

| ROUND PIPE | | | | HORIZONTAL ELLIPTICAL PIPE | | | |
|--------------------------------|--------------------------------------|------------------------------------|------------------------------|----------------------------------|--------------------------------------|------------------------------------|------------------------------|
| INCH DIAMETER OF PIPE (INCHES) | "W" PAYLINE WIDTH OF TRENCH (INCHES) | "M" PAYLINE WIDTH OF TRENCH (FEET) | CONCRETE ENCASUREMENT (FEET) | INCH DIMENSIONS OF PIPE (INCHES) | "W" PAYLINE WIDTH OF TRENCH (INCHES) | "M" PAYLINE WIDTH OF TRENCH (FEET) | CONCRETE ENCASUREMENT (FEET) |
| 4 | 30 | 2.50 | 3.86 | | | | |
| 6 | 30 | 2.50 | 3.86 | | | | |
| 8 | 30 | 2.50 | 3.87 | | | | |
| 10 | 30 | 2.50 | 4.08 | | | | |
| 12 | 30 | 2.50 | 4.25 | | | | |
| 15 | 36 | 3.00 | 5.55 | | | | |
| 18 | 36 | 3.00 | 5.77 | 14 x 23 | 41 | 3.42 | 5.94 |
| 21 | 36 | 3.25 | 6.61 | | | | |
| 24 | 42 | 3.50 | 7.35 | 19 x 30 | 49 | 4.08 | 7.68 |
| 27 | 45 | 3.75 | 8.18 | 22 x 34 | 53 | 4.42 | 8.41 |
| 30 | 48 | 4.08 | 9.30 | 24 x 38 | 58 | 4.83 | 9.70 |
| 33 | 53 | 4.42 | 10.53 | 27 x 42 | 62 | 5.17 | 10.71 |
| 36 | 58 | 4.87 | 11.43 | 29 x 45 | 68 | 5.50 | 11.73 |
| 38 | | | | 32 x 48 | 71 | 5.92 | 12.14 |
| 42 | 63 | 5.25 | 13.36 | 34 x 53 | 72 | 6.25 | 14.05 |
| 48 | 70 | 5.83 | 15.89 | 38 x 60 | 83 | 6.92 | 16.18 |
| 54 | 77 | 6.42 | 18.15 | 43 x 68 | 92 | 7.87 | 18.81 |
| 60 | 84 | 7.00 | 20.73 | 48 x 76 | 101 | 8.42 | 21.59 |
| 66 | 91 | 7.58 | 23.45 | 53 x 83 | 108 | 9.08 | 24.35 |
| 72 | 98 | 8.17 | 26.37 | 58 x 91 | 118 | 9.83 | 27.45 |
| 78 | 105 | 8.75 | 29.39 | 63 x 98 | 128 | 10.50 | 30.50 |
| 84 | 112 | 9.33 | 32.57 | 68 x 106 | 135 | 11.25 | 33.91 |
| 90 | 119 | 9.92 | 35.90 | 72 x 113 | 143 | 11.92 | 36.99 |
| 96 | 126 | 10.50 | 39.37 | 77 x 121 | 152 | 12.67 | 40.69 |
| 102 | 133 | 11.08 | 42.99 | 82 x 128 | 160 | 13.33 | 44.45 |
| 108 | 140 | 11.67 | 46.75 | 87 x 136 | 168 | 14.00 | 47.79 |
| 114 | 147 | 12.25 | 50.66 | 92 x 143 | 176 | 14.67 | 51.70 |
| 120 | 154 | 12.83 | 54.72 | 97 x 151 | 185 | 15.42 | 56.01 |
| 126 | 161 | 13.42 | 58.92 | | | | |
| 132 | 168 | 14.00 | 63.27 | 106 x 166 | 202 | 16.83 | 61.48 |
| 144 | 182 | 15.17 | 72.40 | 118 x 180 | 218 | 18.17 | 73.58 |

