S.T.M. A536 (LATEST EDITION) GRADE 80-60-03.
2. NF-90 FRAME AND COVER IS WATERTIGHT VARIATION OF NF-80.
THERE ARE NO VENTING HOLES IN NF-90 COVER AND A GASKET IS PLACED BETWEEN THE FRAME AND COVER.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
4. NOT GENERALLY APPLICABLE IN PEACE RIVER. TO BE USED ONLY WHEN DIRECTED BY MUNICIPALITY.

TOWN OF PEACE RIVER

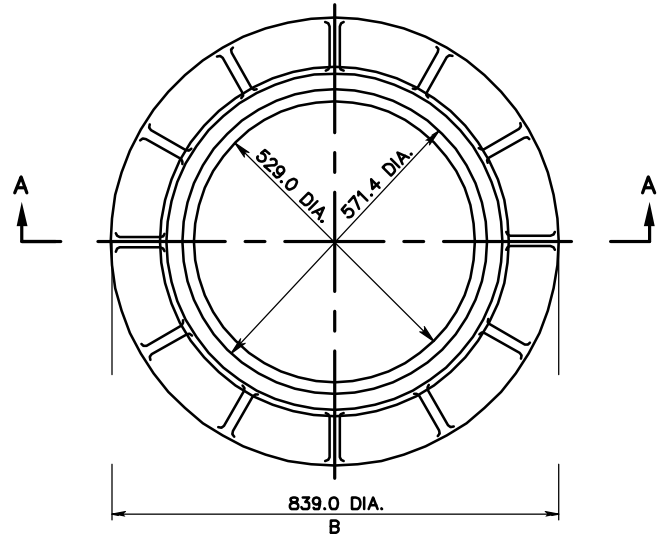
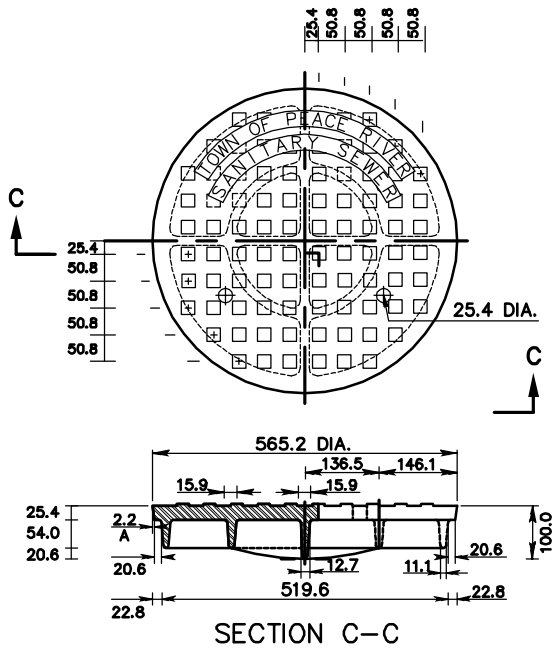
General Municipal Servicing Standards



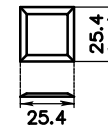
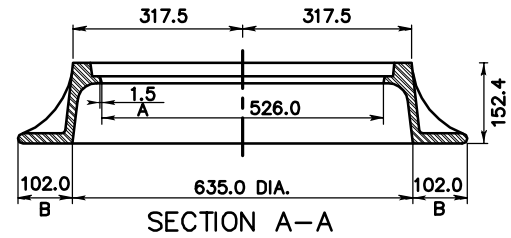
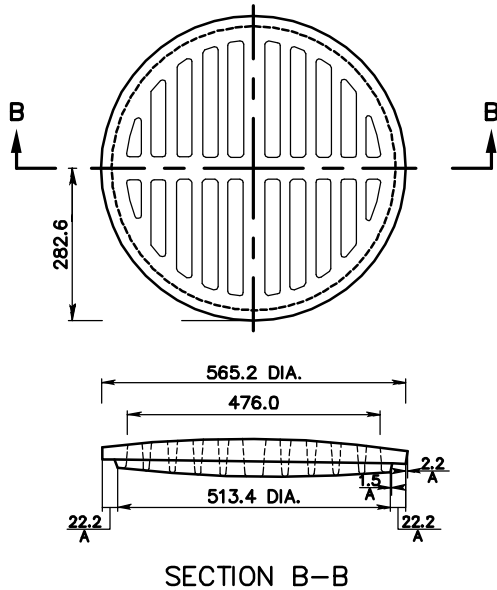
Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	ROUND TOP CATCH BASIN AND MANHOLE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-13A
Date: 2009-04-16	Drawn:	Scale NTS		

No. 6A STANDARD MANHOLE COVER

No.6 STANDARD FRAME FOR MANHOLE AND ROUND CATCH BASIN TOP



No. 6B STANDARD ROUND CATCH BASIN TOP



DETAIL OF CHECKERS


NOTES:

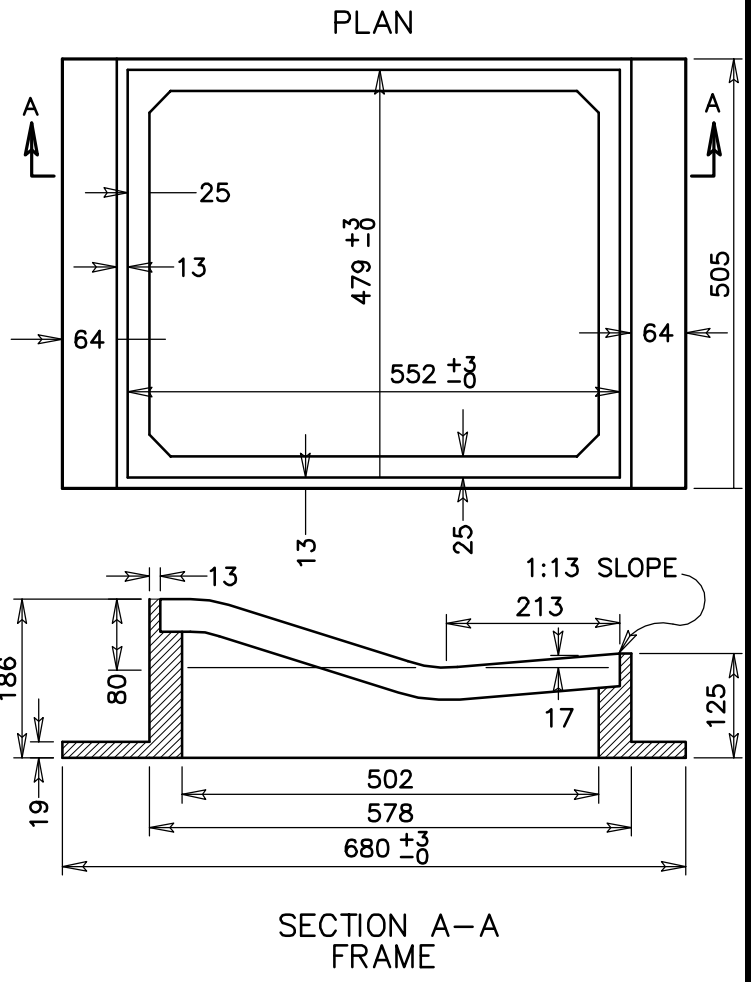
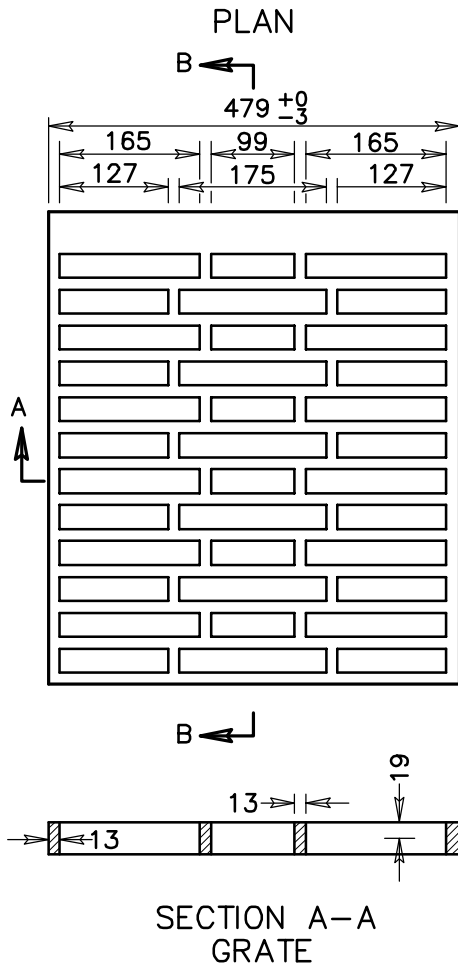
1. MATERIAL SPECIFICATION:
DUCTILE IRON TO CONFORM TO A.S.T.M. A536 (LATEST EDITION) GRADE 80-60-03.
2. NF-90 FRAME AND COVER IS WATERTIGHT VARIATION OF NF-80.
THERE ARE NO VENTING HOLES IN NF-90 COVER AND A GASKET IS PLACED BETWEEN THE FRAME AND COVER.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
4. NOT GENERALLY APPLICABLE IN PEACE RIVER. TO BE USED ONLY WHEN DIRECTED BY MUNICIPALITY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	ROUND TOP CATCH BASIN AND MANHOLE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-13B
Date: 2009-04-16	Drawn:	Scale NTS		



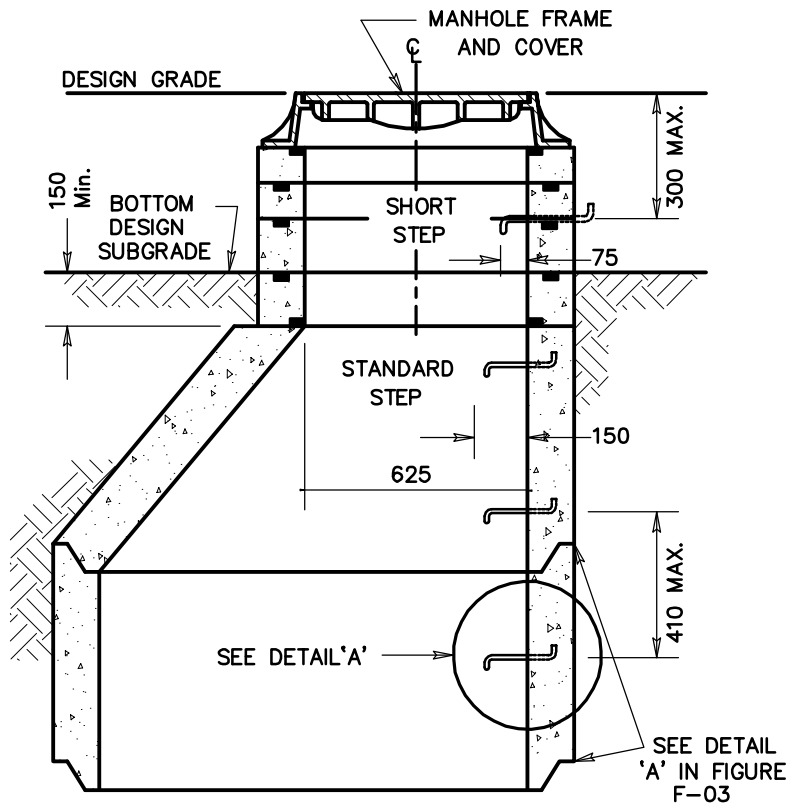
- NOTES:**
- MATERIALS:**
FRAME
 GREY CAST IRON TO CONFORM TO CLASS 25B A.S.T.M. A48 (LATEST EDITION).
GRATE
 DUCTILE IRON TO CONFORM TO A.S.T.M. A536 (LATEST EDITION) GRADE 80-55-06.
 - ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 - PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	FRAME & GRATING TYPE K-7	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-14
Date: 2009-04-16	Drawn: TLB	Scale NTS		

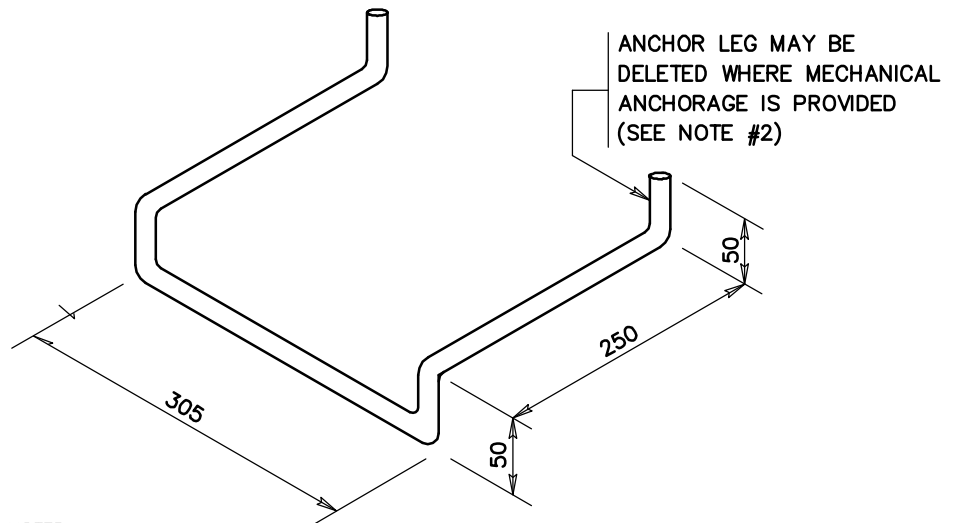


TYPICAL MANHOLE SECTION

PLACEMENT:

1. EXCEPT WHERE SPECIFIED OTHERWISE, SAFETY STEPS SHALL BE INSTALLED IN ALL PRECAST MANHOLE SECTIONS & CONES, IN THE GRADE ADJUSTMENT SECTIONS AND IN CAST IN PLACE SECTIONS SO THAT WHEN THE VARIOUS SECTIONS ARE ASSEMBLED IN ANY COMBINATION THEY WILL FORM A CONTINUOUS VERTICAL LADDER WITH RUNGS EQUALLY SPACED AT A MAXIMUM OF 410mm TO WITHIN 300mm BELOW THE COVER AND TO WITHIN 600mm OF THE BASE OR BENCHING.
2. STEPS SHALL BE CAST FIRMLY IN PLACE OR SECURED WITH A SUITABLE MECHANICAL ANCHORAGE TO PREVENT PULLOUT, AND MAINTAIN WATER TIGHTNESS.
3. "STANDARD STEPS" SHALL PROJECT A DISTANCE OF 150mm MEASURED AT THE POINT OF EMBEDMENT.
4. A "SHORT STEP" WITH A PROJECTION OF 75mm SHALL BE INSTALLED WITHIN THE GRADE ADJUSTMENT SECTION, CAST INTO THE NECK OR FIRMLY MORTARED IN PLACE BETWEEN THE NECK RINGS, WITH THE ANCHOR LEGS OUTSIDE OF THE NECK RING.
5. EXCEPT AS SPECIFIED ABOVE, DESIGN AND INSTALLATION OF SAFETY STEPS SHALL CONFORM TO A.S.T.M. C478.
6. SAFETY STEPS SHALL BE ALIGNED ON CENTRELINE PERPENDICULAR TO THE MAIN FLOW CHANNEL. WHENEVER POSSIBLE, THE STEPS SHALL BE ALIGNED SO THAT A PERSON EXITING THE MANHOLE WOULD FACE ONCOMING TRAFFIC IF NOT CONFLICTING WITH THE PREVIOUS REQUIREMENT.

DETAIL 'A'




NOTES:

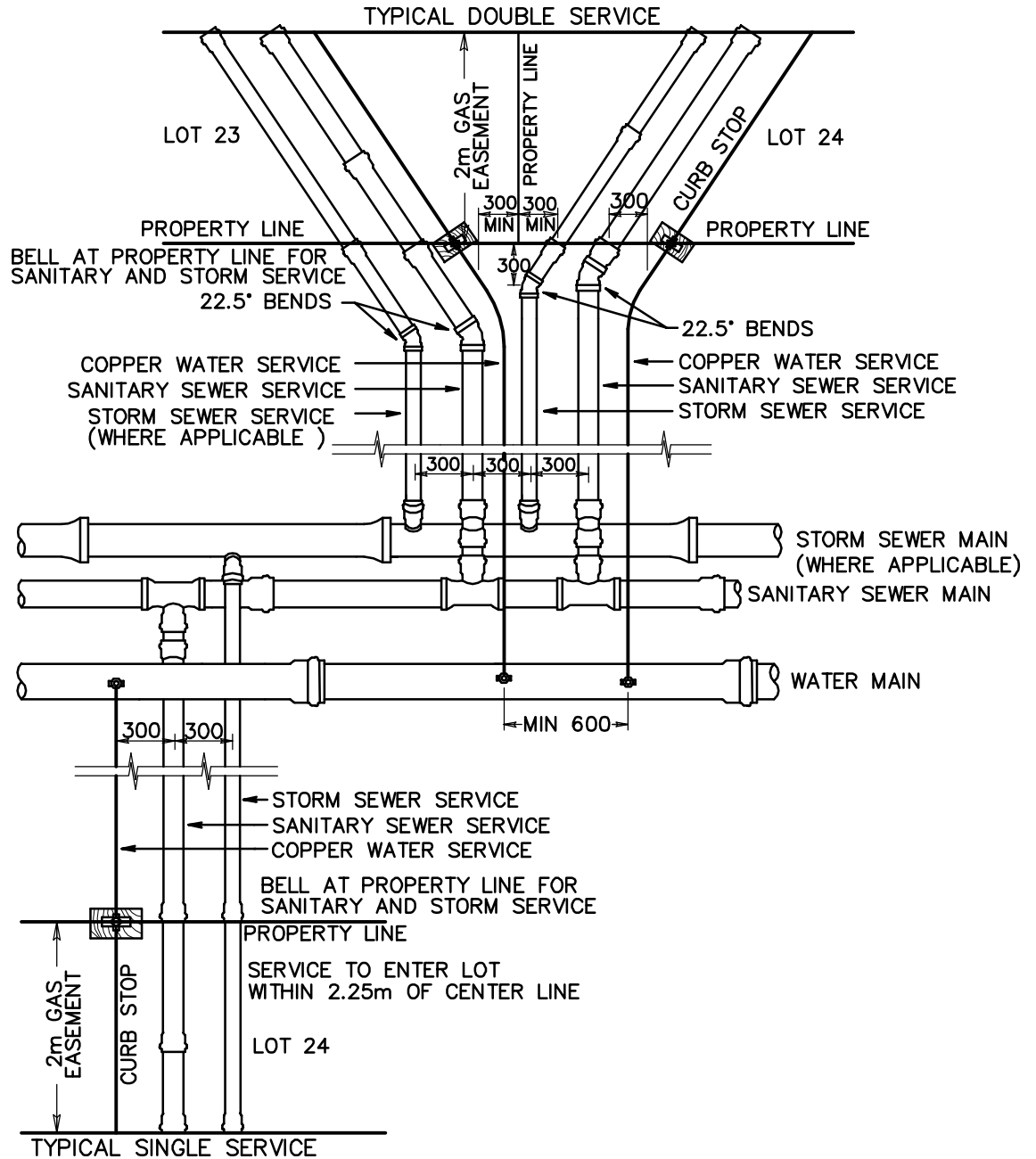
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	SAFETY STEPS FOR MANHOLES	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-15
Date: 2009-04-16	Drawn:	Scale NTS		



NOTES:

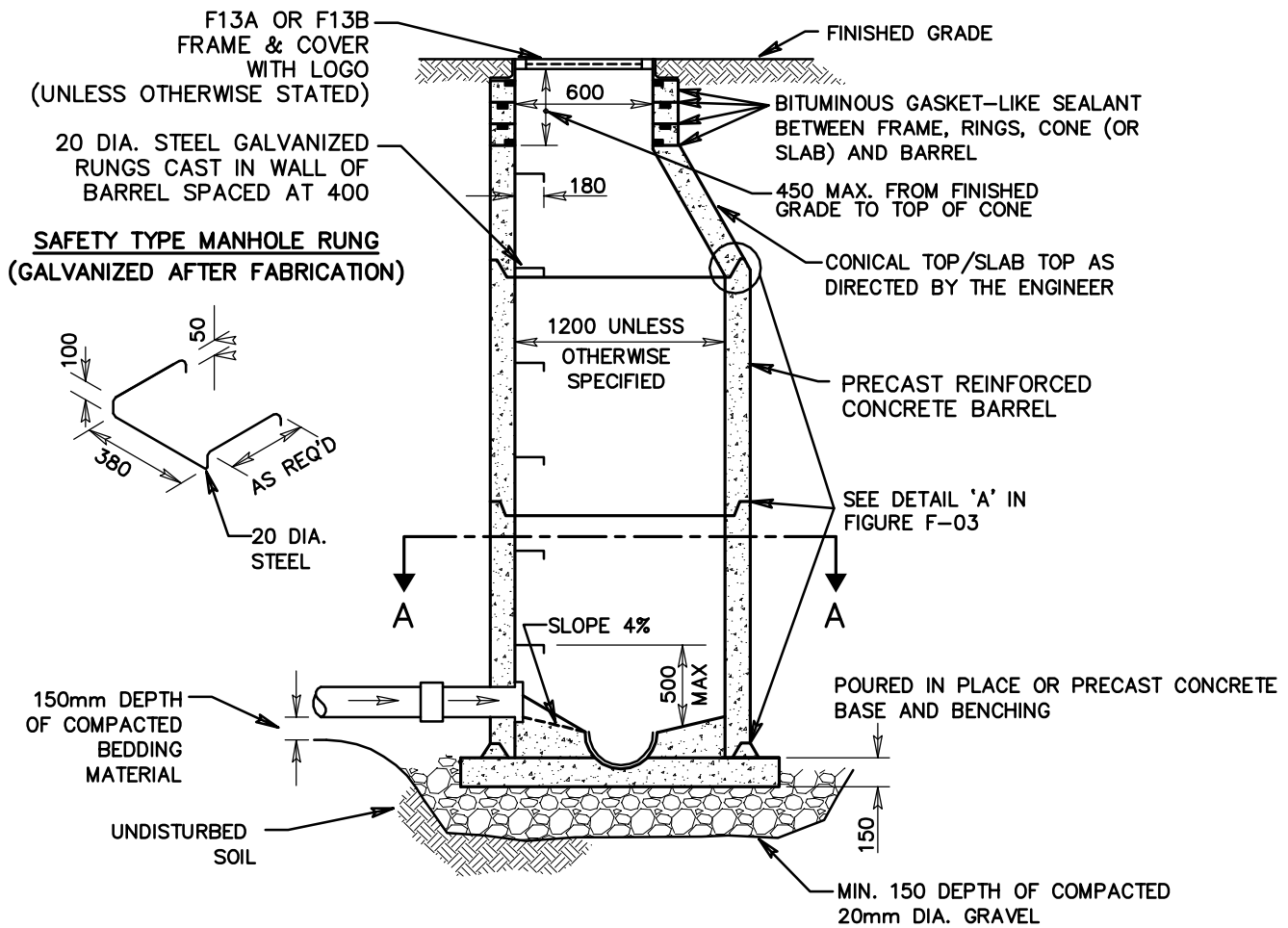
1. WATER AND SEWER SERVICES MAY BE EXTENDED TO EDGE OF 2.0m GAS EASEMENT.
2. THE COUNTY ACCEPTS NO RESPONSIBILITY FOR THE CONSTRUCTION OR MAINTENANCE OF SERVICES INSTALLED WITHIN THE EASEMENT.
3. MARK ENDS OF SERVICES AT EDGE OF GAS EASEMENT WITH A 50mm X 100mm X 750mm STAKE PROTRUDING 450mm ABOVE GROUND AND PAINTED BLUE. MARK THE CURB CONTROL VALVE WITH A SIMILAR STAKE PAINTED RED.
4. THE END OF COPPER WATER SERVICE PIPING SHOULD NOT BE CRIMPED CLOSED, PERMEABLE FILTER CLOTH MAY BE USED TO PREVENT INTRUSION OF DEBRIS AND TO ALLOW TESTING FLOW OF CURBSTOP.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. SEWERLINE TO ALWAYS BE DOWNSIDE OF WATERLINE BASED ON SEWER FLOW DIRECTION.

