CONSTRUCTION PLANS FOR

LATERAL 18, MAIN 12

OF THE

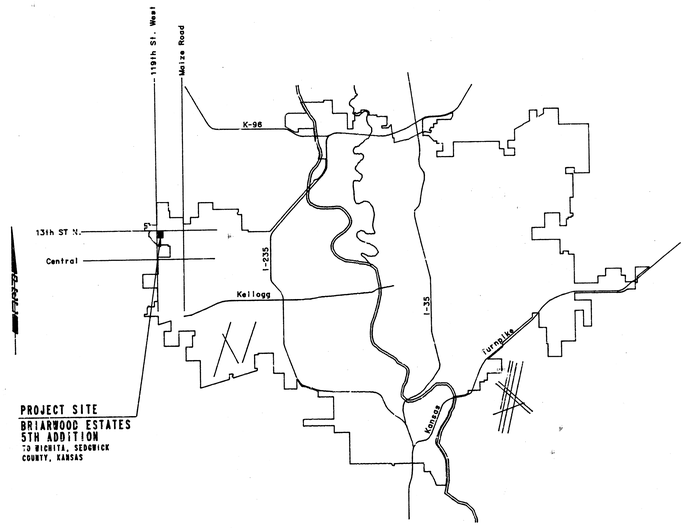
SOUTHWEST INTERCEPTOR SEWER

TO

THE CITY OF WICHITA,

SEDGWICK COUNTY, KANSAS

MICHAEL E. LINDEBAK, P.E. CITY ENGINEER



LOCATION MAP

CITY OF WICHITA PROJECT NO. 468-76-245-81550-000-000-001

AUGUST, 1986

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

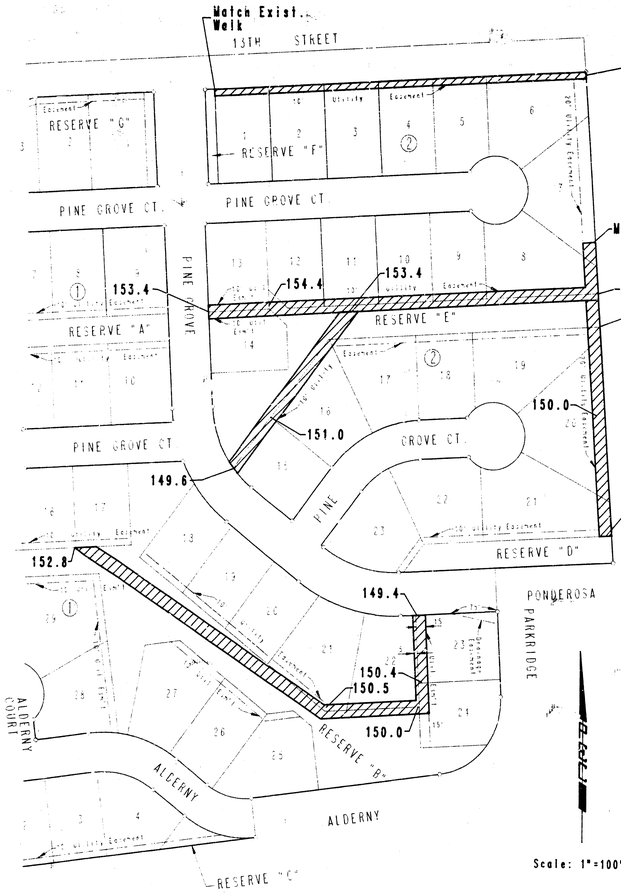
WICHITA, KANSAS

AS BUILT
RDL
3-87

KEVIN LAWRENCE BOND
LICENSED
10104
KANSAS
PROFESSIONAL ENGINEER

1/10

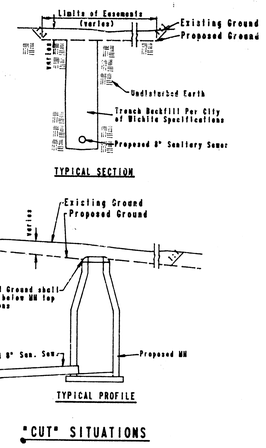
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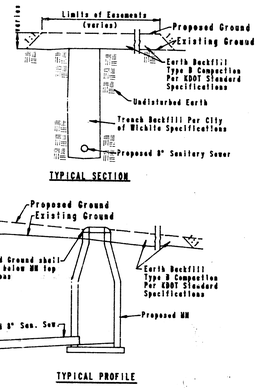
Scale: 1"=100'

