

**Willowood Estates**  
CITY OF WICHITA, KANSAS

Private Project Number

JUNE, 1999

**GENERAL NOTES:**

- Kansas One-Call** **687-2470**

Multimedia Cablevision 262-0661  
832-3168

... ..

- Trees and shrubs in public right-of-way which are

- All areas disturbed by construction operations shall*

100

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

and testing for this project is to

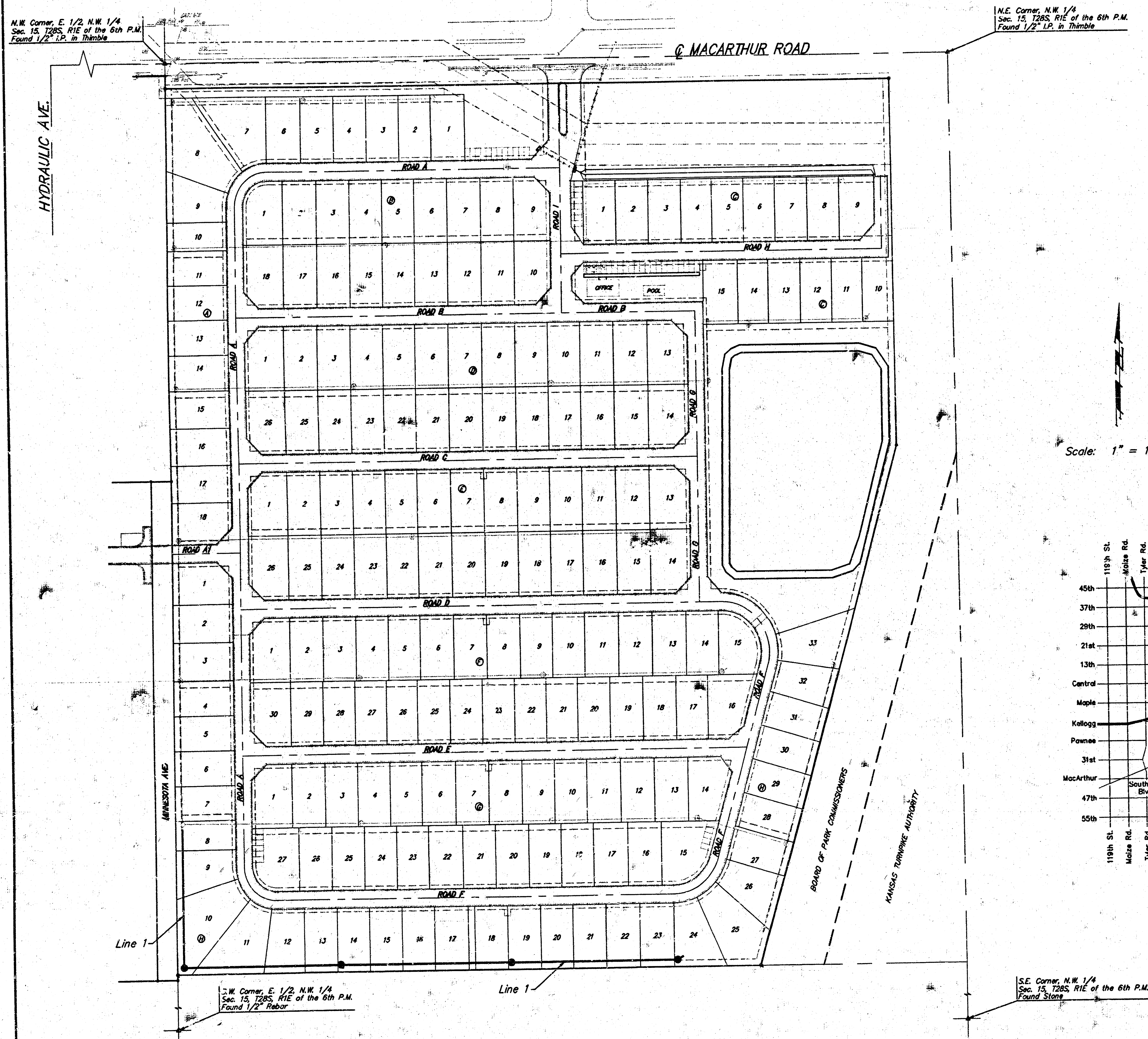
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eng|willowd2|ph4|ss|sscov

ENGINEERING, SURVEYING, & PLANNING

14-2-3-12

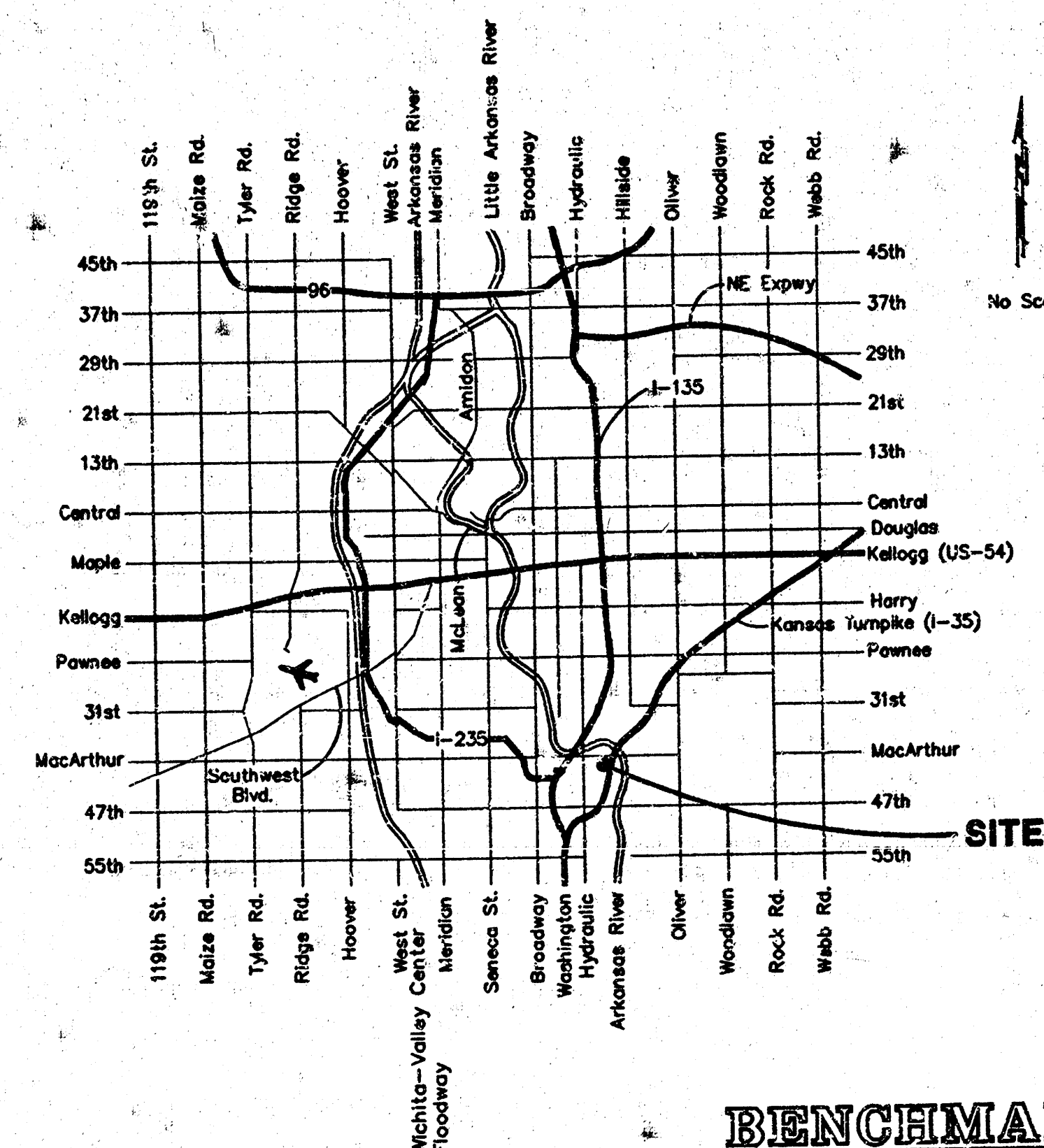
10/1/10



## Sheet Index

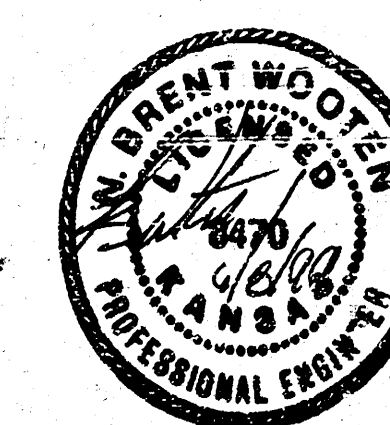
*Title Sheet*  
*Line 1*  
*Standard Manhole Detail*  
*Shallow Manhole Detail*  
*Manhole Frame & Cover Detail*  
*Willowood Estates Plat*

Scale: 1" = 100'



## BENCHMARK

*This '□' on E. @ of Sanitary Sewer MH,*



# **BENCHMARK:**

This "□" on E. & of Sanitary Sewer MH,  
East Side of Emery Park Road, 235 feet  
South of MacArthur Road.  
Elev. = 85.46 City Datum

This "□" on E. & of Sanitary Sewer MH,  
West Side of Emery Park Road, 1245 feet  
South of MacArthur Road.  
Elev. = 84.22 City Datum

Sta. 0+00, Begin Line 1 =  
Connect to Existing 8" Stub  
and Extend 8" Pipe (S).  
Contractor to Verify Depth  
and Location of Existing  
Stub Prior to Construction.

