SANITARY SEWER IMPROVEMENTS

PAWNEE MESA ADDITION - PHASE 2

PRIVATE PROJECT NUMBER: 512 PPS (607861)

GENERAL NOTES

1. Traffic generated outside the project area and local business or residential traffic generated within the project area are to be carried through construction. Contractor shall maintain two lanes of traffic open during construction.

2. Underground utility service lines and overhead utility pole lines are to be adjusted by others if necessary prior to construction unless the plans specifically call for their adjustment by the Contractor or by thier owner. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agricultural permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

4. Trees and shrubs in public right-of-way which are in direct conflict with proposed construction shall be removed by the Contractor with the Engineers approval. Trees and shrubs which are not in direct conflict with proposed construction shall be saved and protected from damage.

5. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.

6. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are disturbed by his construction operations. Such irons shall be re-established by a licensed Land Surveyor in accordance with state laws.

7. The Contractor shall contact all affected utility companies concerning the relocation of utility lines as per the plans.

8. Contractor will be required to provide a minimum notice of twenty-four (24) hours to utility companies prior to starting any excavation as follows:

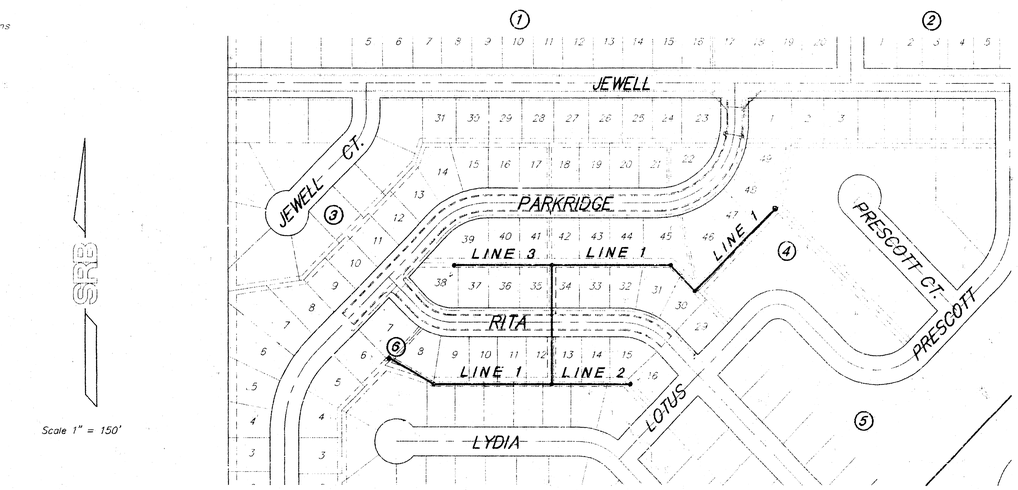
   Kansas One-Call 687-2470

   The Contractor must notify the following before construction and in case of an emergency.

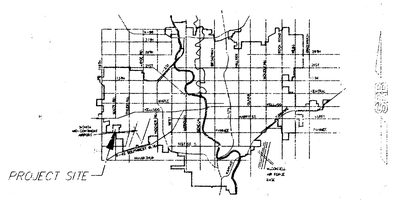
K.P.& L. Gas Service Company	263-7511
Kansas Gas & Electric	264-1141
Arkla Gas Company	942-8350 or 263-8161
Southwestern Bell Telephone Company	1-571-2611
Cablevision	262-4270 or 263-2061
City of Wichita Water Department	268-4908
City of Wichita Sewer Maintenance	268-4071

9. Utility easements along the route of this sewer shall be graded to the elevation shown on the plan/profile sheets.

10. All disturbed areas shall be seeded and mulched per city specifications.



Scale 1" = 150'



VICINITY MAP

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Sanitary Sewers _____

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

Paving _____

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

INDEX OF SHEETS

1. TITLE SHEET
2. LINE 1
3. LINES 2 & 3
4. STANDARD TYPE "P" MANHOLE DETAIL

BENCH MARKS

"□" CUT ON CENTER OF NORTH HUBGUARD R.C.B. BETWEEN LOT 1, BLOCK 5, AND LOT 50, BLOCK 18, PAWNEE MESA ADDITION, AN ADDITION TO SEDGWICK COUNTY, KANSAS
ELEV. = 1414.19 (CITY DATUM)