TOWN OF PEACE RIVER

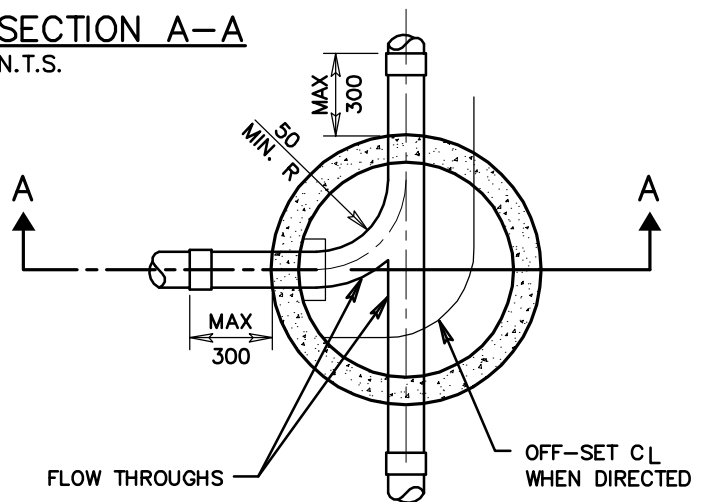
General Municipal Servicing Standards



Rev.	Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	TYPICAL SERVICES (SINGLE & DUAL)	
Rev.			Approved:	Figure F-16
Rev.				
Date: 2009-04-16	File No.: GP6033068	Design:		
	Drawn: TLB	Scale: NTS		



SECTION A-A
N.T.S.




NOTES:

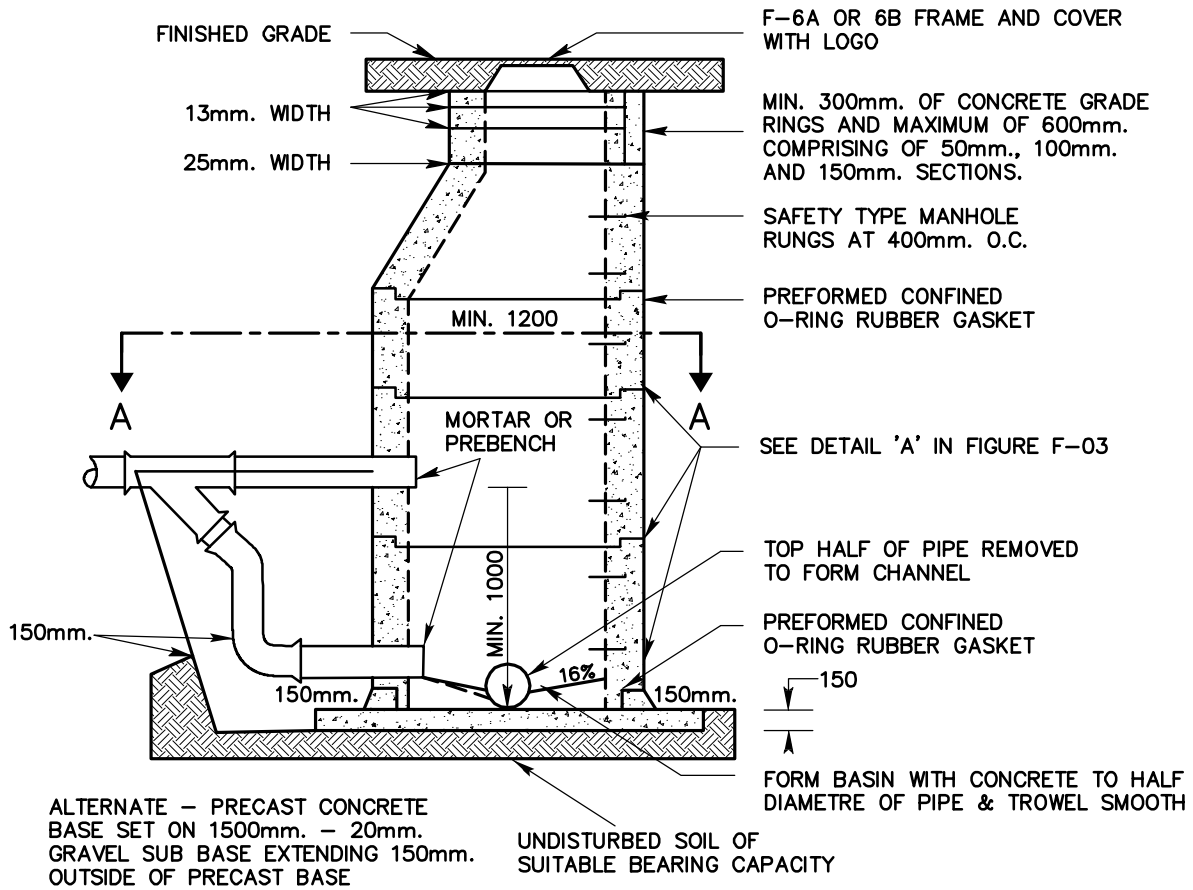
1. ALL PRECAST MANHOLES MUST CONFORM TO A.S.T.M. SPECIFICATIONS C478.
2. POURED IN PLACE CONCRETE SHALL HAVE 28 DAYS COMPRESSIVE STRENGTH OF 25 MPa.
3. ALL JOINTS MORTARED INSIDE & OUT.
4. FORM FLOW THROUGH IN PARTIALLY SET CONCRETE AND TROWEL SMOOTH.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. MAX DIST. FROM RIM TO TOP RUNG IS 800mm.
7. BACKFILL MH. WITH SELECT NATIVE MATERIAL.
8. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
9. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards

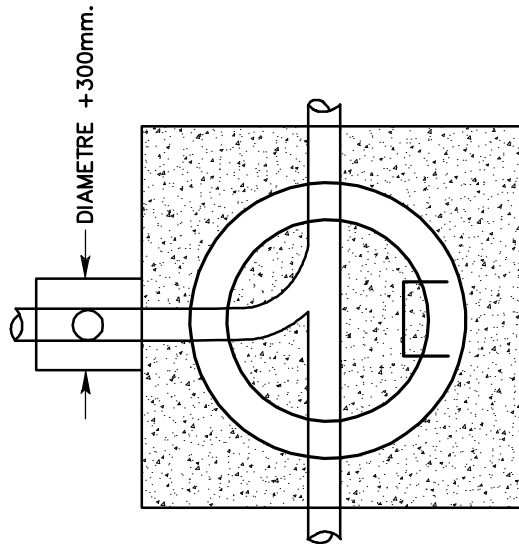


Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	K-7 DF&G SHOULDER RING	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-17A
Date: 2009-04-16	Drawn:	Scale NTS		



NOTES:


1. ALL PRECAST MANHOLES MUST CONFORM TO A.S.T.M. SPECIFICATIONS C478.
2. POURED IN PLACE CONCRETE SHALL HAVE 28 DAYS COMPRESSIVE STRENGTH OF 25 MPa.
3. ALL JOINTS MORTARED INSIDE & OUT.
4. FORM FLOW THROUGH IN PARTIALLY SET CONCRETE AND TROWEL SMOOTH.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. MAX DIST. FROM RIM TO TOP RUNG IS 800mm.
7. BACKFILL MH. WITH SELECT NATIVE MATERIAL.
8. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
9. ALL BARREL JOINTS TO BE GROUTED.

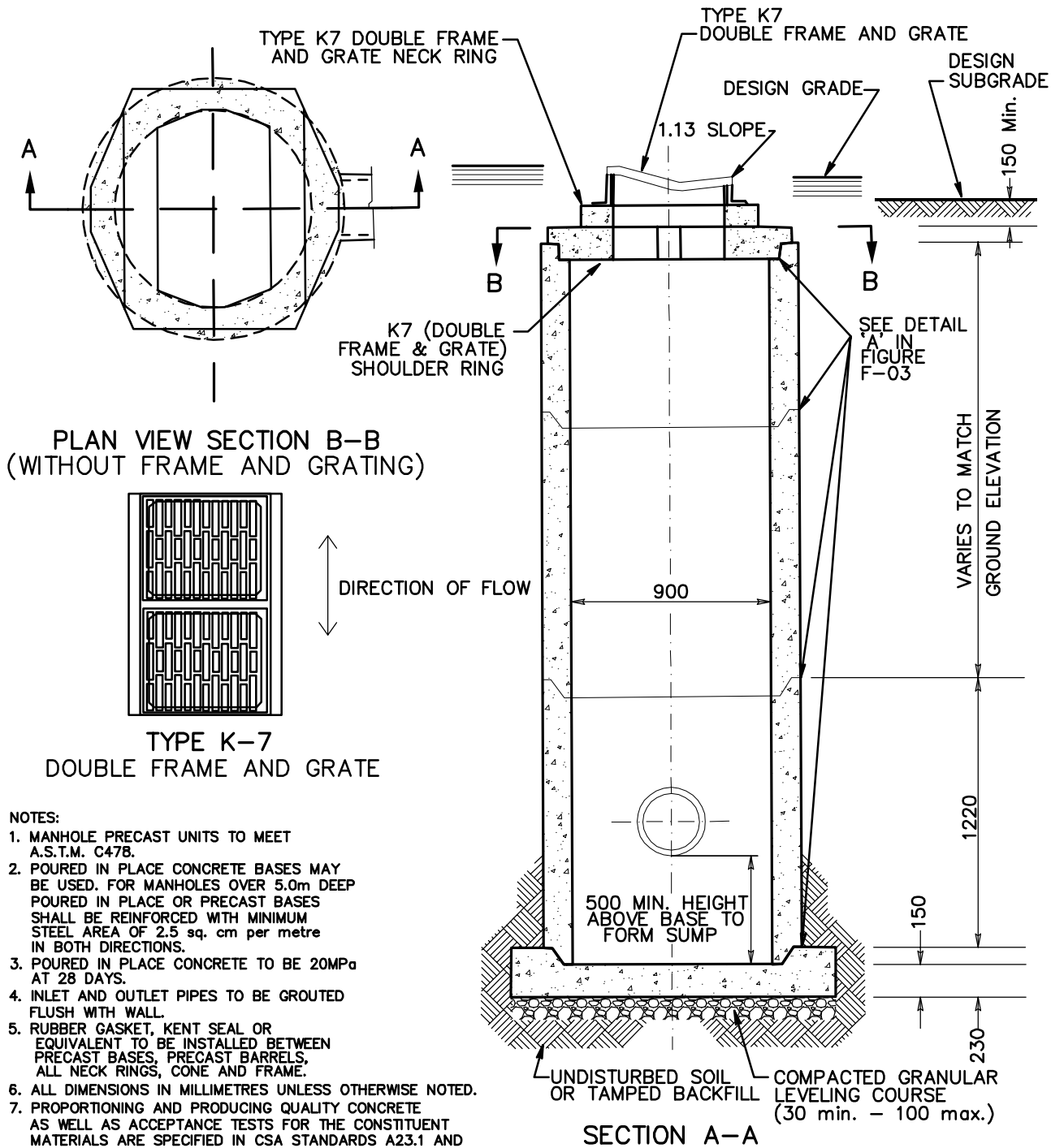


TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>PRECAST DROP MANHOLE</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure <h3>F-17B</h3>
Date: 2009-04-16	Drawn:	Scale NTS		




NOTES:

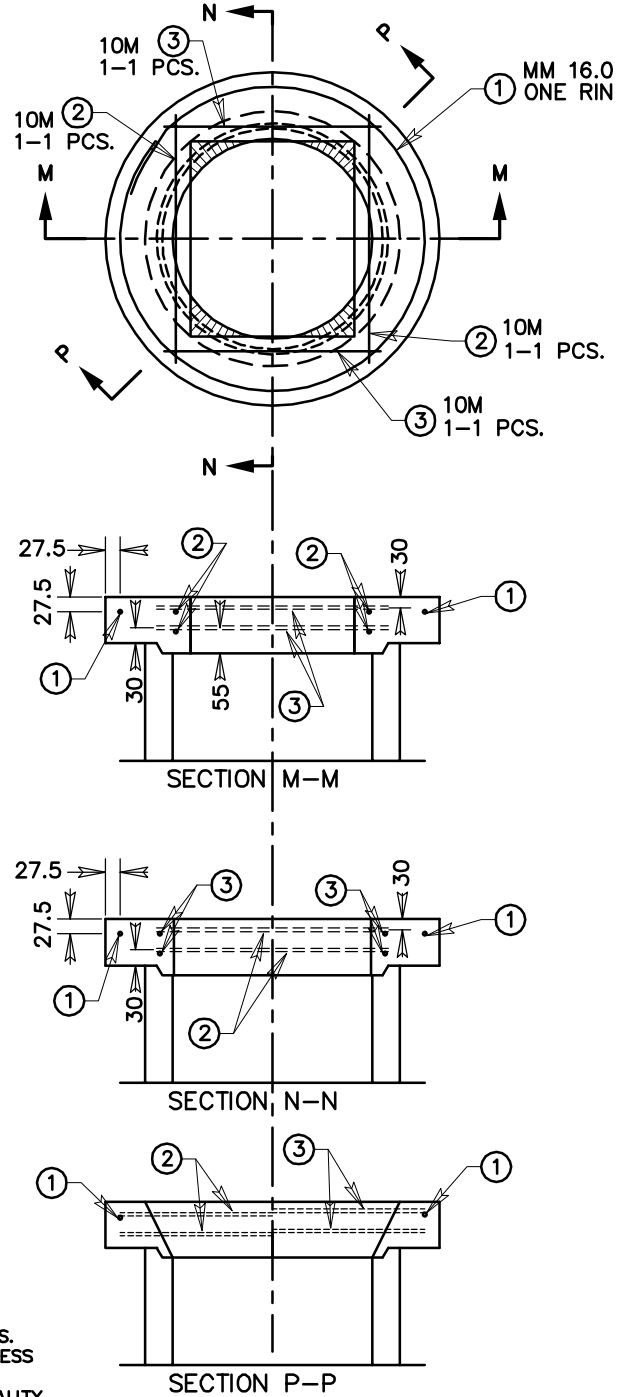
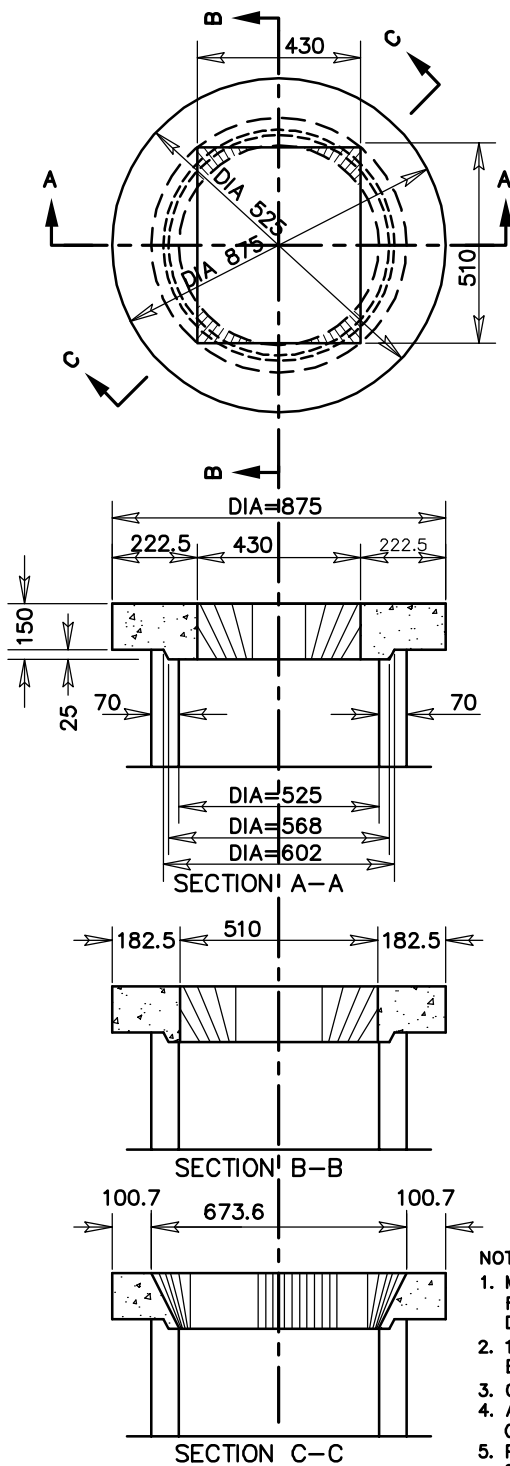
1. MANHOLE PRECAST UNITS TO MEET A.S.T.M. C478.
2. POURED IN PLACE CONCRETE BASES MAY BE USED. FOR MANHOLES OVER 5.0m DEEP POURED IN PLACE OR PRECAST BASES SHALL BE REINFORCED WITH MINIMUM STEEL AREA OF 2.5 sq. cm per metre IN BOTH DIRECTIONS.
3. POURED IN PLACE CONCRETE TO BE 20MPa AT 28 DAYS.
4. INLET AND OUTLET PIPES TO BE GROUTED FLUSH WITH WALL.
5. RUBBER GASKET, KENT SEAL OR EQUIVALENT TO BE INSTALLED BETWEEN PRECAST BASES, PRECAST BARRELS, ALL NECK RINGS, CONE AND FRAME.
6. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
7. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
8. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STANDARD 900mm PRECAST CB c/w K7 DOUBLE FRAME & GRATE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-18
Date: 2009-04-16	Drawn: T.B.	Scale NTS		



- NOTES:
1. MINIMUM 25mm COVER TO ALL RE-BARS EXCEPT WHERE NOTED ON DRAWING.
 2. 10M REINFORCING BARS @ 250 (OR EQUIVALENT STEEL AREA).
 3. CONCRETE: 30 MPa S.R. AT 28 DAYS.
 4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 5. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	
Rev.	
Rev.	
Rev.	
Date:	2009-04-16



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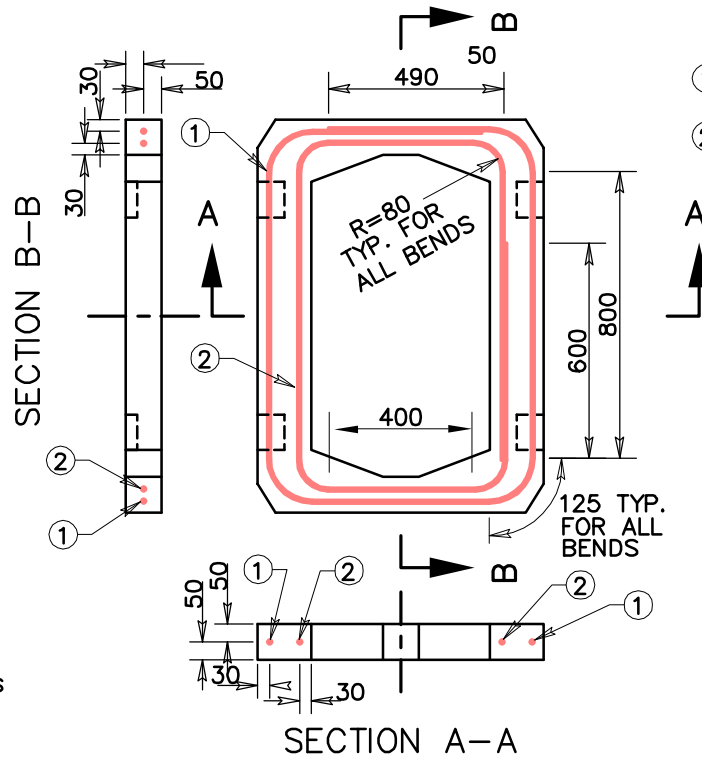
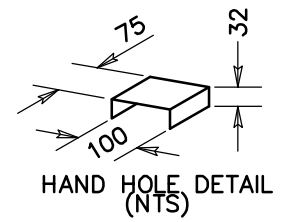
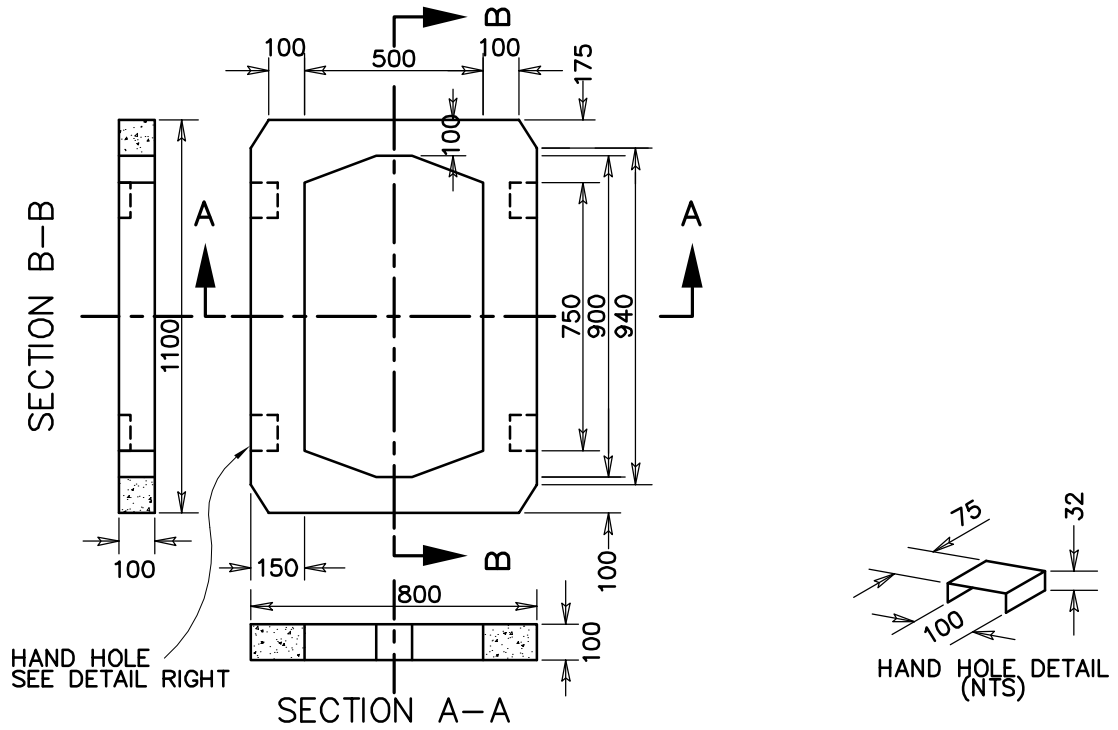
File No.: GP6033068
Drawn: T.S./JAD

Design:
Scale NTS

K-7 SF&G SHOULDER RING

Approved:

Figure F-19




- ① 10M - 2 PIECES
- ② 10M - 2 PIECES

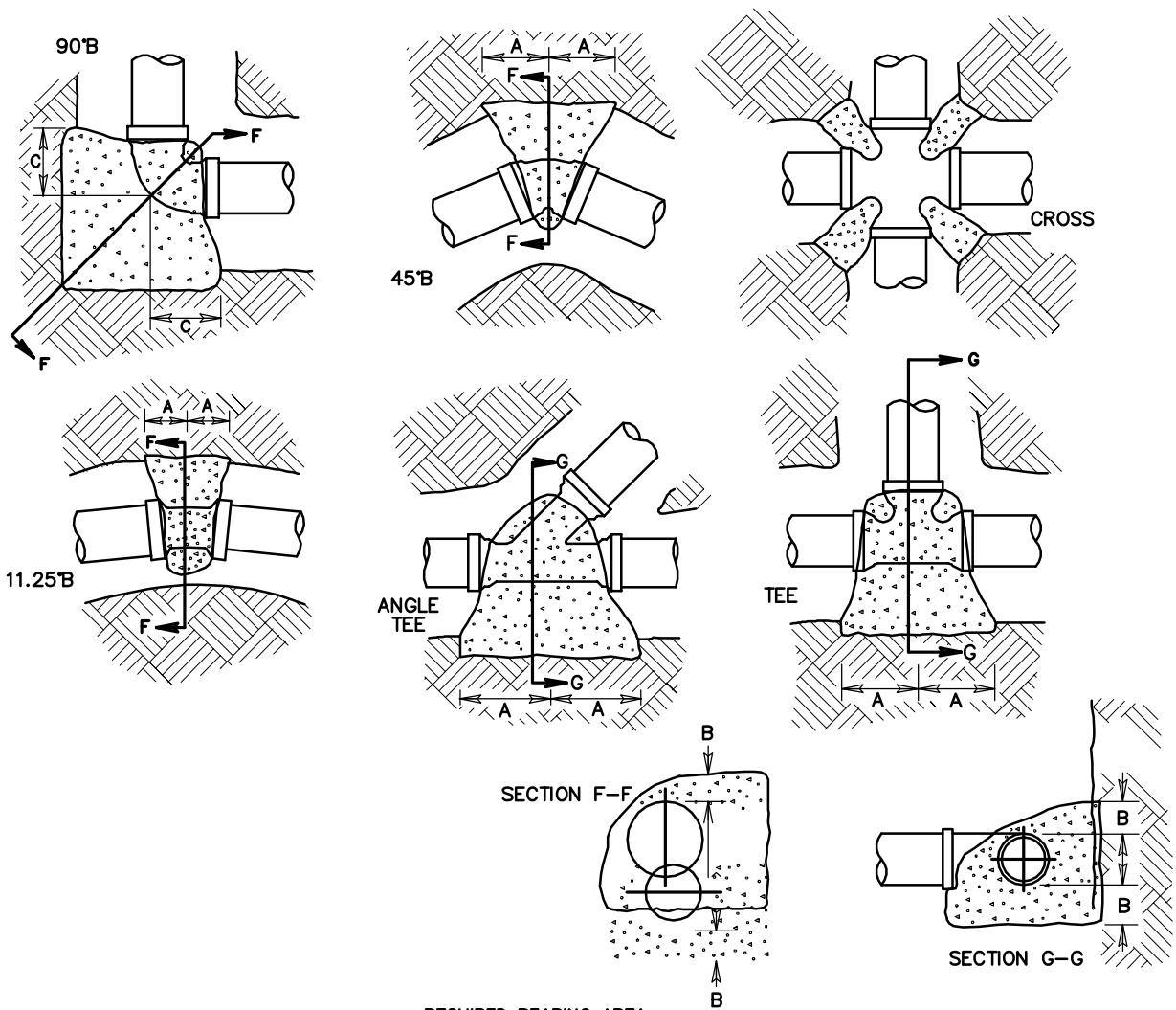
- NOTES:
1. 25mm MINIMUM COVER.
 2. 10M REINFORCING BARS ϕ 250 (OR EQUIVALENT STEEL AREA).
 3. CONCRETE : 30 MPa S.R. AT 28 DAYS.
 4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 5. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>K-7 DF&G NECK RING</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-20
Date: 2009-04-16	Drawn: T.S./JAD	Scale: NTS		



REQUIRED BEARING AREA

DIA (mm)	TEE BRANCH & DEAD END					22.5° & 11.25° BENDS					45° BENDS					90° BENDS					
	300	250	200	150	100	300	250	200	150	100	300	250	200	150	100	300	250	200	150	100	
A (mm)	975	775	550	375	250	300	225	200	150	100	550	450	375	300	200						
B (mm)	75	75	75	75	75	150	125	100	75	75	150	125	100	75	75	525	350	300	200	150	
C (mm)																450	400	350	300	200	
AREA(m ²)	1.025	0.750	0.475	0.275	0.125	0.50	0.275	0.200	0.150	0.05	0.800	0.550	0.375	0.225	0.100	1.475	1.025	0.700	0.400	0.175	

NOTES:

- DESIGN BASIS:
 - HYDRAULIC PRESSURE 1035 kPa.
 - SOIL BEARING CAPACITY 72kPa (MEDIUM SOFT CLAY).
- TEMPORARY BLOCKING MUST BE APPROVED BY THE ENGINEER.
- CONCRETE STRENGTH SHALL BE 25MPa AT 28 DAYS.
- CONCRETE TO BE CLEAR OF BELLS AND PIPE AND UNDER ALL FITTINGS.
- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
- PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
- ALL JOINTS OVER 10 DEGREES NEED RESTRAINTS.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	
Rev.	
Rev.	
Rev.	
Date:	2009-04-16



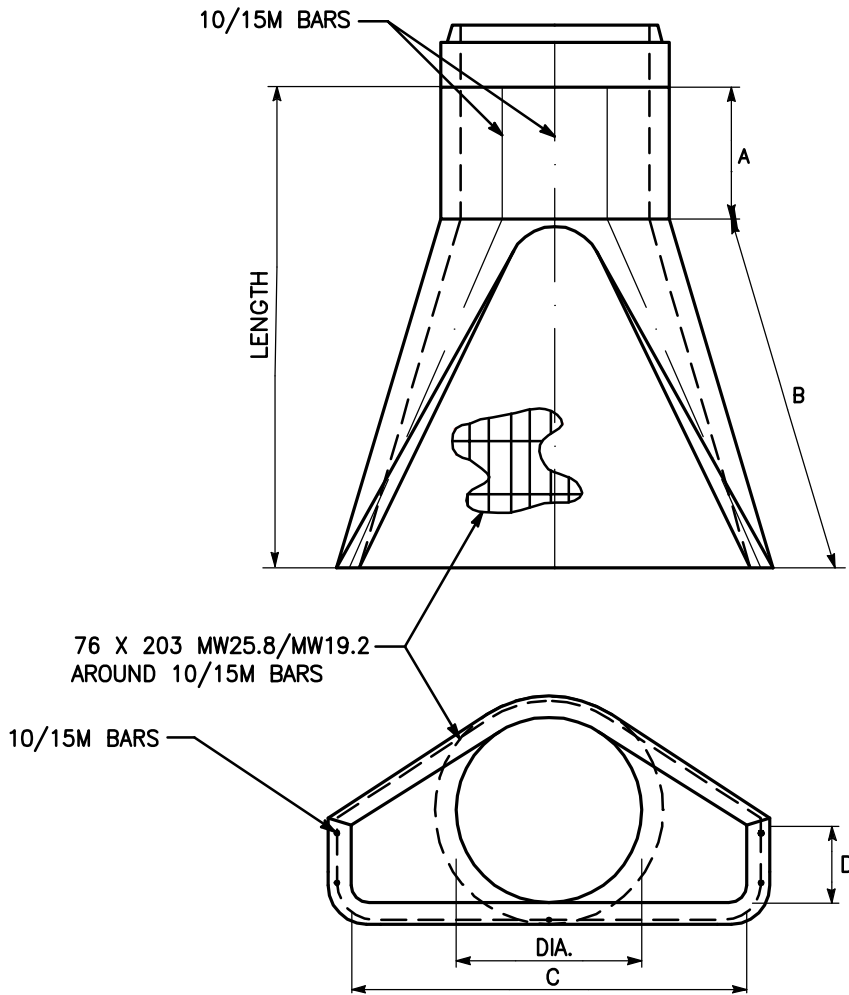
#99, 11039 78th Avenue
Grande Prairie, Alberta
780.814.5880

HORIZONTAL CONCRETE THRUST BLOCK DETAILS

File No.:	GP6033068	Design:	
Drawn:		Scale:	NTS

Approved:	
-----------	--

Figure F-21



DIAMETER (mm)	ACTUAL DIMENSIONS			
	A	B	C	D
600	749	1168	1207	254
1050	889	1650	1981	533

NOTE : 1050mm CULVERT TO COME WITH GATE


NOTE:

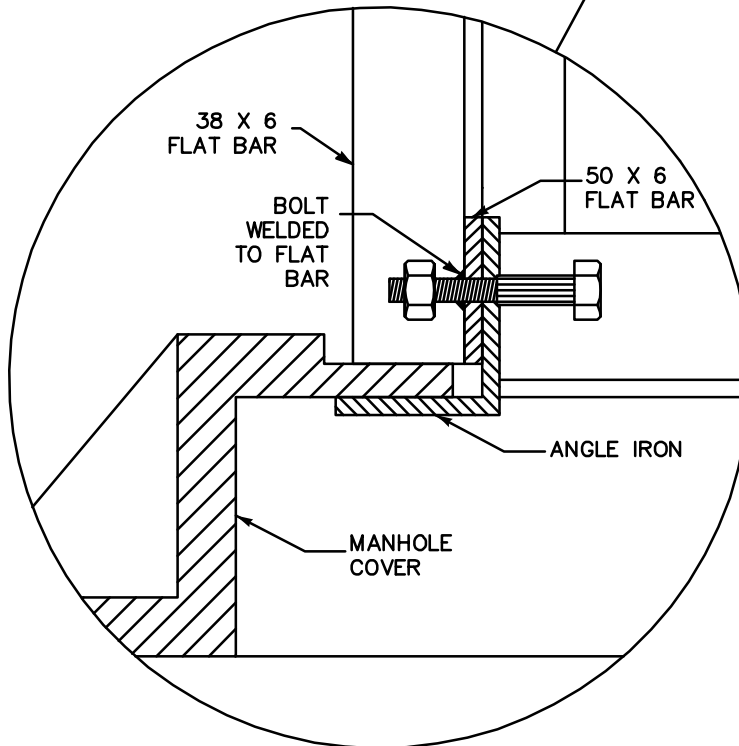
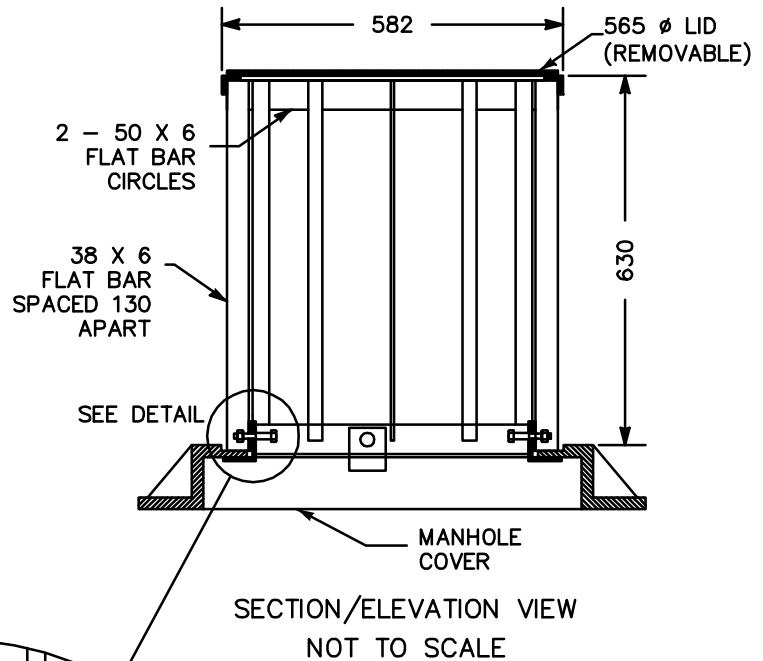
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	CONCRETE CULVERT FLARED END DETAIL	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-22
Date: 2009-04-16	Drawn: GGB	Scale NTS		




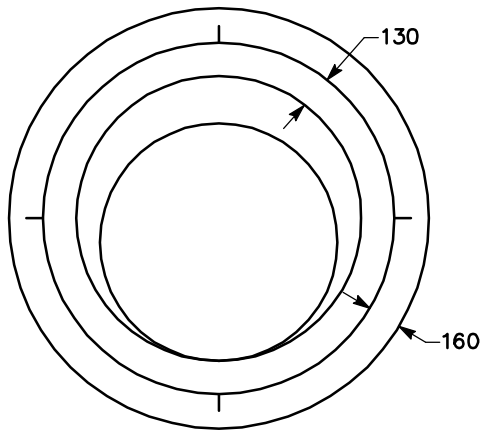
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

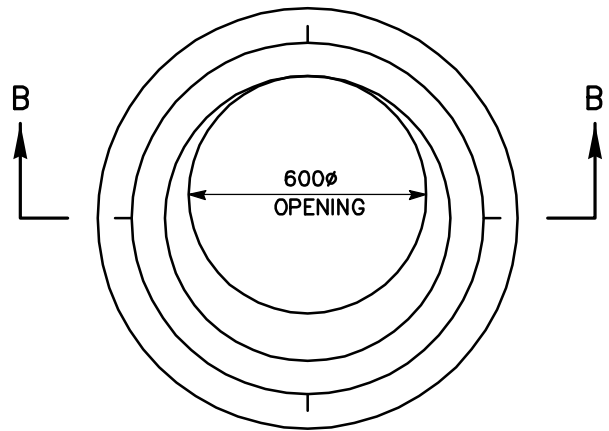
General Municipal Servicing Standards



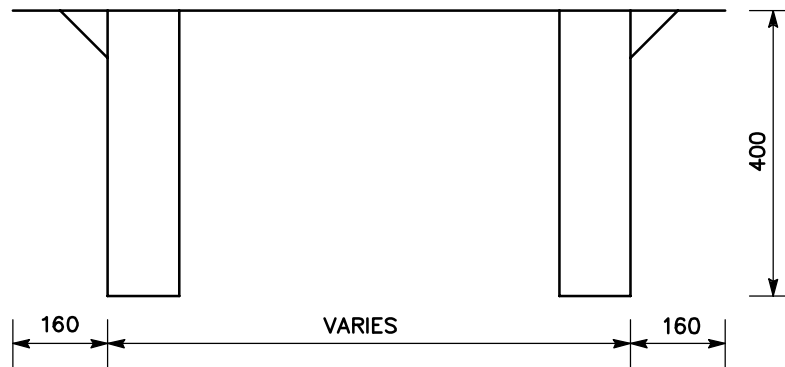
Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	TRASH GUARD FOR MANHOLE ASSEMBLY	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn: CP	Scale NTS		F-23



BOTTOM VIEW



TOP VIEW




SECTION B-B

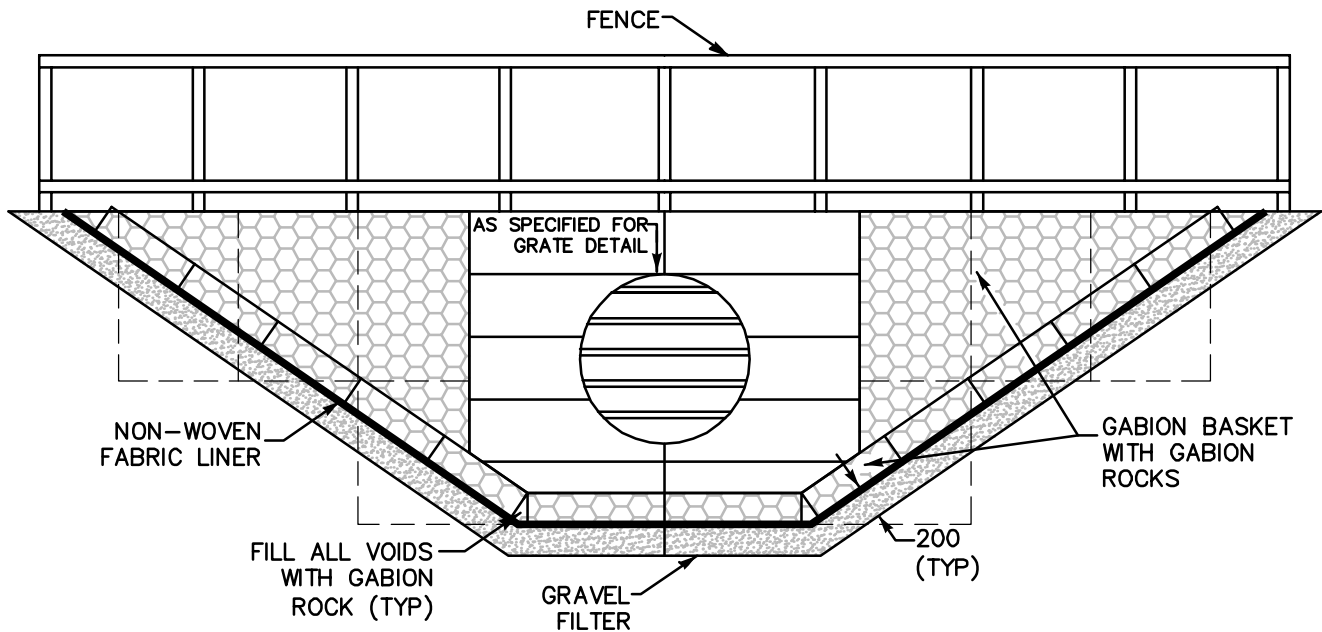
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STEEL PLATE TOP SYSTEM	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn: JAD	Scale: NTS		




NOTE:

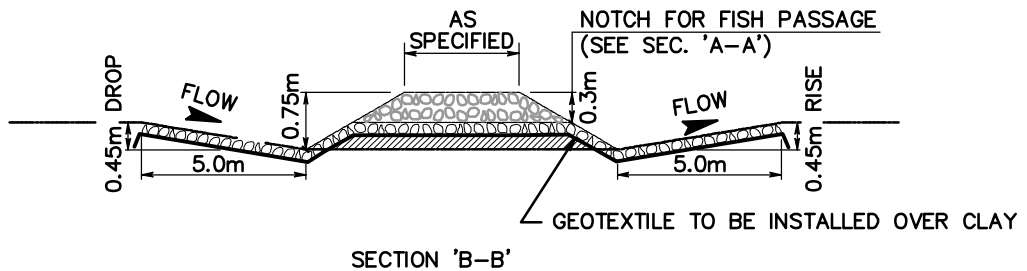
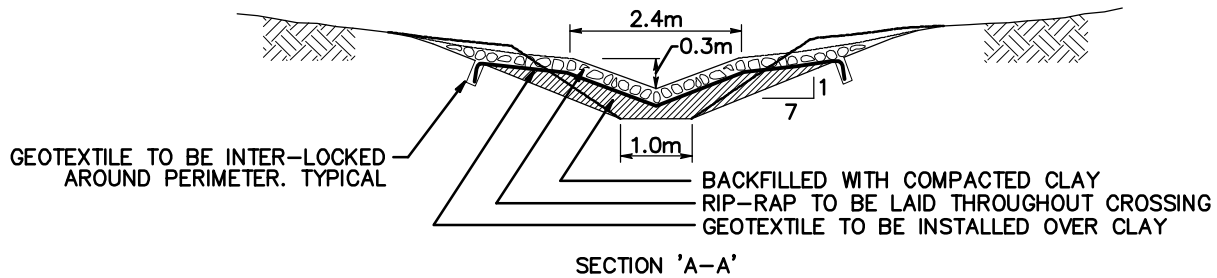
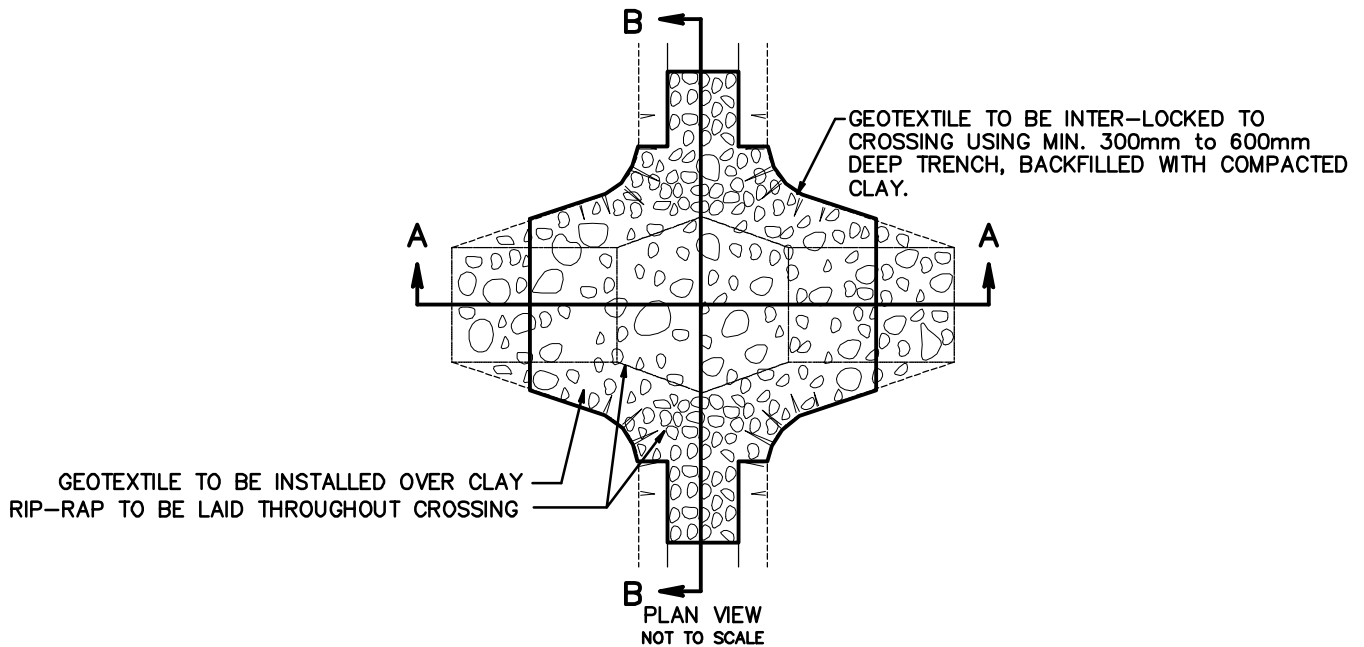
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	GABION BASKET DETAIL STORM SEWER OUTLET (OUTLETS GREATER THAN 0.9m ϕ)	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	
Date: 2009-04-16	Drawn: CP	Scale: NTS		
			Figure F-25	




NOTES:

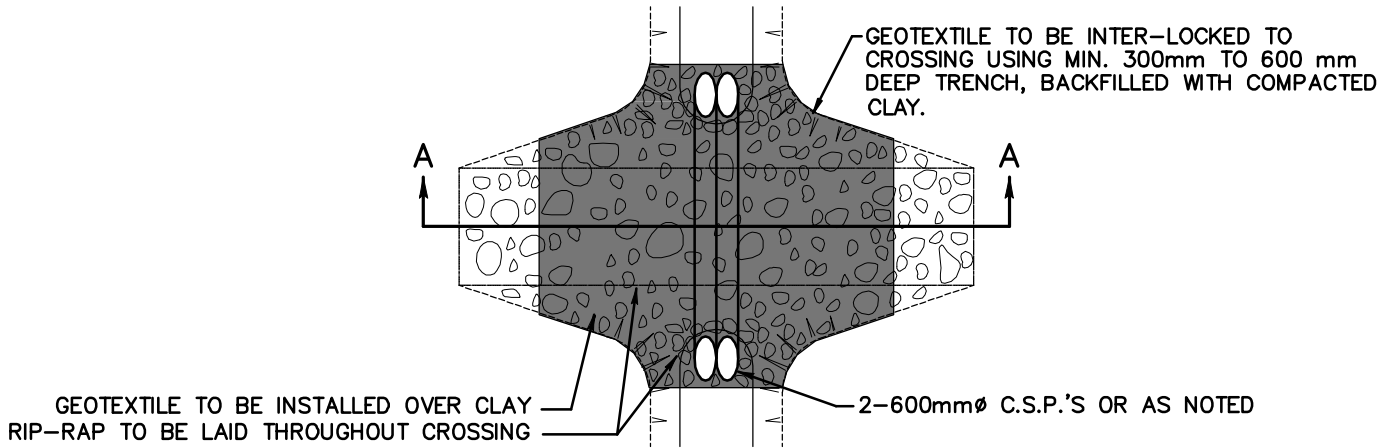
1. GEOTEXTILE OVERLAPS TO BE A MIN. OF 300mm.
2. ROCKED LINED CROSSING: USE 150mm-200mm ROCK, MAT THICKNESS 300mm.
3. EXTEND TO FULL WIDTH, LENGTH & SIDESLOPE OF CROSSING AS WELL AS UPSTREAM & DOWNSTREAM. SPRAY SLURRY MIX CONCRETE (5MPa) TO FILL VOIDS (TOP ONLY).
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards

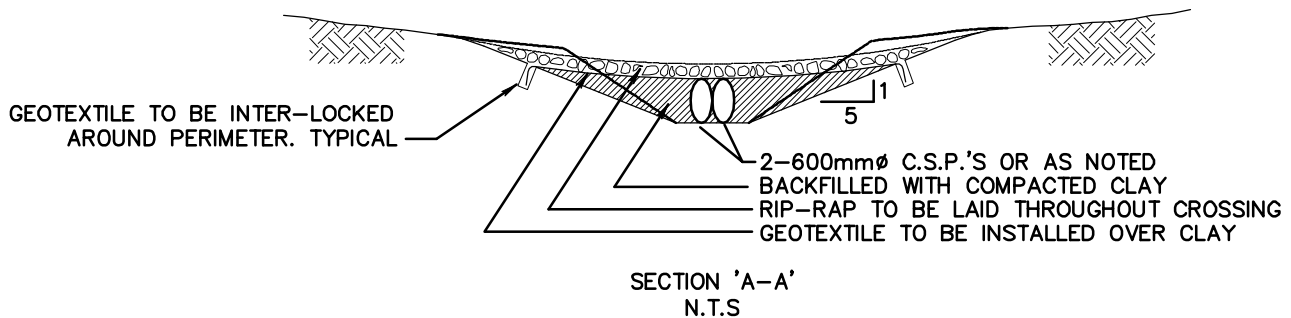


Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	LOW LEVEL X-ING NO CULVERT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn: TLB	Scale: NTS		



NOTE: GEOTEXTILE OVERLAPS TO BE A MIN. OF 300 mm

PLAN VIEW
N.T.S



SECTION 'A-A'
N.T.S


NOTE:

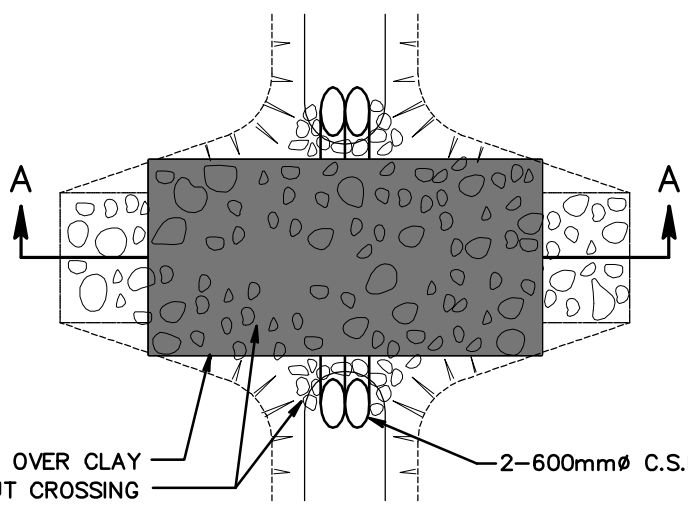
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



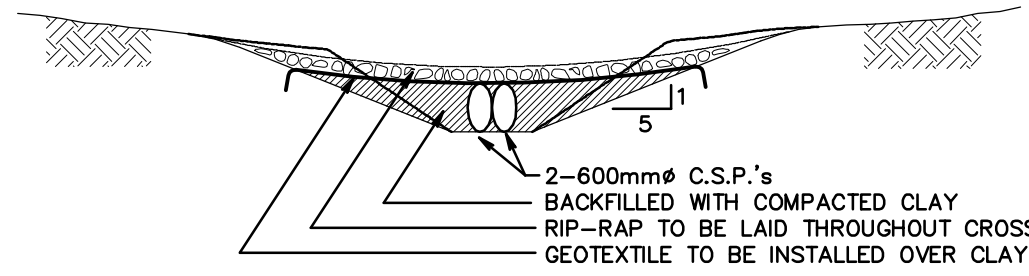
Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	LOW LEVEL X-ING WITH CULVERT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn: TLB	Scale NTS		



GEOTEXTILE TO BE INSTALLED OVER CLAY
 RIP-RAP TO BE LAID THROUGHOUT CROSSING

2-600mm \varnothing C.S.P.'s

PLAN VIEW
 Not to Scale




2-600mm \varnothing C.S.P.'s
 BACKFILLED WITH COMPACTED CLAY
 RIP-RAP TO BE LAID THROUGHOUT CROSSING
 GEOTEXTILE TO BE INSTALLED OVER CLAY

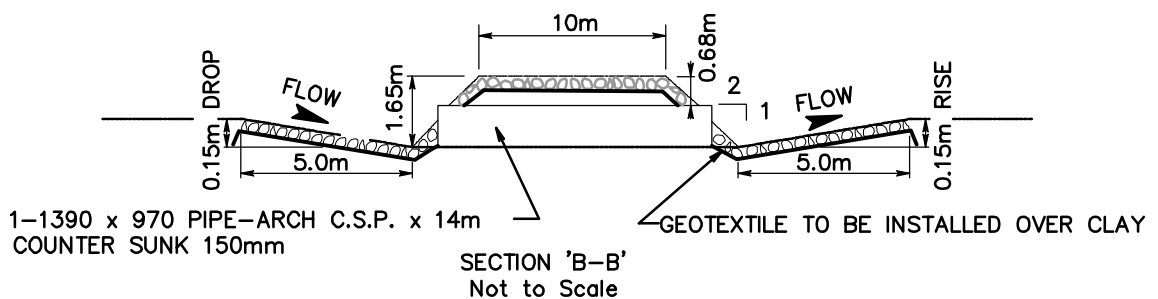
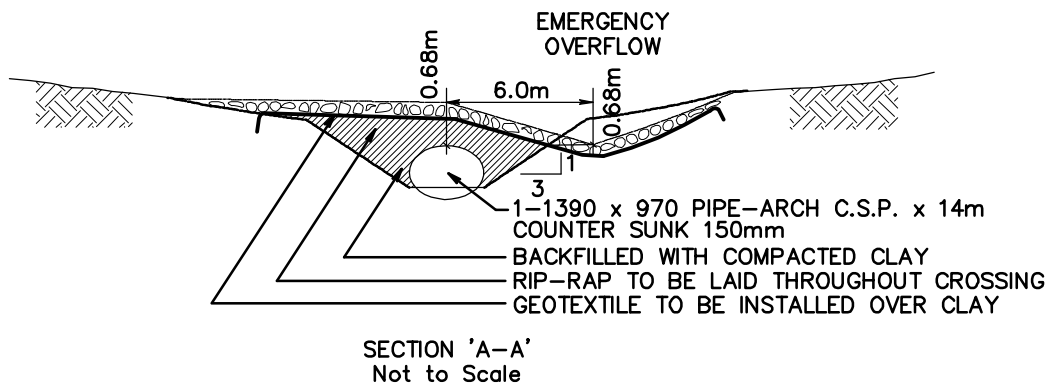
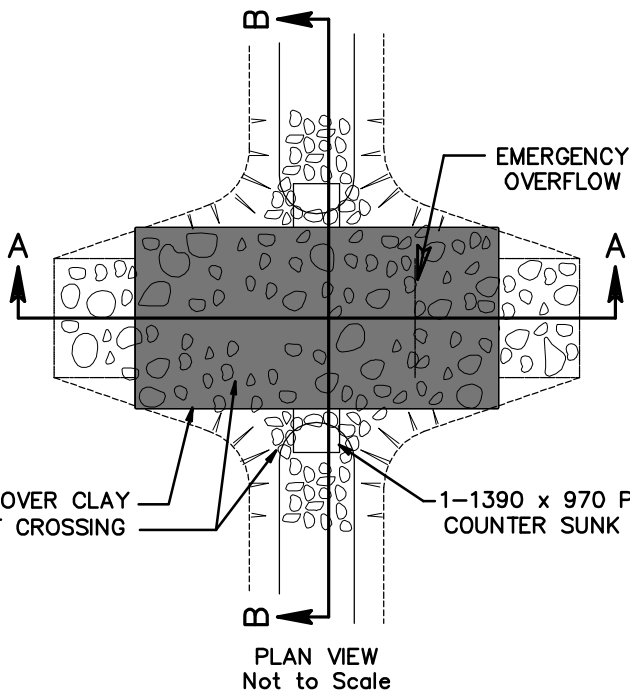
SECTION 'A-A'

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	LOW LEVEL X-ING WITH CULVERT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-28
Date: 2009-04-16	Drawn: TLB	Scale NTS		




NOTES:

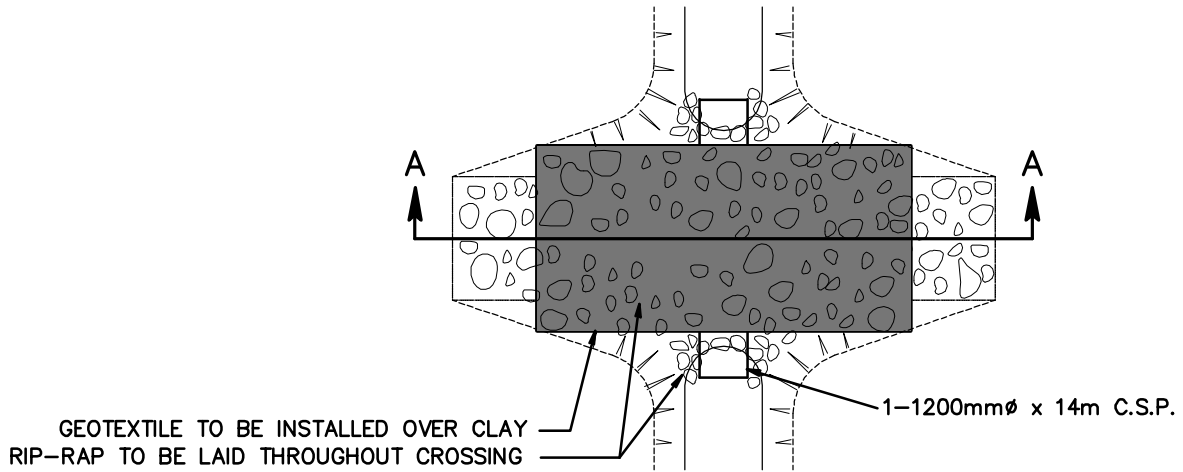
1. GEOTEXTILE OVERLAPS TO BE A MIN. OF 300mm.
2. ROCK LINED CROSSING: USE 150mm - 200mm ROCK, MAT THICKNESS 300mm.
3. EXTEND TO FULL WIDTH, LENGTH & SIDESLOPE OF CROSSING AS WELL AS UPSTREAM & DOWNSTREAM AND OVERFLOW CHANNEL.
4. SPRAY SLURRY CONCRETE (5MPa) TO FILL VOIDS (TOP ONLY).

TOWN OF PEACE RIVER

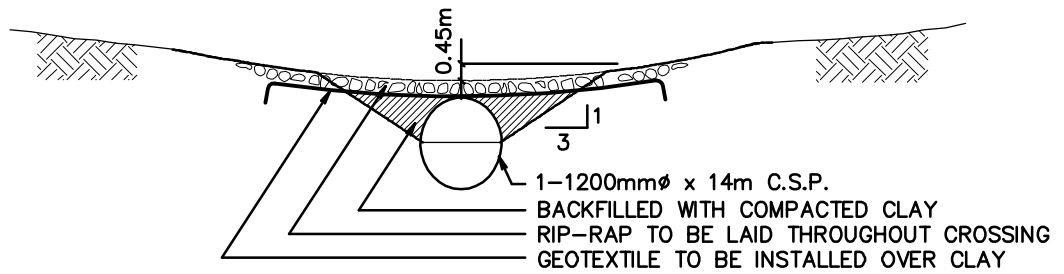
General Municipal Servicing Standards



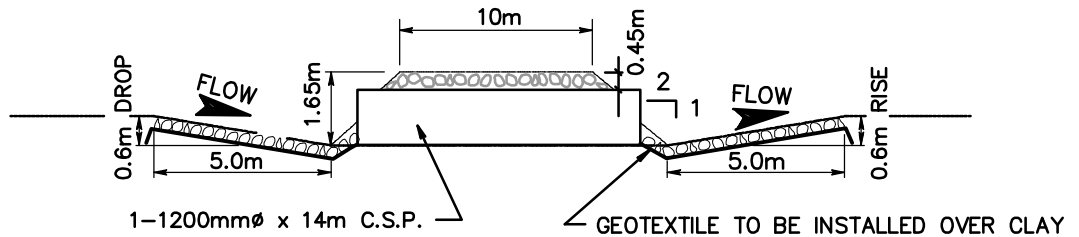
Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	LOW LEVEL X-ING WITH CULVERT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-29
Date: 2009-04-16	Drawn: TLB	Scale NTS		



PLAN VIEW
Not to Scale



SECTION 'A-A'
Not to Scale



SECTION 'B-B'
Not to Scale


NOTES:

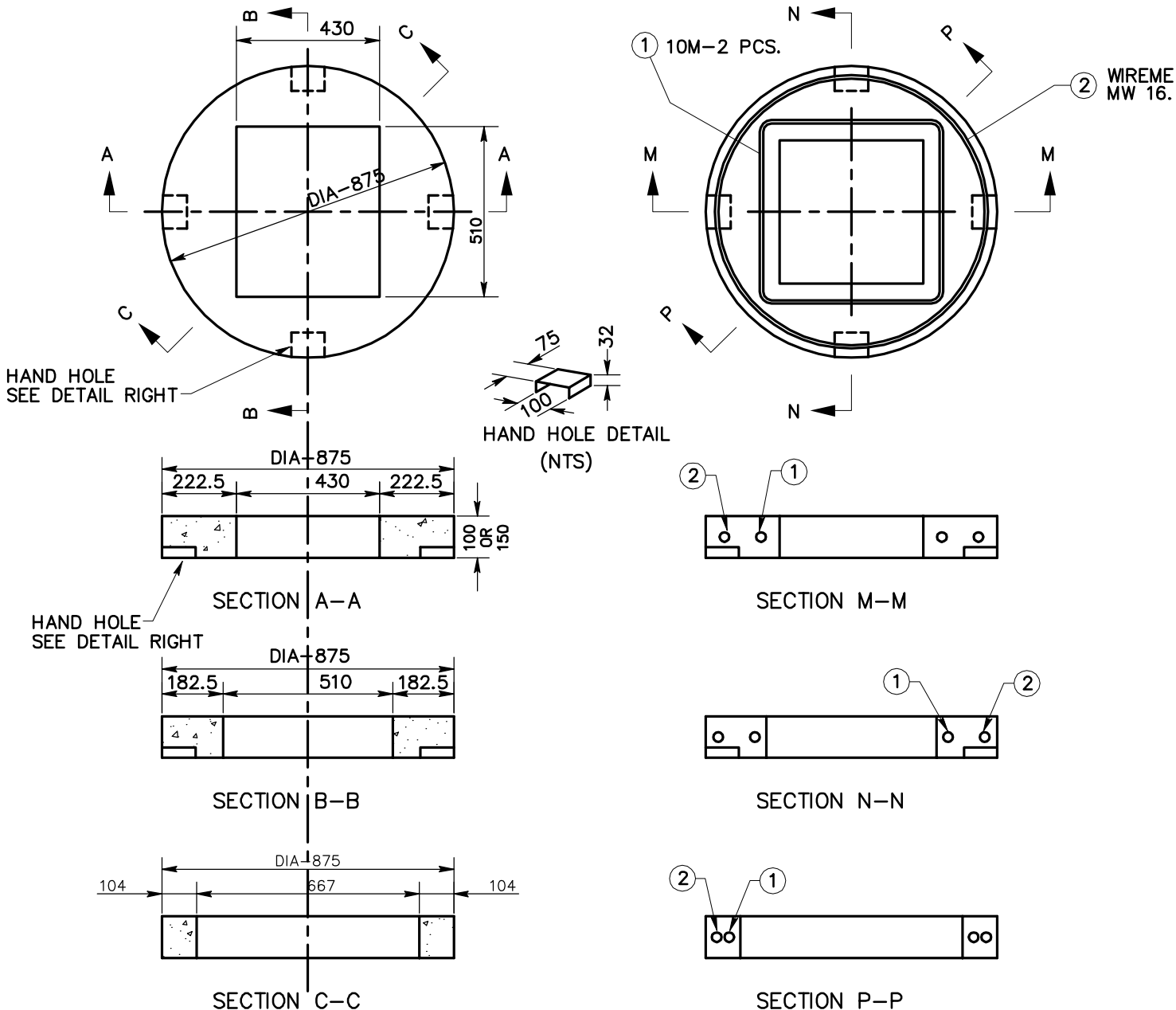
1. GEOTEXTILE OVERLAPS TO BE A MIN. OF 300mm.
2. ROCK LINED CROSSING: USE 150mm - 200mm ROCK, MAT THICKNESS 300mm.
3. EXTEND TO FULL WIDTH, LENGTH & SIDESLOPE OF CROSSING AS WELL AS UPSTREAM & DOWNSTREAM.
4. SPRAY SLURRY MIX CONCRETE (5MPa) TO FILL VOIDS (TOP ONLY).

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	LOW LEVEL X-ING WITH CULVERT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-30
Date: 2009-04-16	Drawn: TLB	Scale NTS		



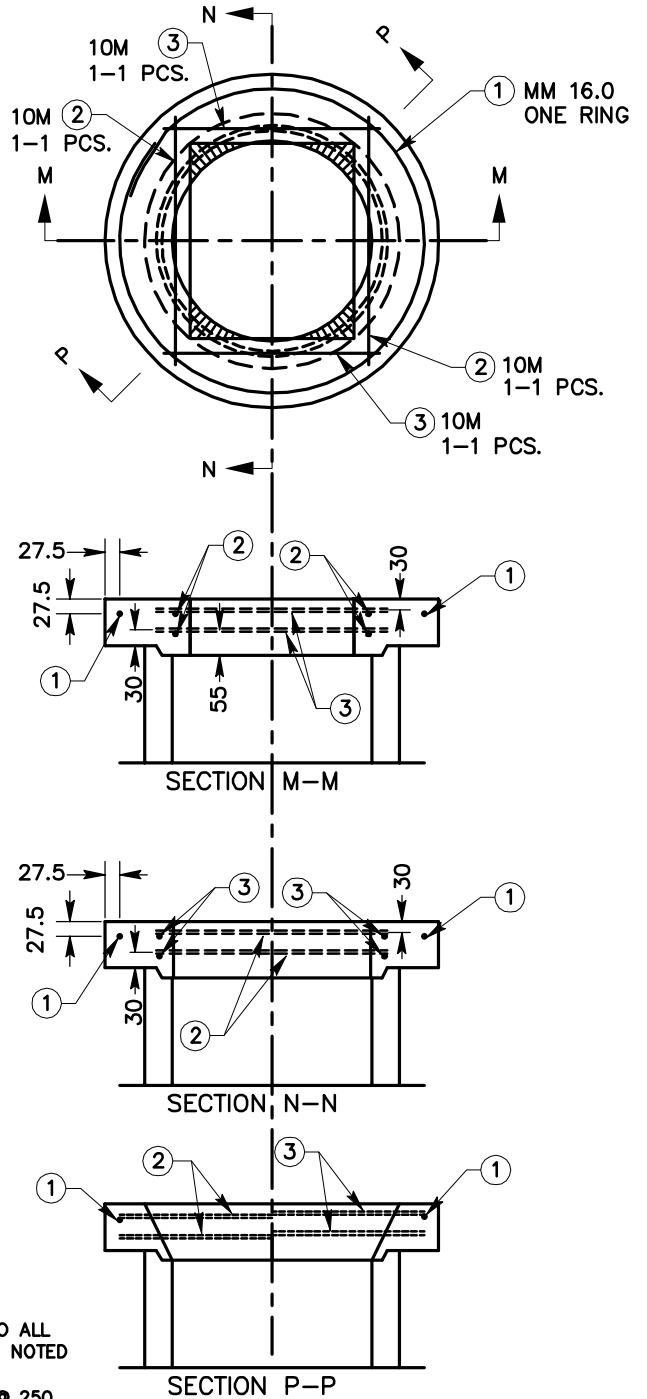
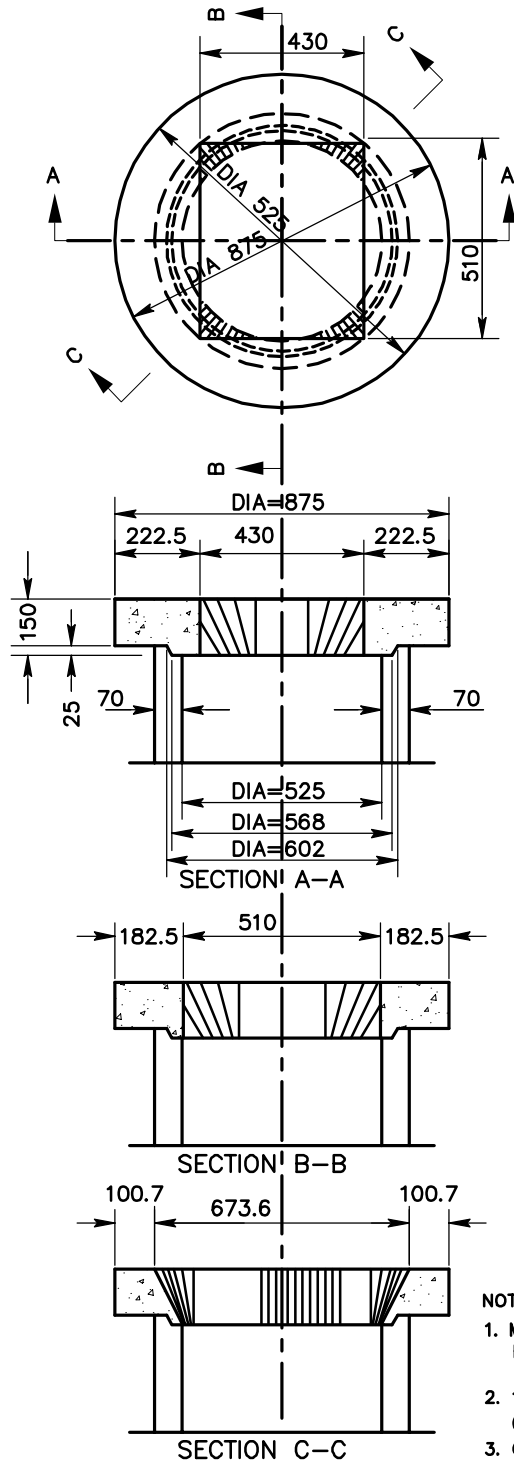
- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. 25mm MINIMUM COVER.
 3. 10M REINFORCING BARS @ 250 (OR EQUIVALENT STEEL AREA).
 4. CONCRETE: 30 MPa S.R. AT 28 DAYS.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>K-7 SF&G NECK RING</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure <h3>F-31</h3>
Date: 2009-04-16	Drawn: T.S./JAD	Scale: NTS		