CAMELOT  
ADDITION

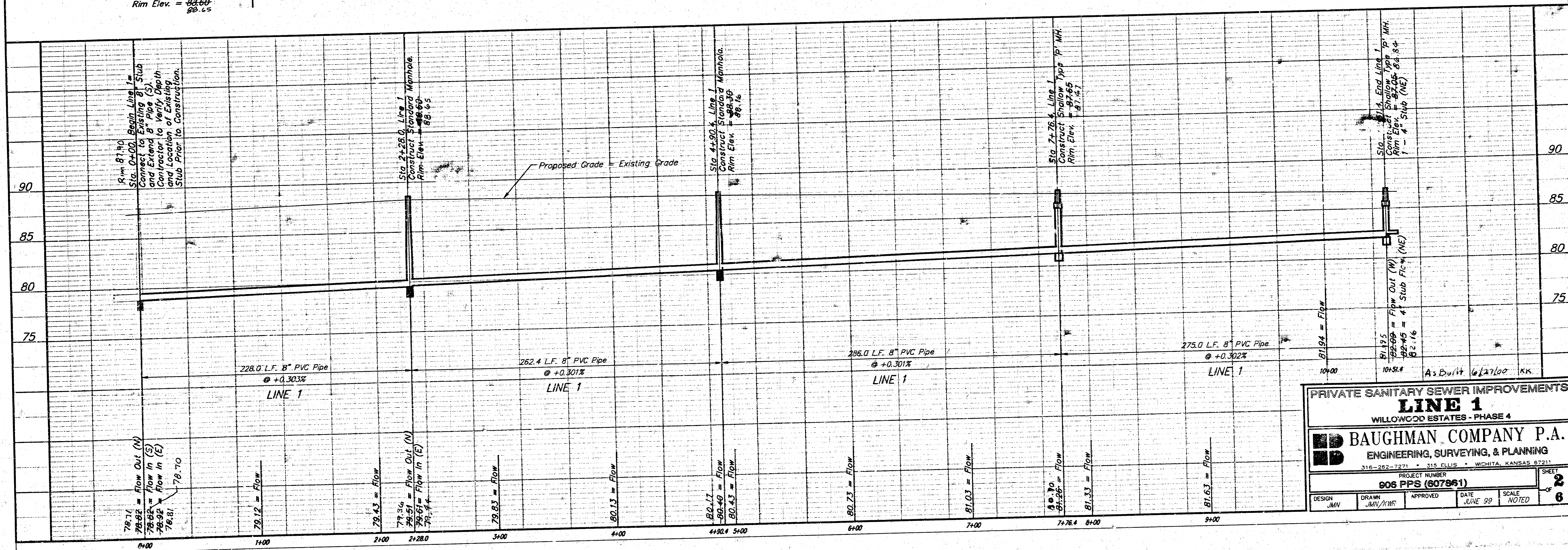
Sta 2+28.0, Line 1  
Construct Standard Manhole.  
Rim Elev. = 82.60  
82.65