EASEMENT GRADING PLAN

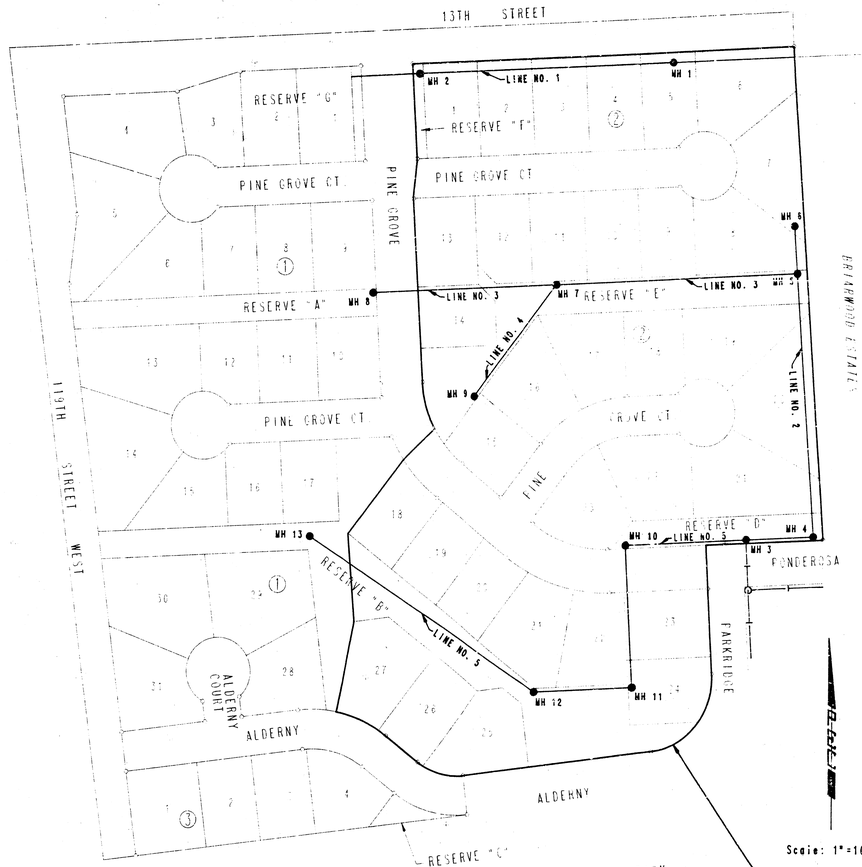
▨ = AREAS TO BE GRADED



"CUT" SITUATIONS



"FILL" SITUATIONS



Scale: 1"=100'

KEY MAP

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM (USGS-1257.4 = CITY DATUM).
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION, IF REQUIRED, (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: GAS SERVICE COMPANY, K.G.&E., THE WICHITA WATER DEPARTMENT, AIR CAPITAL CABLEVISION, AND THE TELEPHONE COMPANY.
5. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. 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.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE OTHER ITEMS OF WORK.
7. ALL EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE WASTED AS DIRECTED OR APPROVED BY THE ENGINEER. NO EXCESS MATERIAL SHALL BE PLACED WITHIN STREET RIGHTS-OF-WAY. THE CONTRACTOR SHALL CONTACT THE DEVELOPER FOR INFORMATION PERTAINING TO ACCEPTABLE LOCATIONS FOR THE DISPOSITION OF WASTE MATERIAL ON SITE. WASTE MATERIAL SHALL BE BLADED SMOOTH AND SLOPED TO DRAIN. THIS WORK SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
8. CONTRACTOR SHALL GRADE THE SANITARY SEWER ALIGNMENT TO THE PROFILE AND ELEVATIONS SHOWN ON THE EASEMENT GRADING PLAN. THE CONTRACTOR SHOULD VISIT THE SITE TO DETERMINE THE EXTENT OF GRADING PRIOR TO PREPARATION OF HIS BID. ALL COSTS FOR GRADING SHALL BE SUBSIDIARY TO THE PROJECT.
9. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

BENEFIT DISTRICT

BRIARWOOD ESTATES 5TH ADDITION

Lots 18 through 27 inclusive, Block 1
Lots 1 through 23 inclusive, Block 2

KEVIN LAWRENCE BOND LICENSED 10104 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

LATERAL 18, MAIN 12 OF THE SOUTHWEST INTERCEPTOR SEWER

KEY MAP

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-76-245-81550-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

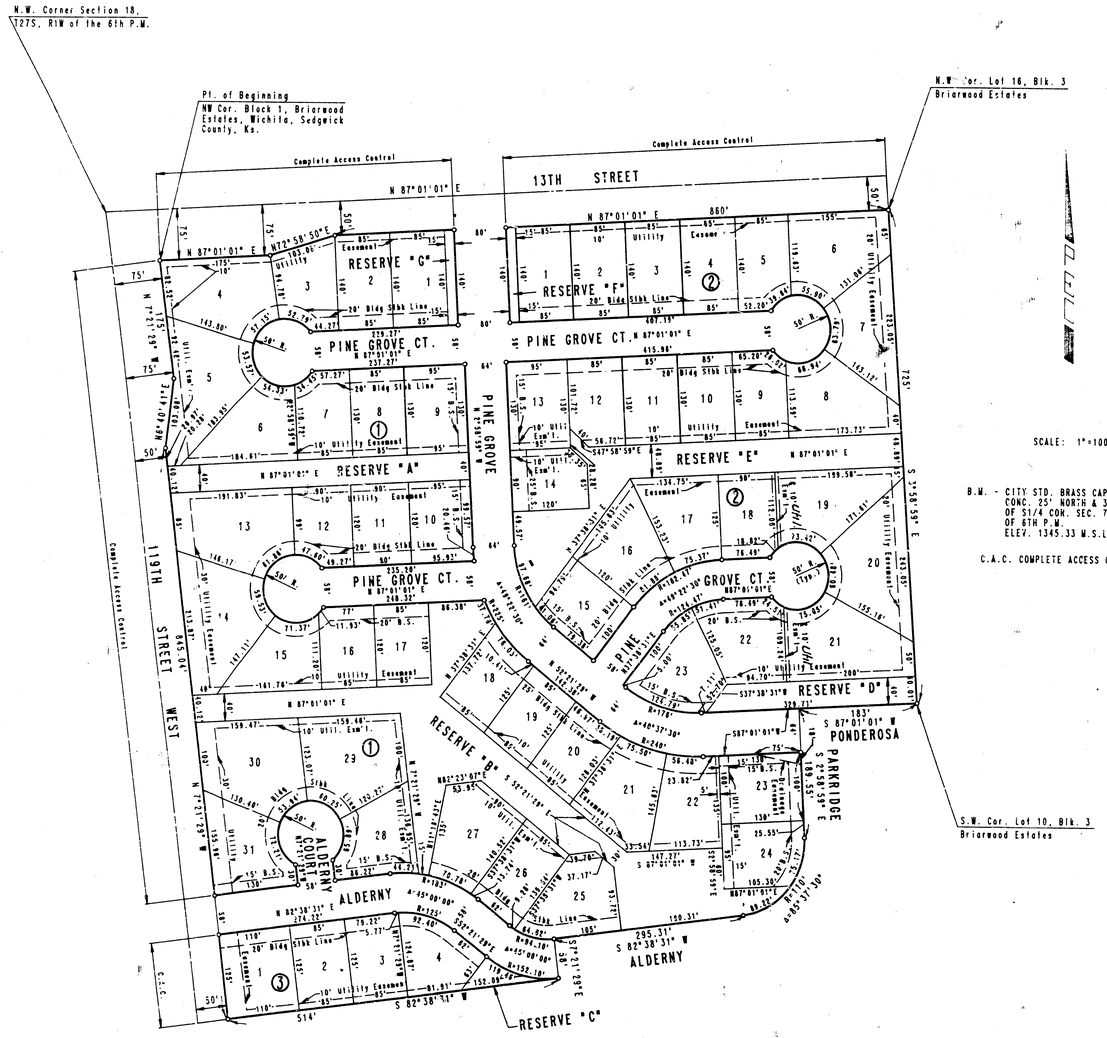
Designed by KLB, GW	Job No. 34-86323-3	Sht. 2 of 10
Drawn by GW	Date August, 1986	