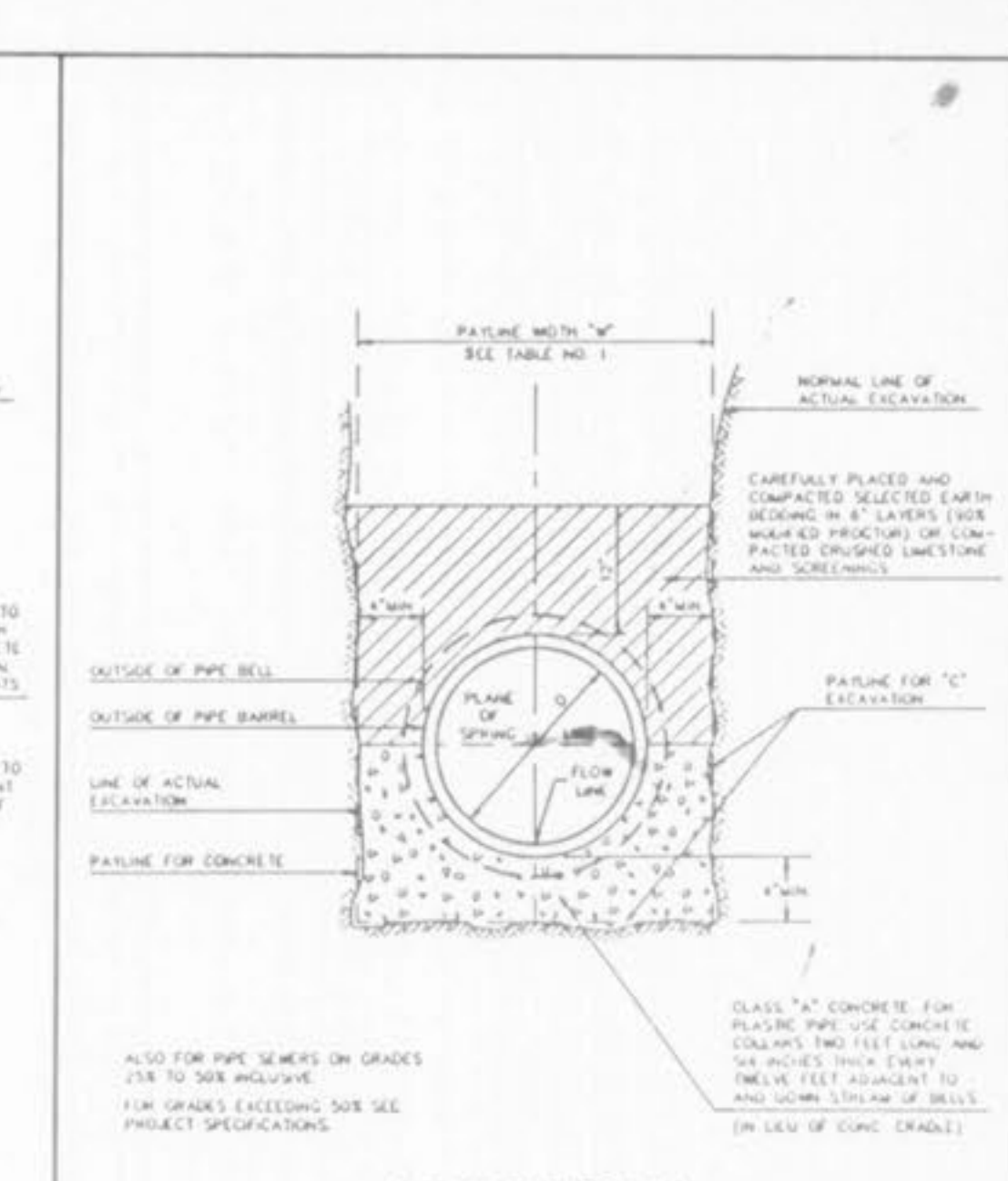
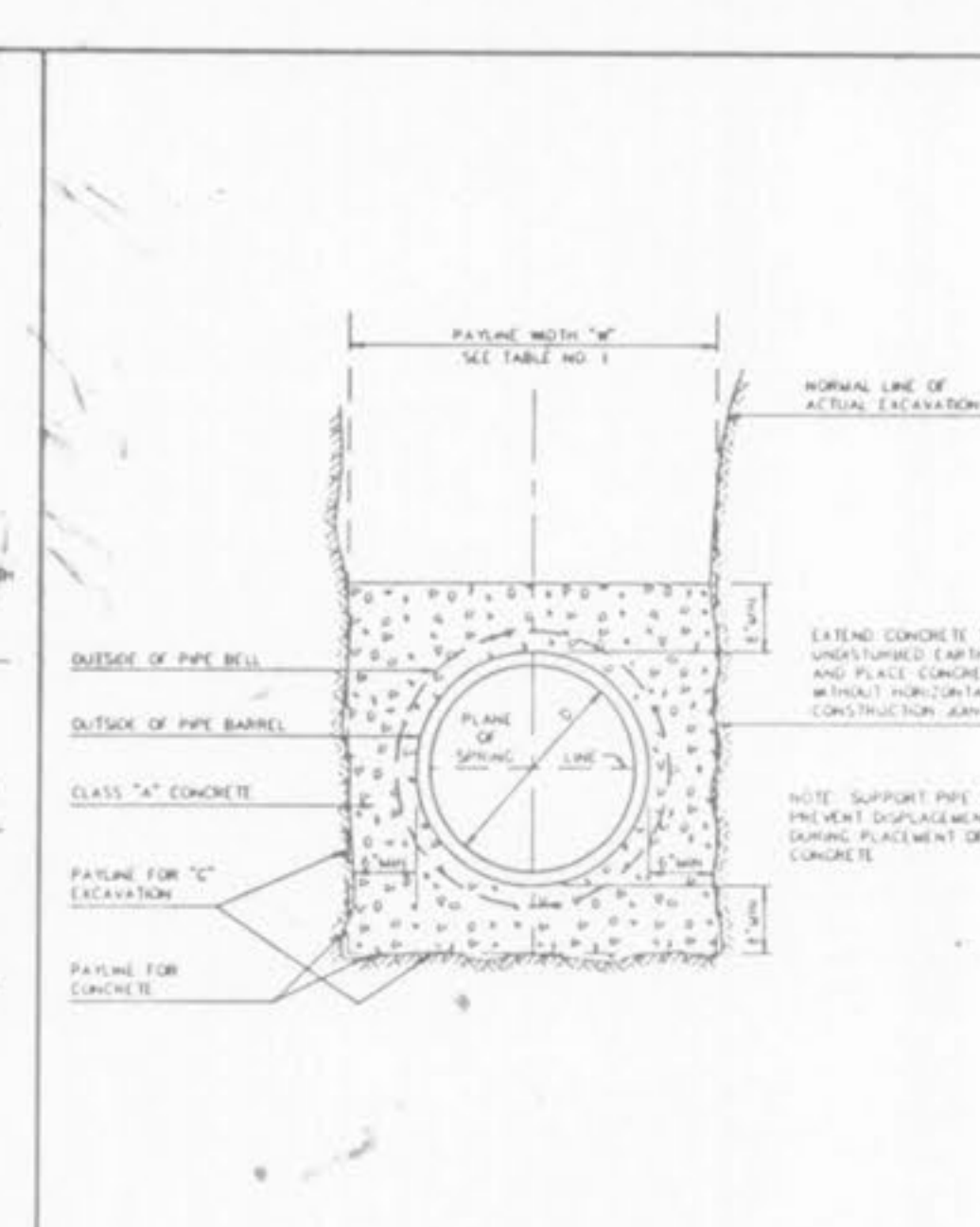
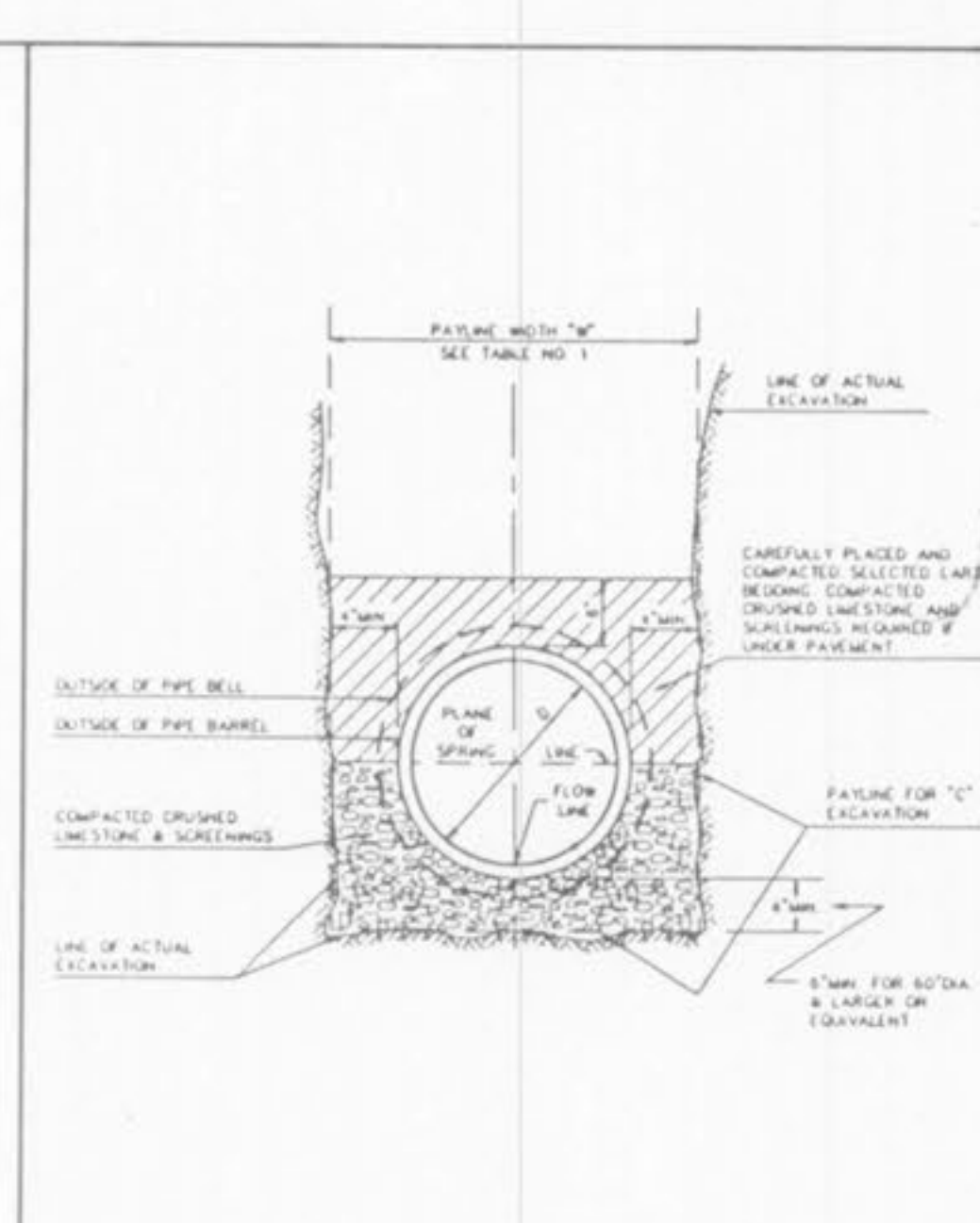