Sta 4+90.4, Line 1  
Construct Standard Manhole.  
Rim Elev. = 82.30  
82.16

Sta 7+76.4, Line 1  
Construct Shallow Type "P" MH.  
Rim Elev. = 87.65  
87.47

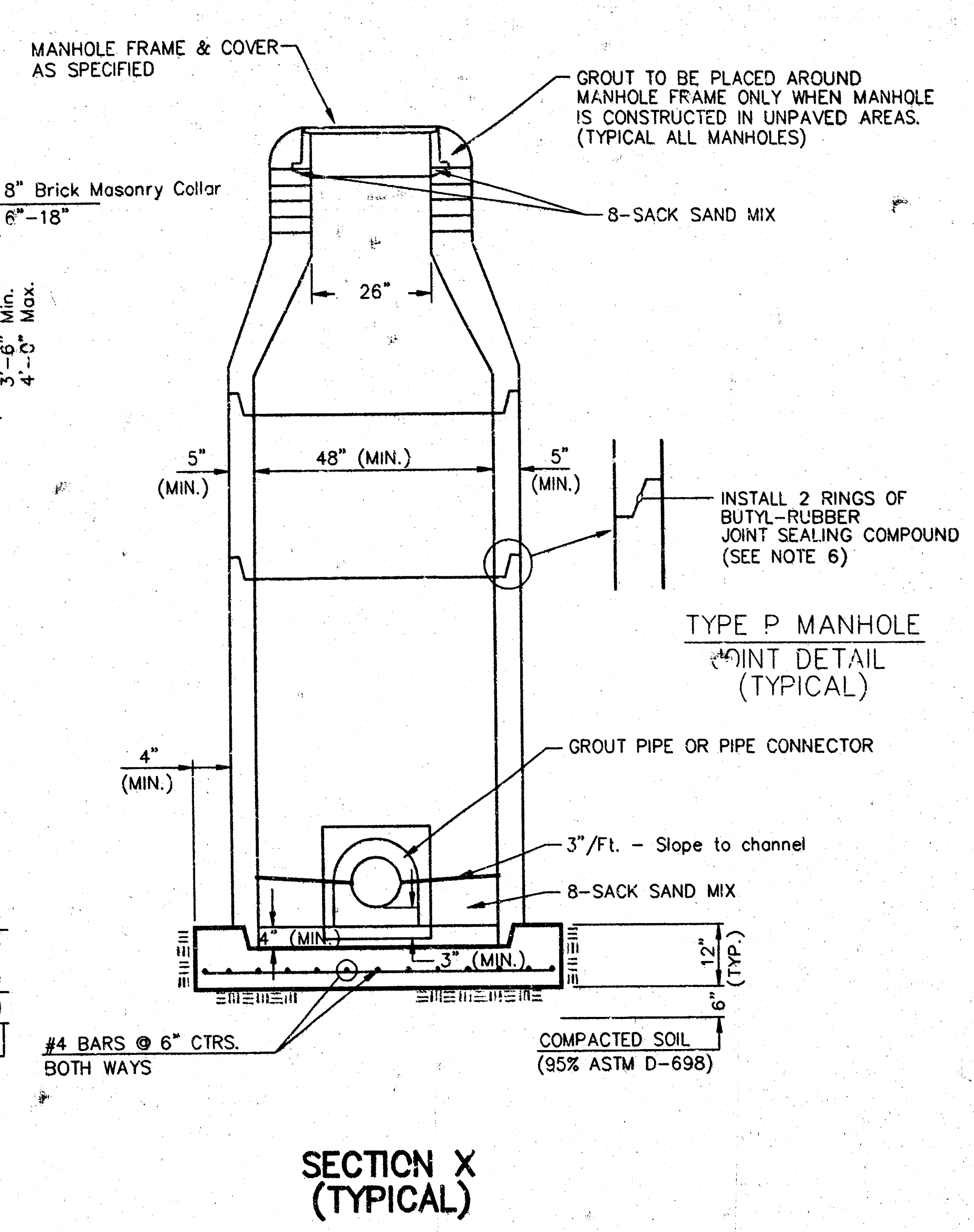
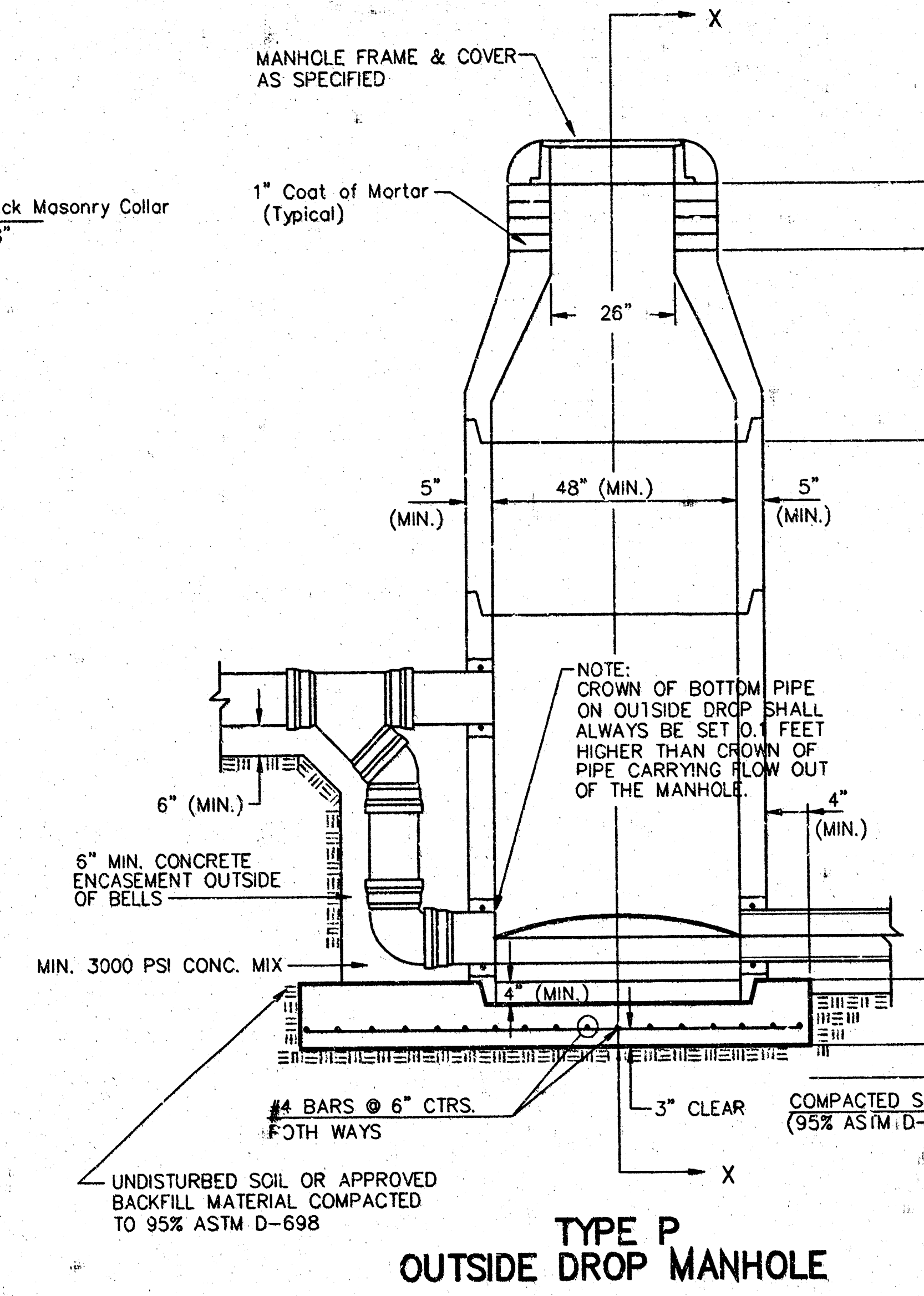
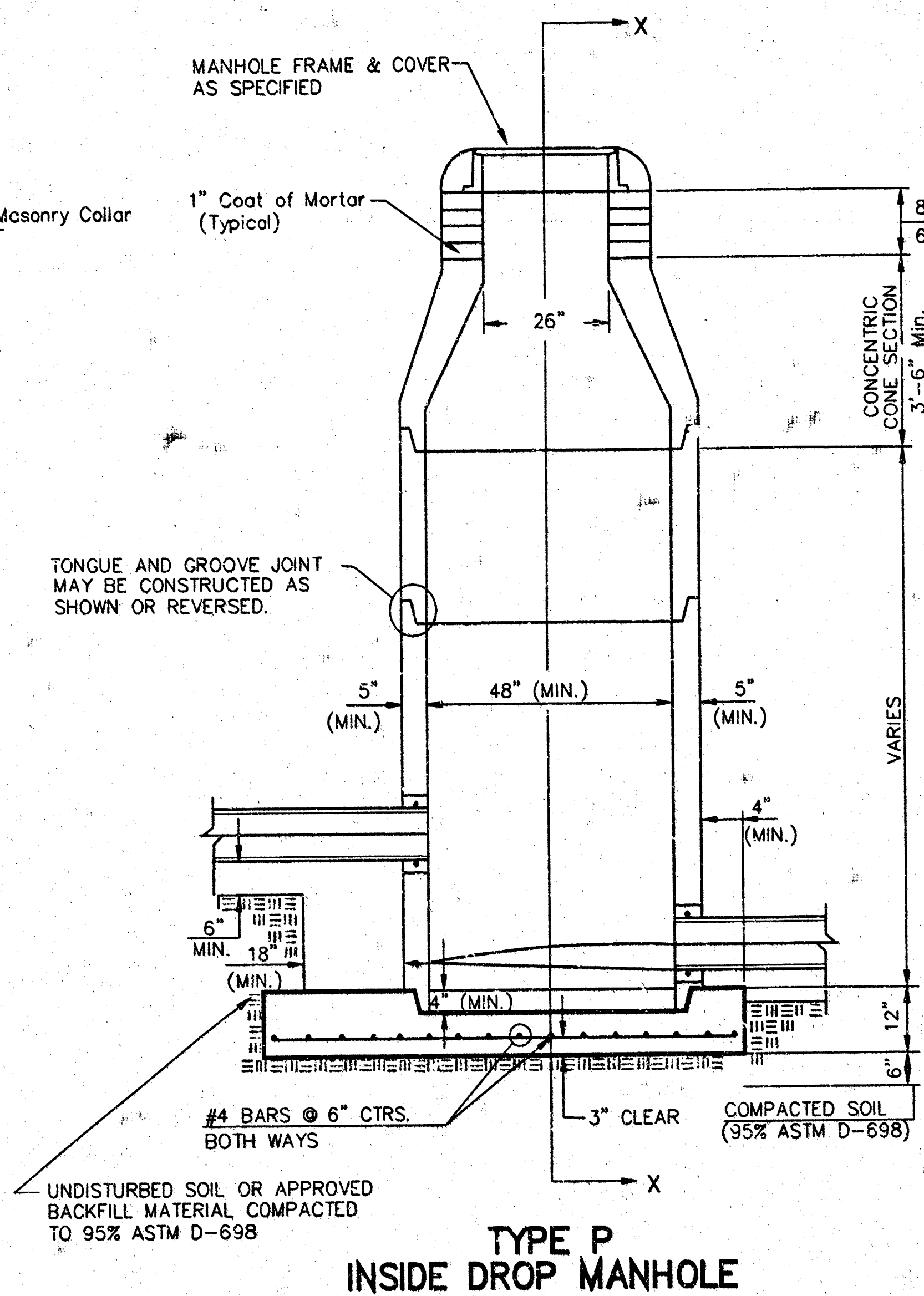
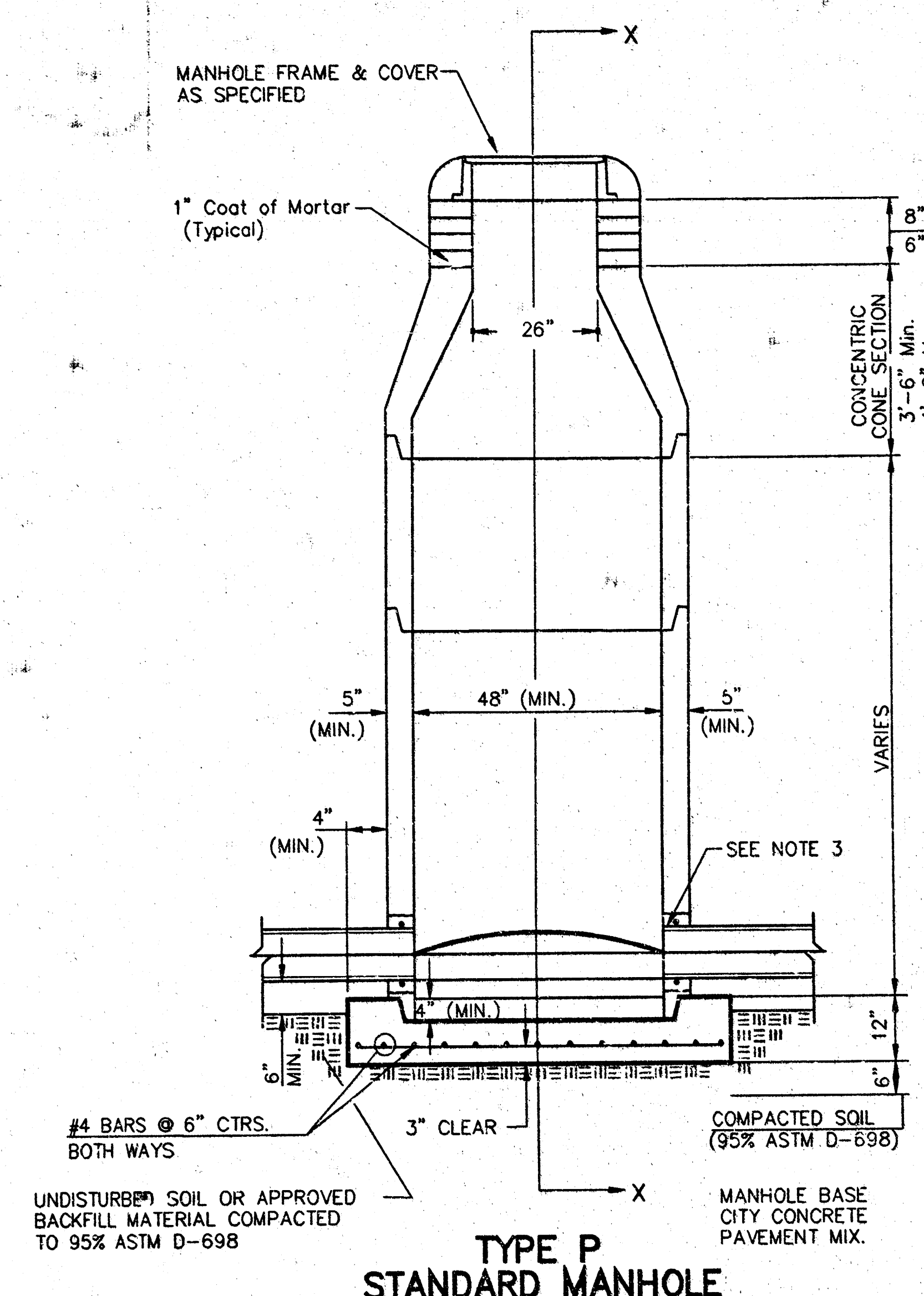
Sta 10+51.4, End Line 1  
Construct Shallow Type "P" MH.  
Rim Elev. = 87.95  
87.84  
1 - 4" Stub (NE)

