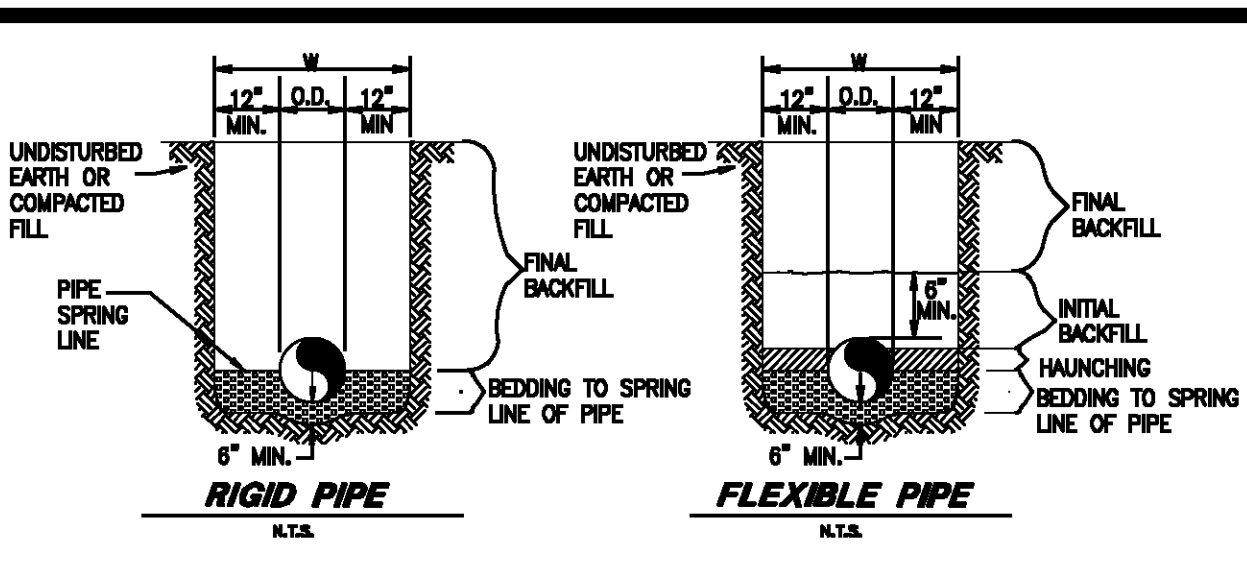


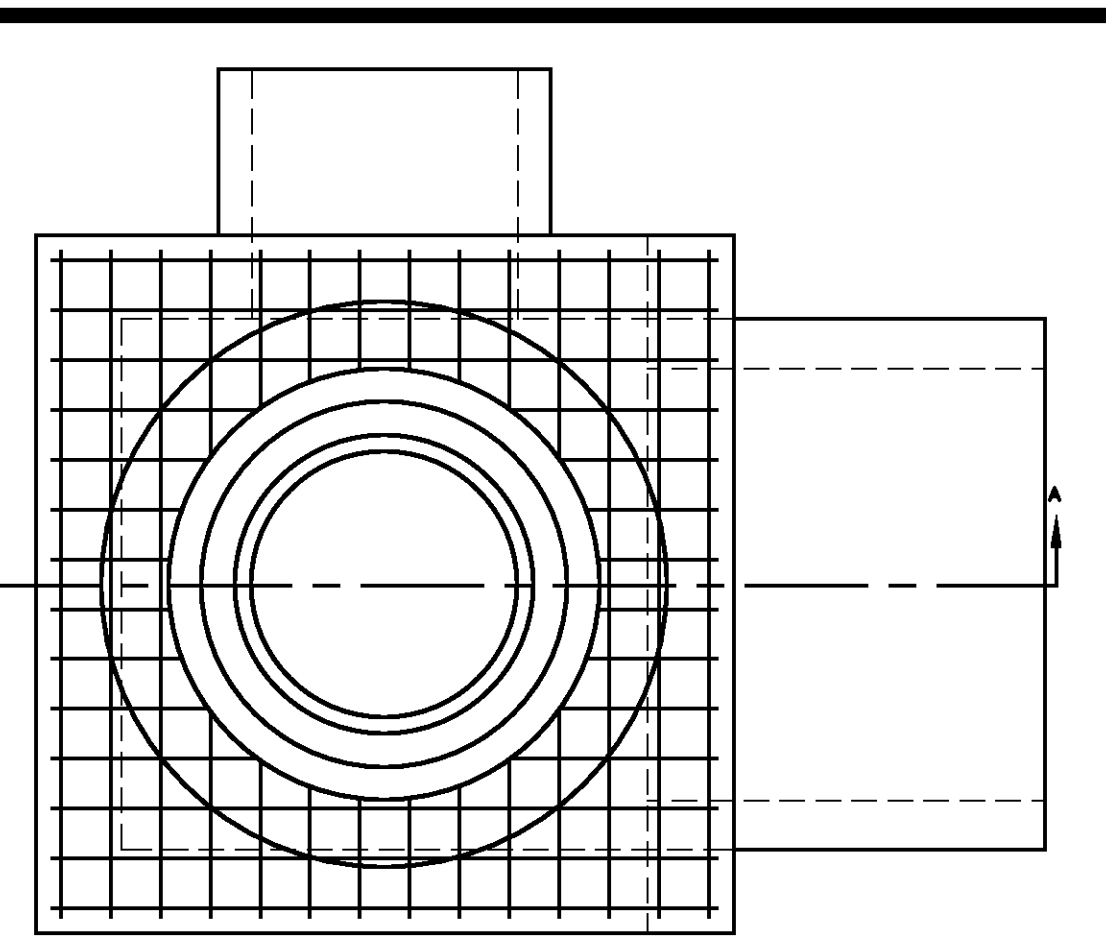
- GENERAL NOTES**
- BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 95% STANDARD PROCTOR.
 - HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 95% PROCTOR.
 - INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
 - INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS II COMPACTED TO 90% STANDARD PROCTOR.
 - FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3, AND 4.
 - FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS N-A COMPACTED TO 95% STANDARD PROCTOR.
 - ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION.
 - ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 888. CLASS III AND N-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
 - FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
 - ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