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A5-36

BRIARWOOD ESTATES 5TH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



SCALE: 1"=100'

B.M. - CITY STD. BRASS CAP IN CONC. 25' NORTH & 30' EAST OF S1/4 COR. SEC. 7, T27S, R1W OF 6TH P.M. ELEV. 1345.33 M.S.L.

C.A.C. COMPLETE ACCESS CONTROL

STATE OF KANSAS
SS
COUNTY OF SEDGWICK

I, R. W. LINN, A PROFESSIONAL ENGINEER IN AFORESAID STATE AND COUNTY, DO HEREBY CERTIFY THAT ON THIS 21st DAY OF Jan., 1986, I HAVE CAUSED TO BE SURVEYED AND PLATTED "BRIARWOOD ESTATES 5TH ADDITION", TO WICHITA, SEDGWICK COUNTY, KANSAS, INTO LOTS, BLOCKS, STREETS, AND RESERVES, THE SAME BEING A REPLAT OF A PORTION OF BRIARWOOD ESTATES, WICHITA, SEDGWICK COUNTY, KANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS:

A TRACT OF LAND IN THE NW 1/4 OF SECTION 18,T27S,R1W OF THE 6TH P.M. AND BEGINNING AT THE N.W. CORNER OF BLOCK 1, IN BRIARWOOD ESTATES, WICHITA, SEDGWICK COUNTY, KANSAS THENCE ALONG THE NORTH LINE OF BLOCK 1, BEARING N87°01'01"E A DISTANCE OF 175.00 FEET; THENCE CONTINUING ALONG SAID NORTH LINE BEARING N72°58'50"E A DISTANCE OF 103.08 FEET; THENCE BEARING N87°01'01"E ALONG THE NORTH LINES OF BLOCKS 1 AND 3 IN SAID BRIARWOOD ESTATES A DISTANCE OF 860.00 FEET TO THE N.W. CORNER OF LOT 16 IN SAID BLOCK 3; THENCE BEARING S3°58'59"E ALONG THE WEST LINES OF LOTS 16, 15, 14, 13, 12, 11 AND 10 IN SAID BLOCK 3, A DISTANCE OF 725.00 FEET TO THE S.W. CORNER OF LOT 10, BLOCK 3; THENCE BEARING S87°01'01"W ALONG THE NORTH LINE OF PONDEROSA STREET AS PLATTED IN BRIARWOOD ESTATES 4TH ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS A DISTANCE OF 183.00 FEET; THENCE BEARING S2°58'59"E ALONG THE WEST LINE OF PARKRIDGE STREET AS PLATTED IN SAID BRIARWOOD ESTATES 4TH, A DISTANCE OF 189.55 FEET TO THE P.C. OF A CURVE TO THE RIGHT HAVING A RADIUS OF 110.00 FEET; THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 85°37'30" AN ARC DISTANCE OF 164.39 FEET; THENCE BEARING S82°38'31"W ALONG THE NORTH LINE OF ALDERNY STREET AS PLATTED IN SAID BRIARWOOD ESTATES 4TH, A DISTANCE OF 295.31 FEET; THENCE BEARING S7°21'29"E A DISTANCE OF 58.00 FEET; THENCE BEARING S82°38'31"W ALONG THE NORTH LINE OF LOTS 44 THROUGH 37 AND RESERVE E IN BLOCK 1 OF SAID BRIARWOOD 4TH ADDITION A DISTANCE OF 514.00 FEET TO A POINT IN THE EAST LINE OF 119TH STREET WEST; THENCE BEARING N7°21'29"W ALONG THE EAST LINE OF 119TH STREET WEST A DISTANCE OF 845.04 FEET; THENCE CONTINUING ALONG SAID EAST LINE BEARING N8°40'41"E A DISTANCE OF 103.08 FEET; THENCE BEARING N7°21'29"W A DISTANCE OF 175.00 FEET TO THE POINT OF BEGINNING.