SCALE:  
1"=40' Horizontal  
1"=5' Vertical  
• = Iron



|                                                  |         |          |         |       |        |
|--------------------------------------------------|---------|----------|---------|-------|--------|
| PRIVATE SANITARY SEWER IMPROVEMENTS              |         |          |         |       |        |
| <b>LINE 1</b>                                    |         |          |         |       |        |
| WILLOWOOD ESTATES - PHASE 4                      |         |          |         |       |        |
| BAUGHMAN COMPANY P.A.                            |         |          |         |       |        |
| ENGINEERING, SURVEYING, & PLANNING               |         |          |         |       |        |
| 315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211 |         |          |         |       |        |
| PROJECT NUMBER                                   |         |          |         |       |        |
| 906 PPS (607861)                                 |         |          |         |       |        |
| DESIGN                                           | DRAWN   | APPROVED | DATE    | SCALE | SHEET  |
| JMN                                              | JMN/KHR |          | JUNE 99 | NOTED | 2 OF 6 |

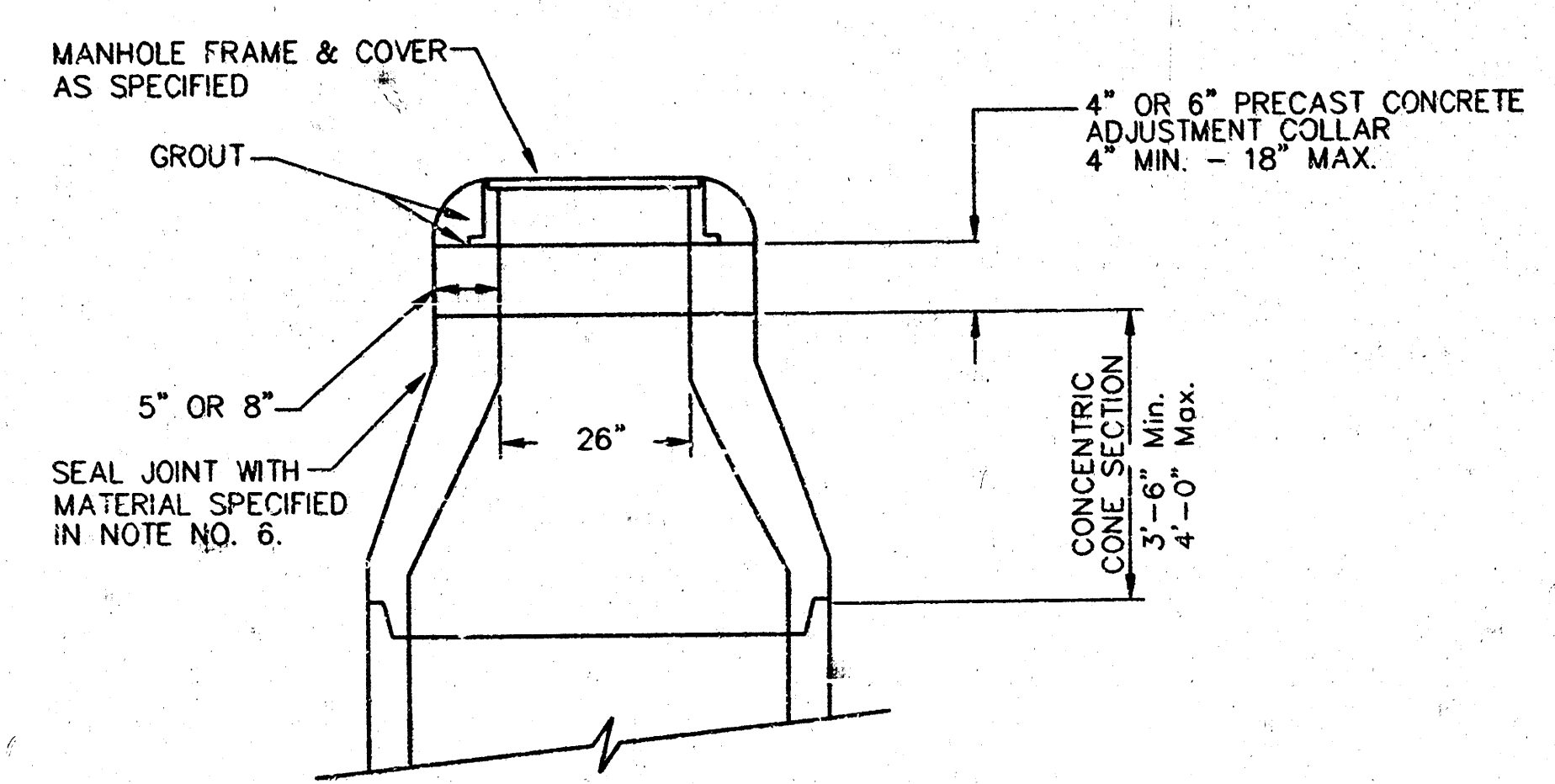
# SEWER APPURTENANCES DETAILS



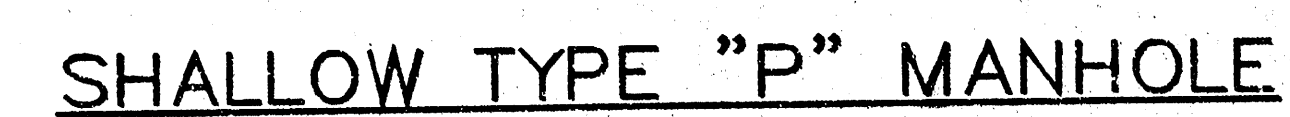
- GENERAL NOTES**
- PRECAST MANHOLE NOTES**
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
  - NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
  - APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASUREMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
  - ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS OF MEC SERIES 66 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.)
  - EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT OF MOBILARMA 633 BITUMINOUS COATING.
  - JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
  - PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
  - TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
  - LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
  - MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO HEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.



|                                                  |       |          |         |       |        |
|--------------------------------------------------|-------|----------|---------|-------|--------|
| CITY OF WICHITA                                  |       |          |         |       |        |
| <b>STD. MANHOLE DETAILS</b>                      |       |          |         |       |        |
| A SEWER APPURTENANCES DETAILS                    |       |          |         |       |        |
| <b>BAUGHMAN COMPANY P.A.</b>                     |       |          |         |       |        |
| ENGINEERING, SURVEYING, & PLANNING               |       |          |         |       |        |
| 316-262-7271 • 316 ELLIS • WICHITA, KANSAS 67211 |       |          |         |       |        |
| PROJECT NUMBER                                   |       |          |         |       |        |
| 908 PPS (907931)                                 |       |          |         |       |        |
| DESIGN                                           | DRAWN | APPROVED | DATE    | SCALE | SHEET  |
| C.O.W.                                           | STAFF |          | JUNE 99 | NONE  | 3 OF 8 |