"□" CUT AT THE NORTH END OF THE N.W. RETURN AT JEWELL AND SHEFFORD, ADJACENT TO THE S.E. CORNER OF LOT 20, BLOCK 1, PAWNEE MESA ADDITION, AN ADDITION TO SEDGWICK COUNTY, KANSAS
ELEV. = 1412.48 (CITY DATUM)

Booked 7-17-95 JKB From As Builts

CONSULTING ENGINEERS LICENSED 11631 KANSAS PROFESSIONAL ENGINEER

11-23-94 REV 2-21-95 As Built
Revised 11-30-94 Manhole Tops

CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK - CITY ENGINEER

SRB 924 NORTH MAIN WICHITA, KANSAS 67203 316-264-8069 FAX 264-1627
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

Sta. 0+00 Line 1
Connect to Exist. Manhole

Sta. 2+63.61 Line 1
Construct Std. Manhole
Top Elev. ~~143.8~~ 144.10
8" Stub (SE)
F.L. Elev. 132.32

Sta. 3+14.84 Line 1
Construct Std. Manhole
Top Elev. ~~144.5~~ 144.80

Sta. 6+23.21 Line 1 =
Sta. 0+00 Line 2
Construct Std. Manhole
Top Elev. ~~145.6~~ 145.84

Sta. 8+87.21 Line 1 =
Sta. 0+00 Line 3
Construct Std. Manhole
Top Elev. ~~145.6~~ 145.73

Sta. 11+61.48 Line 1
Construct Std. Manhole
Top Elev. ~~146.9~~ 147.08

Sta. 12+79.22 Line 1
Construct Std. Manhole
Top Elev. ~~145.9~~ 147.23
8" Stub (SW) F.L. Elev. ~~135.46~~ 135.76
4" Stub (NW) F.L. Elev. ~~135.49~~ 136.18

LINE NO. 1
LINE NO. 2
LINE NO. 3
RITA
PARKRIDGE
LYDIA
SRB
Proposed Pavement
20' Utility Easement
10' Utility Easement
Utility Easement (By Separate Instrument)
Proposed 8" Water Line
37 L.F. Flowable Fill

Scale: PLAN 1" = 40'
PROFILE 1" = 40' Horiz.
1" = 5' Vert.

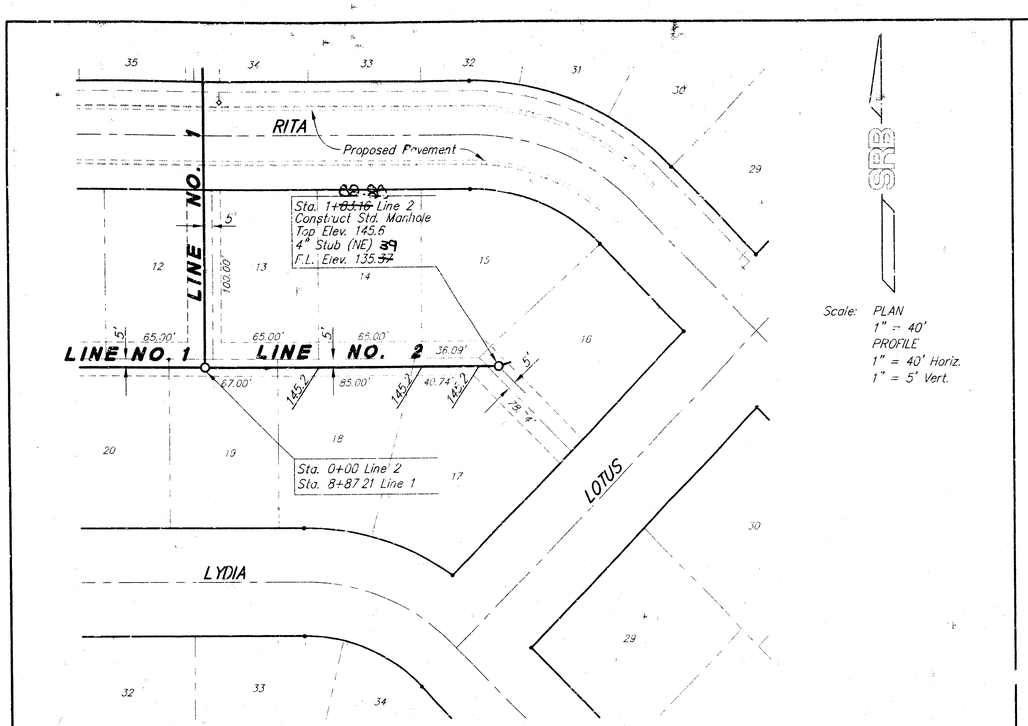
Top of Exist. Manhole Elev. 143.98
Exist. San. Sewer F.L. Elev. 131.43 (SW)
Exist. San. Sewer F.L. Elev. 131.43 (SE)
Finished Ground
Existing Ground over Pipe
8" Stub F.L. Elev. 132.32
Top 8" Water Line Elev. 140.32
Elev. 141.34
Flowable Fill
Line 3 F.L. In 133.50
Line 2 F.L. In 134.49
4" Stub (SW) F.L. Elev. ~~136.09~~ 136.18
8" Stub (SW) F.L. Elev. ~~135.76~~ 135.76