R. W. LINN, REG. NO. 3684

KNOW ALL MEN BY THESE PRESENTS THAT WE, THE UNDERSIGNED PROPERTY OWNERS OF THE LAND AS ABOVE SET FORTH IN THE ENGINEER'S CERTIFICATE HAVE CAUSED THE LAND TO BE SURVEYED AND PLATTED INTO LOTS, BLOCKS, STREETS AND RESERVES, THE SAME TO BE KNOWN AS "BRIARWOOD ESTATES 5TH ADDITION", TO WICHITA, SEDGWICK COUNTY, KANSAS. EASEMENTS, AS INDICATED, FOR THE CONSTRUCTION AND MAINTENANCE OF PUBLIC UTILITIES AND DRAINAGE, ARE HEREBY GRANTED. THE RESERVES, AS INDICATED, SHALL BE RESERVED FOR DRAINAGE, UTILITIES, LANDSCAPING AND RECREATIONAL FACILITIES IN ACCORDANCE WITH THE RESTRICTIVE COVENANTS ESTABLISHED AND BY THE DECLARATION OF LANDOWNERS ASSOCIATION AGREEMENT, AND SHALL BE OWNED AND MAINTAINED BY THE BRIARWOOD ESTATES HOMEOWNERS' ASSOCIATION. THE STREETS ARE HEREBY DEDICATED TO AND FOR THE USE OF THE PUBLIC. ALL ABUTTERS' RIGHTS OF ACCESS TO AND FROM 119TH STREET WEST AND 13TH STREET, OVER AND ACROSS THE WEST LINES OF BLOCKS 1 AND 3 AND THE NORTH LINES OF BLOCKS 1 AND 2 ARE HEREBY GRANTED TO THE CITY OF WICHITA. ALL PORTIONS OF BRIARWOOD ESTATES WITHIN THE ABOVE DESCRIBED TRACT ARE HEREBY VACATED AND REPLATTED BY VIRTUE OF K.S.A. 12-512(b) AMENDED.

INLAND INVESTMENT CO., INC.

LARRY A. CHAMBERS, PRESIDENT

STATE OF KANSAS
SS
COUNTY OF SEDGWICK

BE IT REMEMBERED THAT ON THIS 8th DAY OF Jan., 1986, BEFORE ME, A NOTARY PUBLIC IN AFORESAID STATE AND COUNTY, CAME LARRY A. CHAMBERS, PRESIDENT OF INLAND INVESTMENT CO., INC., TO ME PERSONALLY KNOWN TO BE THE SAME PERSON WHO EXECUTED THE FOREGOING INSTRUMENT OF WRITING AND DULY ACKNOWLEDGE THE EXECUTION OF SAME FOR AND ON BEHALF AND AS THE VOLUNTARY ACT AND DEED OF SAID COMPANY. IN TESTIMONY WHEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR ABOVE WRITTEN.

Tracy L Farmer, NOTARY PUBLIC

TRACY L. FARMER NOTARY PUBLIC STATE OF KANSAS My Appt. Exp. 4/1/89

MY APPOINTMENT EXPIRES: 4/1/89

WE, THE MELLON BANK, N.A., PITTSBURG, PA., HOLDER OF A MORTGAGE ON THE ABOVE DESCRIBED PROPERTY, DO HEREBY CONSENT TO THE PLATTING OF BRIARWOOD ESTATES 5TH ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.

James G. Caswell III
JAMES G. CASWELL III, VICE PRESIDENT

STATE OF COLORADO
COUNTY OF DENVER

BE IT REMEMBERED THAT ON THIS 6TH DAY OF FEBRUARY, 1986, BEFORE ME, A NOTARY PUBLIC IN AFORESAID STATE AND COUNTY, CAME JAMES G. CASWELL III OF THE MELLON BANK, N.A., PITTSBURG, PA., TO ME PERSONALLY KNOWN TO BE THE SAME PERSON WHO EXECUTED THE FOREGOING INSTRUMENT OF WRITING AND DULY ACKNOWLEDGE THE EXECUTION OF SAME FOR AND ON BEHALF AND AS THE VOLUNTARY 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.

Suzanne Earhardt, NOTARY PUBLIC
MY APPOINTMENT EXPIRES: 11-25-88

THIS PLAT HAS BEEN SUBMITTED TO AND APPROVED BY THE WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION, WICHITA, KANSAS DATED THIS 9th DAY OF January, 1986.

William J. Goebel, CHAIRMAN
WILLIAM J. GOEBEL

Michael E. Lindebak, SECRETARY
MICHAEL E. LINDEBAK

THIS PLAT APPROVED AND ALL DEDICATIONS SHOWN HEREON ARE ACCEPTED BY THE CITY COMMISSION OF THE CITY OF WICHITA, KANSAS. DATED THIS 14th DAY OF Jan., 1986.

Robert C. Crown, MAYOR
ROBERT C. CROWN

Donald C. Gisick, CITY CLERK
DONALD C. GISICK

ENTERED ON TRANSFER RECORD THIS 14 DAY OF March, 1986.