## FLAT CONCRETE SLAB DETAILS

- ### GENERAL NOTES

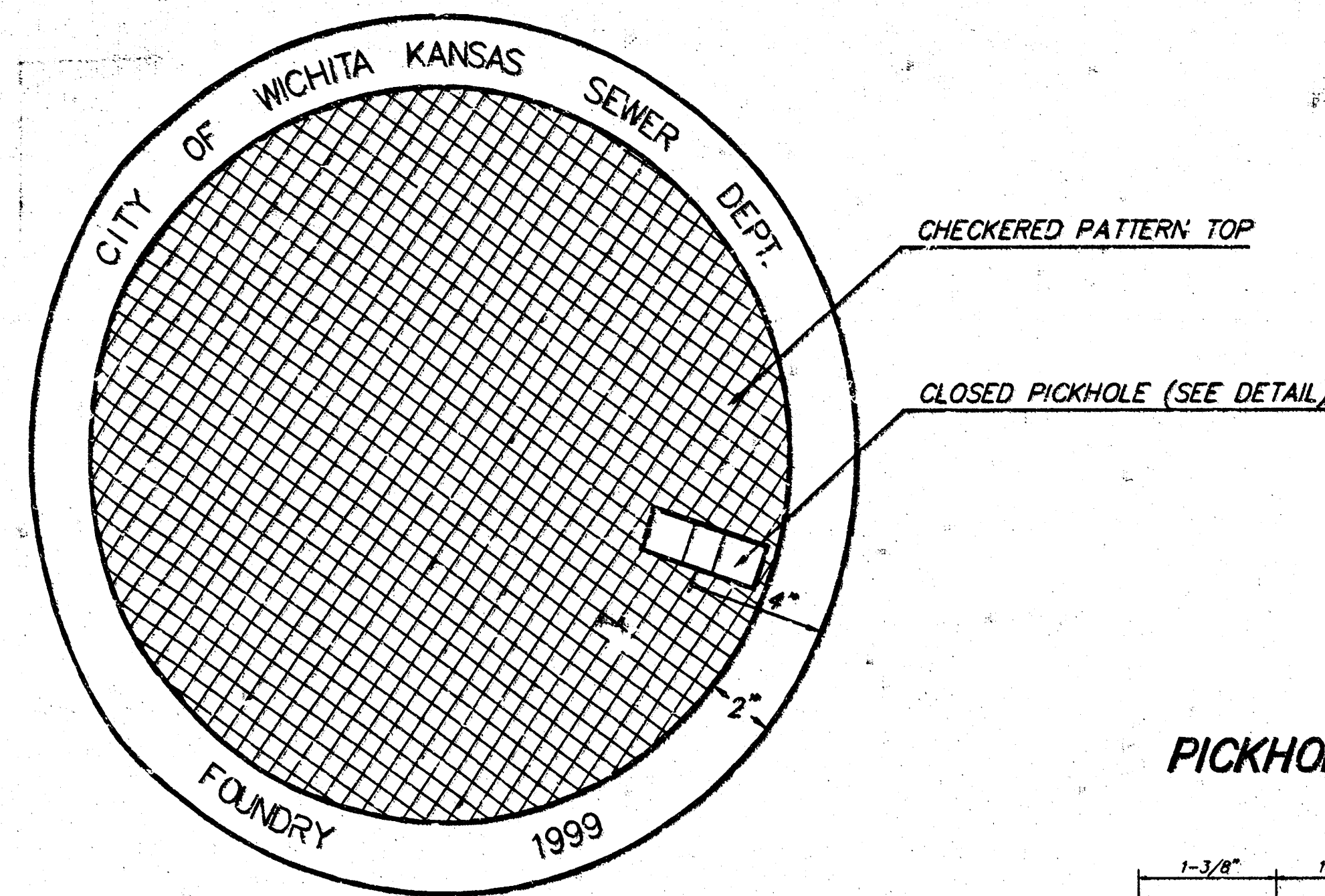
1. Mortar used in masonry construction shall contain 8 sacks of cement per cubic yd. Concrete used in manhole bases shall conform to the requirements of concrete for concrete pavement construction as specified in the city standard paving specifications, using city concrete cement mix without air entraining admixture. Mortar shall be placed around the manhole ring as shown on the drawings when manholes are constructed in unpaved areas. Manholes constructed where pipe sizes are smaller than 24" shall have an inside diameter of 4". Manholes constructed where pipe sizes are 24" or larger shall have an inside diameter of 5". Constructed manhole shall be without leak and water tight.
2. Reinforcing steel shall be installed in the manhole bases and shall consist of no. 4 bars placed on "6" centers in both directions. The manhole base reinforcement shall be placed 6" above the bottom of the manhole base. All costs for furnishing and installing reinforcing steel shall be included in the unit price bid for the manhole.
3. The floors of all manholes shall be shaped with flow channels such that the manholes will be self cleaning and free of areas where solids could be deposited as sewage flows through the manhole from all inlet pipes to the outlet pipe. Flow channels shall be formed to match the bottom halves of the inflowing pipes and the outflowing pipe as shown by the drawings. Manhole floors shall have slopes of 3 inches per foot in the areas outside of the flow channels sloped toward the flow channels. Pipes laid through manholes shall have the top half removed to neat lines for the full inside diameter of the manhole. Manhole floors shall then be shaped around the bottom half of the pipe which forms the flow channel.
4. Pipes installed within the excavation made for the manhole shall be crotled with concrete to the limits of the manhole excavation. When clay pipe is used, the crotle shall extend to the first joint outside the manhole. The crotle shall be terminated at the clay pipe joint in a manner which will maintain the flexibility of the joint. Cost of crotle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.
5. Manhole cover castings and manhole frame castings shall conform to the requirements as indicated in the standard specifications and as shown in the standard detail drawings.
6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.
7. Standard shallow manhole type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.
8. All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

|                                                                                                                                                                                                              |       |          |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|----------|
| CITY OF WICHITA, KANSAS                                                                                                                                                                                      |       |          |          |
| <b>STANDARD SHALLOW MANHOLES</b>                                                                                                                                                                             |       |          |          |
| TYPE "P" AND TYPE "C"                                                                                                                                                                                        |       |          |          |
|  <b>BAUGHMAN COMPANY P.A.</b><br>ENGINEERING, SURVEYING, & PLANNING<br>315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67201 |       |          |          |
| PROJECT NUMBER                                                                                                                                                                                               |       | SHEET    |          |
| <b>906 PPS (507851)</b>                                                                                                                                                                                      |       | <b>4</b> |          |
| DESIGN                                                                                                                                                                                                       | DRAWN | APPROVED | DATE     |
| CLIFF                                                                                                                                                                                                        |       |          | FEB 99   |
|                                                                                                                                                                                                              |       |          | SCALE    |
|                                                                                                                                                                                                              |       |          | 1" = 10' |

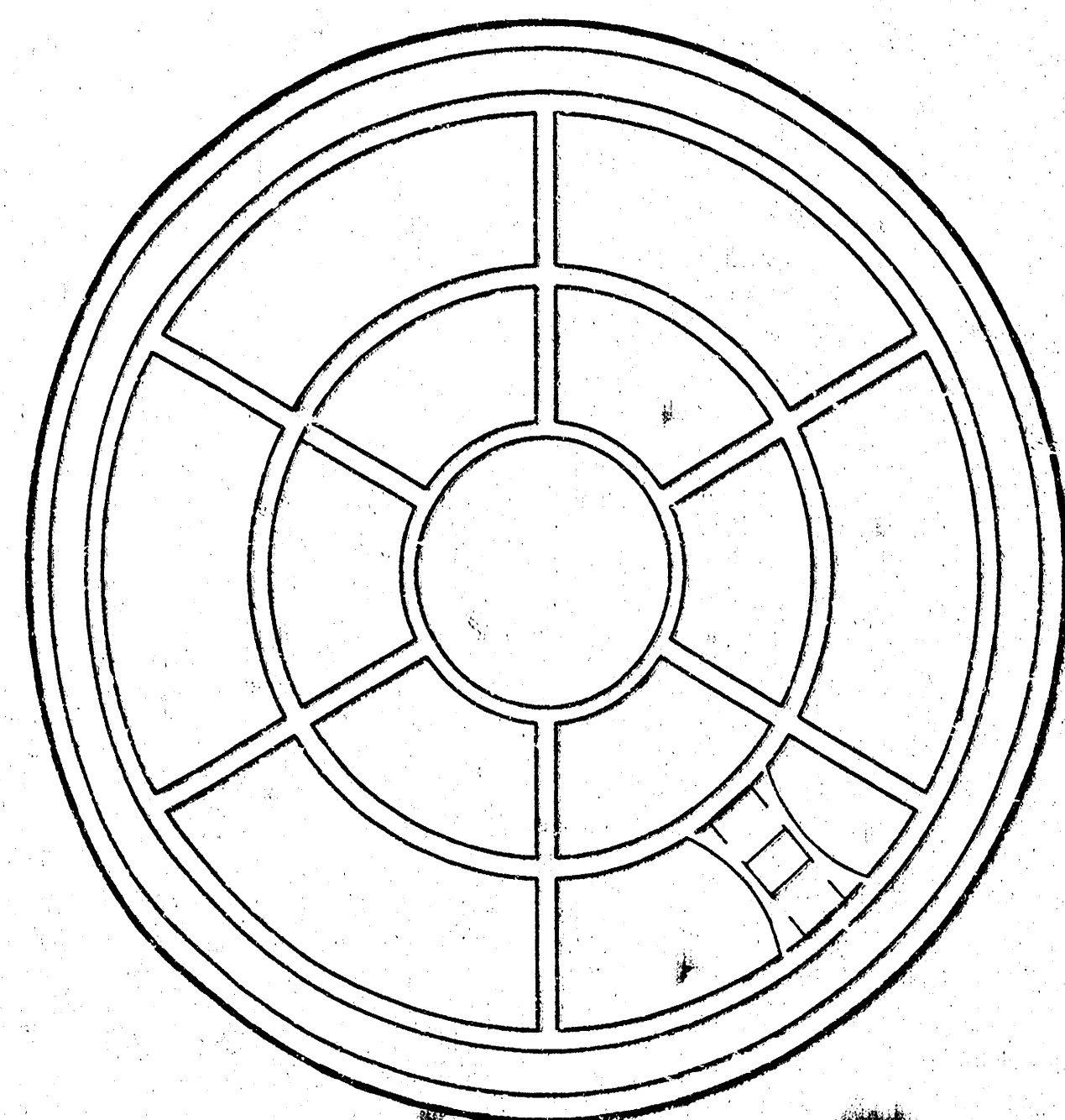
**MANHOLE COVER**  
Weight = 180 Lbs.