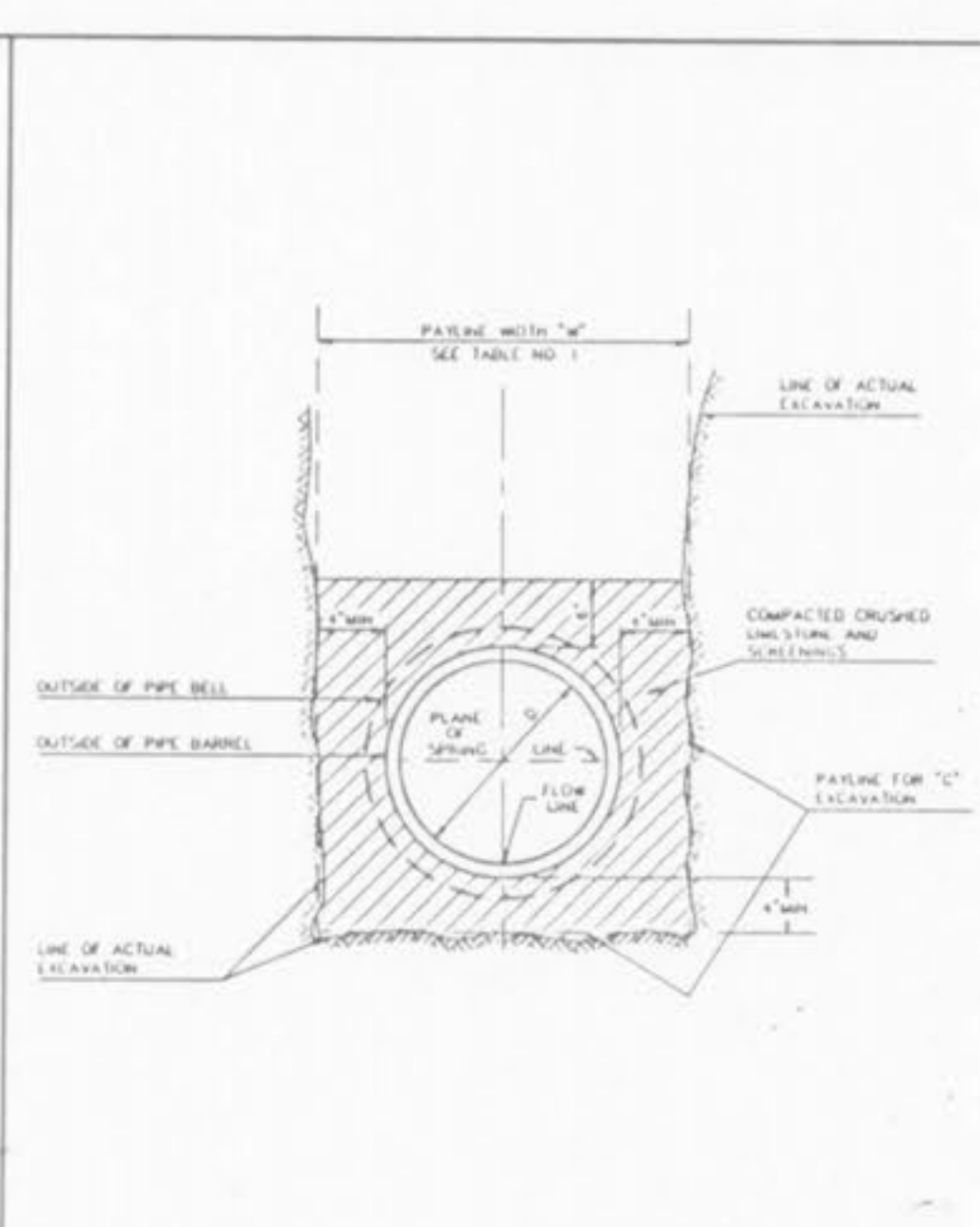
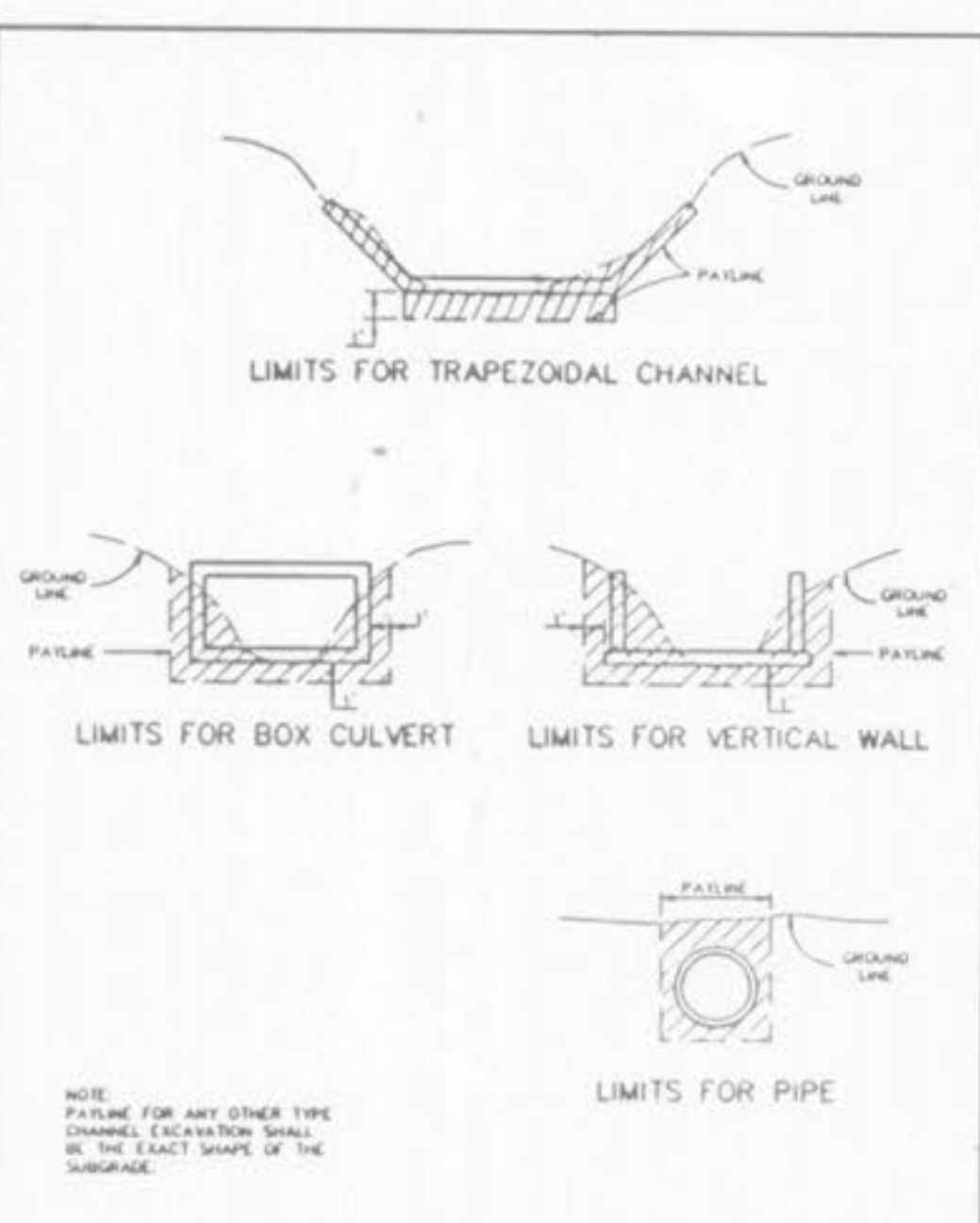