263.6 ~~282.87~~ L.F. 8" PVC or PVC Composite @ +0.30% Grade
80.7 ~~81.03~~ L.F. 8" PVC or PVC Composite @ +0.30% Grade
278.2 ~~278.17~~ L.F. 8" PVC or PVC Composite @ +0.30% Grade
264.00 L.F. 8" PVC or PVC Composite @ +0.30% Grade
277.10 ~~74.27~~ L.F. 8" PVC or PVC Composite @ +0.30% Grade
117.10 ~~117.74~~ L.F. 8" PVC or PVC Composite @ +0.30% Grade

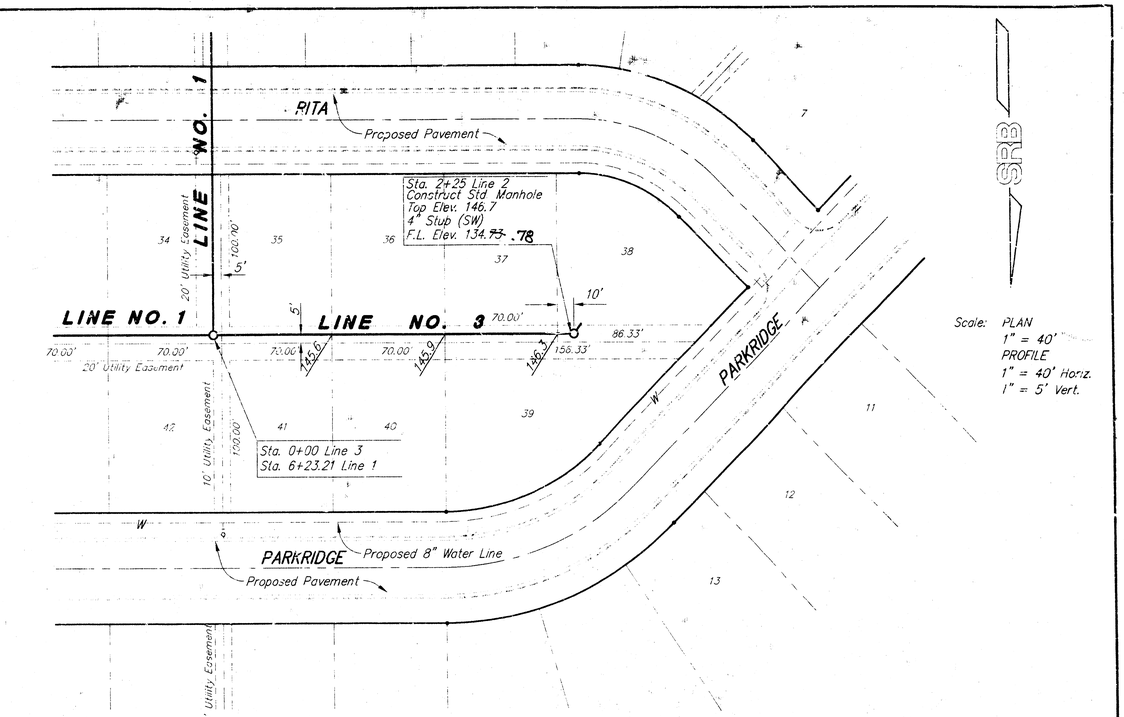