UTILITY TRENCH AND BEDDING
N.T.S.

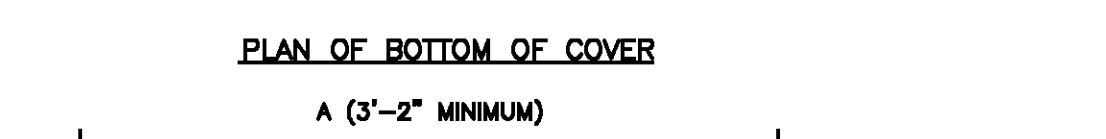


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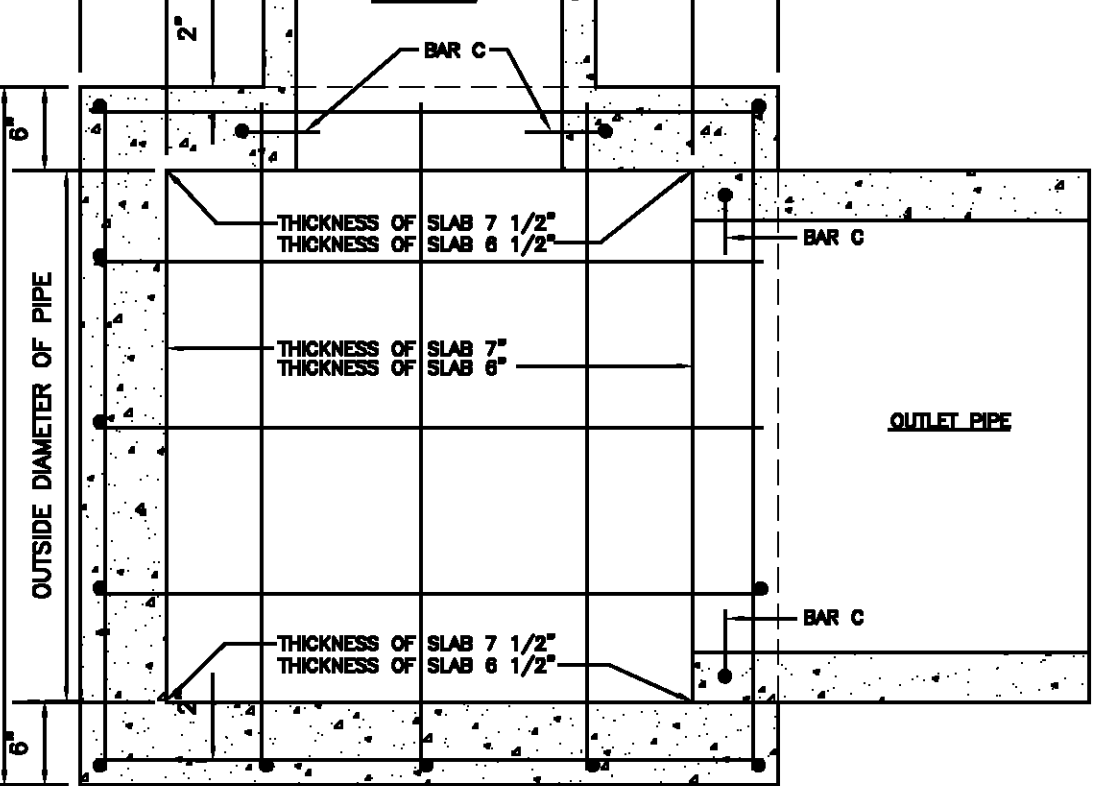
STORM SEWER TRENCH AND BEDDING
N.T.S.