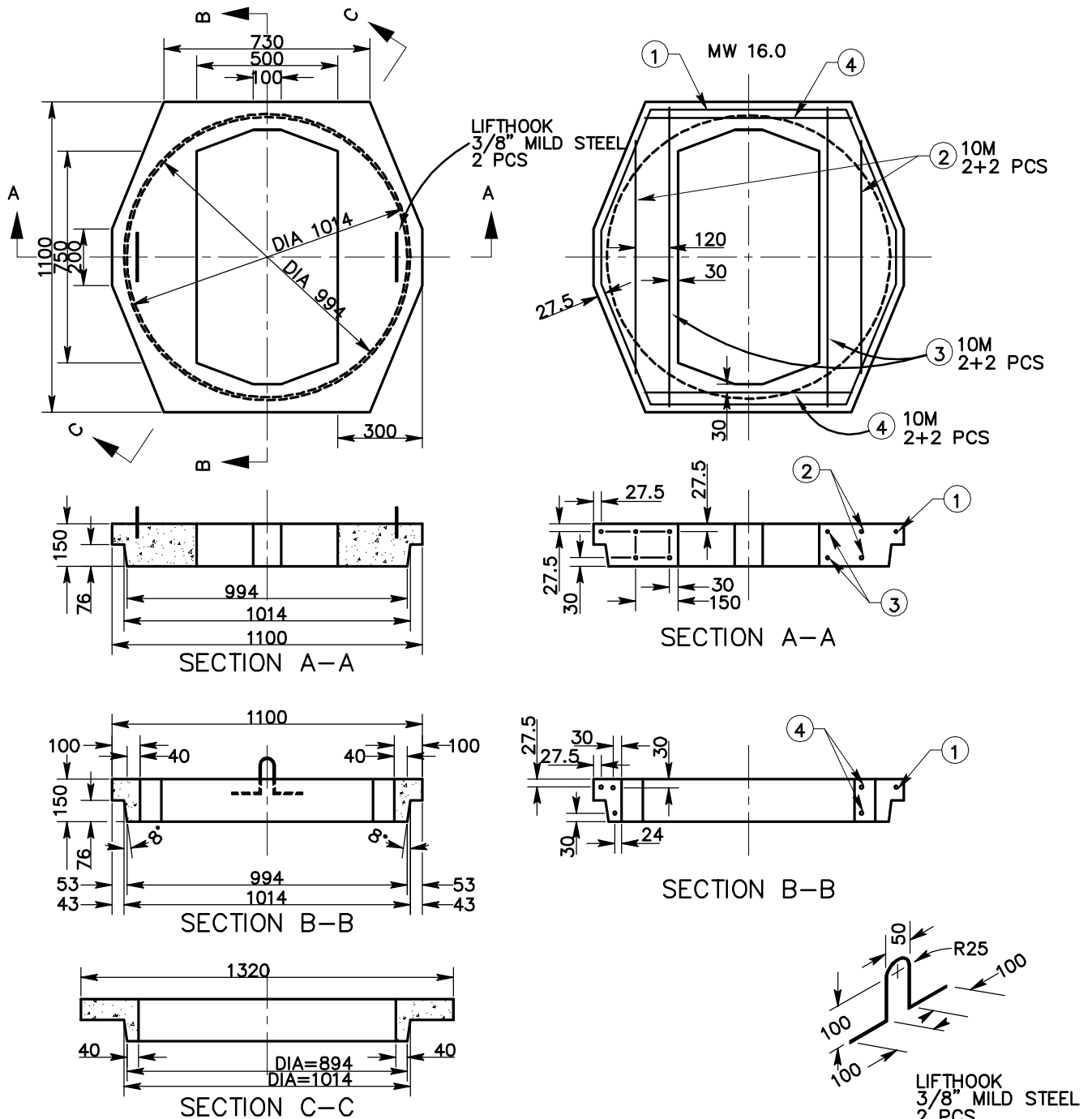
- NOTES:
1. MINIMUM 25mm COVER TO ALL RE-BARS EXCEPT WHERE NOTED ON DRAWING.
 2. 10M REINFORCING BARS @ 250 (OR EQUIVALENT STEEL AREA).
 3. CONCRETE: 30 MPa S.R. AT 28 DAYS.
 4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	K-7 SF&G SHOULDER RING	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-32
Date: 2009-04-16	Drawn: T.S.	Scale: NTS		



NOTES:

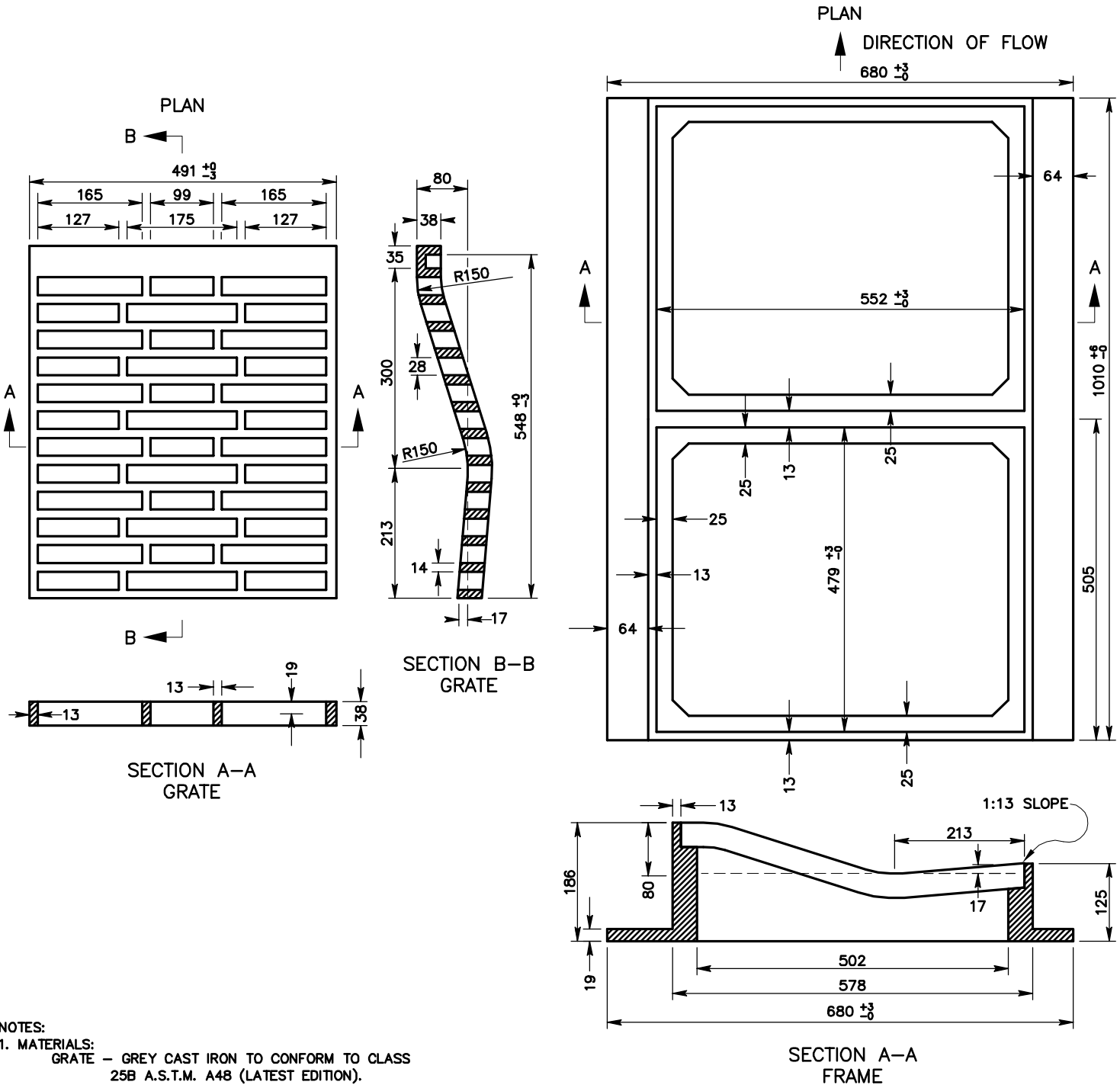
1. 25mm MINIMUM COVER.
2. 10M REINFORCING BARS @ 250 (OR EQUIVALENT STEEL AREA).
3. CONCRETE: 30 MPa AT 28 DAYS.
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
5. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	K-7 DF & G SHOULDER RING	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-33
Date: 2009-04-16	Drawn: T.S. / JAD	Scale: NTS		



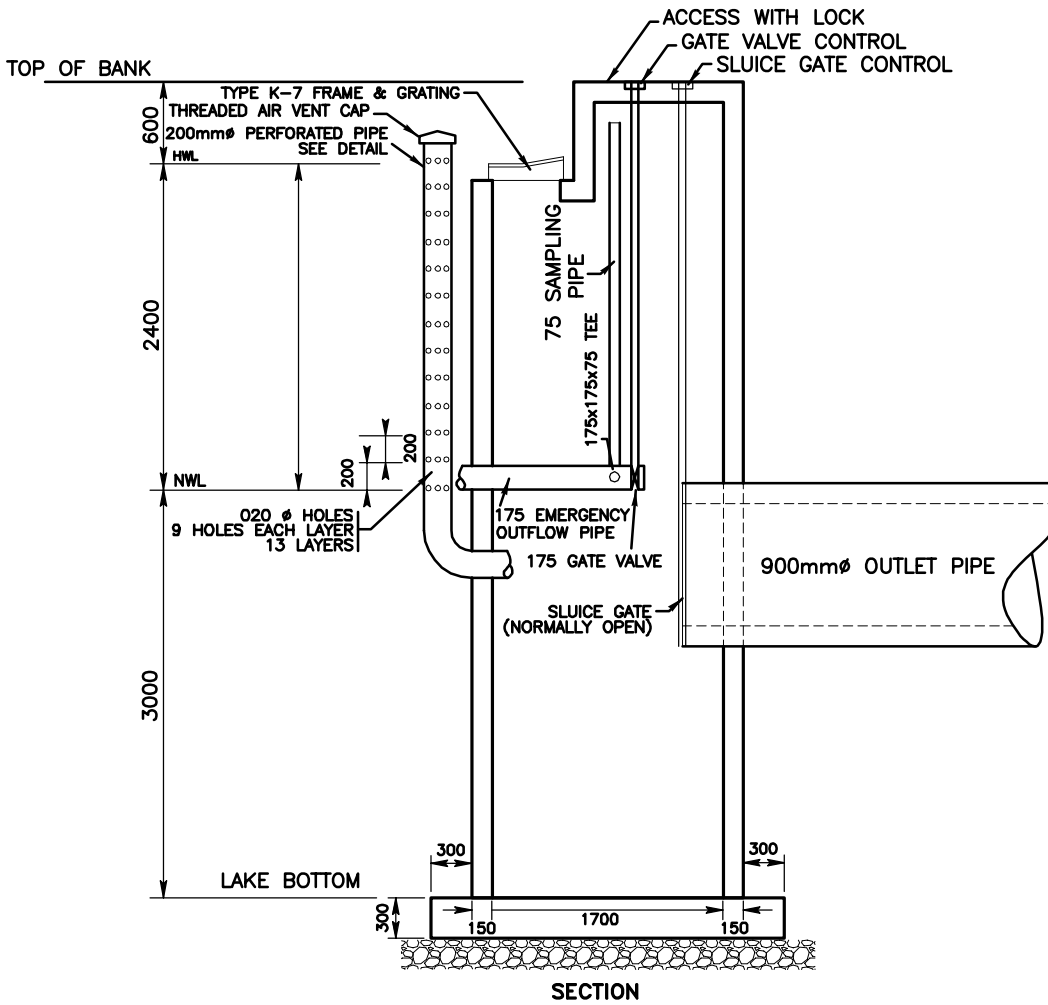
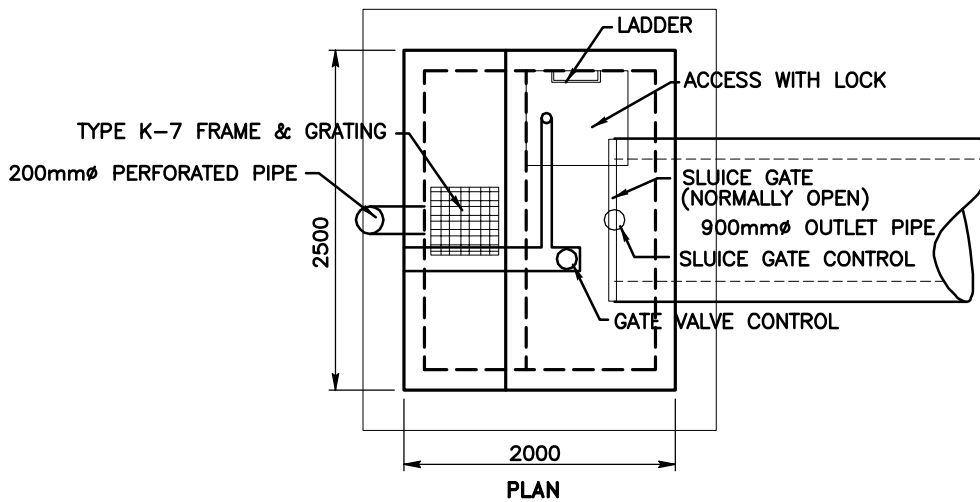
NOTES:
 1. MATERIALS:
 GRATE - GREY CAST IRON TO CONFORM TO CLASS 25B A.S.T.M. A48 (LATEST EDITION).
 FRAME - DUCTILE IRON TO CONFORM TO A.S.T.M. A536 (LATEST EDITION) GRADE 80-55-06.
 2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	K-7 DF&G CATCH BASIN	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-34
Date: 2009-04-16	Drawn: T.S./JAD	Scale NTS		




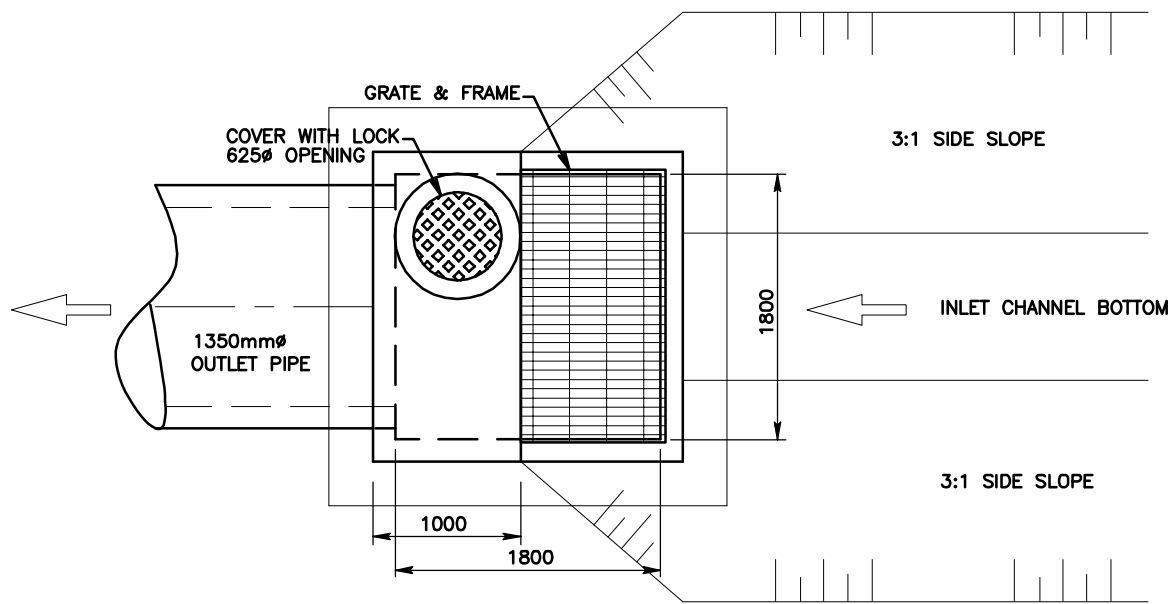
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

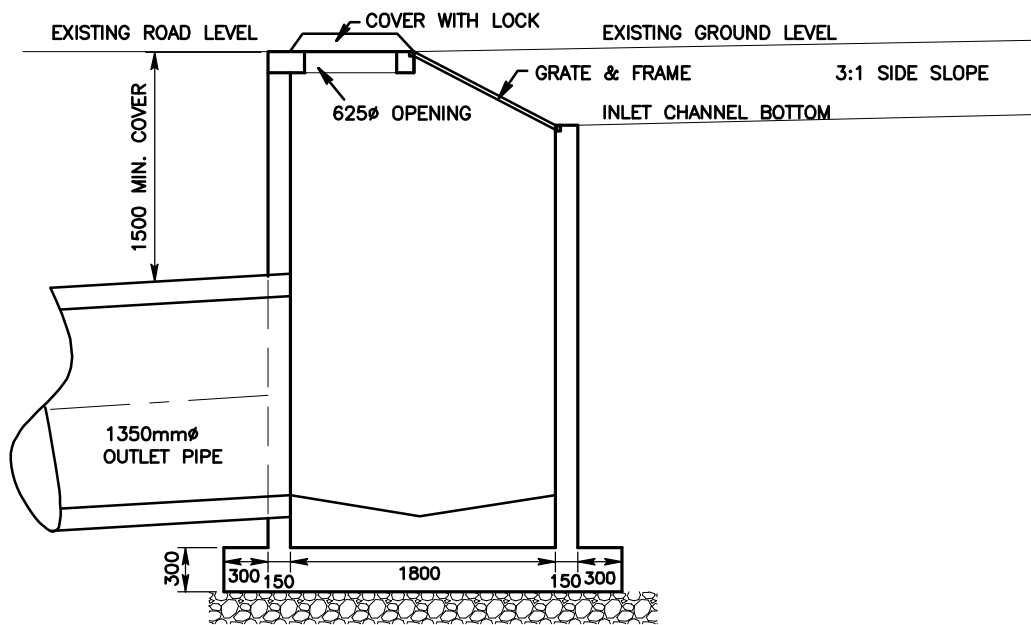
General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>STORM POND OUTLET STRUCTURE</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-35
Date: 2009-04-16	Drawn:	Scale NTS		



PLAN




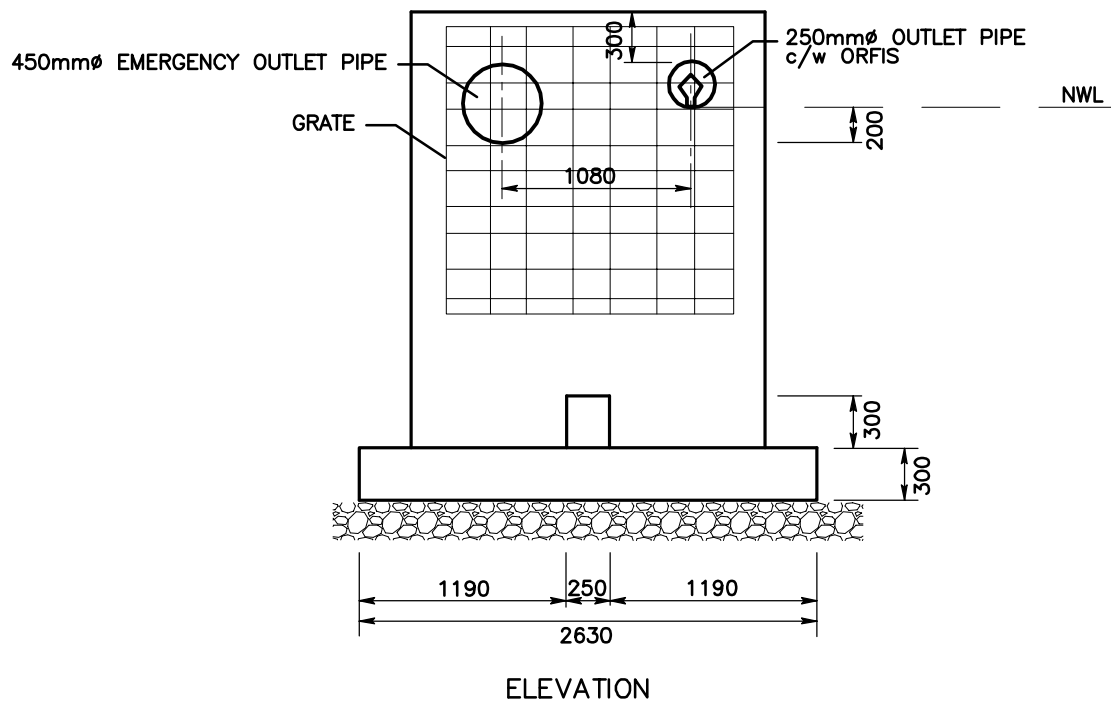
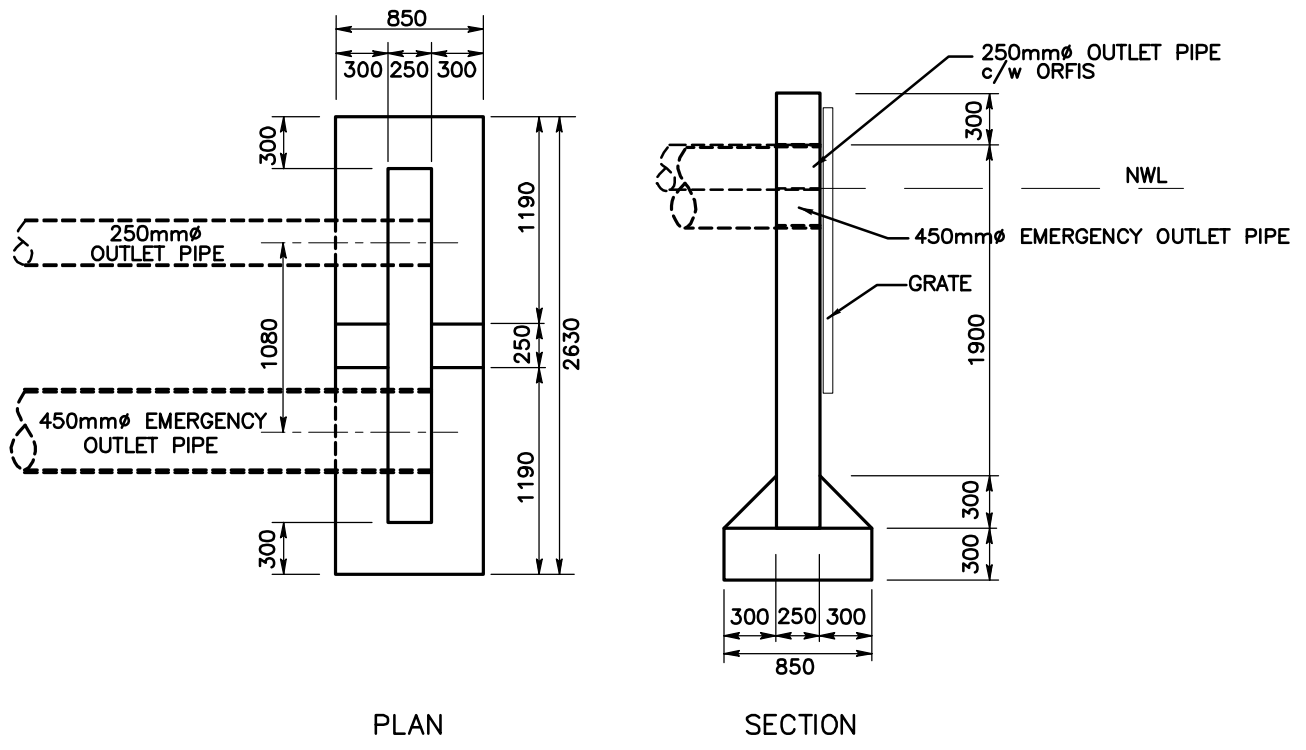
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>SWALE INLET STRUCTURE</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved: _____ Figure F-36	
Date: 2009-04-16	Drawn:	Scale NTS		




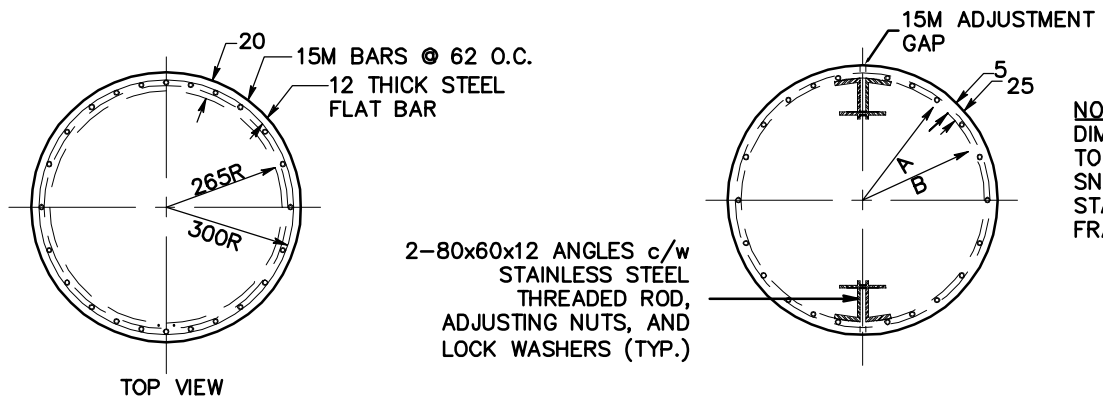
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards

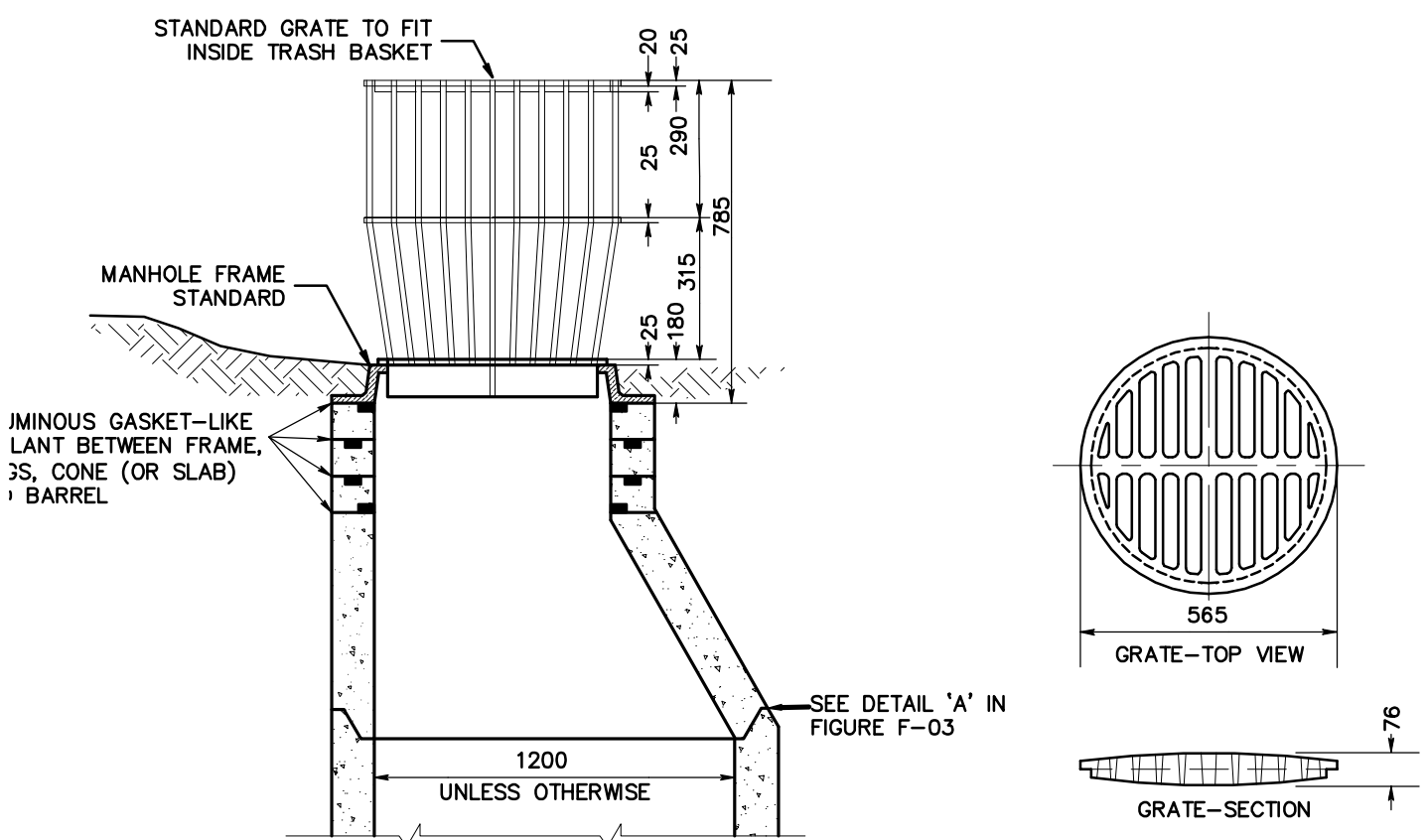


Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	STORM POND OUTLET CONTROL	
Rev.				
Rev.			File No.: GP6033068	Design:
Date: 2009-04-16	Drawn:	Scale NTS		F-37



NOTE:
DIMENSIONS A AND B ARE TO BE ADJUSTED TO FIT SNUGLY INSIDE AN STANDARD MANHOLE FRAME

2-80x60x12 ANGLES c/w STAINLESS STEEL THREADED ROD, ADJUSTING NUTS, AND LOCK WASHERS (TYP.)



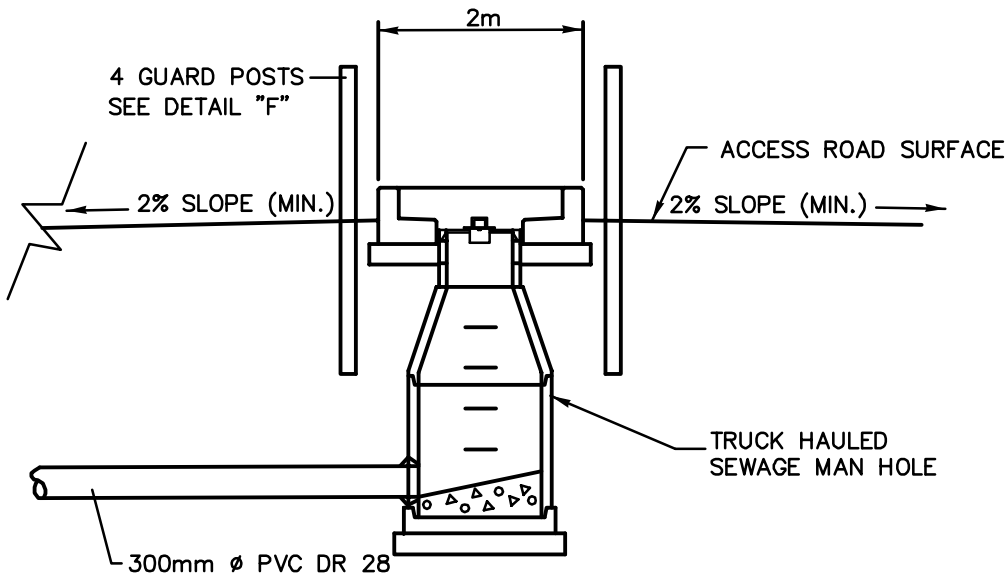
- NOTES:**
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
 3. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

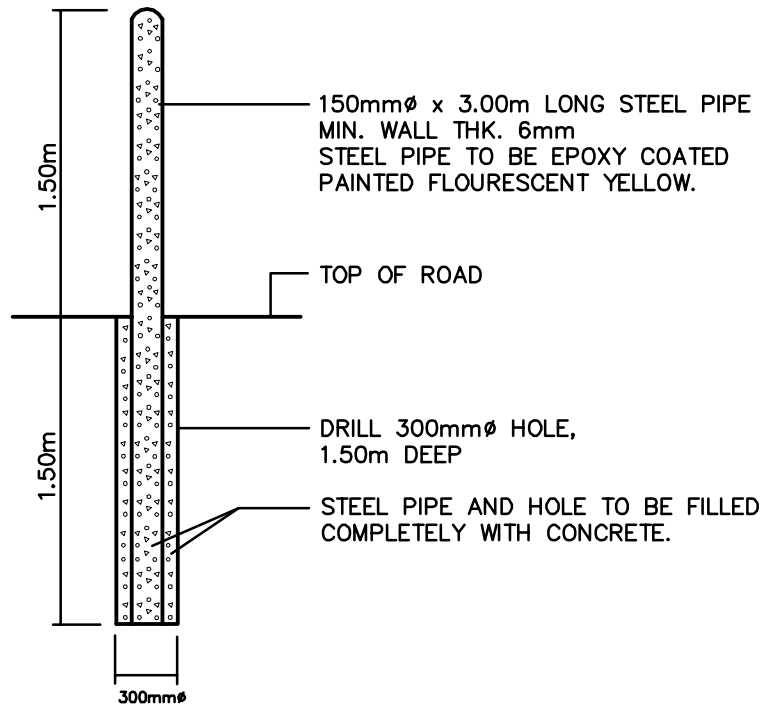
General Municipal Servicing Standards



Rev.		#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	SWALE INLET STRUCTURE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-38
Date: 2008-12-22	Drawn: T.S.	Scale NTS		



DETAIL — GUARD POSTS




DETAIL "F" — GUARD POST

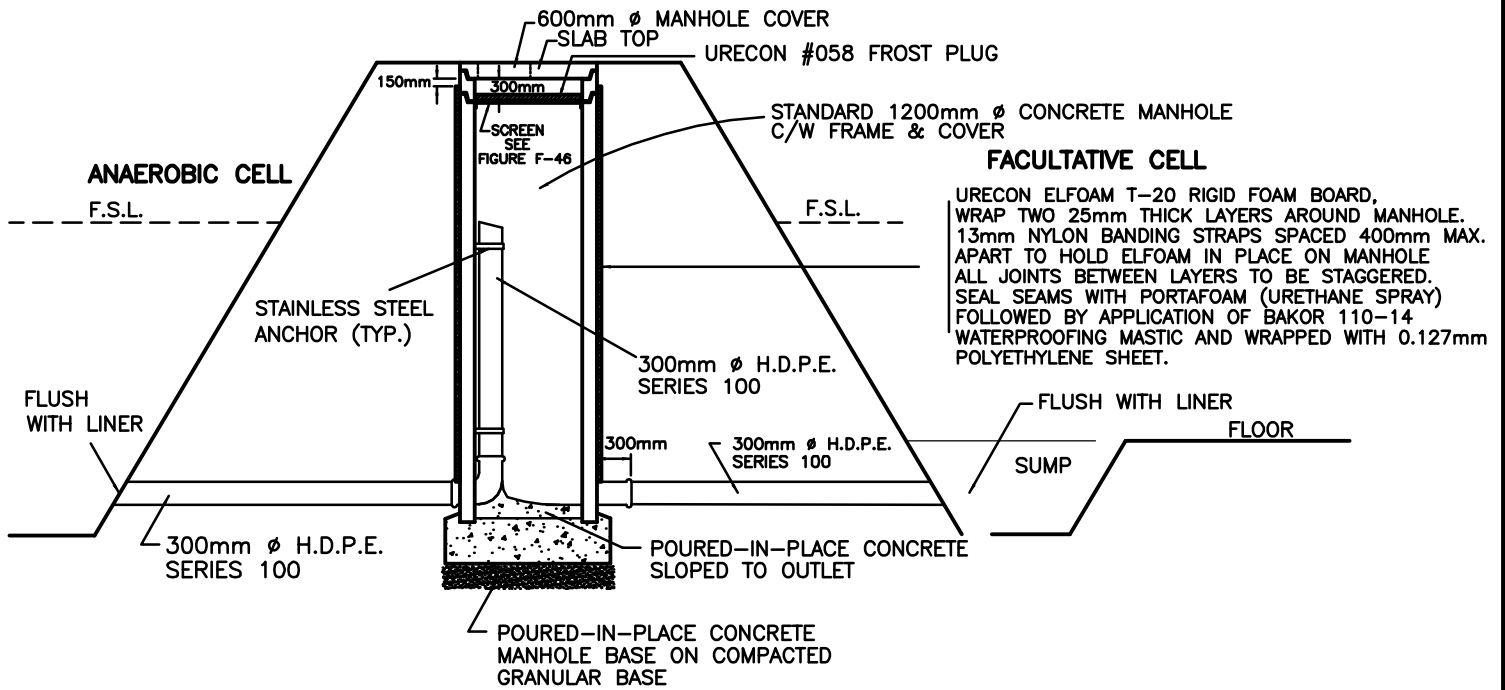
- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>GUARD POSTS</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-39
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

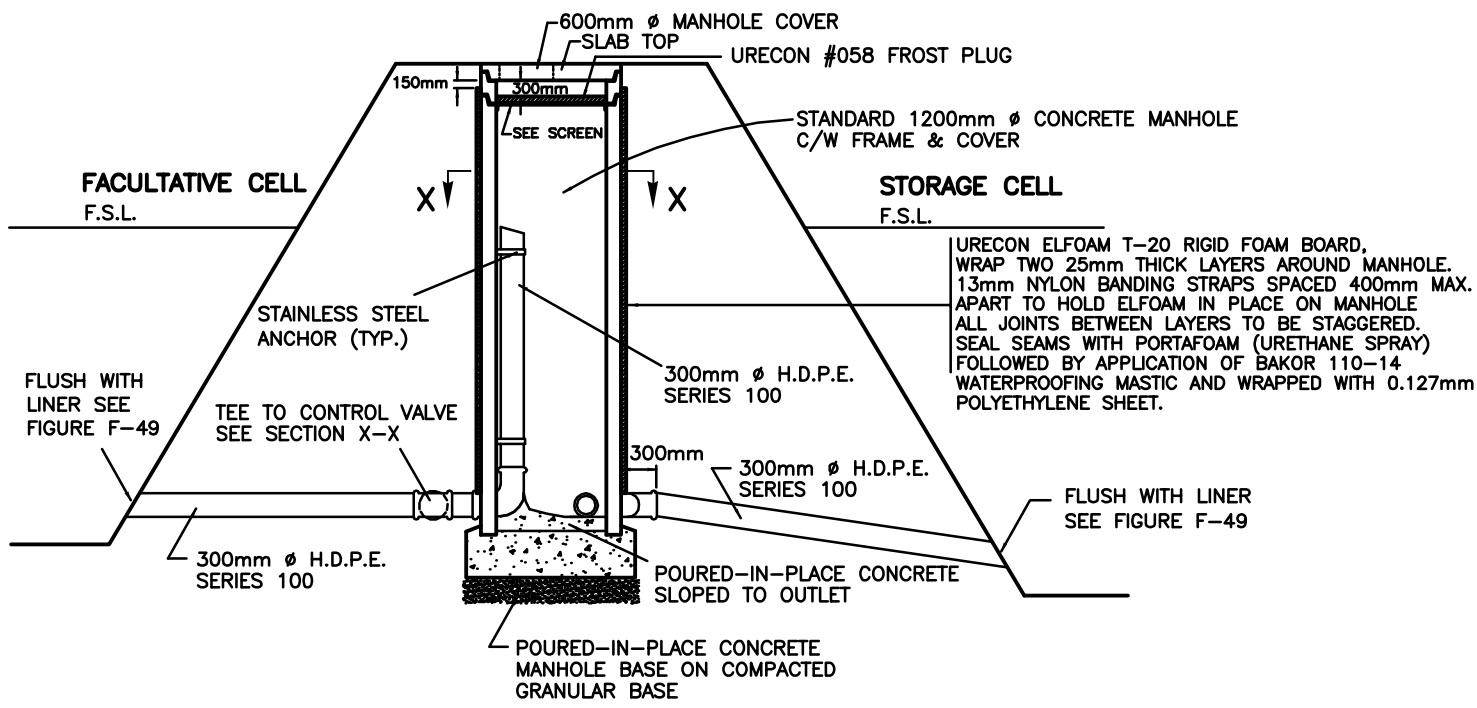
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	OVERFLOW STRUCTURE FROM ANAEROBIC CELL TO FACULTATIVE CELL	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16	Drawn: OM	Scale NTS		F-40




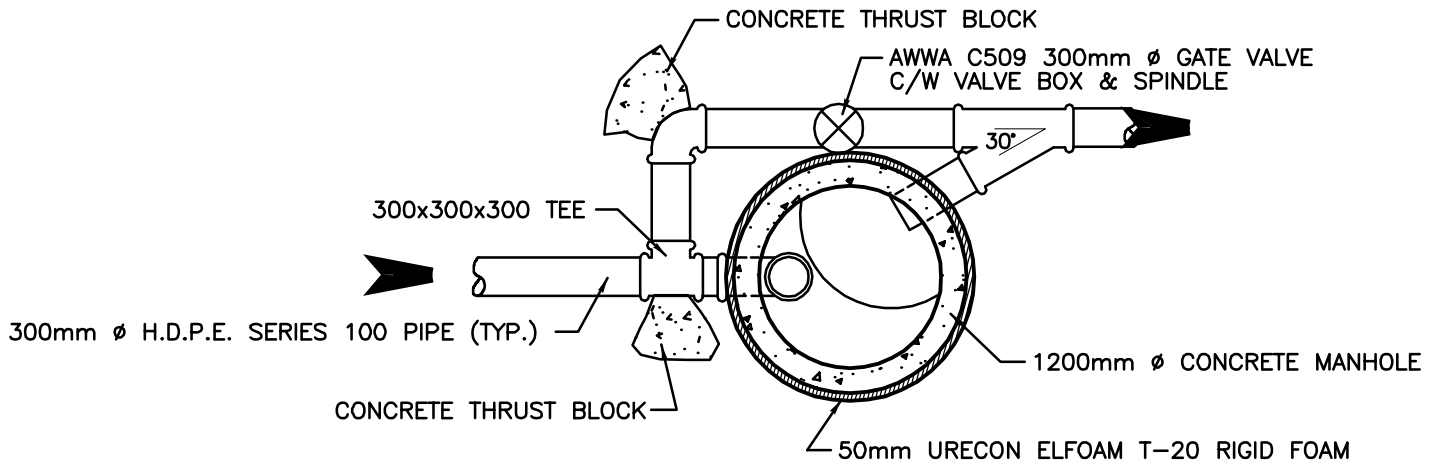
- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
 3. SECTION 'X-X' - SEE FIGURE F-42.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	CONTROL AND OVERFLOW STRUCTURE FROM FACULTATIVE CELL TO STORAGE CELL	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-41
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

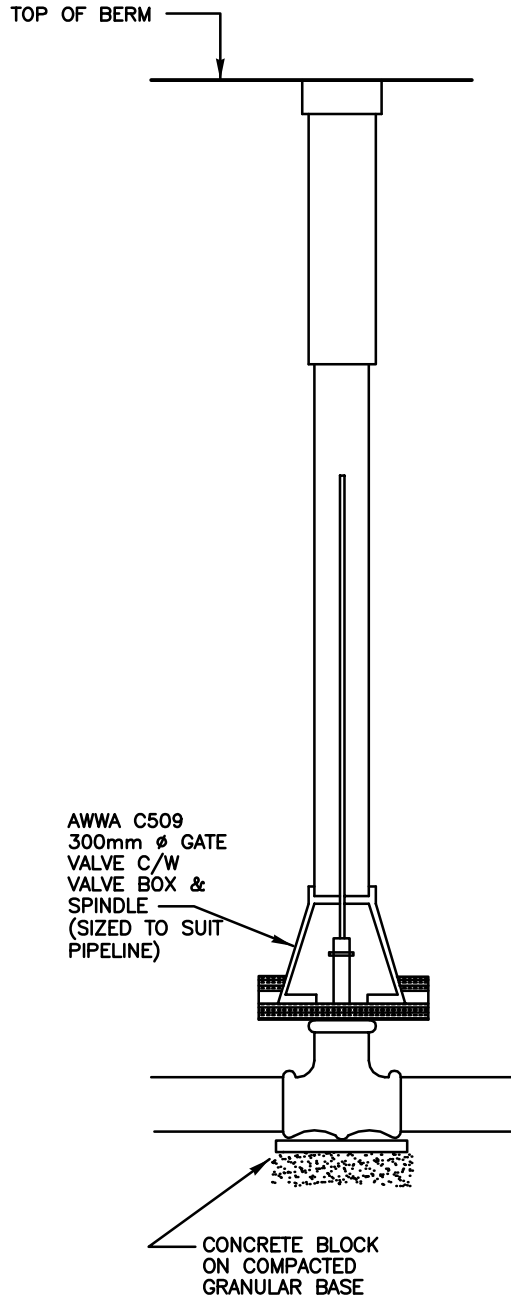
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUTE MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	SECTION X-X	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-42
Date: 2009-04-16	Drawn: OM	Scale NTS		




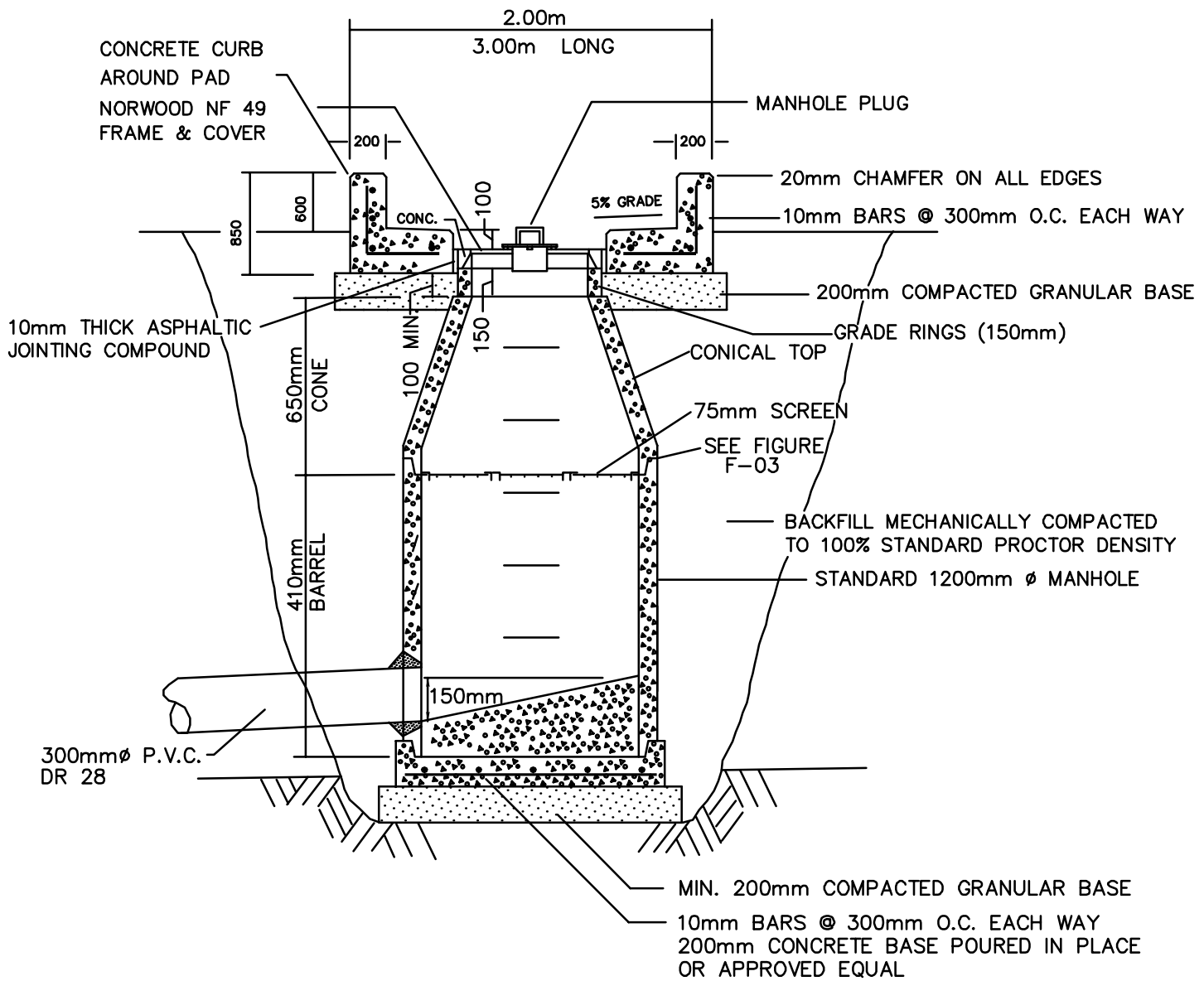
- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>CONTROL GATE VALVE (TYPICAL)</h2>	
Rev.				
Rev.				
Rev.	FILE NO.: GP6033068	Design:	Approved:	Figure F-43
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