Don Bright, COUNTY CLERK
DON BRIGHT

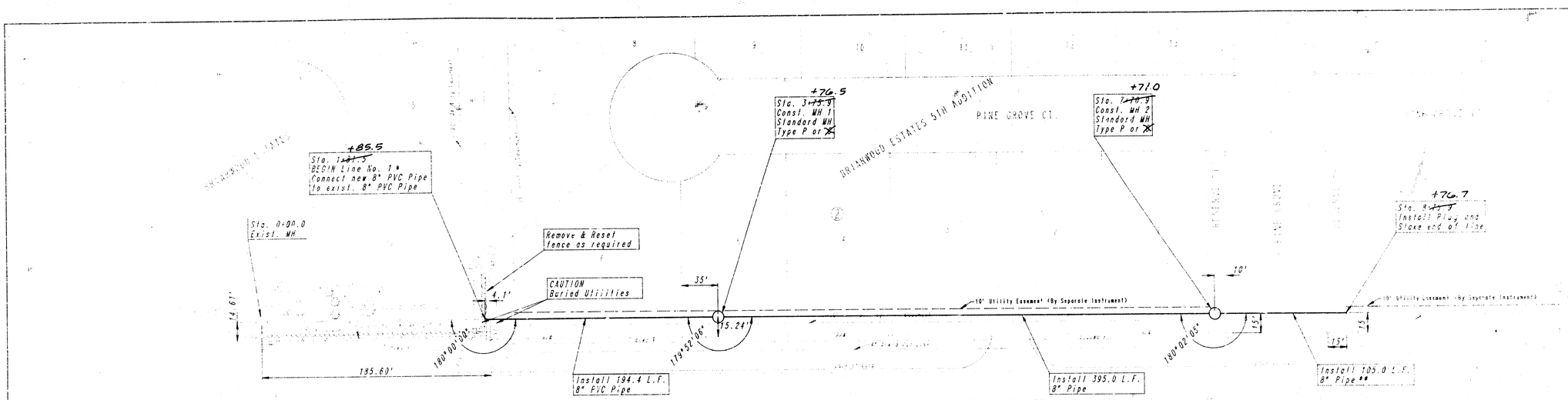
THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE REGISTER OF DEEDS OFFICE AT 2:00 P.M., ON THIS 14th DAY OF March, 1986.

Pat Kettler, REGISTER OF DEEDS
PAT KETTLER

Ed Resa, DEPUTY
ED RESA

* 714581

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** Sanitary Sewer from Sta. 1+70.9 to Sta. 8+75.9 shall pass air testing and television prior to backfilling.

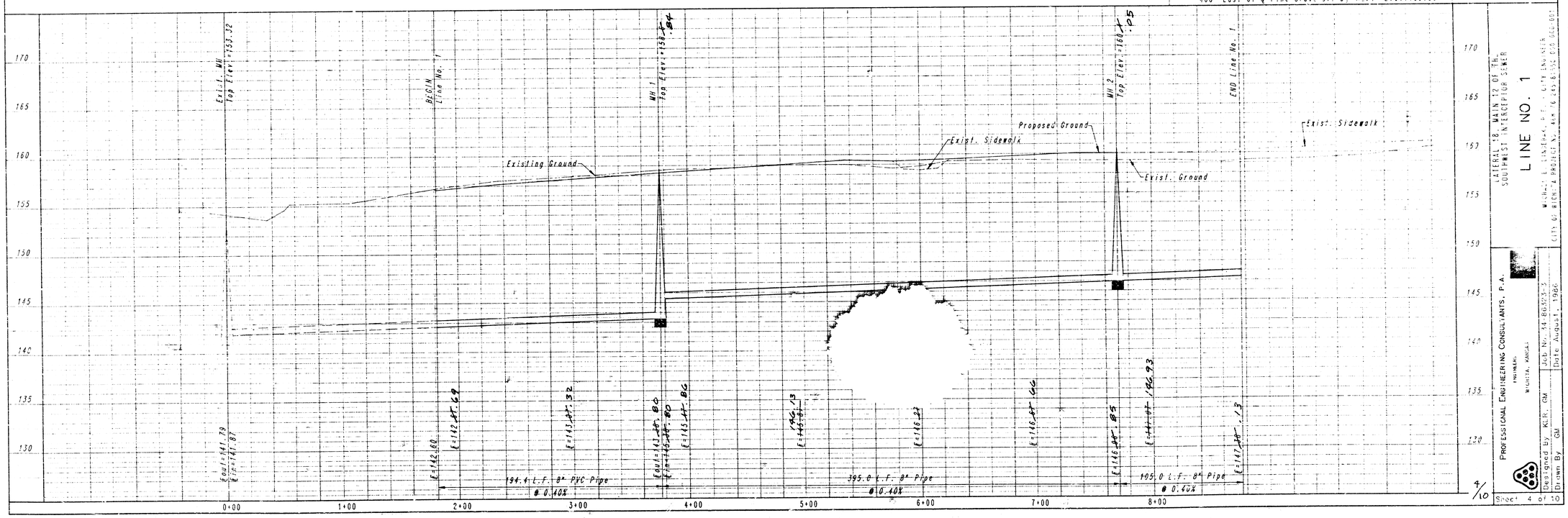
* Prior to beginning Construction, the Contractor shall excavate to verify location and flowline elevation of end of existing 8" PVC sanitary sewer. Any variation between actual location or elevation and that which is shown here shall be reported to the engineer so that necessary plan modifications may be made.

SCALE:
PLAN: LAT. & LONG 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT.

KEVIN LAWRENCE ROAD LICENSED 10104 KANSAS PROFESSIONAL ENGINEER

BM - chis. "D" on back curb North side of 13th St. approx. 400' East of ℄ Pine Grove St. by HLP. Elev. 159.36

LINE NO. 1



LATERAL 18, MAIN 12 OF TH. SOUTHWEST INTERCEPTOR SEWER

LINE NO. 1

Michael L. Lindeman, P.E. - City Engineer
City of Wichita Project No. 467-84015-01-05