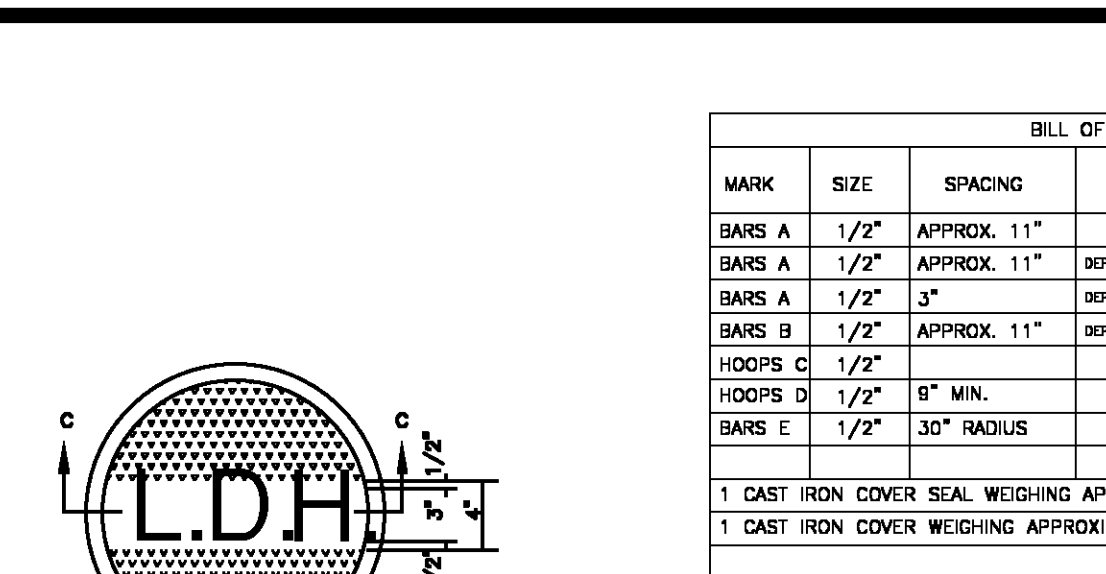
PLAN SHOWING REINFORCING IN TOP OF MANHOLE
PAVEMENT NOT SHOWN



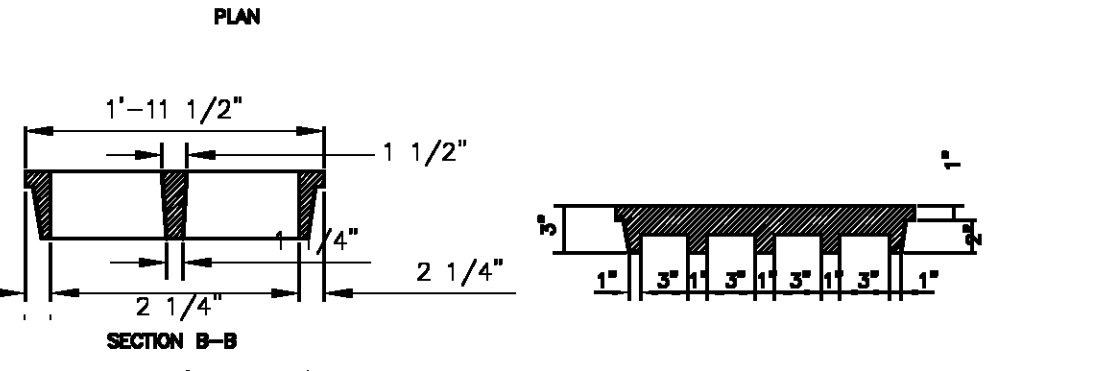
PLAN OF BOTTOM OF COVER
A (3'-2" MINIMUM)