PAWNEE MESA ADDITION
SANITARY SEWER EXTENSION
LINE 1

SRB
924 NORTH MAIN
WICHITA, KANSAS 67203
316-264-8008
FAX 264-4621
SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

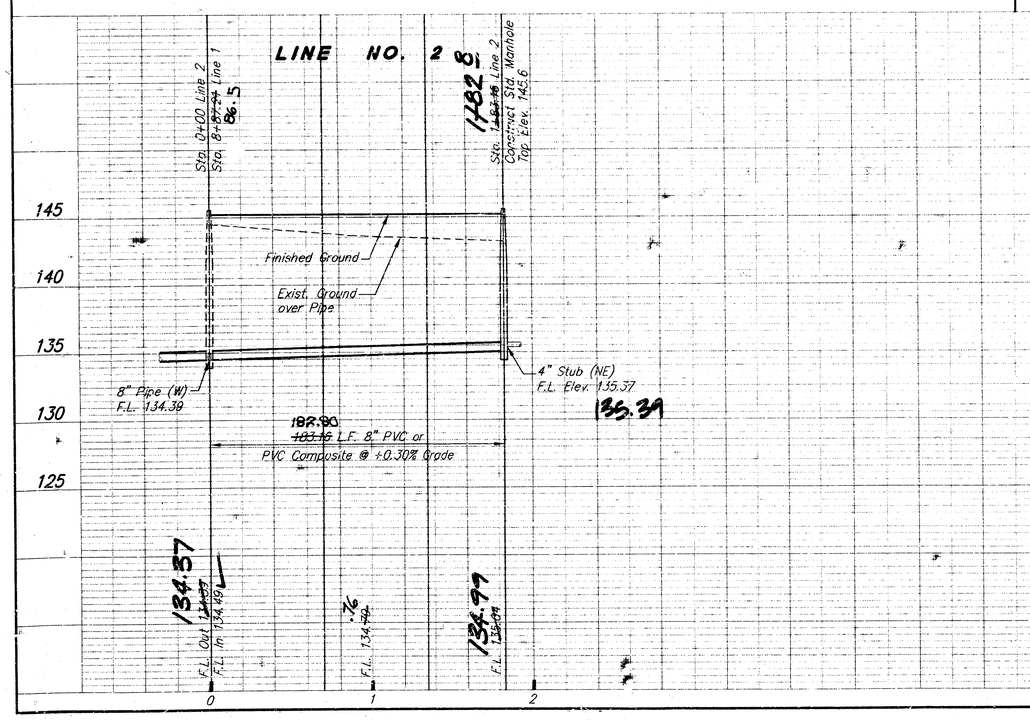
PRIVATE PROJECT NUMBER: 512 PPS
INDEX CODE: 607861
DRAWN: TEB | DESIGN: CMB | REVIEW: | DATE: 11-30-94 | UTILITY: | SRB JOB: 210E
SHEET: 2 OF 4
REVISED:

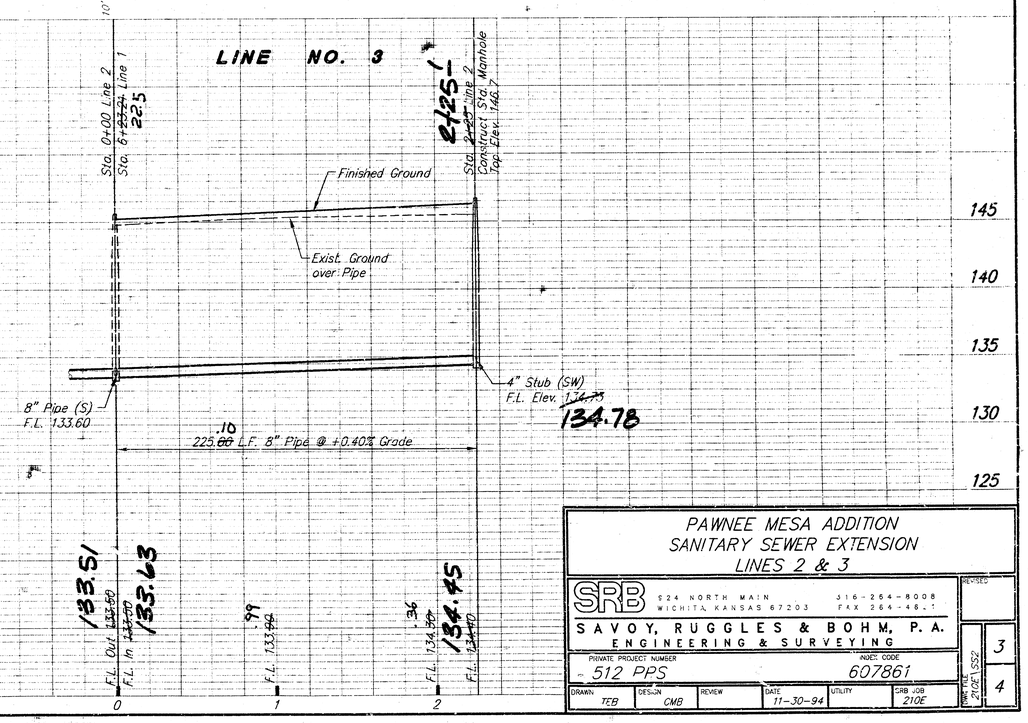


Scale: PLAN
1" = 40'
PROFILE
1" = 40' Horiz.
1" = 5' Vert.



Scale: PLAN
1" = 40'
PROFILE
1" = 40' Horiz.
1" = 5' Vert.





PAWNEE MESA ADDITION
SANITARY SEWER EXTENSION
LINES 2 & 3

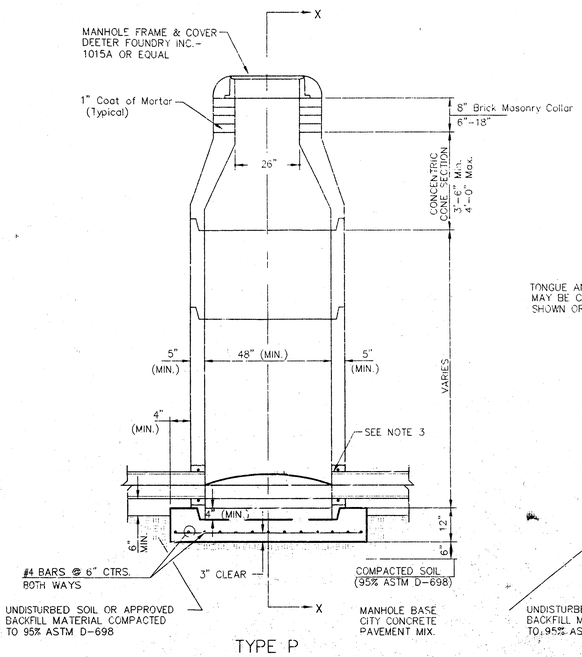
SRB
524 NORTH MAIN
WICHITA, KANSAS 67203
316-264-8008
FAX 264-48.~
SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