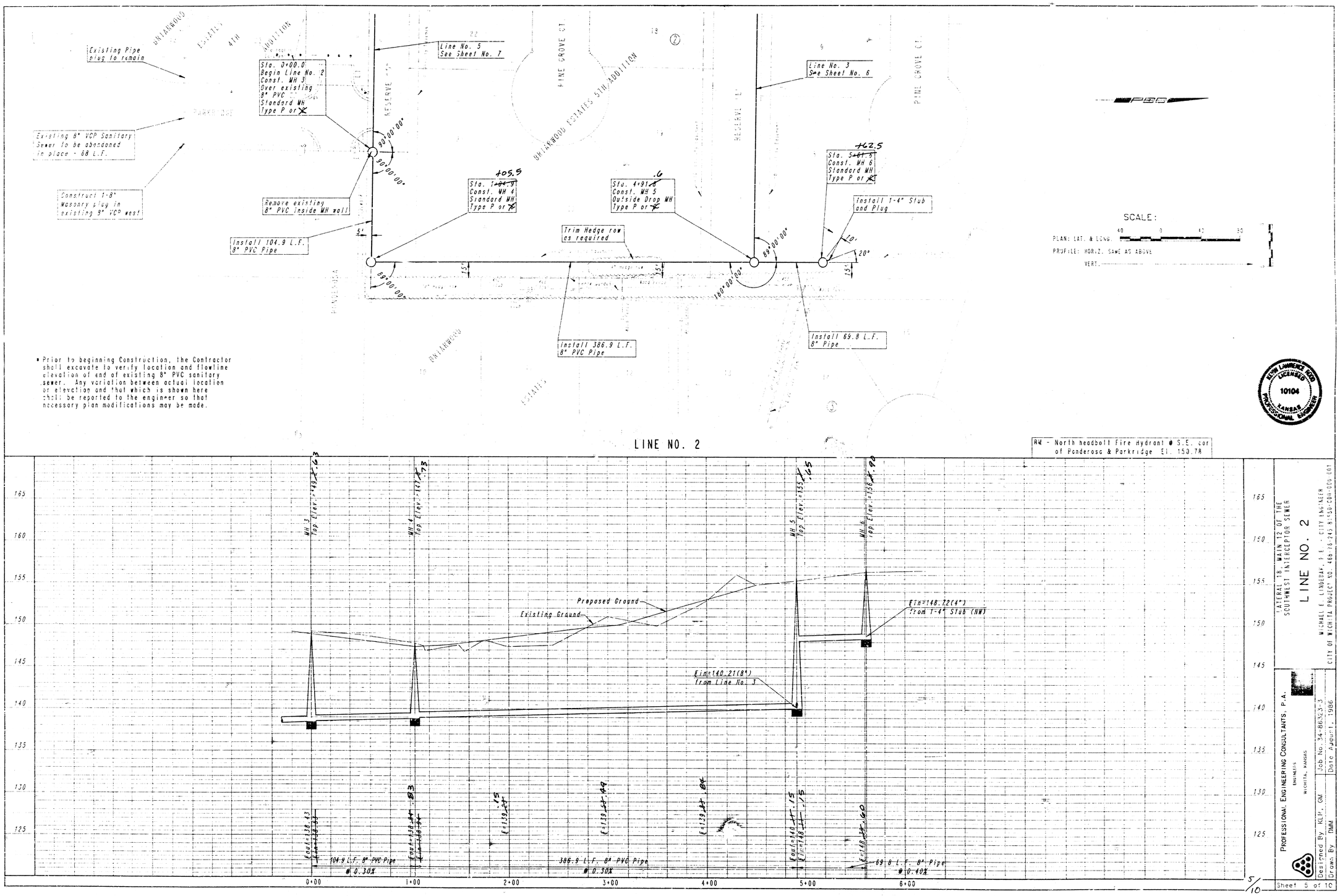
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed by K.R. GM | Job No. 34 86323-5
Drawn By GM | Date August, 1986

4/10

Sheet 4 of 10

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- Prior to beginning Construction, the Contractor shall excavate to verify location and flowline elevation of end of existing 8" PVC sanitary sewer. Any variation between actual location or elevation and that which is shown here shall be reported to the engineer so that necessary plan modifications may be made.