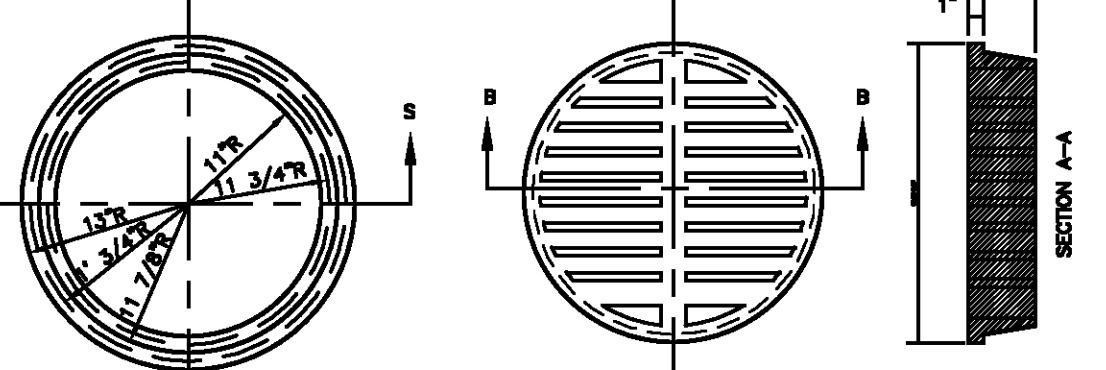
SECTION SHOWING REINFORCING IN BOTTOM OF SLAB



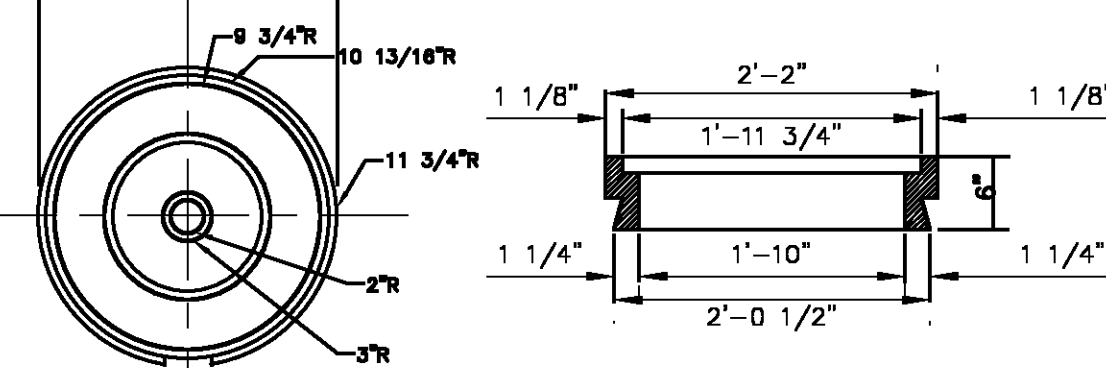
DETAILS OF (H20-44) C.I. GRATE TYPE COVER



DETAILS OF C.I. COVER



PLAN C.I. COVER SEAT



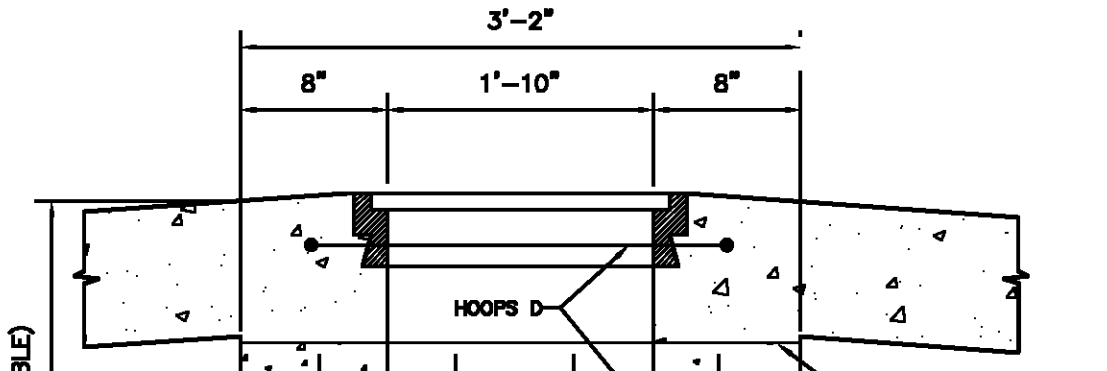
DETAILS OF C.I. COVER

BILL OF MATERIALS FOR ONE MANHOLE
X = 4'-2" (AS DETAILED)

MARK	SIZE	SPACING	NO. REQUIRED	UNIT LENGTH	UNIT LENGTH
BAR A	1/2"	APPROX. 11"	10	A-3"	LONGITUDINAL AND TRANSVERSE IN BOTTOM SLAB
BAR B	1/2"	APPROX. 11"	DEPENDENT ON WIDTH & SIZE OF PIPE	A-3"	LONGITUDINAL AND TRANSVERSE IN WALLS OF BOX
BAR C	1/2"	3"	DEPENDENT ON WIDTH & SIZE OF PIPE	A-3"	LONGITUDINAL AND TRANSVERSE IN TOP SLAB OF BOX
BAR D	1/2"	APPROX. 11"	DEPENDENT ON WIDTH & SIZE OF PIPE	SEE BENDING DIAGRAM	VERTICAL IN WALLS OF BOX
HOOPS C	1/2"		1 EACH PIPE	SEE BENDING DIAGRAM	AROUND EACH PIPE AS SHOWN
HOOPS D	1/2"	8" MIN.	8 MIN.	3'-2"	HOOPS IN WALLS OF CYLINDER
BAR E	1/2"	30" RADIUS	12	V = 4 1/2" - PW THICKNESS	VERTICAL IN WALLS OF CYLINDER