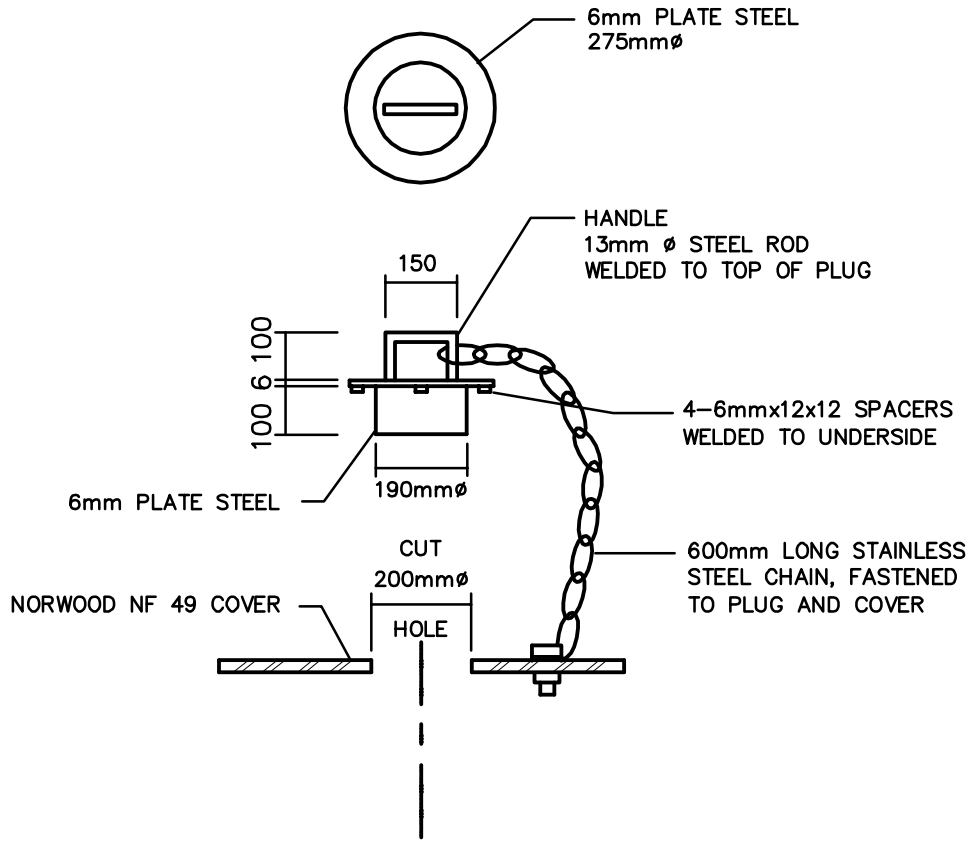
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
3. ALL BARREL JOINTS TO BE GROUTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	DUMPING TRUCK HAULED SEWAGE MANHOLE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-44
Date: 2009-04-16	Drawn: OM	Scale: NTS		




NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

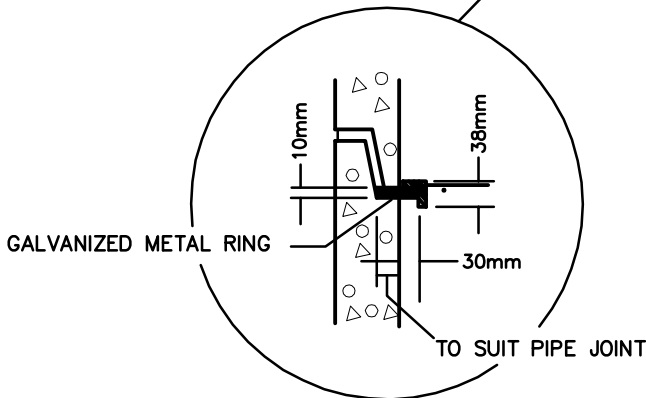
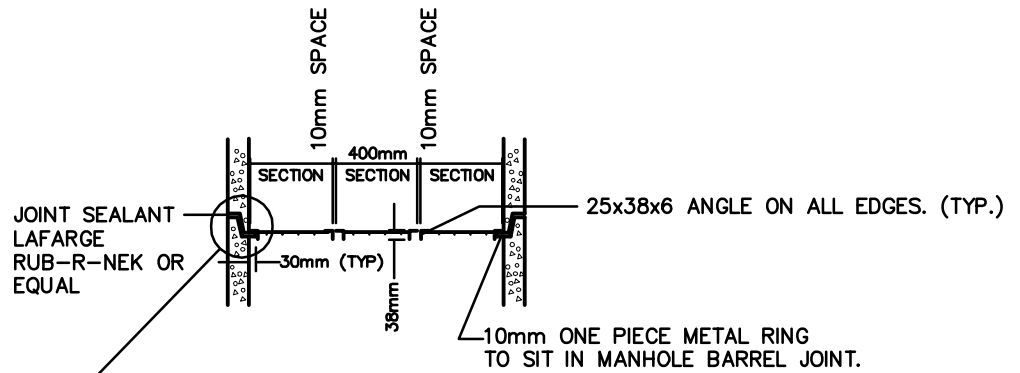
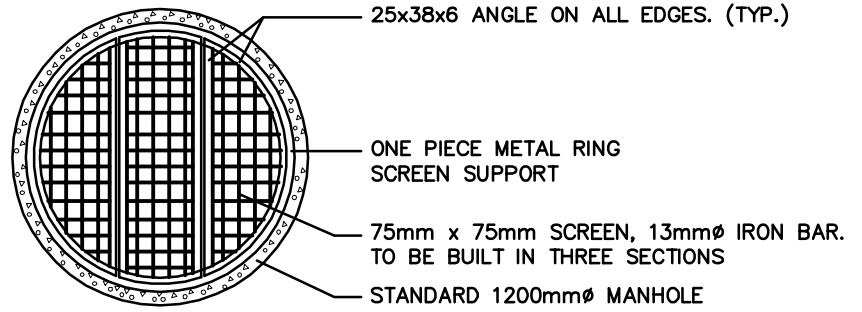
TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>MANHOLE PLUG</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure <h3>F-45</h3>
Date: 2009-04-16	Drawn: OM	Scale: NTS		

ALL STEEL WORK TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.




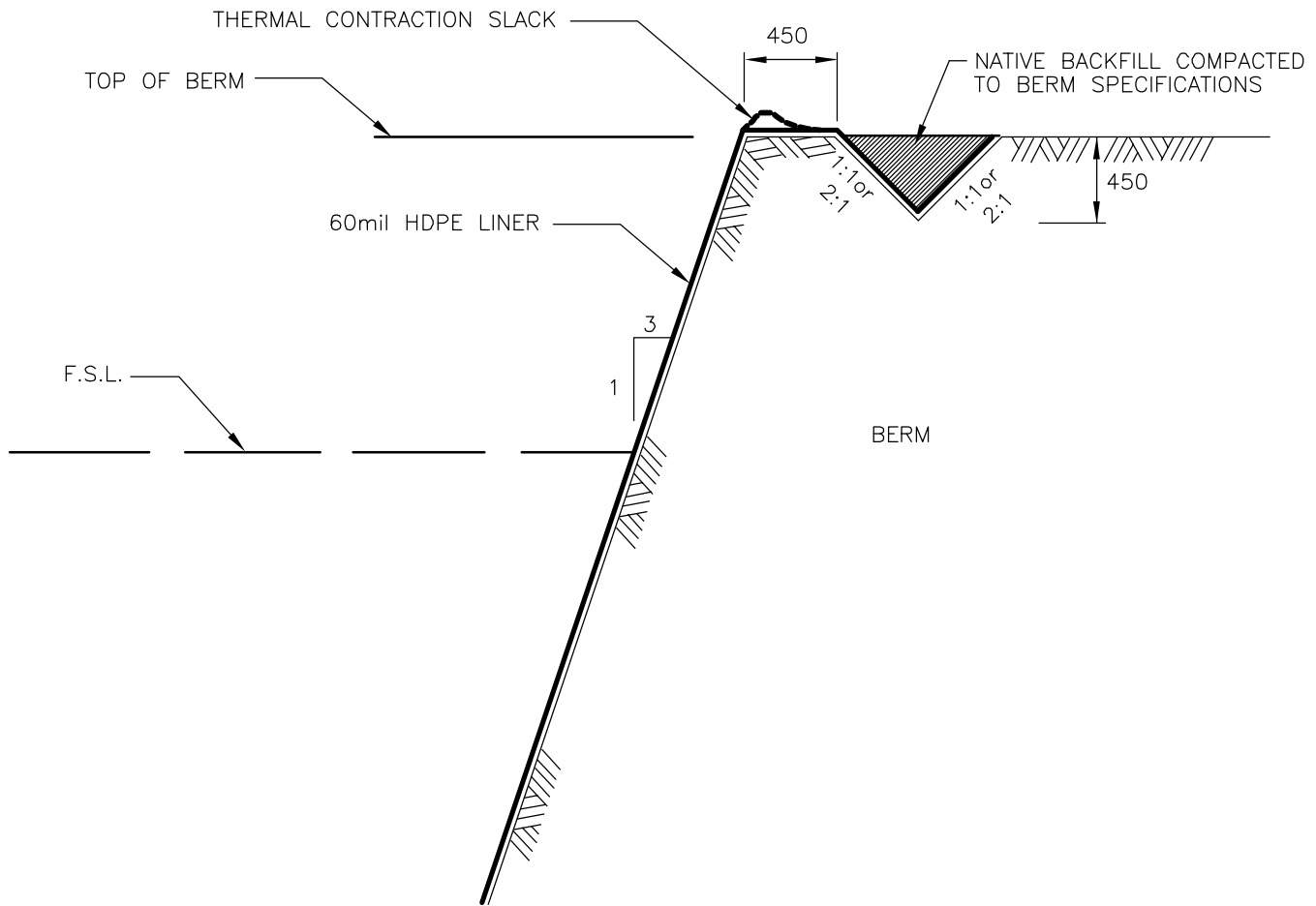
- NOTES:
1. ALL DIMENSIONS IM MILLIMETRES UNLESS OTHERWISE NOTED.
 2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>SCREEN</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-46
Date: 2009-04-16	Drawn: OM	Scale NTS		




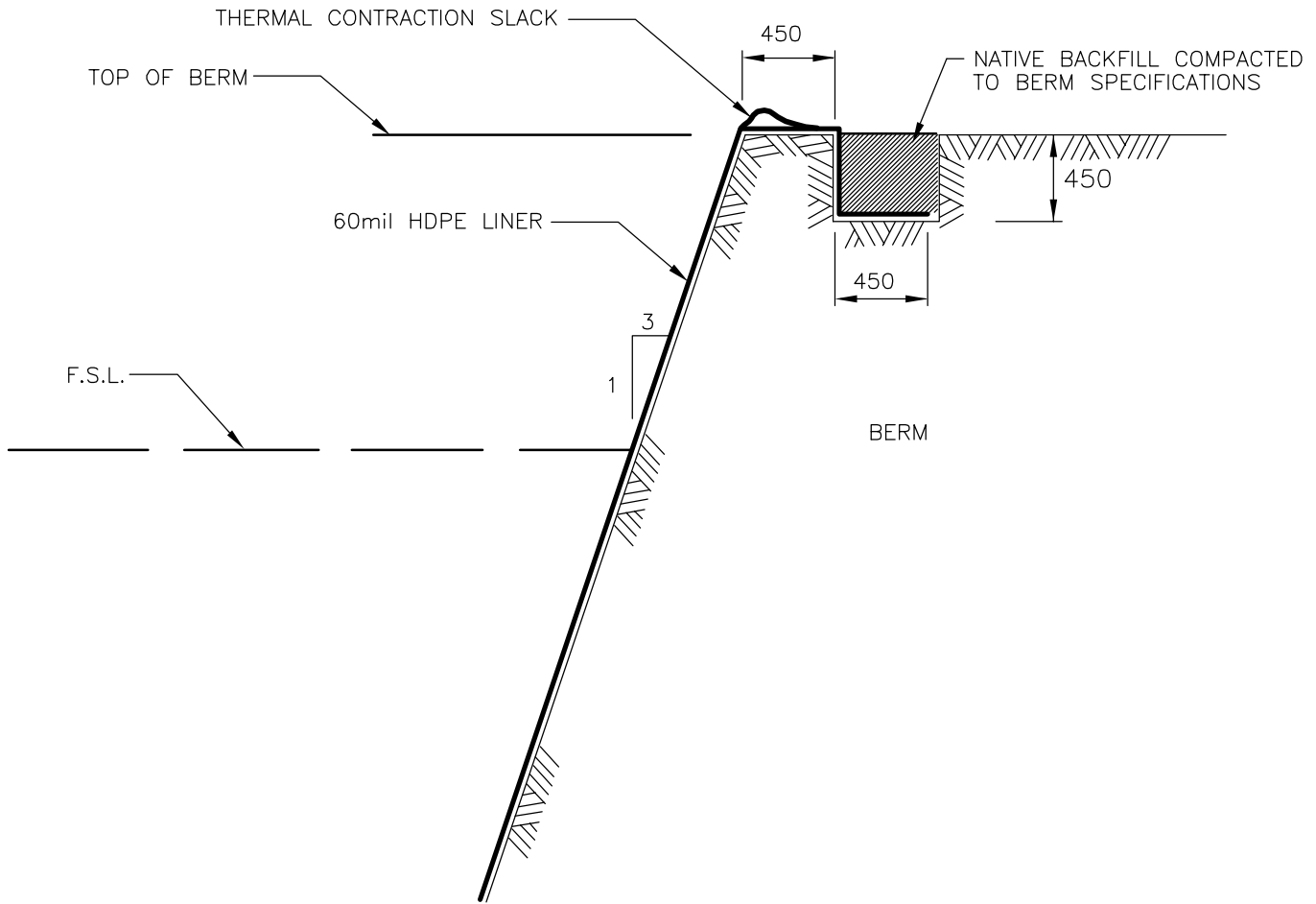
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>V-TYPE ANCHOR TRENCH</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-47
Date: 2009-04-16	Drawn: OM	Scale NTS		




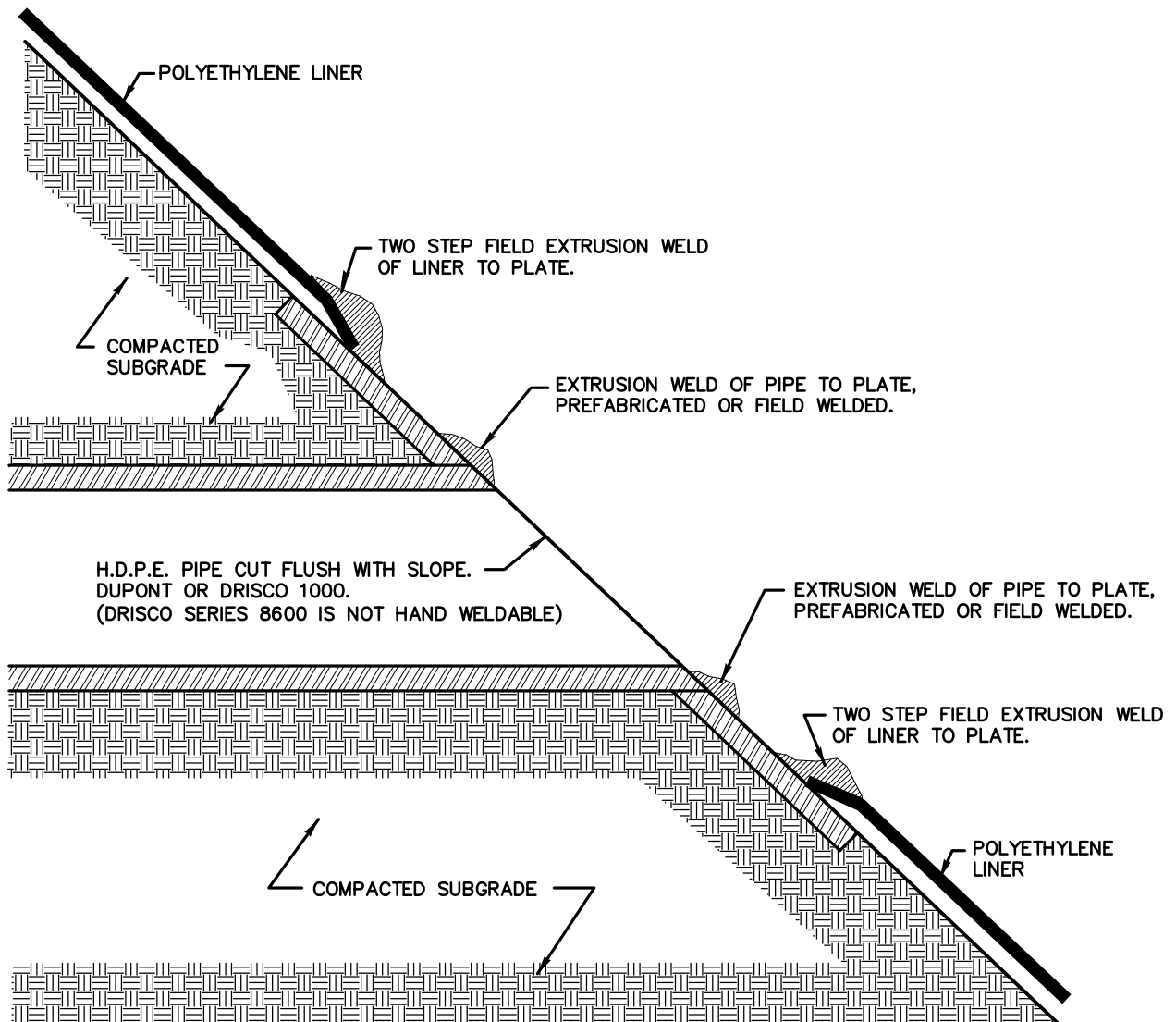
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>STANDARD ANCHOR TRENCH</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-48
Date: 2009-04-16	Drawn: OM	Scale NTS		




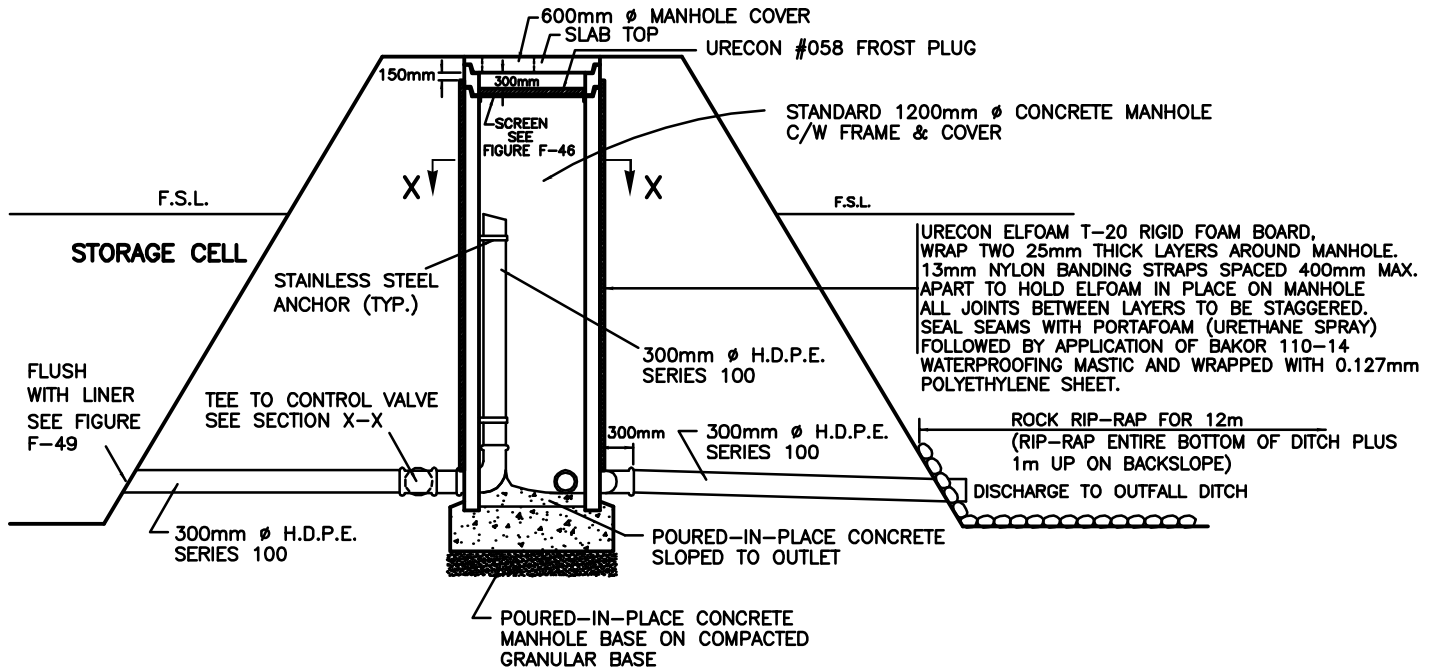
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	H.D.P.E. PIPE PENETRATION WITH FLANGE PLATE	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure
Date: 2009-04-16		Scale NTS		F-49




NOTES:

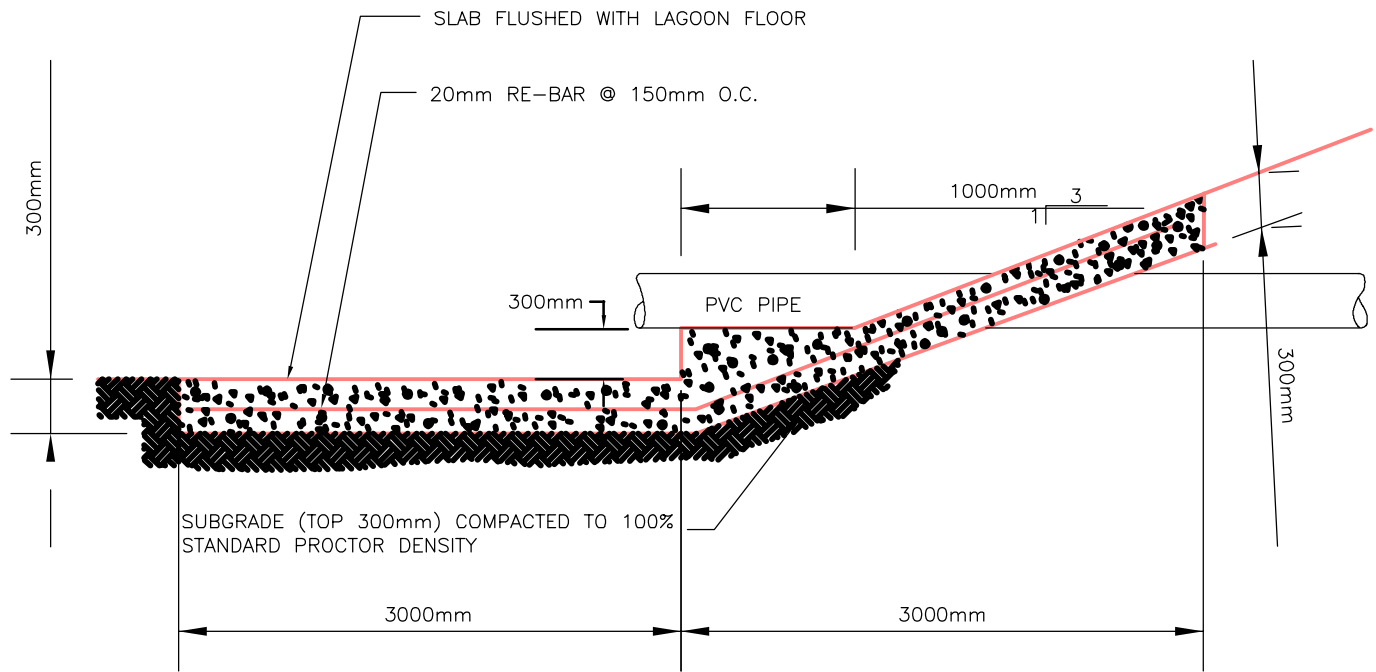
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.
3. SECTION 'X-X' - SEE FIGURE F-42.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	DISCHARGE OVERFLOW STRUCTURE FROM STORAGE CELL TO OUTFALL DITCH	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-50
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