LINE NO. 2

RM - North headbolt Fire Hydrant @ S.E. cor of Ponderosa & Parkridge El. 150.78

LATERAL 18, MAIN 12 OF THE SOUTHWEST INTERCEPTOR SEWER

LINE NO. 2

MITCHELL E. LINDEBAK, P.E. - CITY ENGINEER

CITY OF WICHITA PROJECT NO. 466-76-243 & 450-CON-069 CONT

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

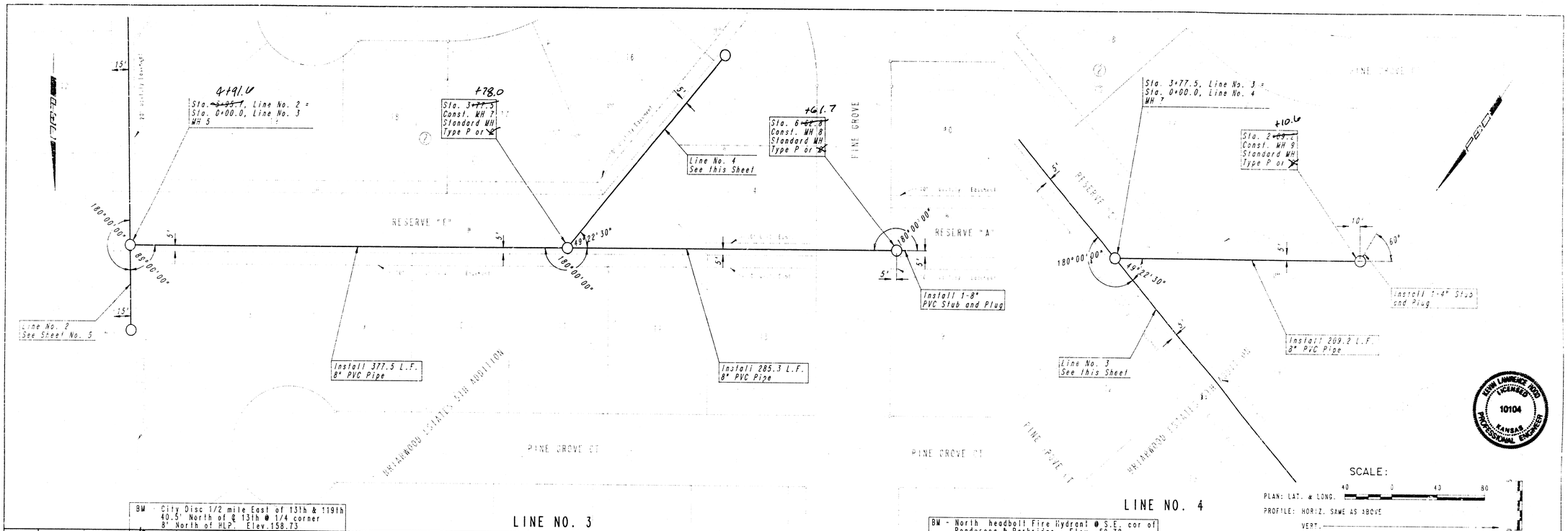
Designed By KLP, GM | Job No. 34-86X2-3
Drawn By DMM | Date August, 1986

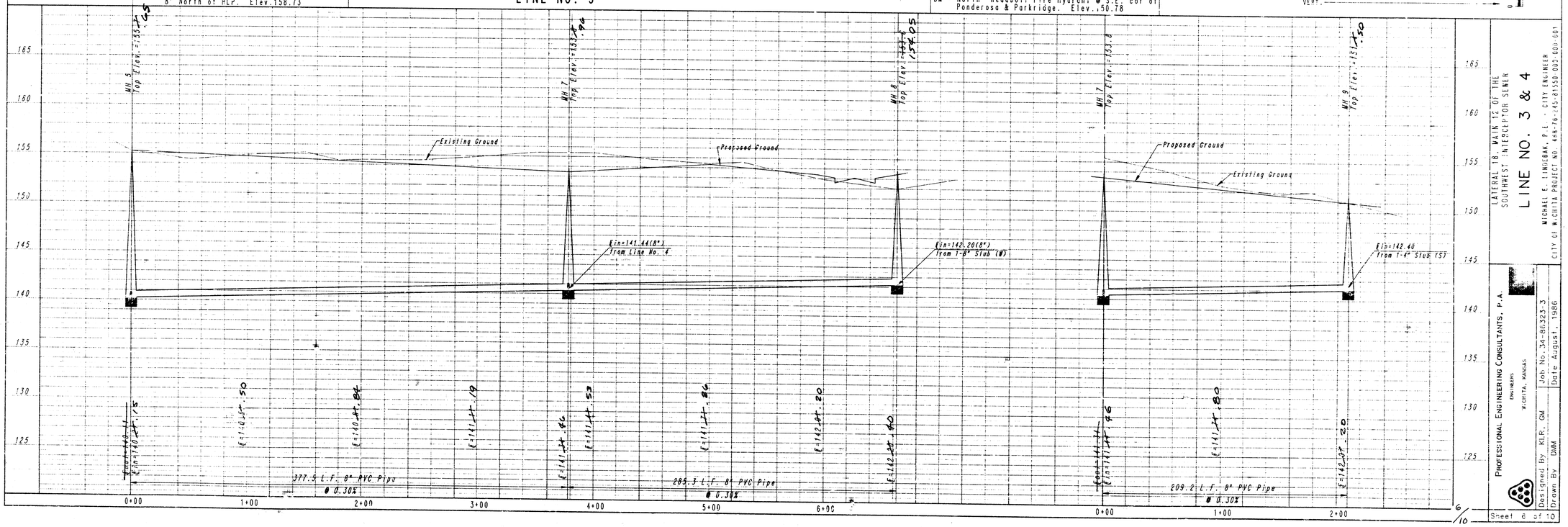
Sheet 5 of 10

5/10

KENNETH LAWRENCE POE LICENSED 10104 KANSAS PROFESSIONAL ENGINEER

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SCALE:
PLAN: LAT. & LONG. 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT. 0 5