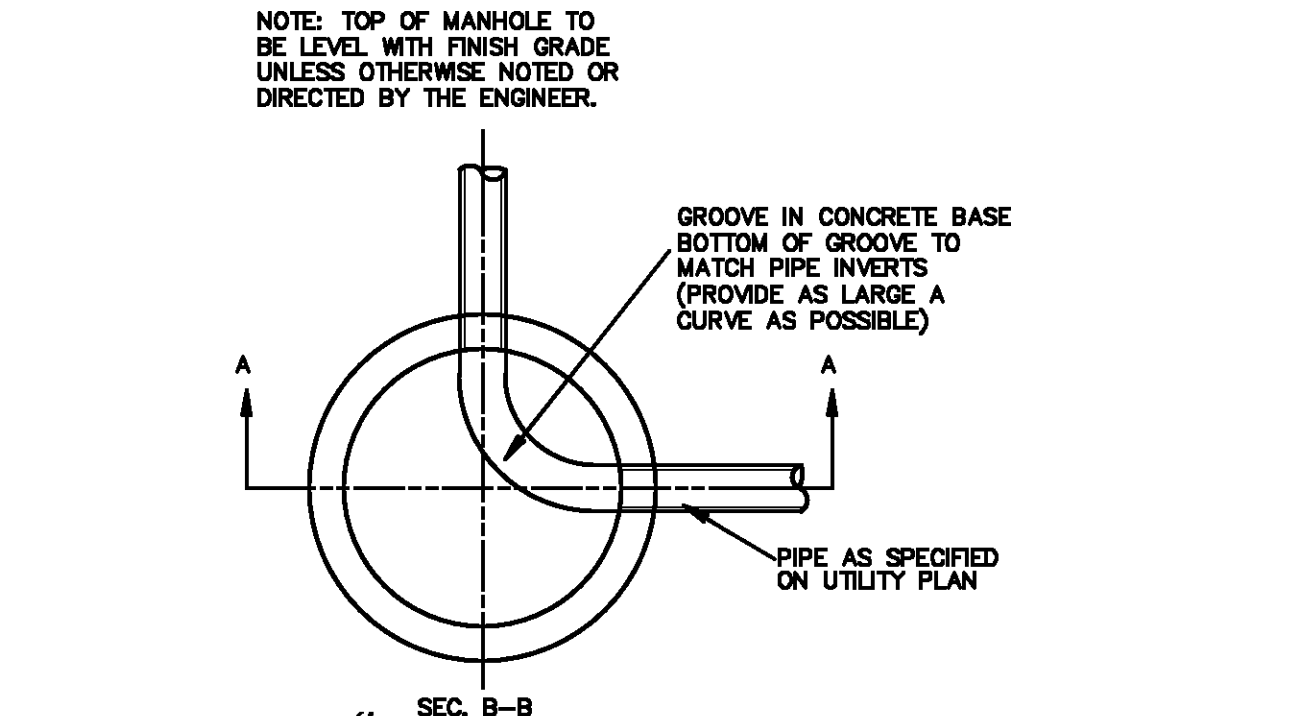
1 CAST IRON COVER SEAL WEIGHING APPROXIMATELY 161 POUNDS
1 CAST IRON COVER WEIGHING APPROXIMATELY 205 POUNDS