TABLE 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 1

PAYLINE LIMITS FOR EXCAVATION
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 2

PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 3

PIPE BEDDING CLASS "C" (WOODED FOR REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 4

CONCRETE ENCASUREMENT
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 5

CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 6

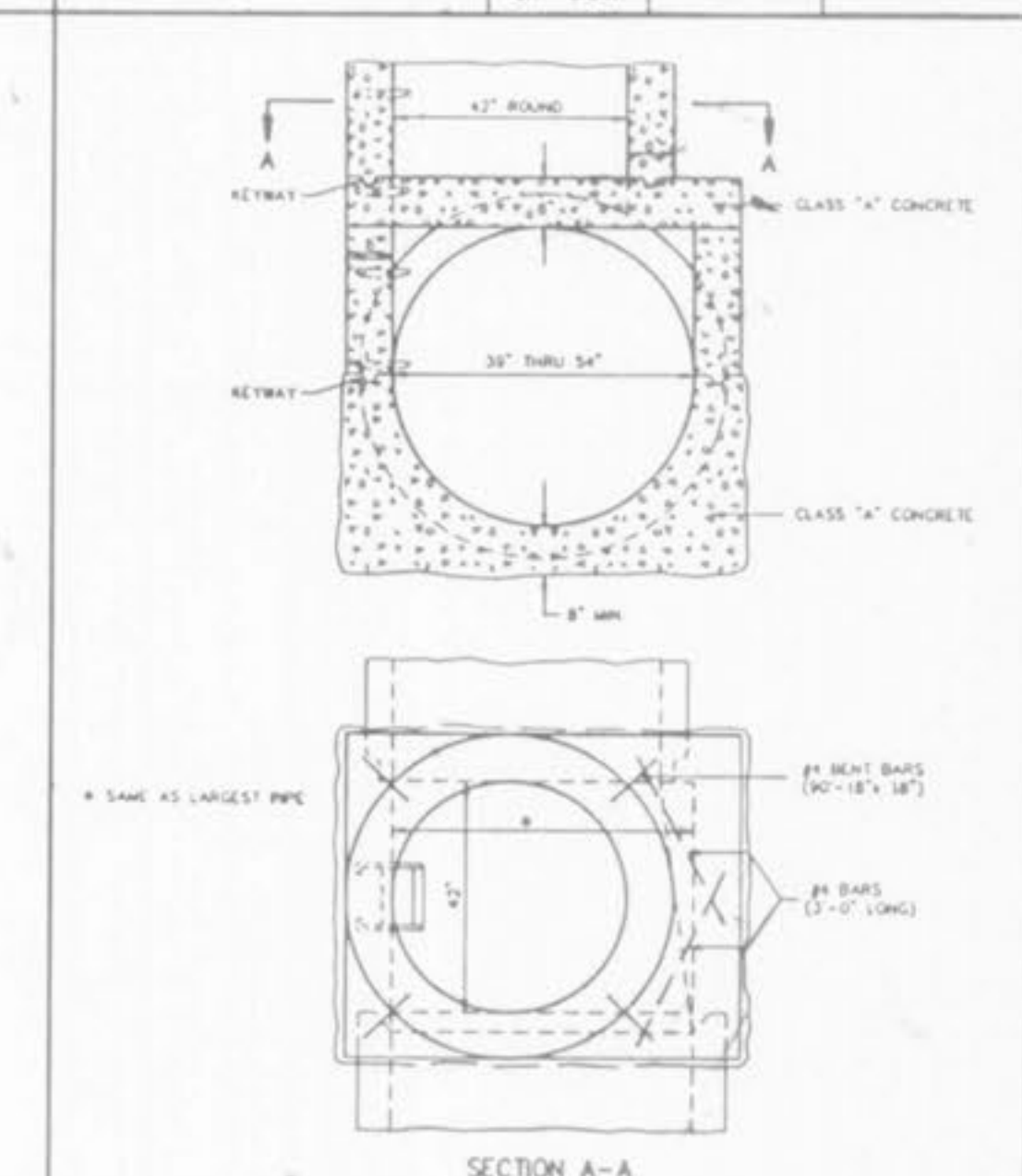
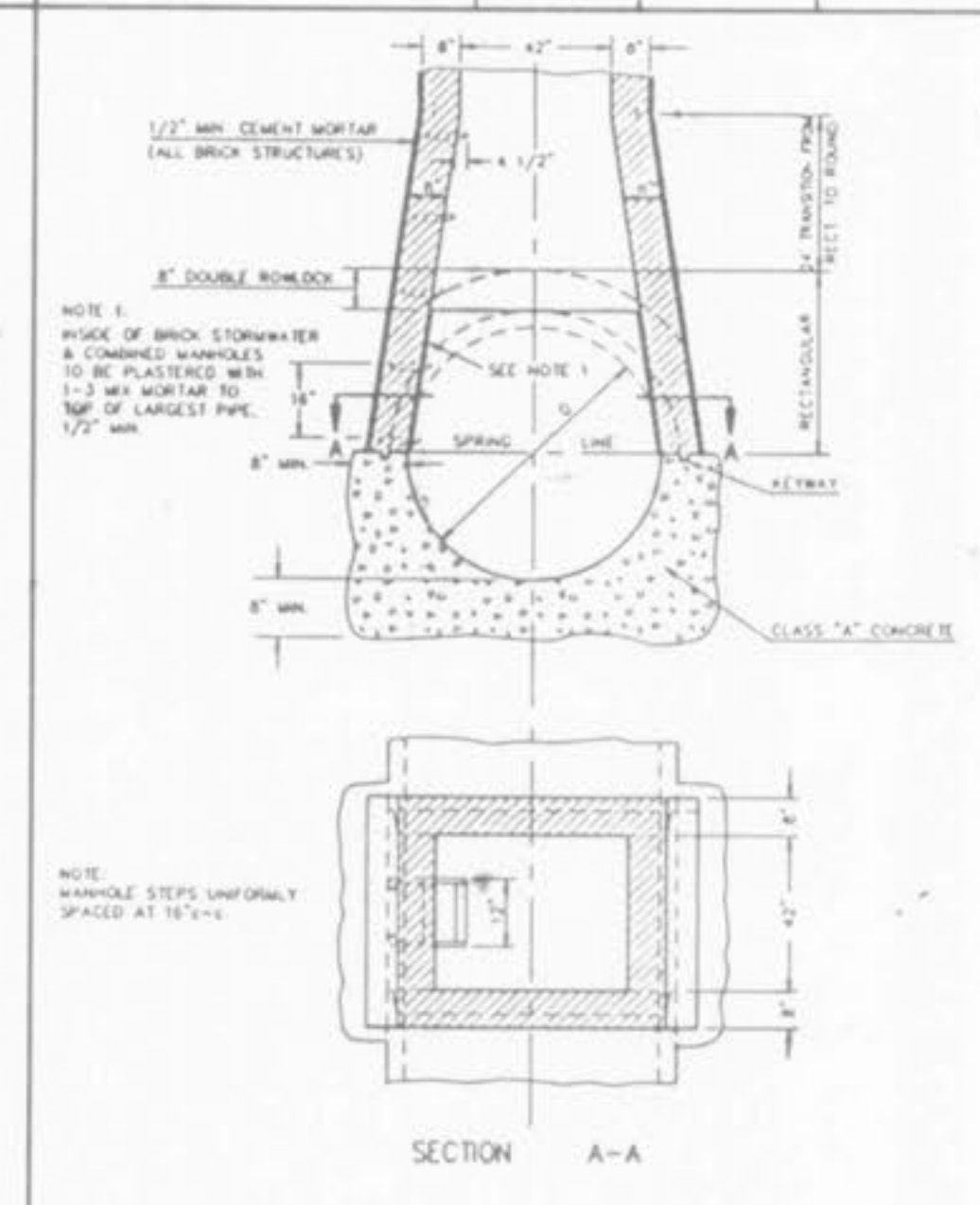
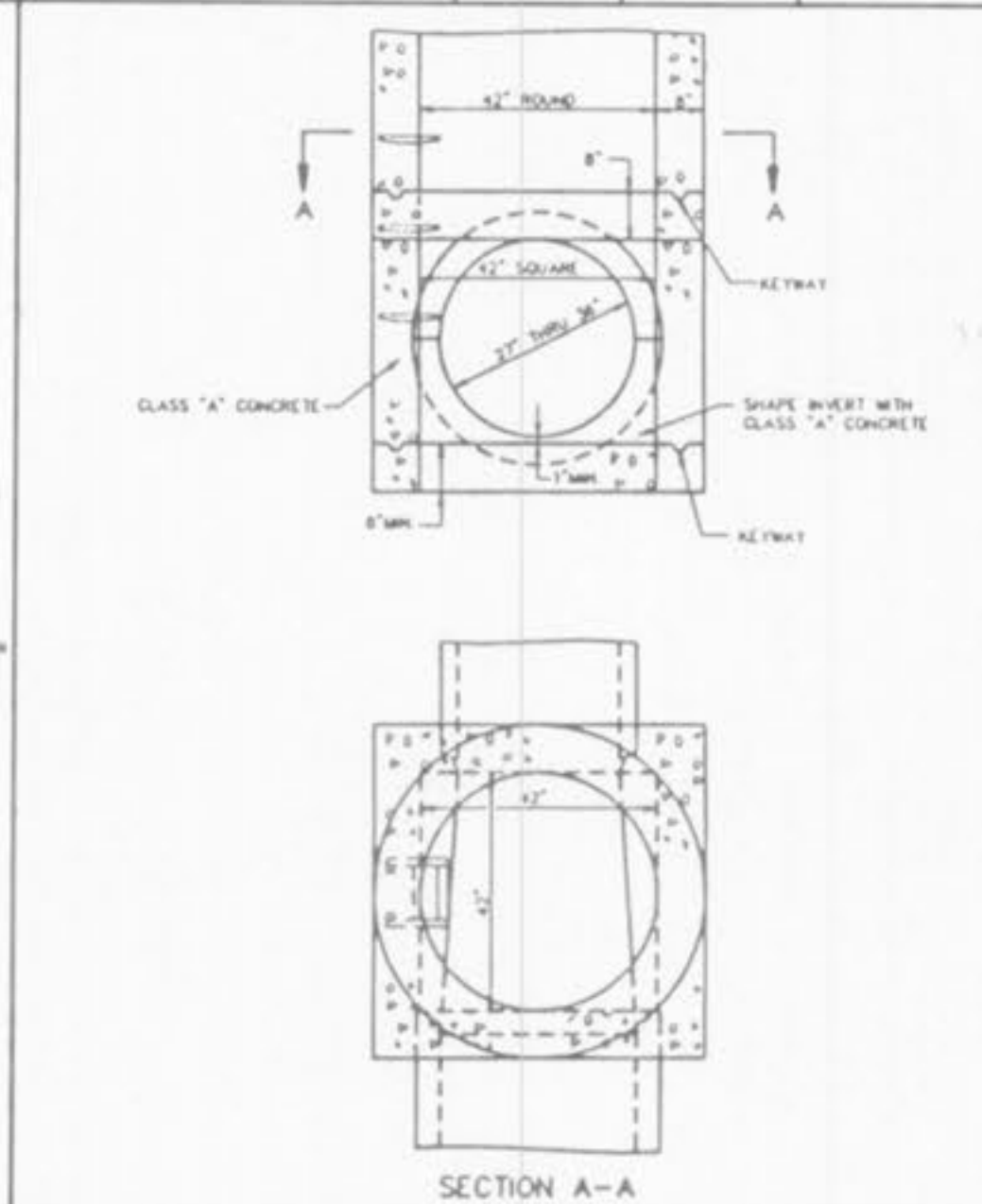
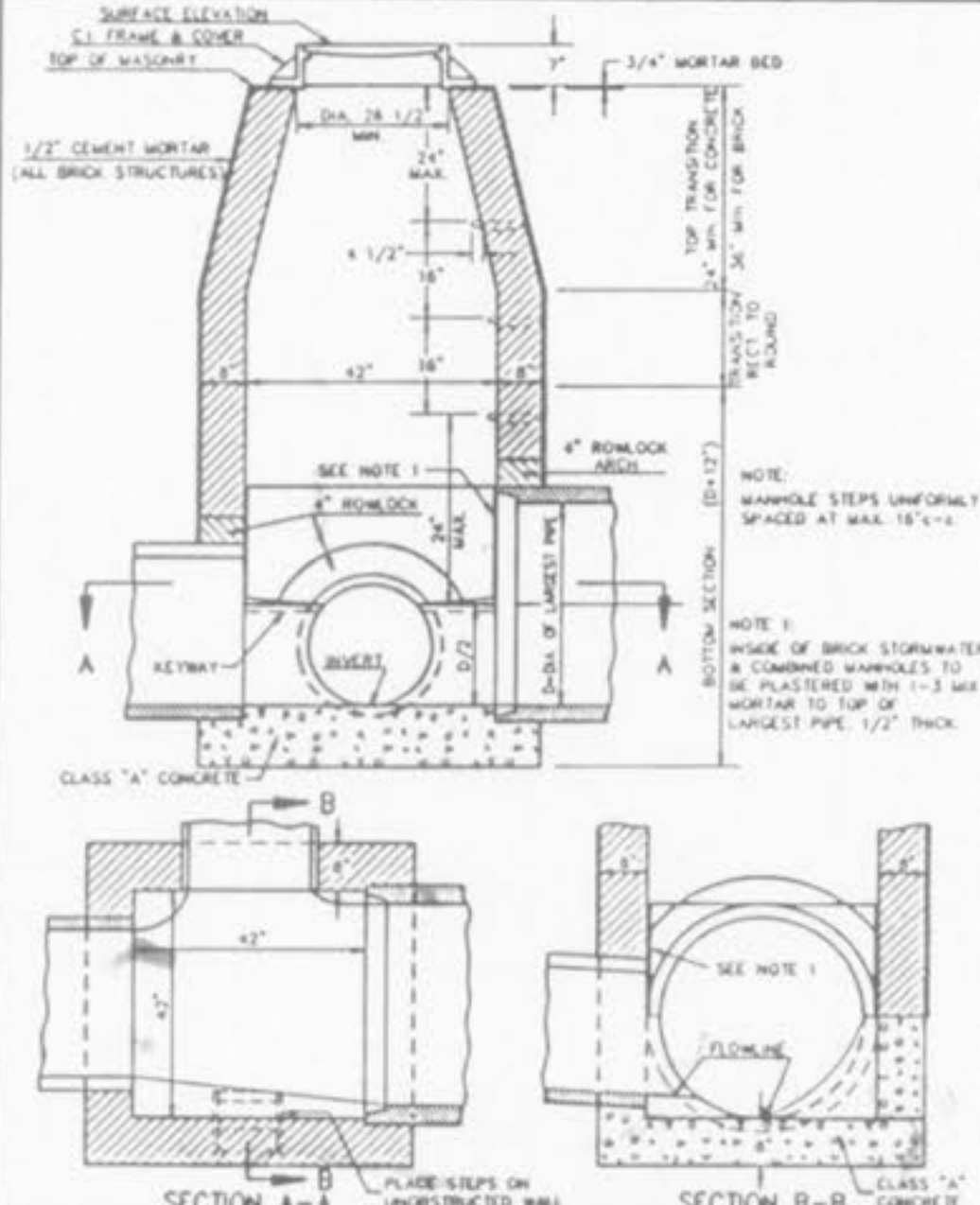
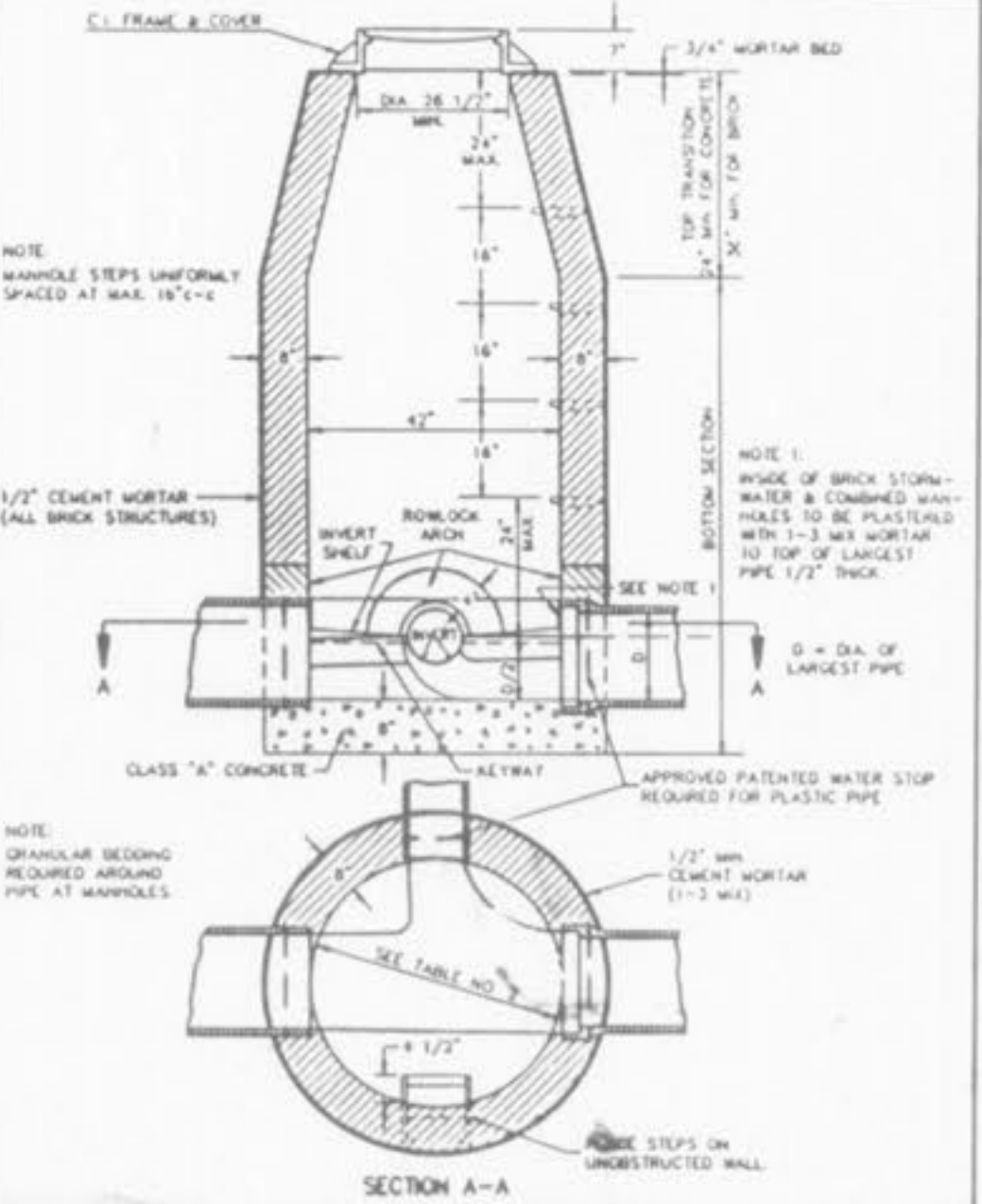
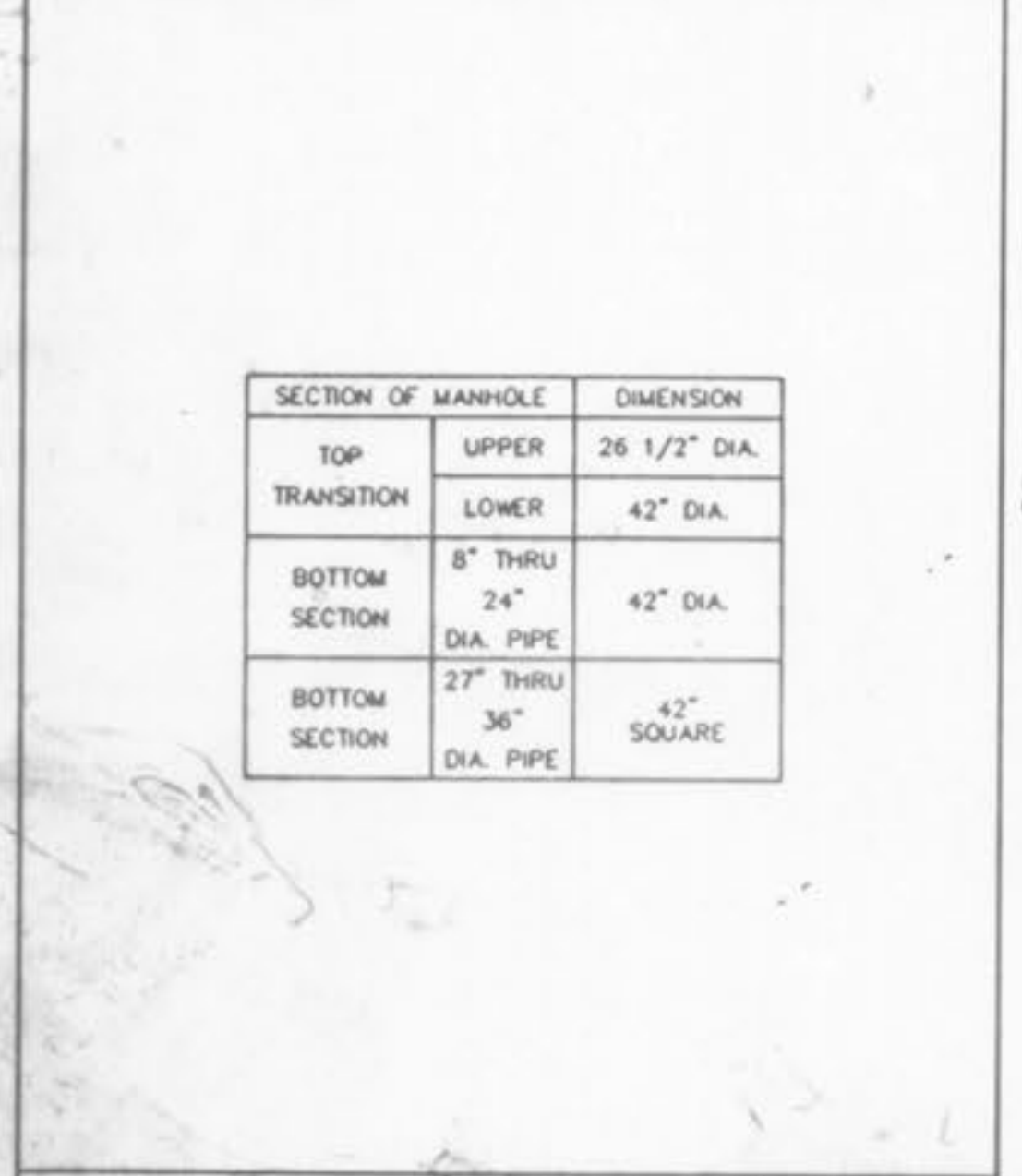


