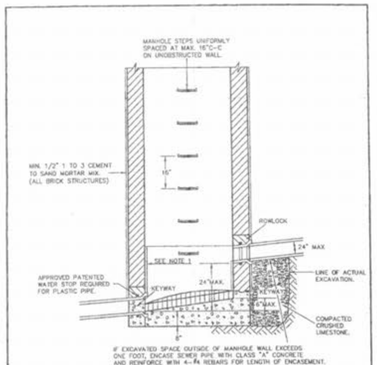
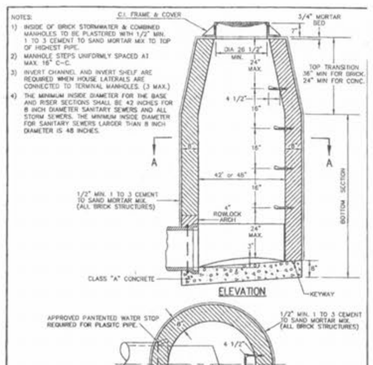


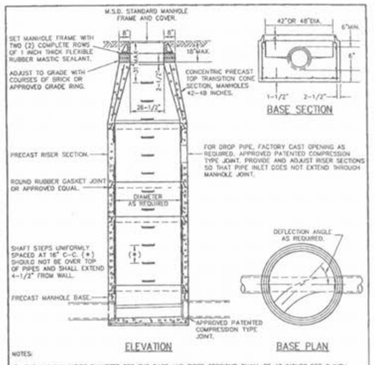
NOTES:
1) INSIDE OF BRICK MANHOLES TO BE PLASTERED WITH 1/2" MIN. 1 TO 3 CEMENT TO SAND MORTAR MIX TO TOP OF HIGHEST PIPE.
2) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42 INCHES FOR 8" DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8" DIAMETER IS 48 INCHES.

INSIDE FOULWATER DROP MANHOLE (FOR FREE-FALL)	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 19	



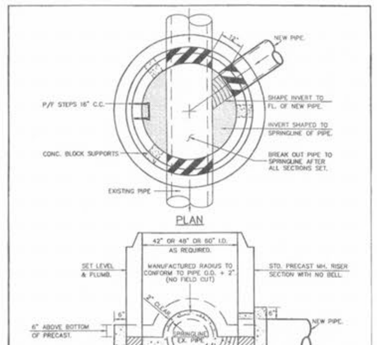
NOTES:
1) INSIDE OF BRICK STORMWATER & COMBINED MANHOLES TO BE PLASTERED WITH 1/2" MIN. 1 TO 3 CEMENT TO SAND MORTAR MIX TO TOP OF HIGHEST PIPE.
2) MANHOLE STEPS UNIFORMLY SPACED AT MAX. 16" C-C.
3) INVERT CHANNEL AND INVERT SHELF ARE REQUIRED WHEN HOUSE LATERALS ARE CONNECTED TO TERMINAL MANHOLES. (3 MAX.)
4) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42 INCHES FOR 8 INCH DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8 INCH DIAMETER IS 48 INCHES.

TERMINAL MANHOLE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 20	



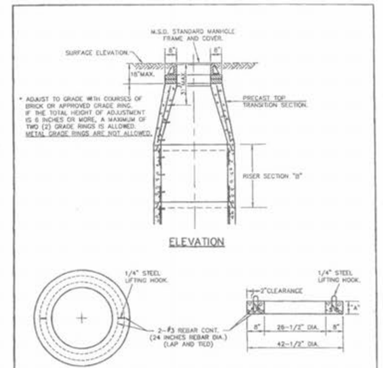
NOTES:
1) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42 INCHES FOR 8 INCH DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8 INCH DIAMETER IS 48 INCHES. MANHOLE SHALL MEET ASTM C-478 REQUIREMENTS.
2) FLOWLINE ELEVATION OF INCOMING PIPES SHALL BE 1 INCH HIGHER THAN THAT OF OUTGOING PIPE.
3) PIPE SIZES LARGER THAN 24 INCH DIAMETER MAY REQUIRE MANHOLE DIAMETERS OF 60 INCH, 72 INCH OR 96 INCH AS DETERMINED BY OUTSIDE DIAMETERS AND ORIENTATIONS OF CONNECTING PIPES.
4) ECCENTRIC CONES SHALL BE USED ON DIAMETERS 60 INCH AND LARGER. STEPS SHALL EXTEND DOWN VERTICAL WALL OF CONE.
5) PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL OF MANHOLES ON PIPE DIAMETERS LARGER THAN 24 INCH AND ALSO FOR THOSE STRUCTURES WITH A DROP PIPE CONNECTION.