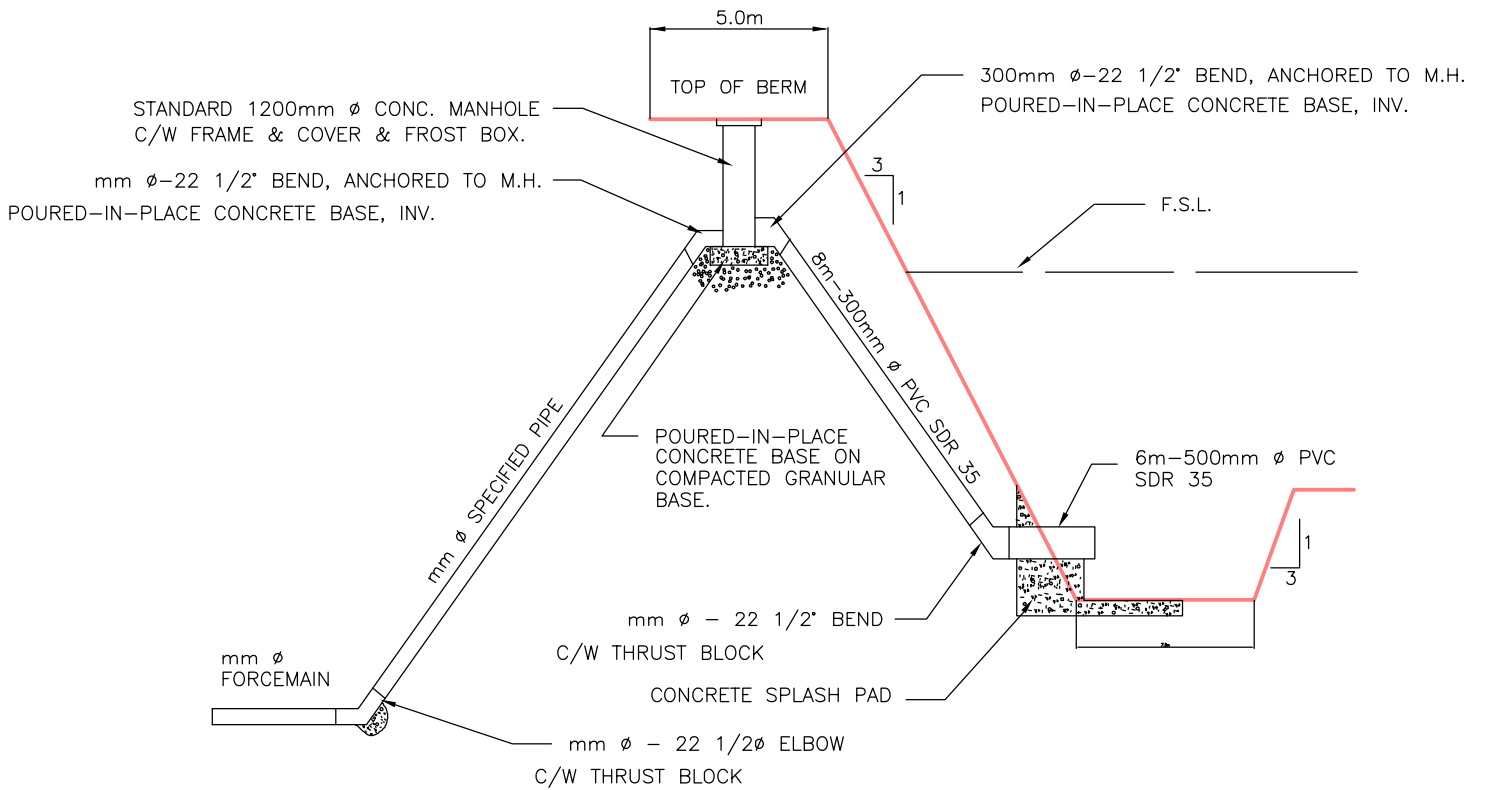
1. CONCRETE THICKNESS 300mm UNLESS OTHERWISE STATED.
2. CONCRETE COMPRESSIVE STRENGTH MINIMUM 27.5 MPa @ 28 DAYS.
3. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
4. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>CONCRETE SPLASH PAD DETAILS</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved: _____ Figure F-51	
Date: 2009-04-16	Drawn: OM	Scale: NTS		




NOTES:

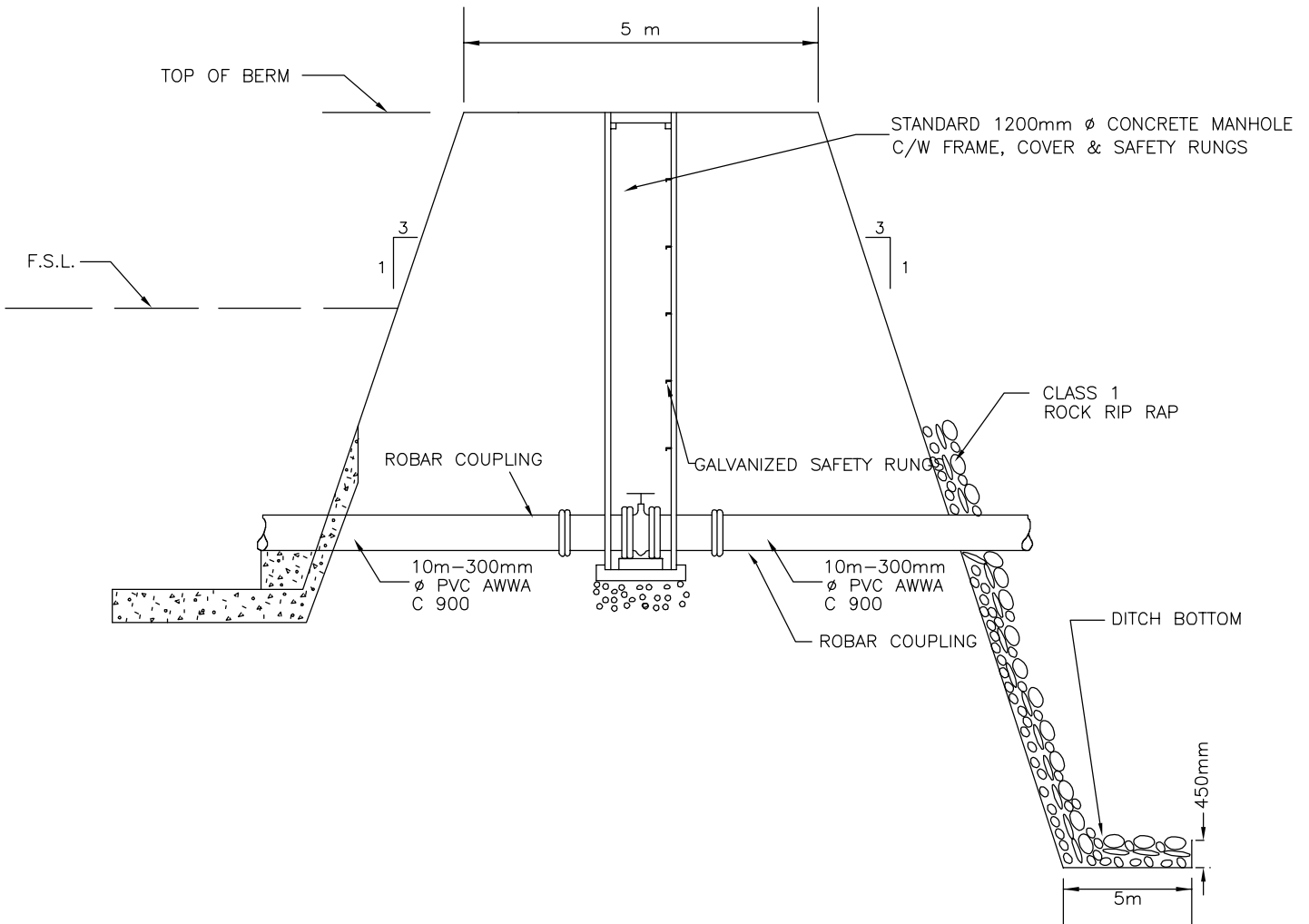
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	<h2>INLET MANHOLE DETAILS</h2>	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-52
Date: 2009-04-16	Drawn: OM	Scale NTS		




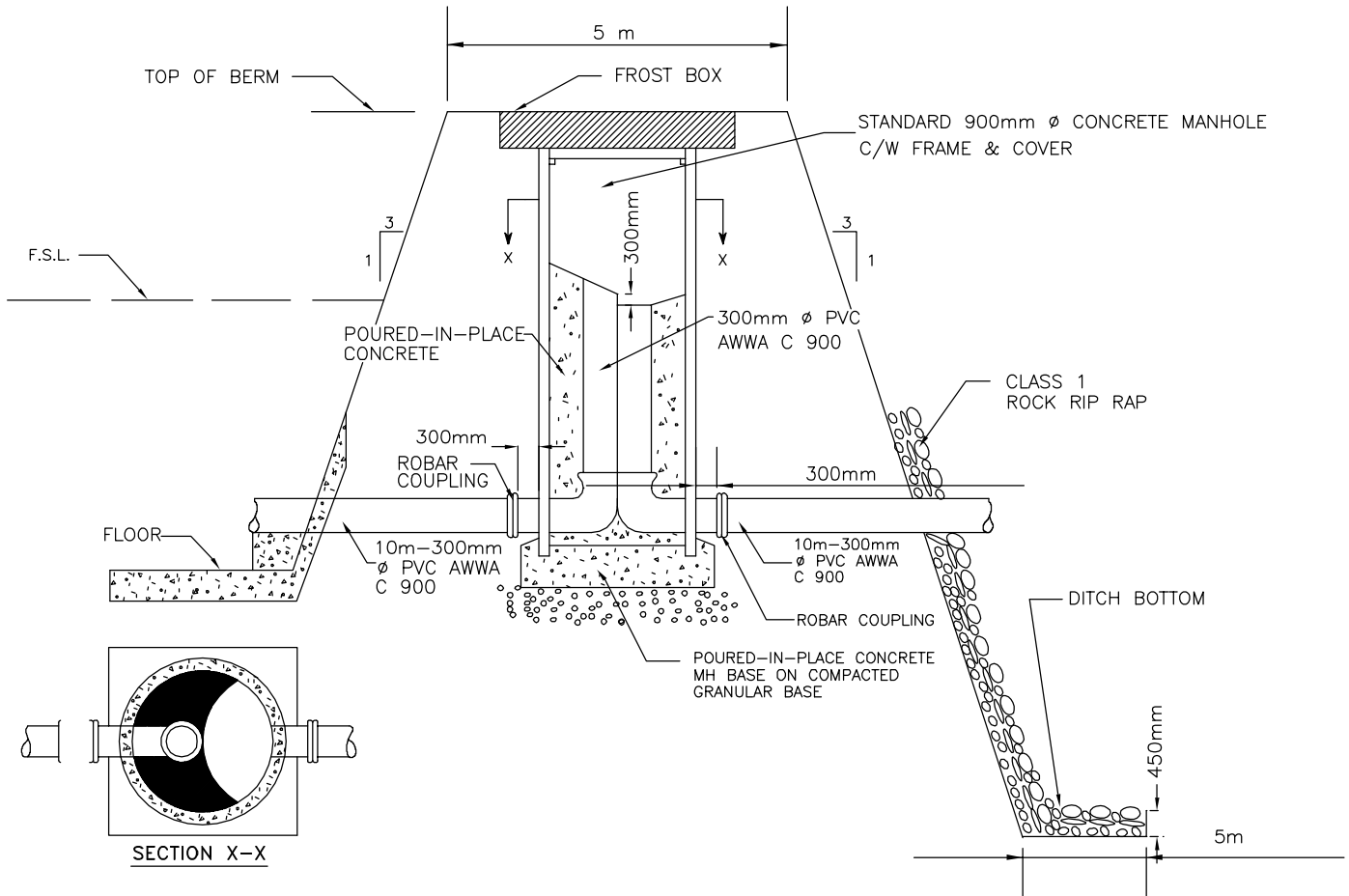
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	DISCHARGE CONTROL DETAILS	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-53
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

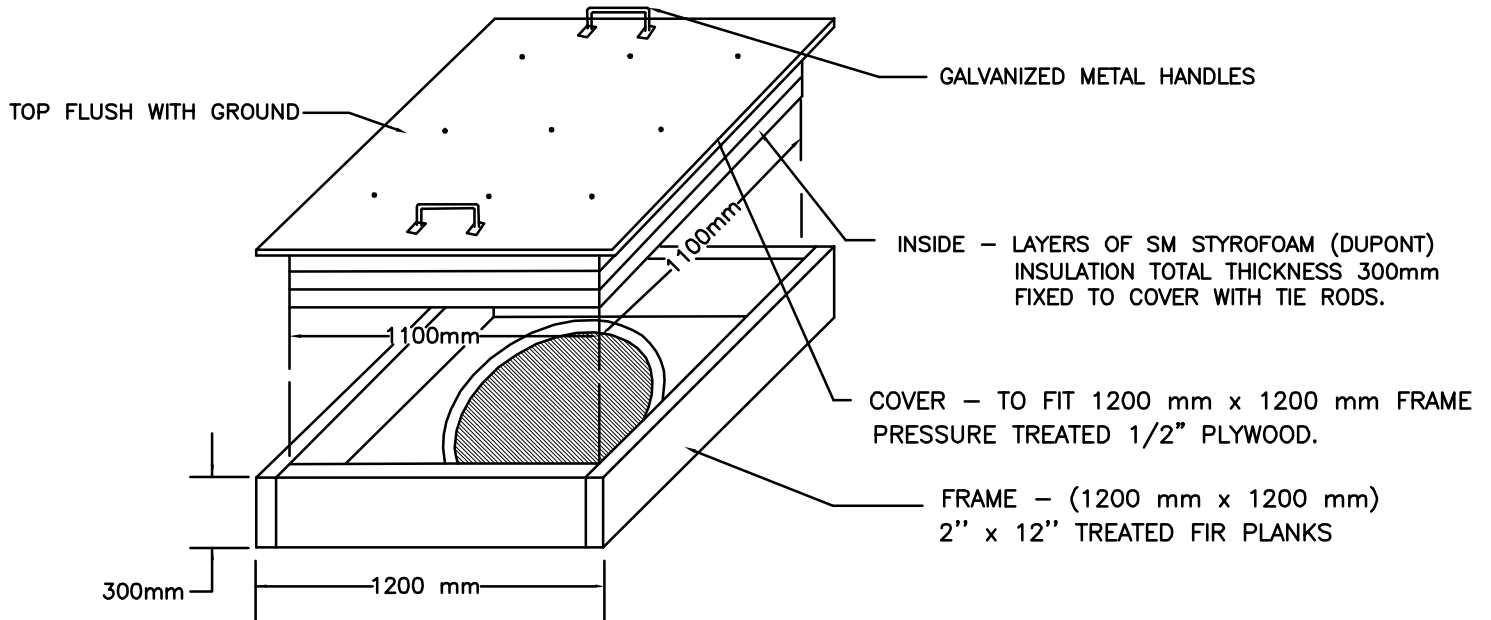
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	EMERGENCY DISCHARGE OVERFLOW MANHOLE DETAILS	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-54
Date: 2009-04-16	Drawn: OM	Scale NTS		




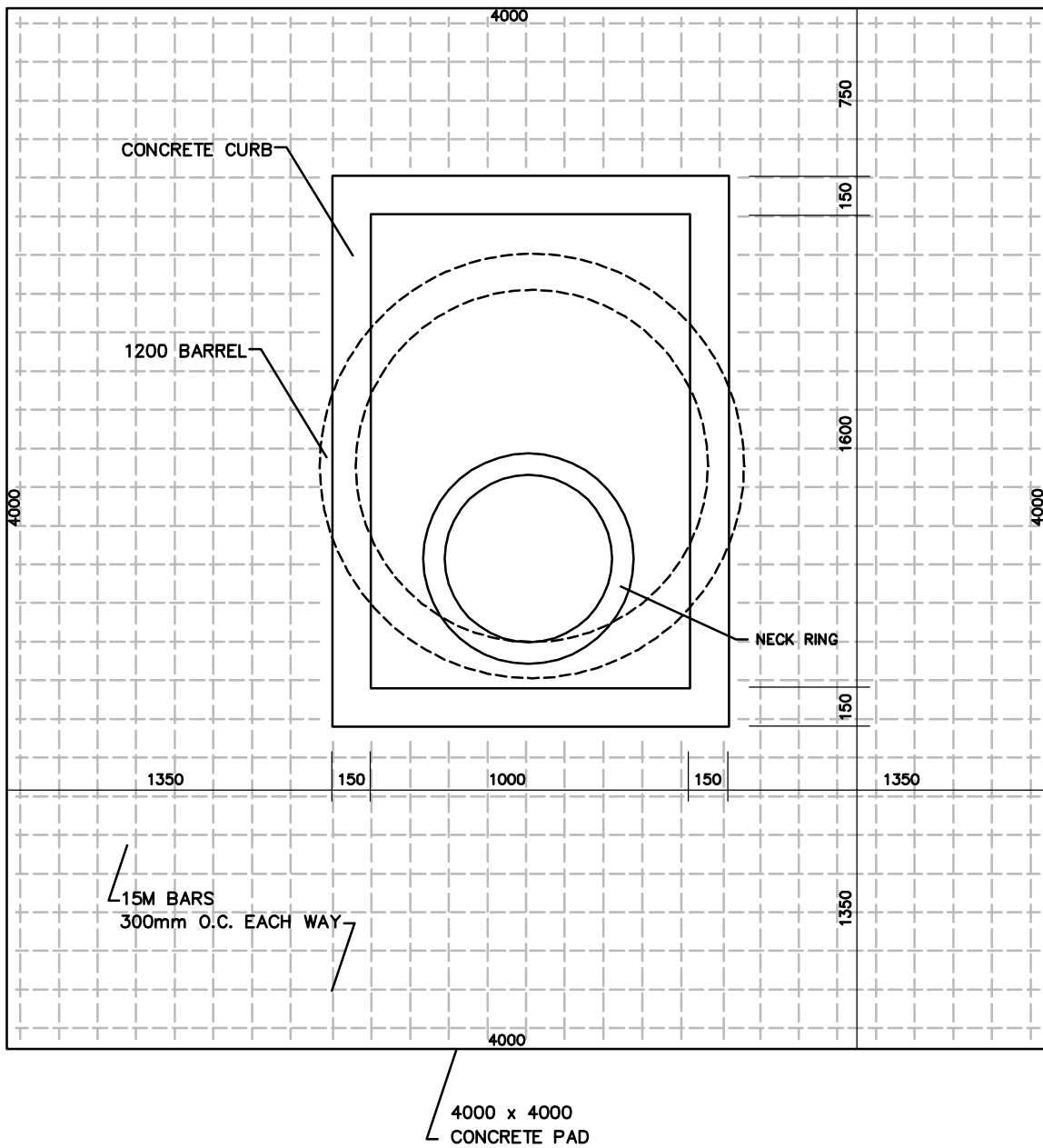
NOTE:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	FROST BOX DETAIL	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-55
Date: 2009-04-16	Drawn: OM	Scale NTS		




NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. PROPORTIONING AND PRODUCING QUALITY CONCRETE AS WELL AS ACCEPTANCE TESTS FOR THE CONSTITUENT MATERIALS ARE SPECIFIED IN CSA STANDARDS A23.1 AND A23.4 FOR CAST-IN-PLACE AND PRECAST CONCRETE RESPECTIVELY.

TOWN OF PEACE RIVER

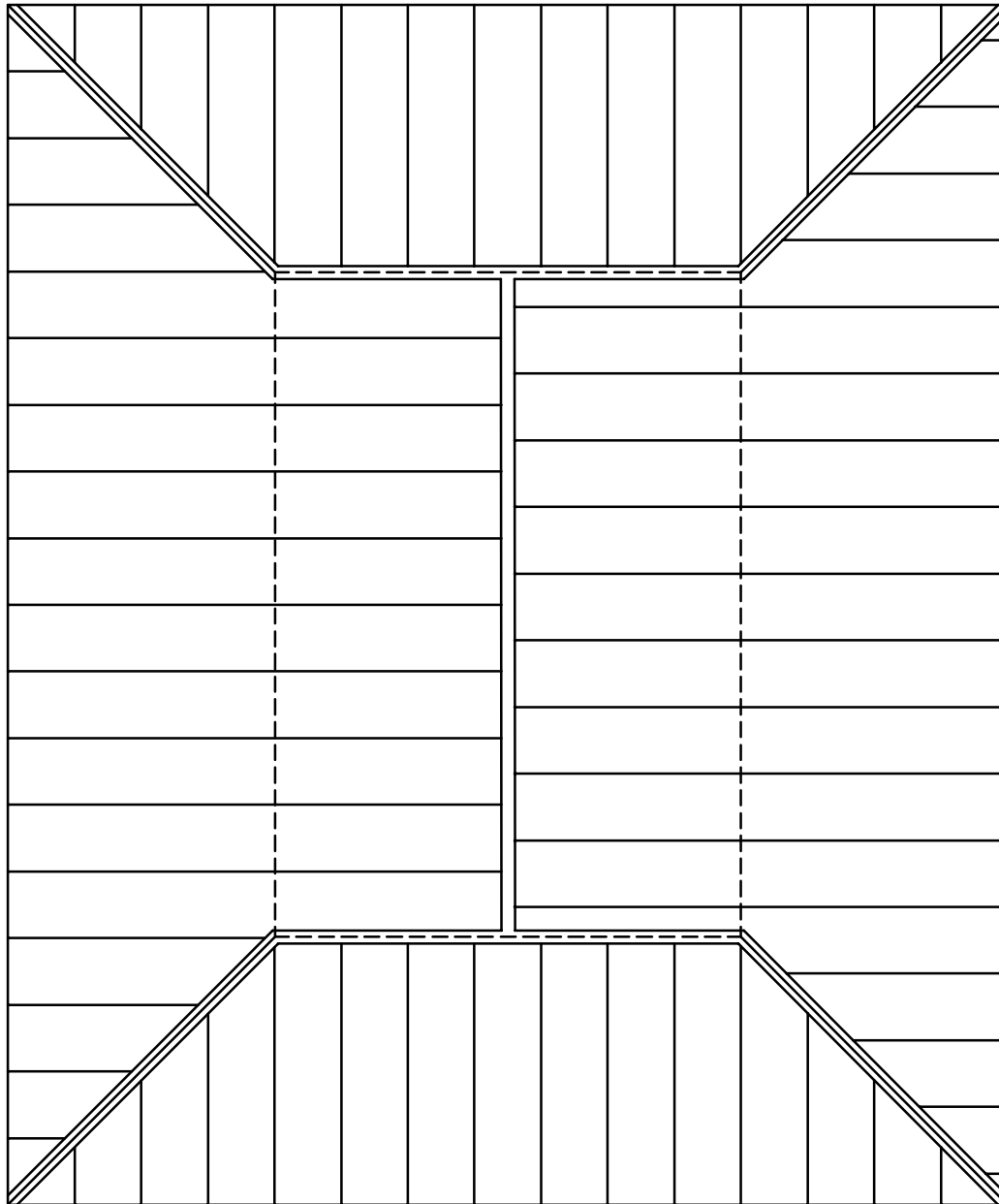
General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	PLAN VIEW OF TRUCK HAULED SEWAGE DUMPING STATION	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-56
Date: 2009-04-16	Drawn: OM	Scale NTS		

LEGEND


- FIELD SEAM
- ==== BUTT SEAM
- TOE OF SLOPE



TOWN OF PEACE RIVER

General Municipal Servicing Standards



Rev.	 Stewart Weir	#99, 11039 78th Avenue Grande Prairie, Alberta 780.814.5880	TYPICAL SHEET LAYOUT	
Rev.				
Rev.				
Rev.	File No.: GP6033068	Design:	Approved:	Figure F-57
Date: 2009-04-16	Drawn: OM	Scale NTS		