SECTION A-A

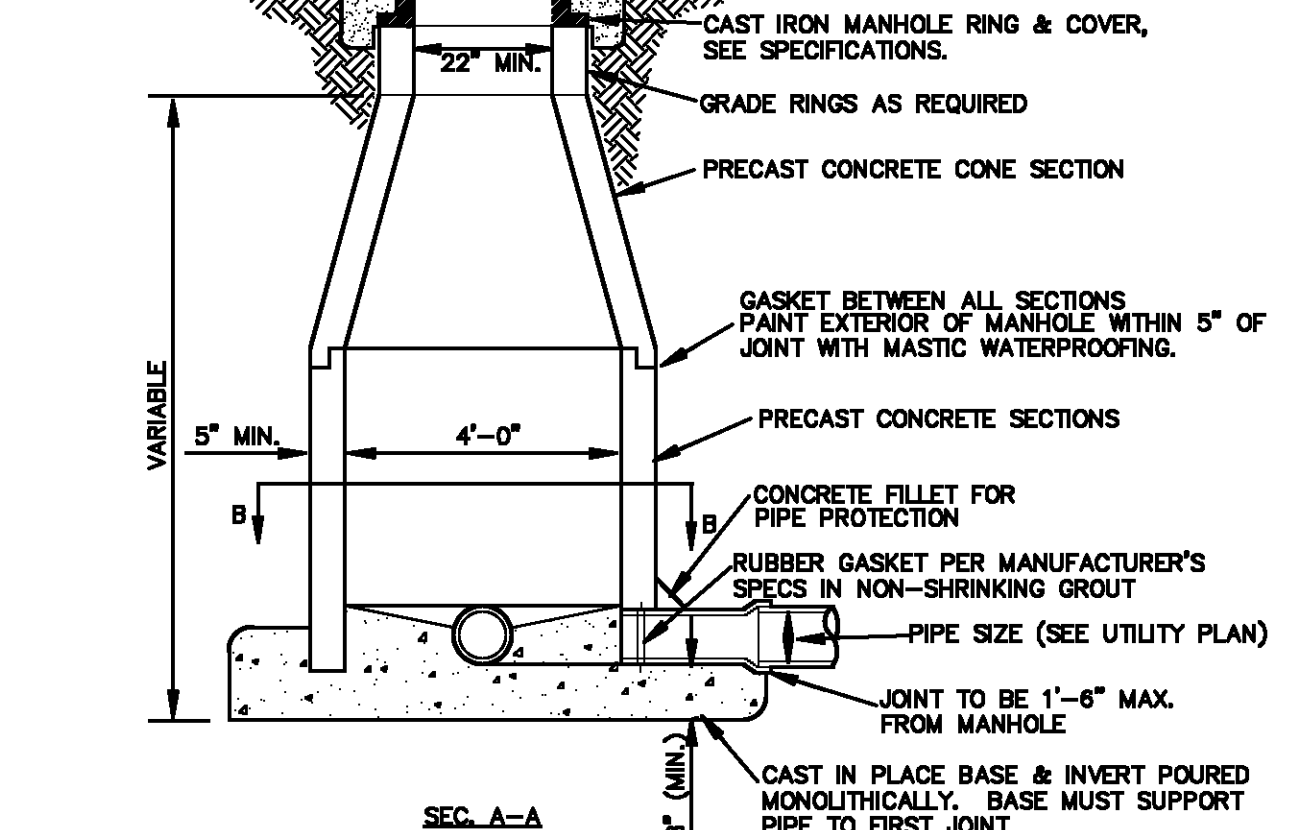


SECTION A-A

CLASS	TYPE	SOIL GROUP SYMBOL	DESCRIPTION
1A	MANUFACTURED AGGREGATES; OPEN-GRADED, CLEAN	NONE	ANGULAR, CRUSHED STONE OR ROCK, CRUSHED GRAVEL, CRUSHED SLAG, CINDERS OR SHELLS; LARGE VOID CONTENT, CONTAIN LITTLE OR NO FINES
1B	MANUFACTURED, PROCESSED AGGREGATES; DENSE-GRADED, CLEAN	NONE	ANGULAR, CRUSHED STONE (OR OTHER CLASS 1A MATERIALS) AND STONE/SAND MIXTURES WITH GRADATIONS SELECTED TO MINIMIZE MIGRATION OF ADJACENT SOILS; CONTAIN LITTLE OR NO FINES (SEE 1.8)
II	COARSE-GRAINED SOILS CLEAN	GW	WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES
		GP	POORLY-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES
		SW	WELL-GRADED SANDS AND GRAVELY SANDS; LITTLE OR NO FINES
		SP	POORLY-GRADED SANDS AND GRAVELY SANDS; LITTLE OR NO FINES
III	COARSE-GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
IV-A	FINE-GRAINED SOILS (INORGANIC)	ML	INORGANIC SILTS AND VERY FINE SANDS; ROCK FLOUR; SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		OH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
IV-B	FINE-GRAINED SOILS (INORGANIC)	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
V	ORGANIC SOILS HIGHLY ORGANIC	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
		PT	PEAT AND OTHER HIGH ORGANIC SOILS

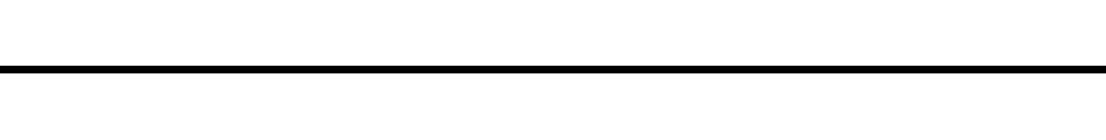


NOTE: TOP OF MANHOLE TO BE LEVEL WITH FINISH GRADE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

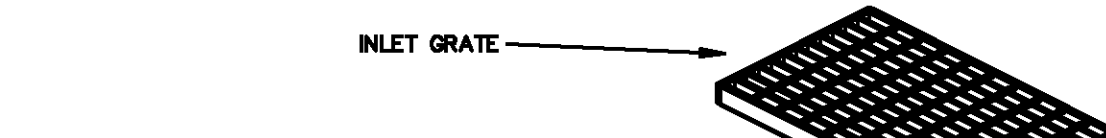


PRE-CAST SANITARY SEWER MANHOLE
N.T.S.