# MANHOLE FRAME AND COVER DETAIL

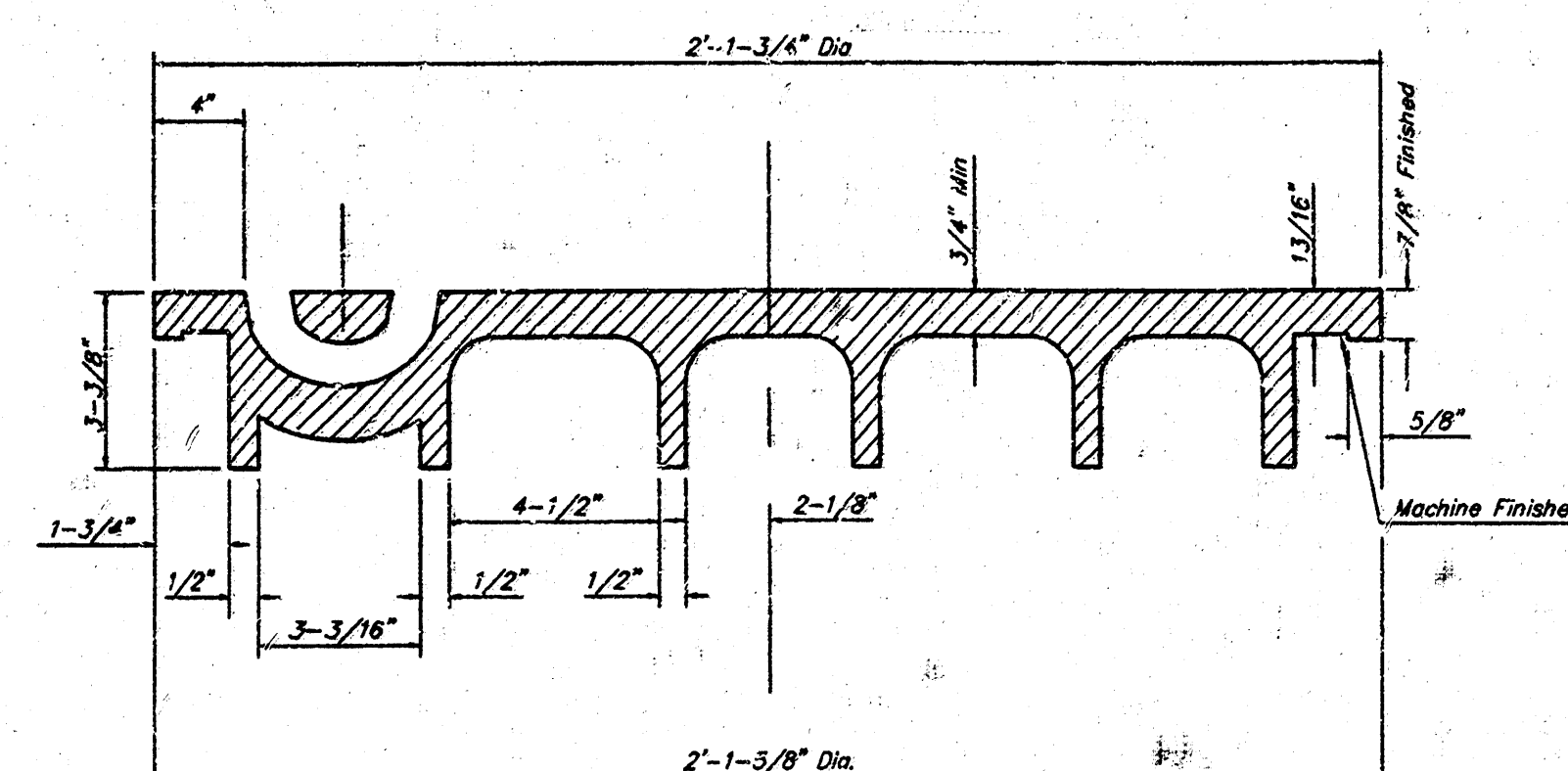
ADOPTED AS STANDARD DESIGN BY  
CITY OF WICHITA, KANSAS



TOP VIEW

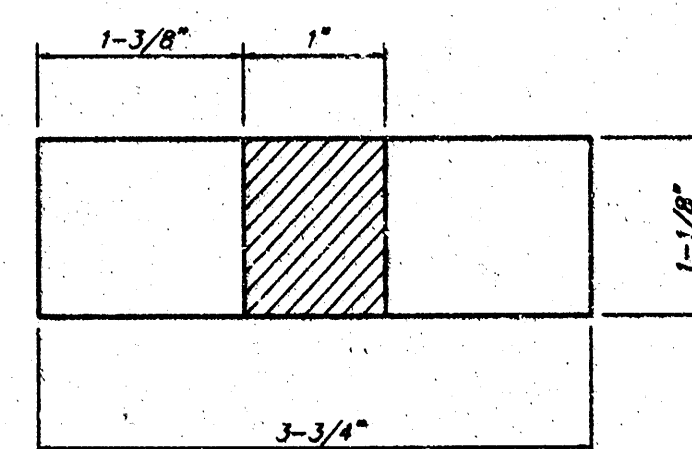


BOTTOM VIEW

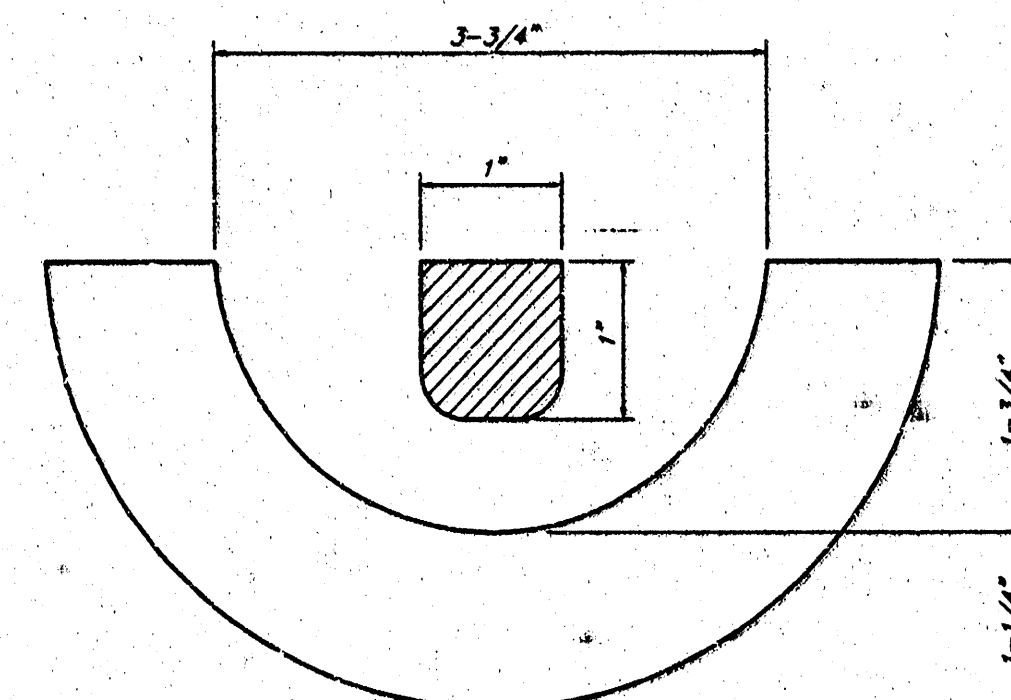


SECTION VIEW

PICKHOLE DETAIL

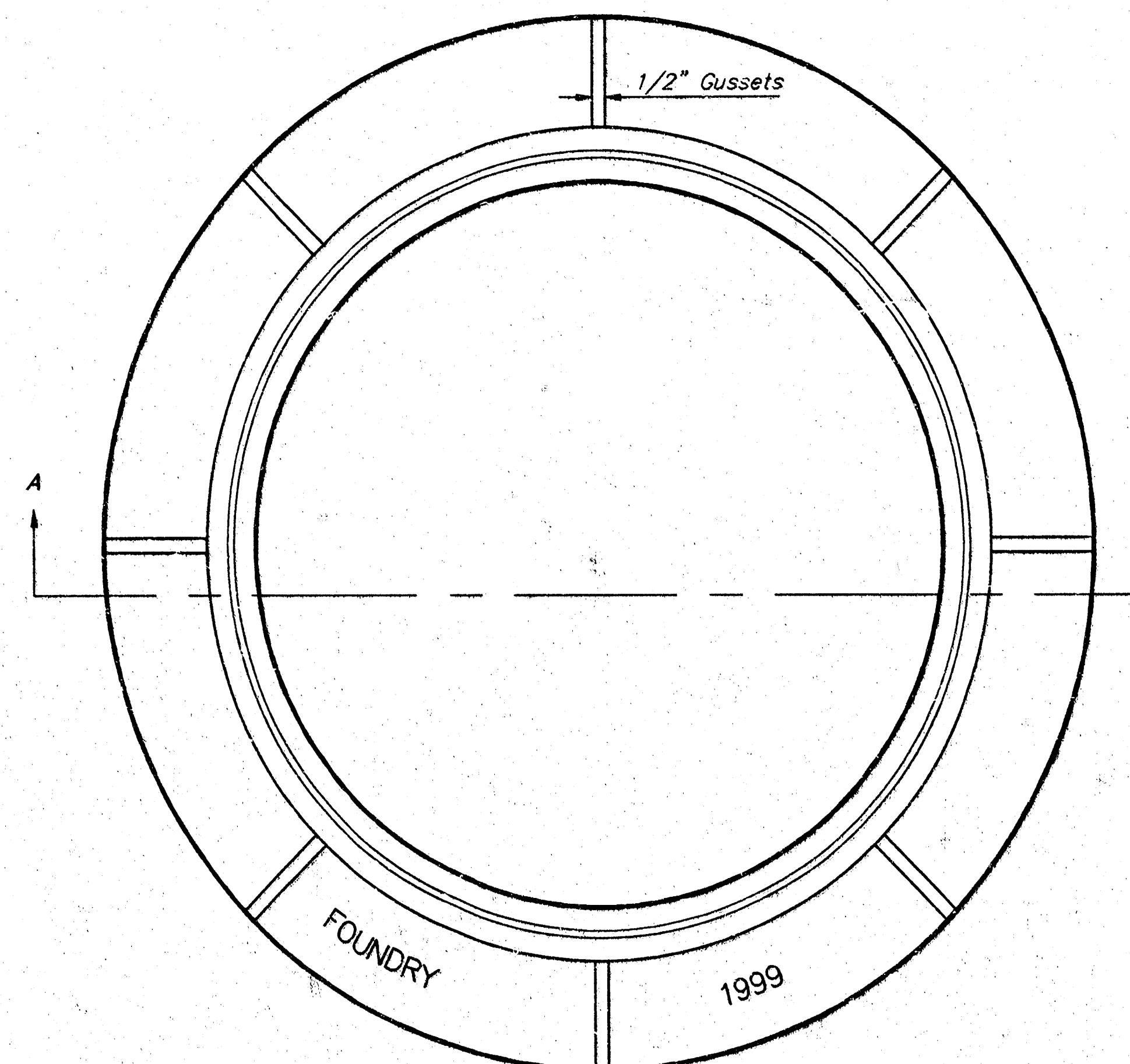