TABLE NO. 2
STANDARD MANHOLE DIMENSIONS
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 7

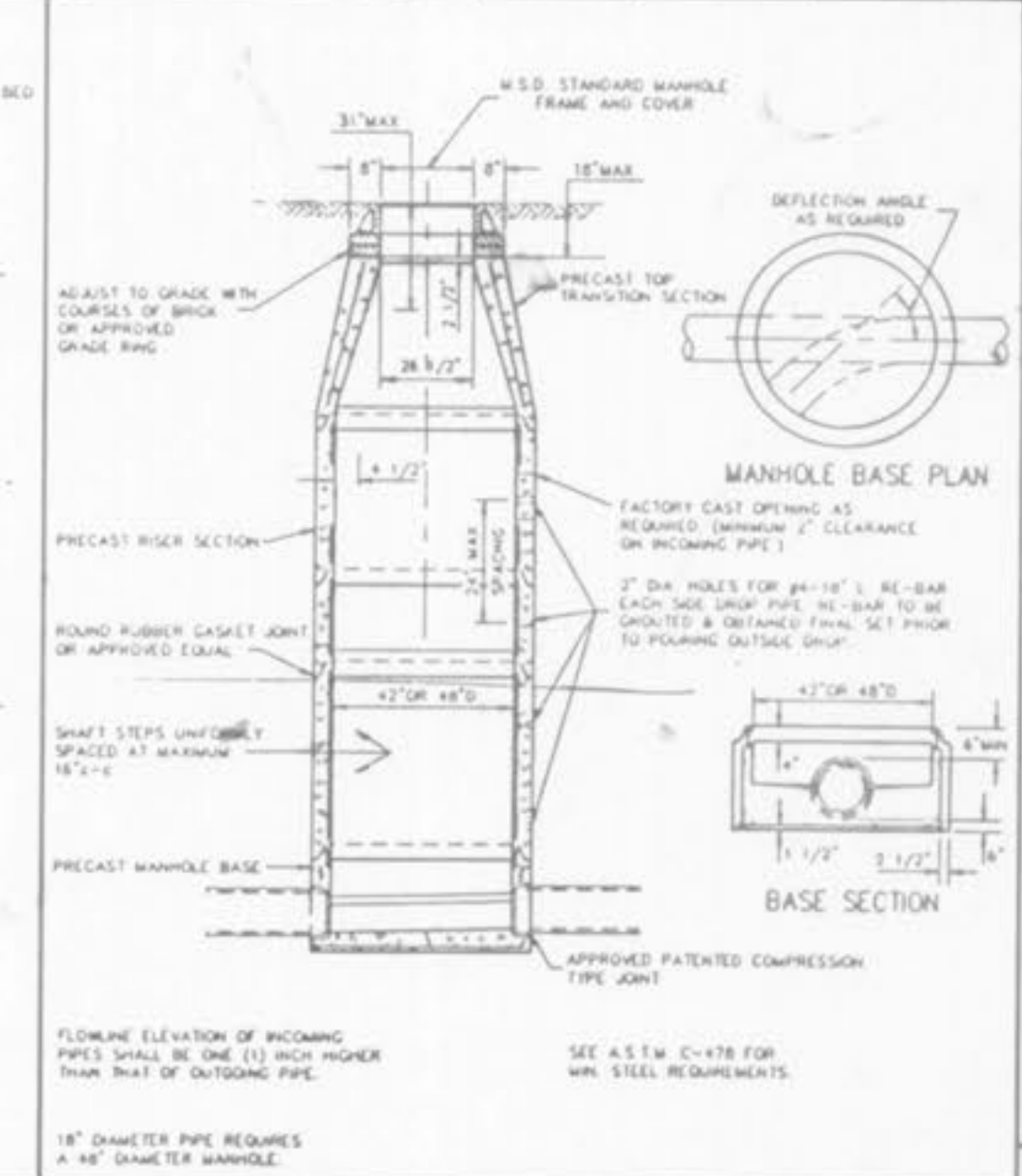
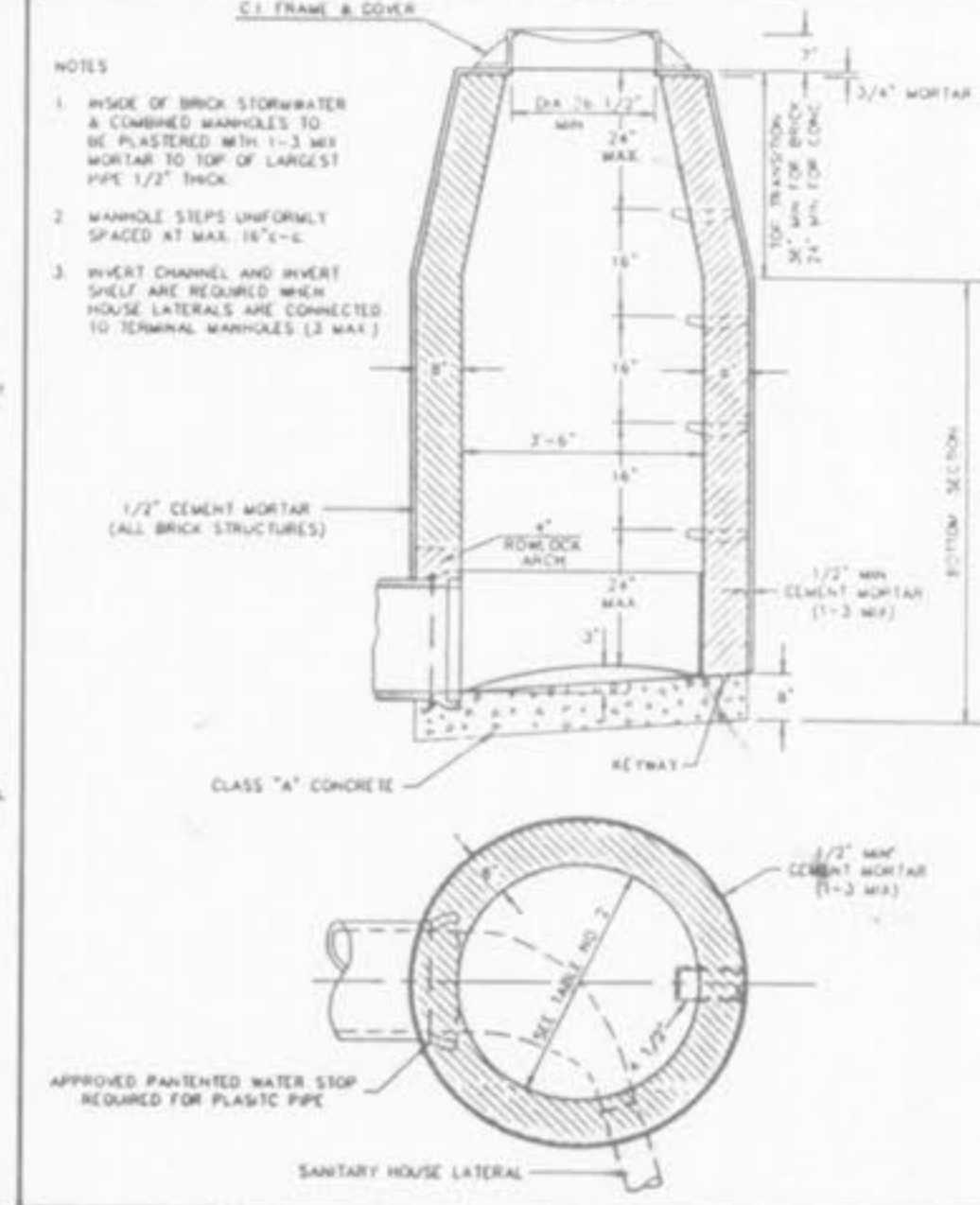
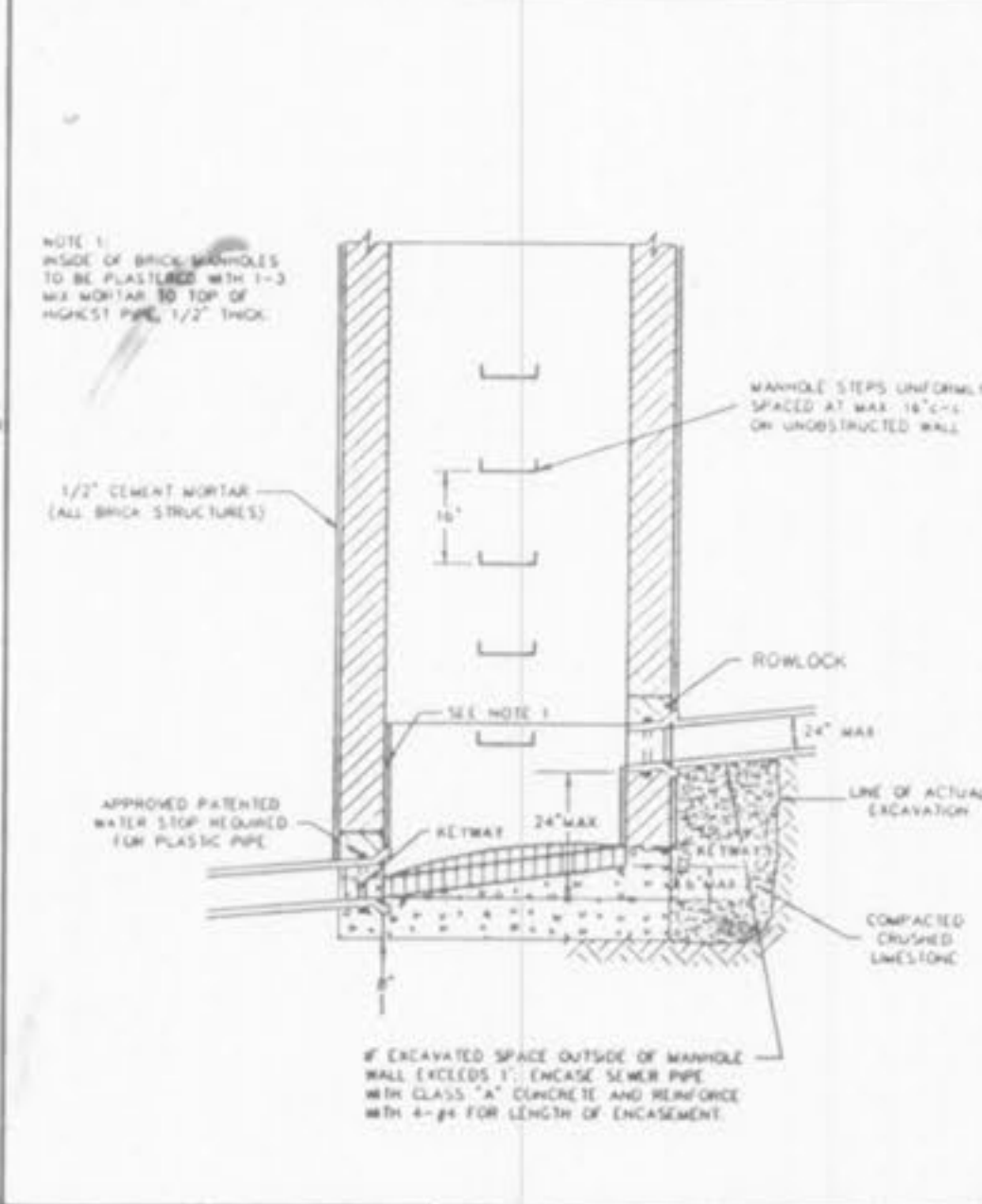
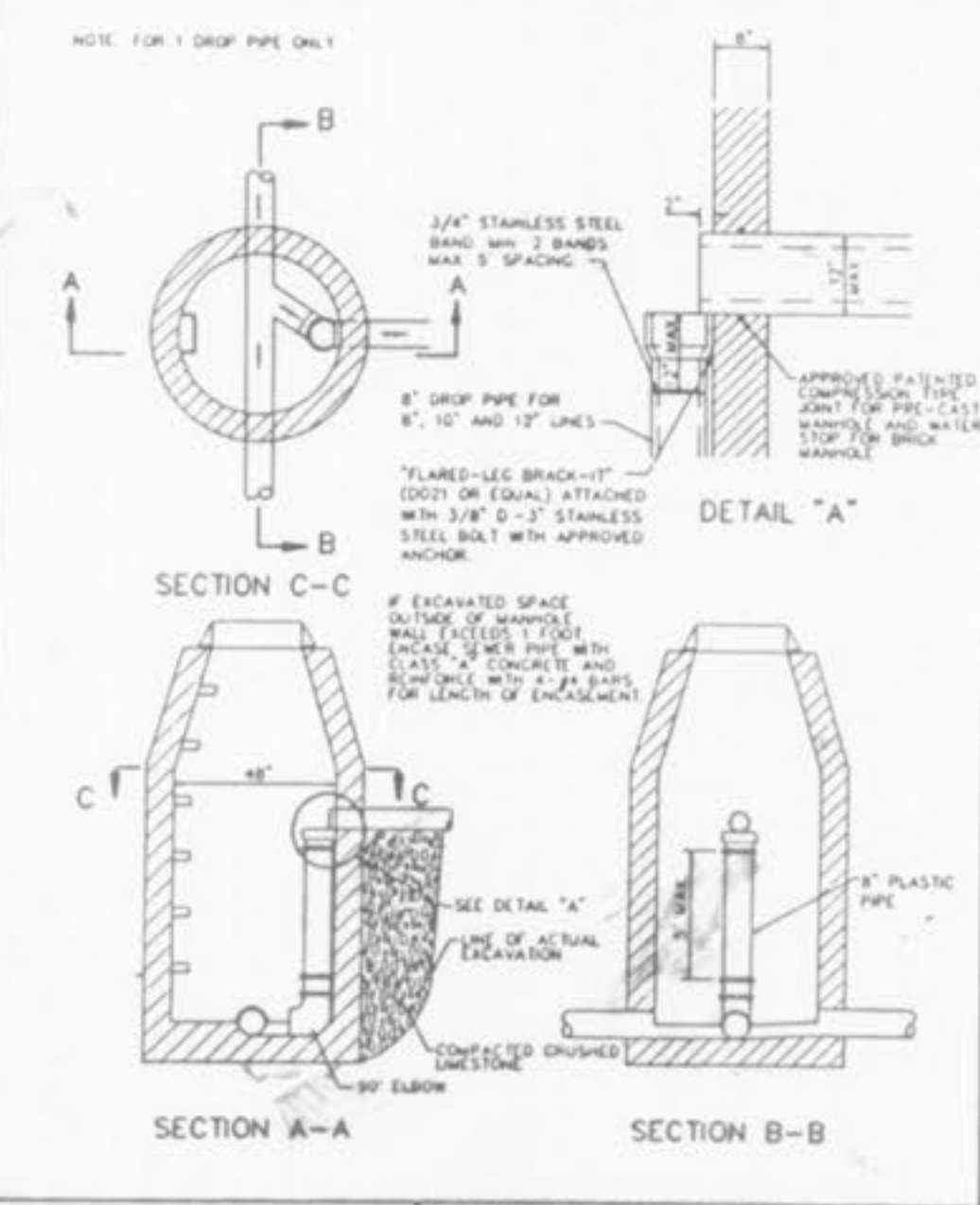
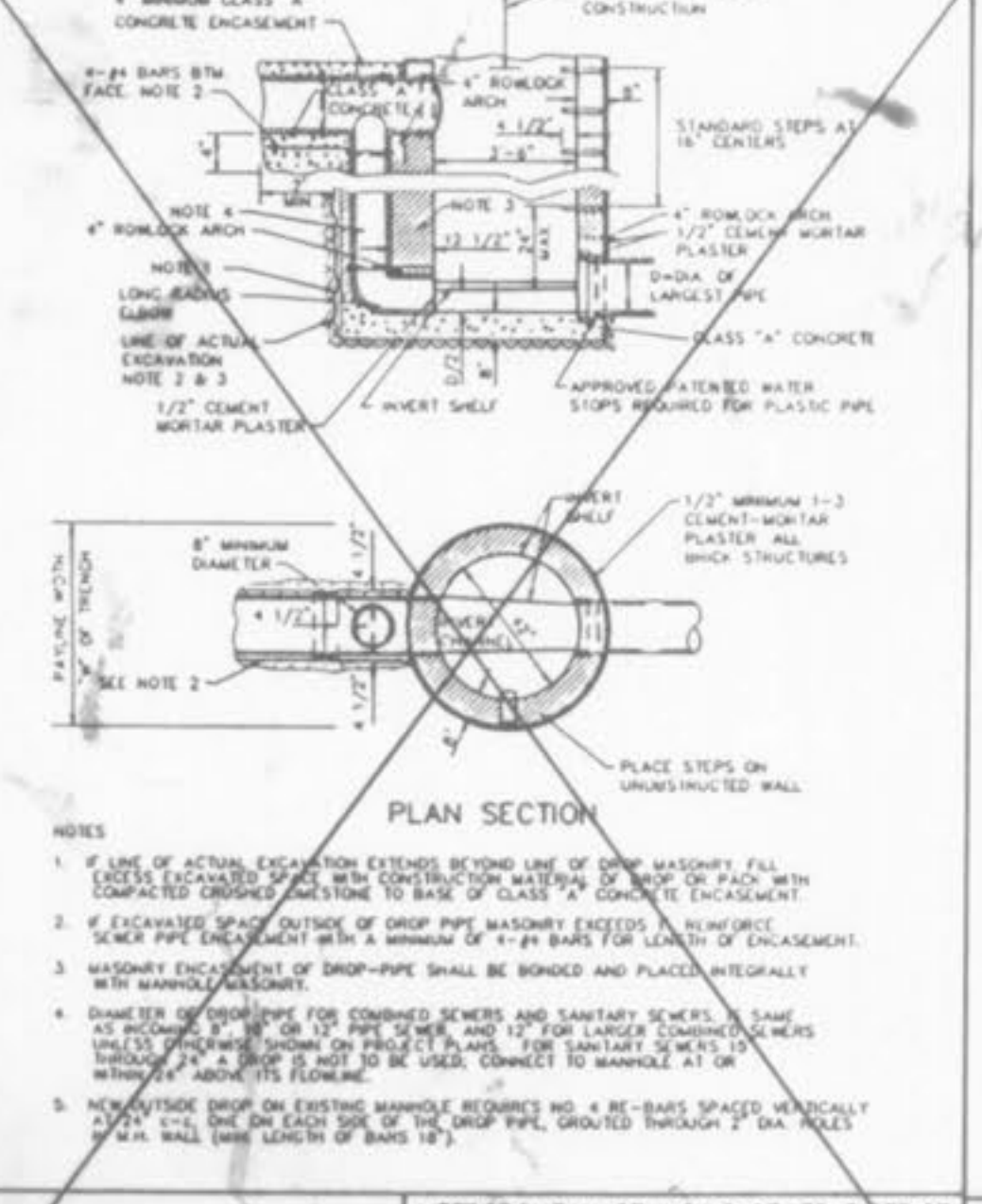
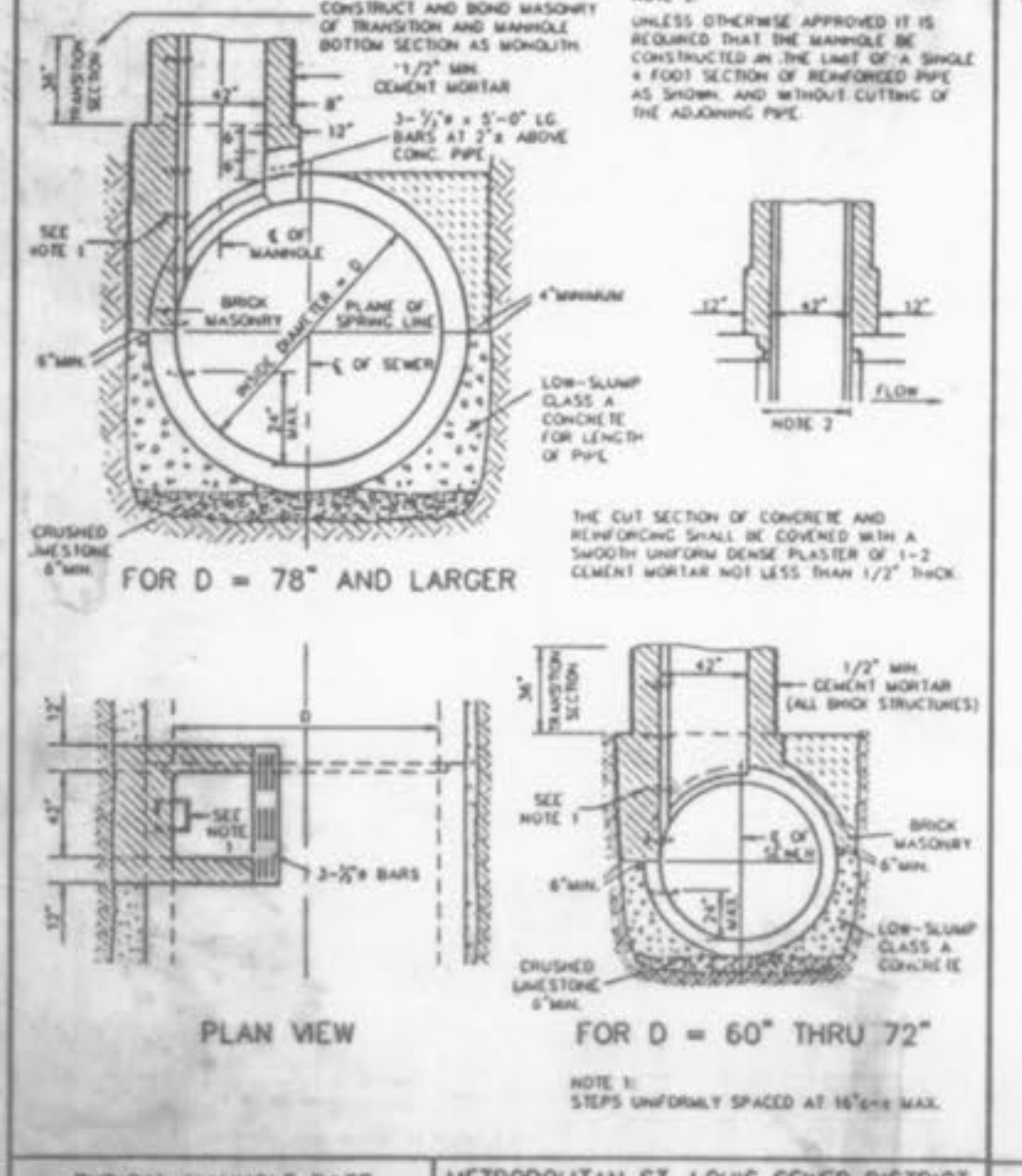
LINE MANHOLE PIPE SEWERS 8"-24" DIA.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 8

TYPICAL LINE MANHOLE ON PIPE SEWER 27" THRU 36" IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 9

MANHOLE ON PIPE SEWER 27" THRU 36" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. D.A.B. Ch. J.C.K. 1992 SHEET 10

MANHOLE ON CONCRETE PIPE SEWERS 39" THRU 54" DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 11

MANHOLE ON CONC. PIPE 39" THRU 54" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 12



TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 13

OUTSIDE FOULWATER DROP MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 14

INSIDE FOULWATER DROP MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 15

INSIDE FOULWATER DROP MANHOLE (FOR FREE-FALL)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 16

TERMINAL MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 17

PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 18