STANDARD PLAN RC MANHOLES L.D.O.T.D. R-CB-11
N.T.S. 30" MAXIMUM PIPE CONNECTION



SECTION SHOWING REINFORCING IN BOTTOM OF SLAB



SECTION SHOWING REINFORCING IN BOTTOM OF SLAB

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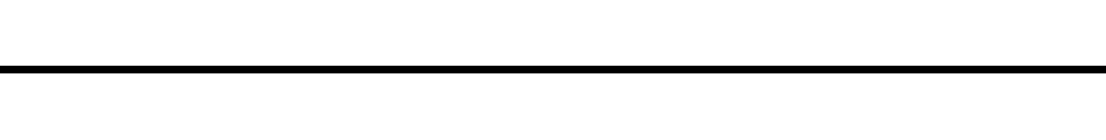
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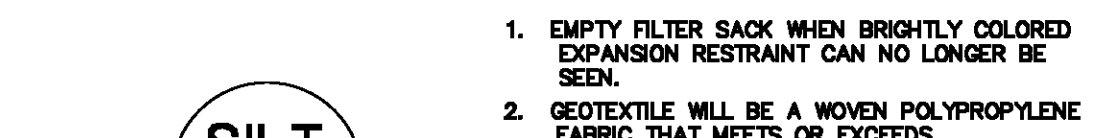
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STANDARD PLAN RC MANHOLES L.D.O.T.D. R-CB-11
N.T.S. 30" MAXIMUM PIPE CONNECTION



SECTION SHOWING REINFORCING IN BOTTOM OF SLAB



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SECTION SHOWING REINFORCING IN BOTTOM OF SLAB

SECTION A-A

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PROPOSED WATER LINE OFFSET DETAIL
N.T.S.



PROPOSED WATER LINE OFFSET DETAIL
N.T.S.



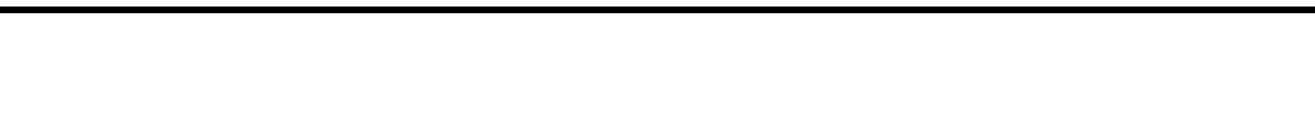
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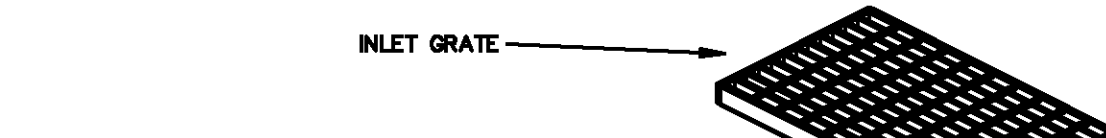
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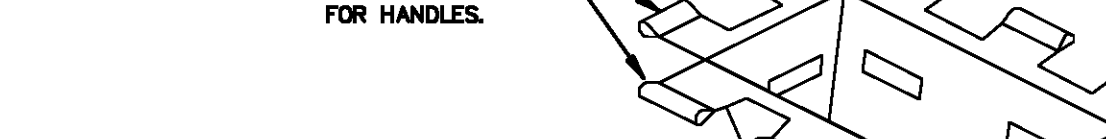
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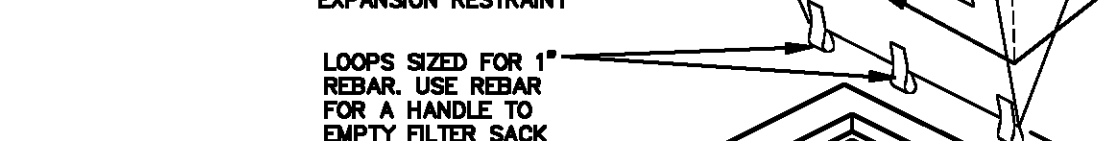
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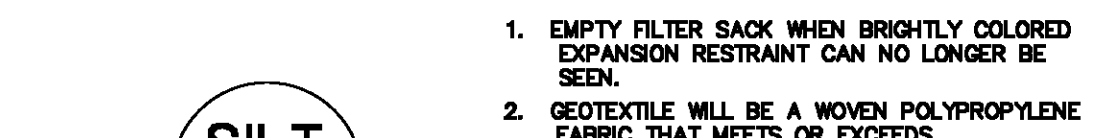