PRECAST CONCRETE MANHOLE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 21	



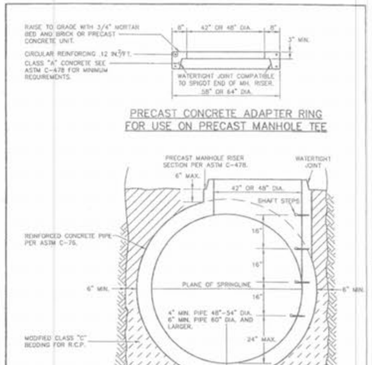
NOTE:
WATER STOP REQUIRED FOR P.V.C.

PRECAST MANHOLE ON EXIST. PIPE W/CONTINUOUS FLOW ONLY	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. S.A.M. Ch. P.W.S.	2000	SHEET 22	



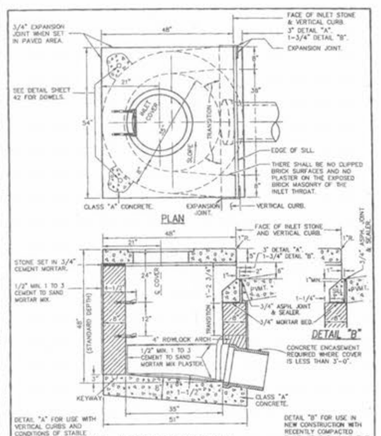
NOTES:
1) IF BRICK IS USED DO NOT PLASTER INSIDE OF MANHOLE.
2) IF MANHOLE IS BURIED MORE THAN 18 INCHES, A RISER SECTION WILL HAVE TO BE ADDED.
3) DIMENSION "A" STOCK GRADE RING HEIGHT OPTIONS. (3 INCHES MINIMUM TO 11 INCHES MAXIMUM.)
4) DIMENSION "B" STOCK RISER SECTION HEIGHT OPTIONS. (12 INCH, 24 INCH, 36 INCH AND 48 INCH)

ADJUST TO GRADE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. S.A.M. Ch. P.W.S.	2000	SHEET 23	

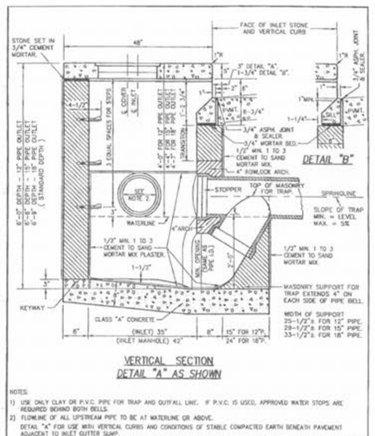


NOTES:
1) TO BE USED WHERE NO CHANGE IN LINE OR GRADE IS REQUIRED AT MANHOLE.
2) THE MINIMUM INSIDE DIAMETER FOR RISER SECTIONS SHALL BE 42 INCHES FOR 8 INCH DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8 INCH DIAMETER IS 48 INCHES.

TYPICAL PRECAST MANHOLE TEE FOR REINFORCED CONCRETE PIPE SEWERS 48 INCH AND LARGER IN DIAMETER	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 24	

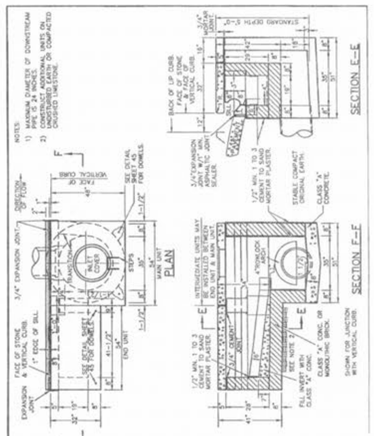


UNTRAPPED STREET INLET BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 25	



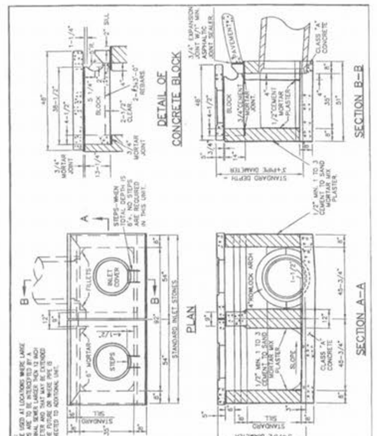
NOTES:
1) USE ONLY CLAY OR P.V.C. PIPE FOR TRAP AND OUTFALL LINE. IF P.V.C. IS USED, APPROVED WATER STOPS ARE REQUIRED BEHIND BOTH BELLS.
2) FLOWLINE OF ALL UPSTREAM PIPE TO BE AT WATERLINE OR ABOVE.
DETAIL "A" FOR USE WITH VERTICAL CURBS AND CONDITIONS OF STABLE COMPACTED EARTH BENEATH PAVEMENT ADJACENT TO INLET GUTTER SUMP.
DETAIL "B" FOR USE IN NEW CONSTRUCTION WITH RECENTLY COMPACTED EARTH BENEATH PAVEMENT ADJACENT TO INLET GUTTER SUMP.