TOP VIEW

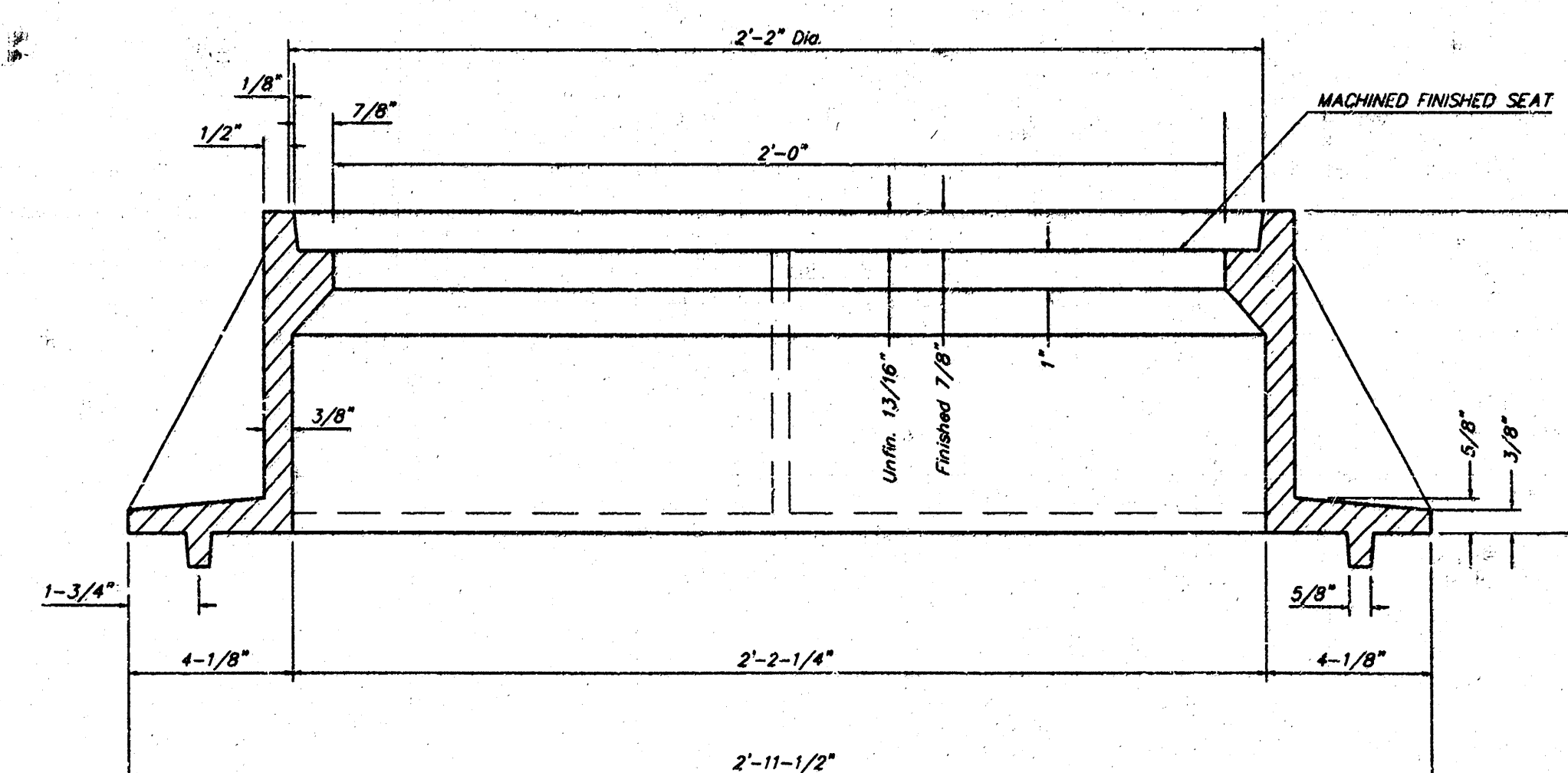


SECTION VIEW

**MANHOLE FRAME**  
Weight = 145 Lbs.



TOP VIEW



SECTION A-A

## GENERAL NOTES

MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

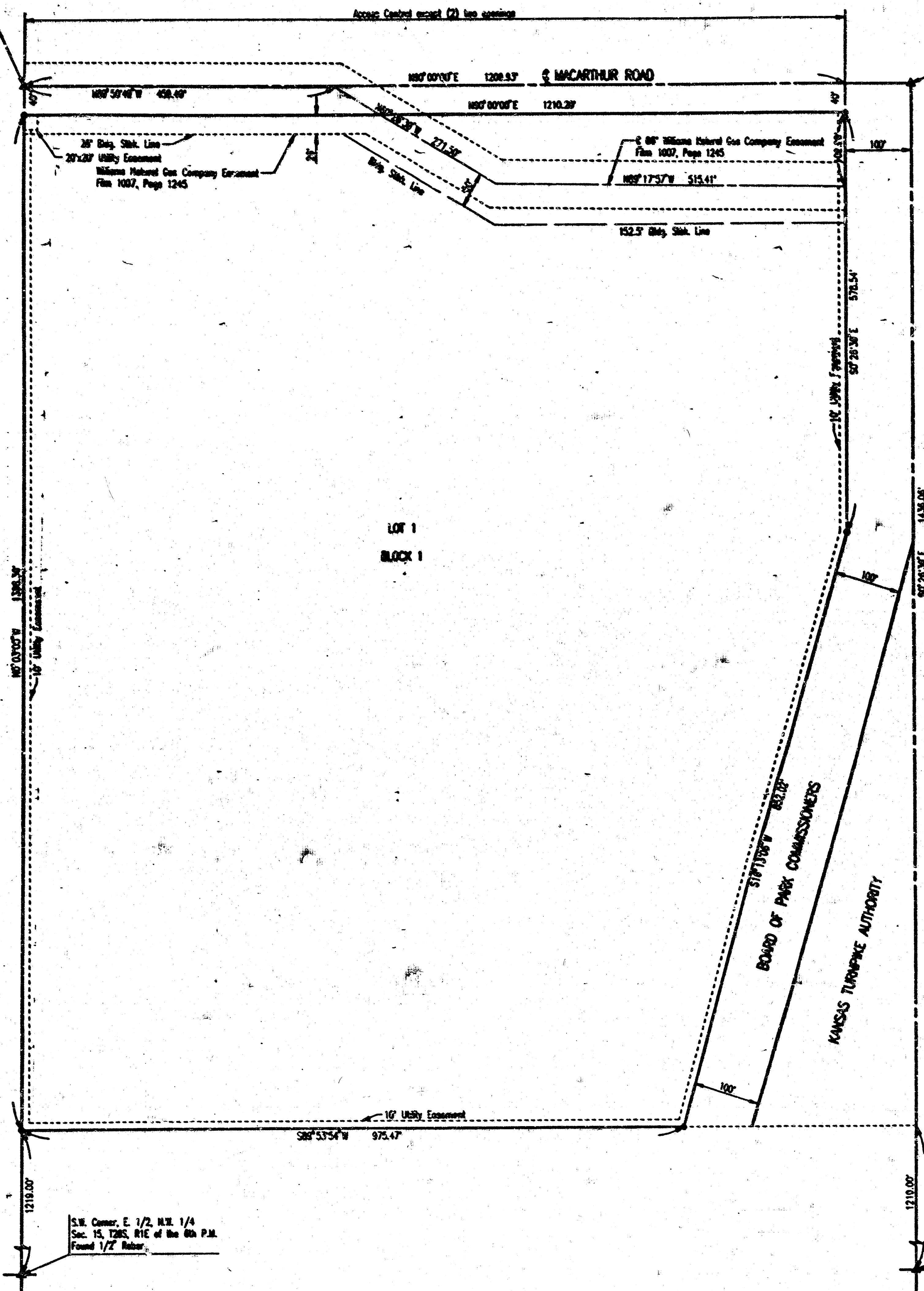
THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8\"