PRIVATE PROJECT NUMBER	INDEX CODE
~ 512 PPS	607861

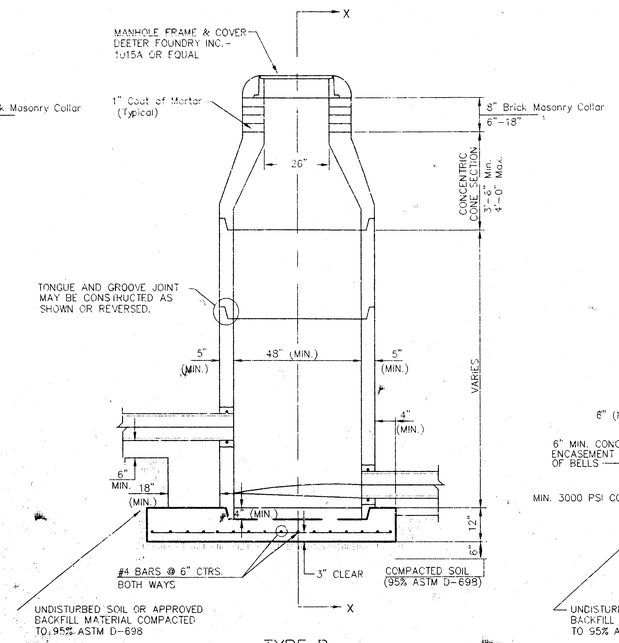
DRAWN	DESIGN	REVIEW	DATE	UTILITY	SRB JOB
TEB	CMB		11-30-94		210E

REVISED	
	3
DWG FILE 210E1.DGN	4

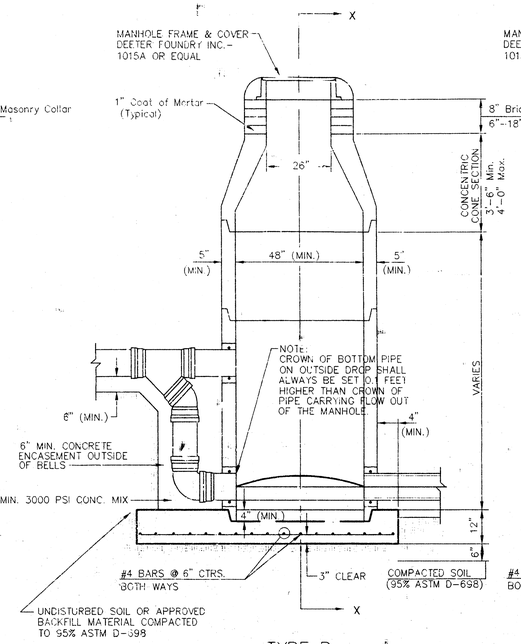
SEWER APPURTENANCES DETAILS



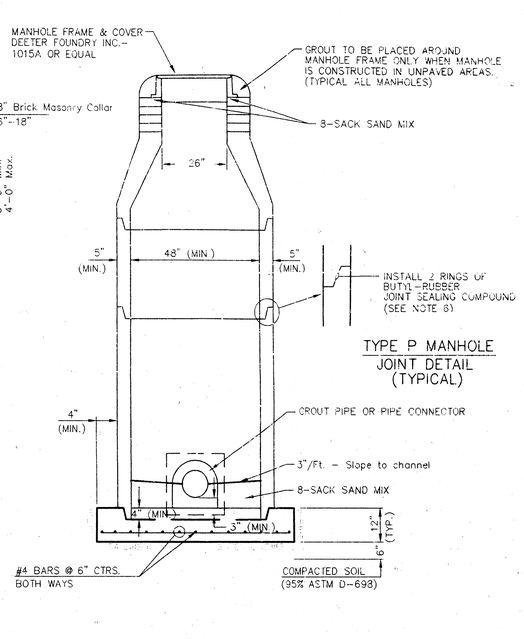
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



TYPE P MANHOLE
JOINT DETAIL
(TYPICAL)

SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. 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 ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. 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.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. 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 CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING 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.
11. 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.
12. 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.
13. 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 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.

PRIVATE PROJECT NUMBER
512 PPS

INDEX CODE
607861

STANDARD MANHOLE DETAILS
SEWER APPURTENANCES DETAILS
CITY OF WICHITA, KANSAS

SHEET NO. | TOTAL SHEETS
4 | 4

12-7-04