TRAPPED STREET INLET BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. WSH/SAM Ch. J.C.K.	2000	SHEET 26	

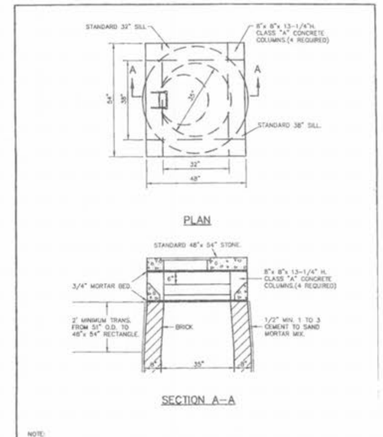


NOTES:
1) NORMAL DIAMETER OF DOWNSTREAM PIPE IS 24 INCHES.
2) BEDDING SHALL CONSIST OF LIMESTONE EASILY CRUSHED SUBSTONE.

MULTIPLE STREET INLET BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. DAB/SAM Ch. J.C.K.	2000	SHEET 27	

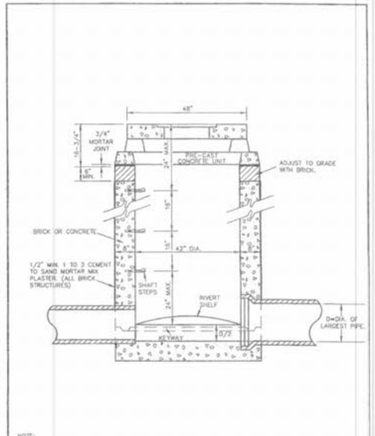


DOUBLE UNTRAPPED STREET INLET BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. DAB/SAM Ch. J.C.K.	2000	SHEET 28	



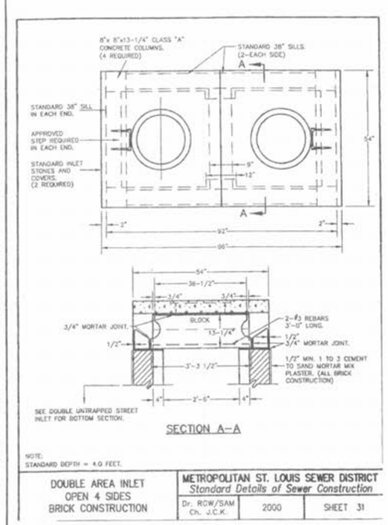
NOTE:
STANDARD DEPTH = 4.0 FEET.

AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. R.G.W. Ch. J.C.K.	2000	SHEET 29	



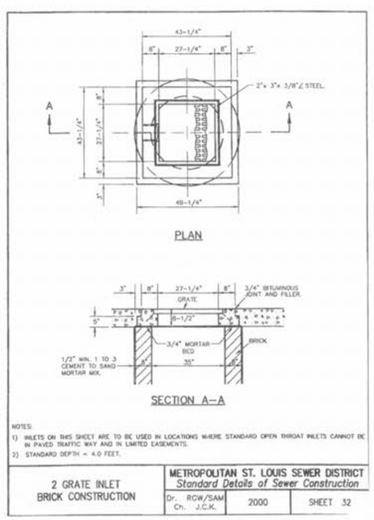
NOTE:
FOR SEWERS 27 INCH THRU 42 INCH SEE DETAIL SHEET 11 FOR BOTTOM SECTION.

AREA INLET MANHOLE (12" THRU 24")	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. RGW/SAM Ch. J.C.K.	2000	SHEET 30	



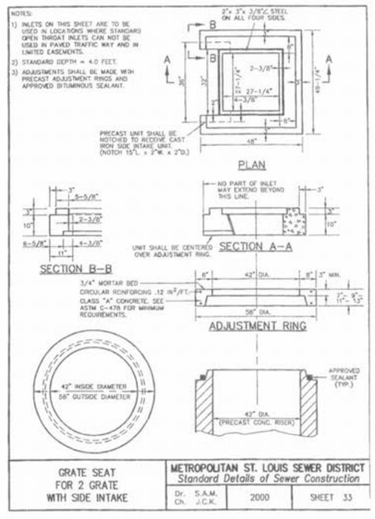
NOTE:
STANDARD DEPTH = 4.0 FEET.