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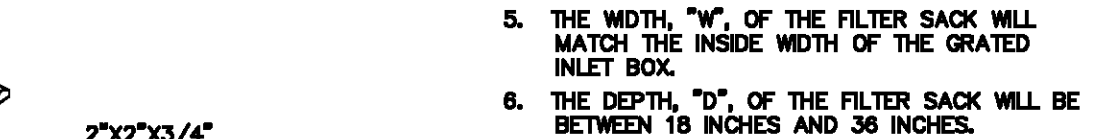


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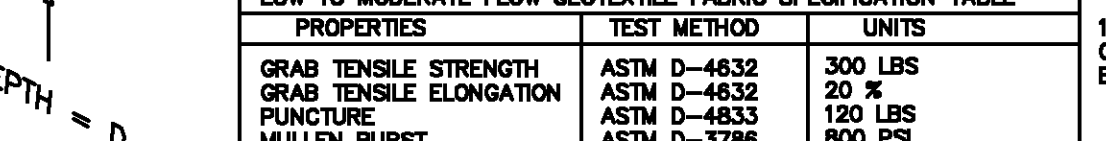
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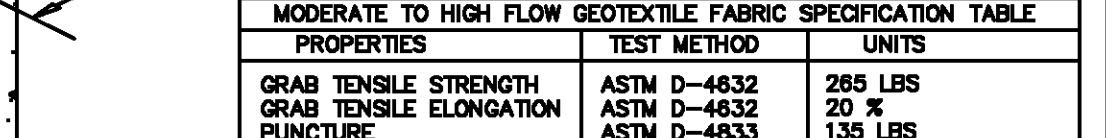
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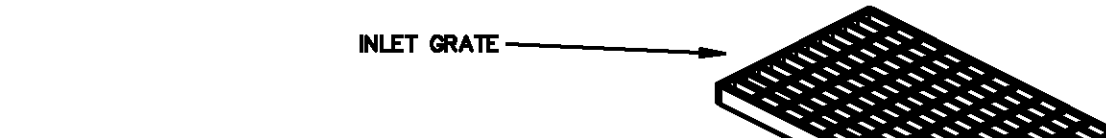
SECTION A-A

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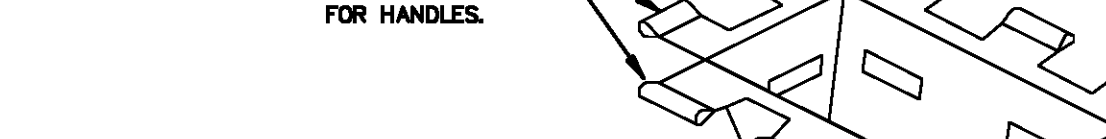
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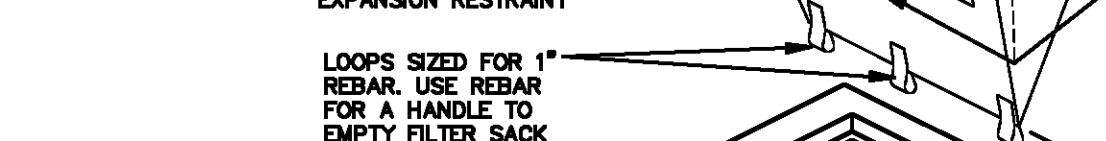
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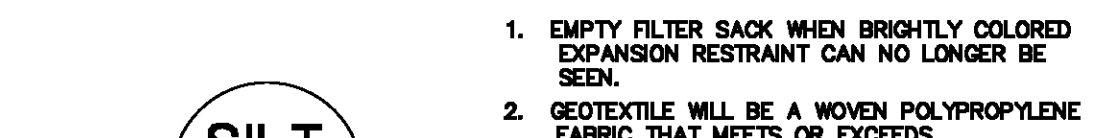


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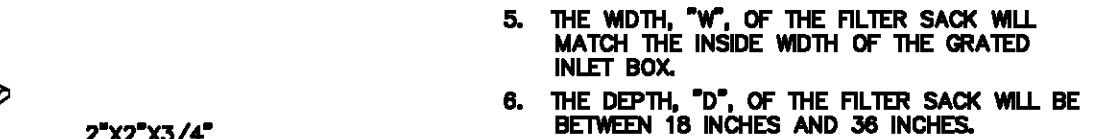


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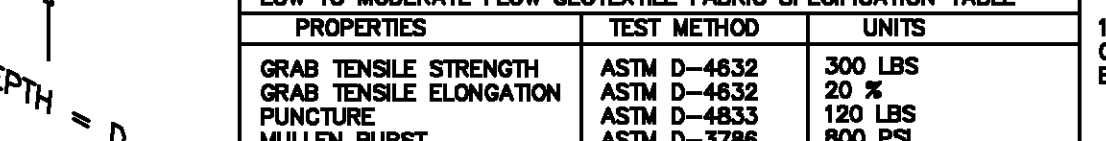
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