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

|                                                  |       |          |         |       |        |
|--------------------------------------------------|-------|----------|---------|-------|--------|
| MANHOLE FRAME AND COVER DETAIL                   |       |          |         |       |        |
| ADOPTED AS STANDARD DESIGN BY                    |       |          |         |       |        |
| CITY OF WICHITA, KANSAS                          |       |          |         |       |        |
| BAUGHMAN COMPANY P.A.                            |       |          |         |       |        |
| ENGINEERING, SURVEYING, & PLANNING               |       |          |         |       |        |
| 315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211 |       |          |         |       |        |
| PROJECT NUMBER                                   |       |          |         |       |        |
| R08 PPS (807881)                                 |       |          |         |       |        |
| DESIGN                                           | DRAWN | APPROVED | DATE    | SCALE | SHEET  |
| C.O.W.                                           | STAFF |          | JUNE 99 | NONE  | 5 OF 6 |

# WILLOWOOD ESTATES

## AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



SCALE: 1"=100'  
 \* - IRON SET

U.S. - CITY OF WICHITA DEC 31<sup>ST</sup> WEST AND 31<sup>ST</sup> SOUTH  
 OF THE INTERSECTION OF THE CORNER LINES OF  
 HORNBACK AND MACARTHUR ROADS  
 ELEV. - 86.273 CITY DRAIN  
 ELEV. - 127.623 M.S.L.

STATE OF KANSAS )  
 COUNTY OF SEDGWICK )

I, MICHAEL W. BERRY, A REGISTERED LAND SURVEYOR IN AFROESIA STATE AND COUNTY DO HEREBY CERTIFY THAT ON THIS 24<sup>TH</sup> DAY OF JANUARY 1987, I HAVE CAUSED TO BE SURVEYED AND PLATTED WILLOWOOD ESTATES, AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS, INTO A LOT AND A BLOCK THE SAME BEING A REPLAT OF AND DESCRIBED AS:

LOTS 1 THROUGH 30 IN BLOCK 1; LOTS 1 THROUGH 27 IN BLOCK 2; RESERVE "A" TOGETHER WITH INCLUDED MACARTHUR ROAD CORNER, SELMA AND ALVA STREETS, AND FRANKLIN WICHITA STREET AS ORIGINALLY PLATTED IN EVERY PARK ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.

ALL PORTIONS OF CHERRY PARK ADDITION IN WICHITA, SEDGWICK COUNTY, KANSAS, LOTS, BLOCKS, RESERVE "A" EASEMENTS AND STREETS AS DESCRIBED ABOVE ARE HEREBY WIDENED AND REPLATED BY VOTER OF K.S.A. 12-512(a) APPROVED.

*Michael W. Berry*  
 MICHAEL W. BERRY, R.L.S., L.S. 548  
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

UNLESS ALL MEN BY THESE PRESENTS THAT WE, THE UNDERSIGNED PROPERTY OWNERS OF THE LAND AS ABOVE SET FORTH IN THE SURVEYOR'S CERTIFICATE, HAVE CAUSED THE LAND TO BE SURVEYED AND PLATTED INTO A LOT AND A BLOCK, THE SAME TO BE KNOWN AS WILLOWOOD ESTATES, AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.

EASEMENTS FOR CONSTRUCTION AND MAINTENANCE OF PUBLIC UTILITIES ARE HEREBY GRANTED.

ALL ADJACENT RIGHTS OF ACCESS TO AND FROM MACARTHUR ROAD OVER AND ACROSS THE NORTH LINE OF LOT 1, BLOCK 1, ARE HEREBY GRANTED TO THE CITY OF WICHITA, PROVIDED HOWEVER THAT LOT 1, BLOCK 1 SHALL HAVE ACCESS TO MACARTHUR ROAD AT TWO (2) LOCATIONS, SAID LOCATIONS TO BE DETERMINED BY THE CITY ENGINEER OF THE CITY OF WICHITA, KANSAS.

OTHER: WILLOWOOD MIDDLE HOME PARK, INC.

*Ralph P. Wiest*  
 RALPH P. WIEST, PRESIDENT  
 BY: SHARLEY E. WELSH

STATE OF KANSAS )  
 COUNTY OF SEDGWICK )

BE IT REMEMBERED ON THIS 24<sup>TH</sup> DAY OF JANUARY 1987, BEFORE ME A NOTARY PUBLIC IN AFROESIA STATE AND COUNTY, CHIEF SHARLEY E. WELSH, PRESIDENT OF WILLOWOOD MIDDLE HOME PARK, INC. TO ME PERSONALLY KNOWN TO BE THE SAME PERSON WHO EXECUTED THE FOREGOING INSTRUMENT OF RECORD AND DULY ACKNOWLEDGED THE EXECUTION OF SAME FOR AN ON BEHALF AND AS THE ACT AND DEED OF SAID CORPORATION. IN TESTIMONY WHEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR ABOVE WRITTEN.

*Shirley E. Wiest*  
 SHIRLEY E. WIEST, NOTARY PUBLIC  
 BY COMMISSION EXPIRES 1-15-2001

WE, COMMERCE BANK AND TRUST, HOLDER OF A MORTGAGE ON THE ABOVE DESCRIBED PROPERTY, DO HEREBY CONSENT TO THE PLATTING OF WILLOWOOD ESTATES AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.

*Barrel E. Dougan*  
 BARREL E. DOUGAN, VICE PRESIDENT

STATE OF KANSAS )  
 COUNTY OF SHARREE )

BE IT REMEMBERED ON THIS 28<sup>TH</sup> DAY OF JANUARY 1987, BEFORE ME A NOTARY PUBLIC IN AFROESIA STATE AND COUNTY, CHIEF BARREL E. DOUGAN, VICE PRESIDENT OF COMMERCE BANK AND TRUST TO ME PERSONALLY KNOWN TO BE THE SAME PERSON WHO EXECUTED THE FOREGOING INSTRUMENT OF RECORD AND DULY ACKNOWLEDGED THE EXECUTION OF SAME FOR AN ON BEHALF AND AS THE ACT AND DEED OF SAID BANK. IN TESTIMONY WHEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR ABOVE WRITTEN.

*Annette M. Morgan*  
 ANNETTE M. MORGAN, NOTARY PUBLIC  
 BY COMMISSION EXPIRES May 11, 1999

THIS PLAT WAS BEEN SUBMITTED TO AND APPROVED BY THE WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION, WICHITA, KANSAS. DATED THIS 19<sup>TH</sup> DAY OF DECEMBER, 1986.

*John C. Foy*  
 JOHN C. FOY, CHAIRMAN  
*William S. Krent*  
 WILLIAM S. KRENT, SECRETARY

THIS PLAT APPROVED AND ALL NECESSARY SHOWN HEREON ARE ACCEPTED BY THE CITY COUNCIL OF THE CITY OF WICHITA, KANSAS. DATED THIS 25<sup>TH</sup> DAY OF FEBRUARY 1987.

*Bob Wright*  
 BOB WRIGHT, Mayor  
*Don Burdett*  
 DON BURDETT, City Clerk

RECORDED ON TRANSFER RECORD THIS 24<sup>TH</sup> DAY OF APRIL 1987.

*James Alfaro*  
 JAMES ALFARO, COUNTY CLERK

THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE RECORDS OF DEEDS OFFICE AT WICHITA, ON THIS 24<sup>TH</sup> DAY OF JANUARY 1987.

*James L. Conisher*  
 JAMES L. CONISHER, REGISTER OF DEEDS

*Michael D. Hurtt*  
 MICHAEL D. HURTT, DEPUTY

DATE: 01/24/87 BY: G.V. O'NEAL, D.P. SCALE: 1"=100.00  
 01/24/87 09:25:00Z (P.M.) 12-24-1986 0:18:17 am

PC 74-10

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