DOUBLE AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. RGW/SAM Ch. J.C.K.	2000	SHEET 31	



NOTES:
1) INLETS ON THIS SHEET ARE TO BE USED IN LOCATIONS WHERE STANDARD OPEN THROAT INLETS CANNOT BE IN PAVED TRAFFIC WAY AND IN LIMITED EASEMENTS.
2) STANDARD DEPTH = 4.0 FEET.

2 GRATE INLET BRICK CONSTRUCTION	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. RGW/SAM Ch. J.C.K.	2000	SHEET 32	



NOTES:
1) INLETS ON THIS SHEET ARE TO BE USED IN LOCATIONS WHERE STANDARD OPEN THROAT INLETS CAN NOT BE USED IN PAVED TRAFFIC WAY AND IN LIMITED EASEMENTS.
2) STANDARD DEPTH = 4.0 FEET.
3) ADJUSTMENTS SHALL BE MADE WITH PRECAST ADJUSTMENT RINGS AND APPROVED BITUMINOUS SEALANT.

GRATE SEAT FOR 2 GRATE WITH SIDE INTAKE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. S.A.M. Ch. J.C.K.	2000	SHEET 33	

PRECAST CONCRETE STORMWATER STRUCTURES

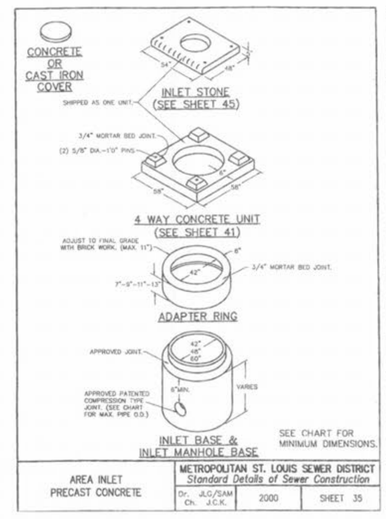
MINIMUM DISTANCE FLOWLINE TO TOP OF STONE OR GRATE

PIPE I.D. NOMINAL INCHES	AREA INLET CIRCULAR BASE DIA. 42"	48"	60"	(2) GRATE INLET CIRCULAR BASE DIA. SQUARE 42"	48"	60" (MAX.)	SINGLE STREET INLET CIRCULAR BASE DIA. 42"	48"	60"	RECTANGLE (MAX.)
12"	45"			39"			31"	48"		41"
15"	48"			41"			34"	51"		44"
18"	51"			44"			37"	55"		48"
21"	55"			47"			40"	58"		51"
24"		56"			51"		44"		61"	54"
27"			78"			71"	NA			81" NA
30"			82"			74"	NA			85" NA
33"			85"			77"	NA			88" NA

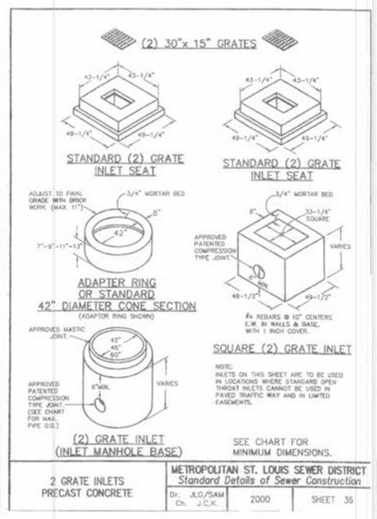
(SEE SHEET 35 FOR DETAIL) (SEE SHEET 36 FOR DETAIL) (SEE SHEET 37 FOR DETAIL)

NOTES:
1) 48" DIAMETER BASE REQUIRES 3" HIGH TRANSITION SECTION TO 42" DIAMETER, SIMILAR TO "ADAPTER RING" SHEET 35.
2) 60" DIAMETER BASE REQUIRES 24" HIGH CONCENTRIC REDUCER TRANSITION TO 42" DIAMETER, SIMILAR TO "ADAPTER RING" SHEET 35.
3) STANDARD DEPTH = 3'+ PIPE DIAMETER.

PRECAST CONCRETE STORMWATER STRUCTURES	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. J.L.G. Ch. J.C.K.	2000	SHEET 34	



AREA INLET PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. JLG/SAM Ch. J.C.K.	2000	SHEET 35	



NOTE:
INLETS ON THIS SHEET ARE TO BE USED IN LOCATIONS WHERE STANDARD OPEN THROAT INLETS CANNOT BE USED IN PAVED TRAFFIC WAY AND IN LIMITED EASEMENTS.

2 GRATE INLETS PRECAST CONCRETE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*			
	Dr. JLG/SAM Ch. J.C.K.	2000	SHEET 36	

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