LATERAL 18, MAIN 12 OF THE SOUTHWEST INTERCEPTOR SEWER

LINE NO. 3 & 4

CITY OF WICHITA PROJECT NO. 468-76-45-81550 002-000-601

MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

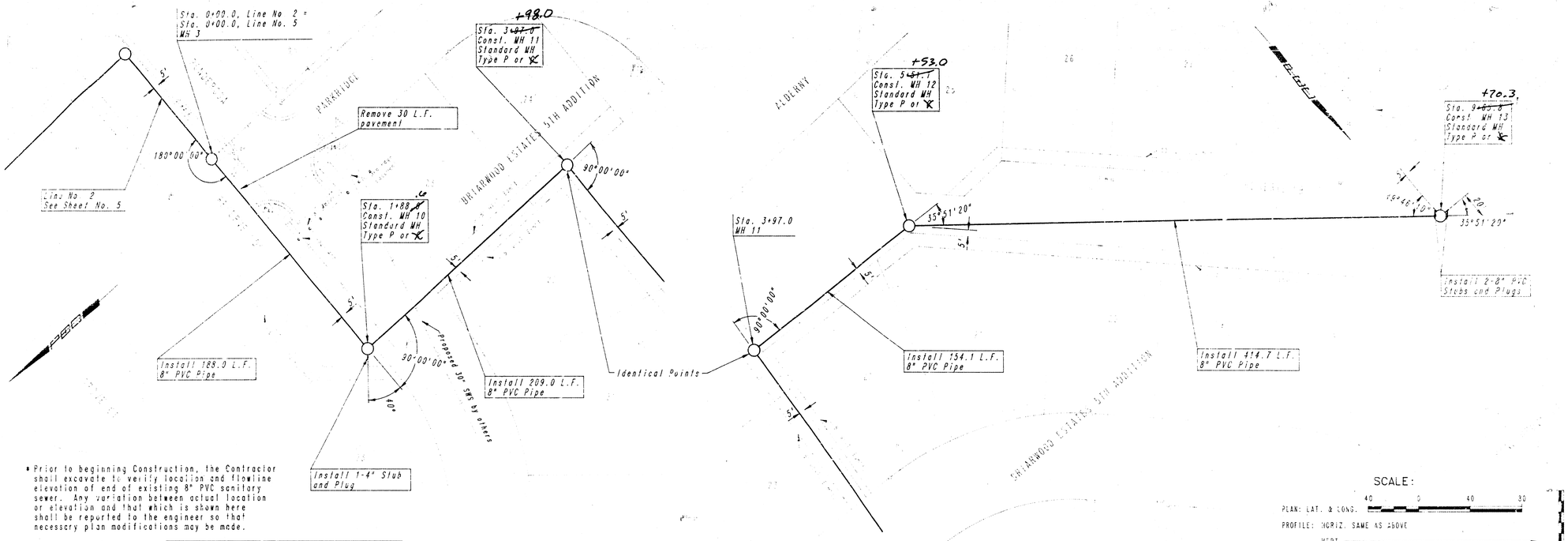
Designed By KLR, GM
Drawn By DMM
Job No. 34-86323.3
Date August, 1986

Sheet 6 of 10

6/10

KEITH LAWRENCE HUDD LICENSED 10104 KANSAS PROFESSIONAL ENGINEER

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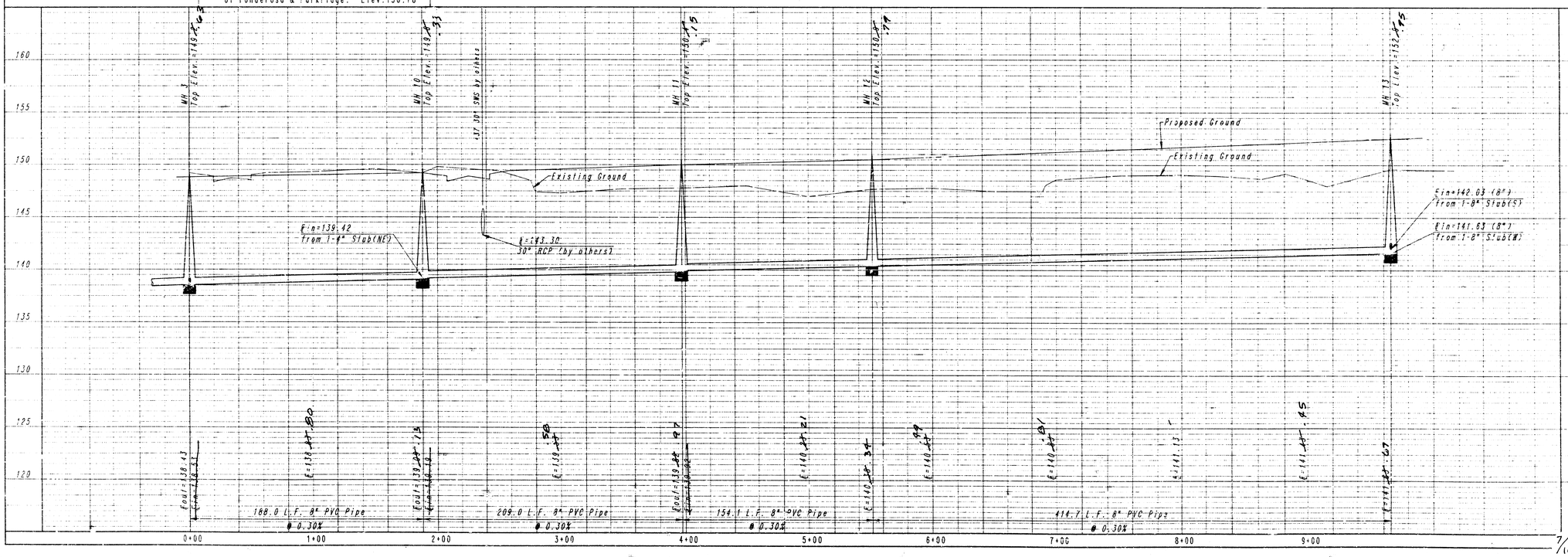
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BM - North headbolt Fire Hydrant @ S.E. cor of Ponderosa & Parkridge. Elev.150.78

SCALE:
PLAN: LAT. & LONG. 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT.

ADAM LAWRENCE BOND LICENSED 10104 KANSAS PROFESSIONAL ENGINEER

LINE NO. 5



LATERAL 18, MAIN 12 OF THE SOUTHWEST INTERCEPTOR SEWER

LINE NO. 5

MICHAEL E. LINDEBAK, P.E. CITY ENGINEER

CITY OF WICHITA PROJECT NO. 468-76 245 81550 000 000 001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS

Designed By KLR, GM | Job No. 34-86323-3

Drawn By DMM | Date August, 1986

Sheet 7 of 10

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MANHOLE FRAME AND COVER DETAIL

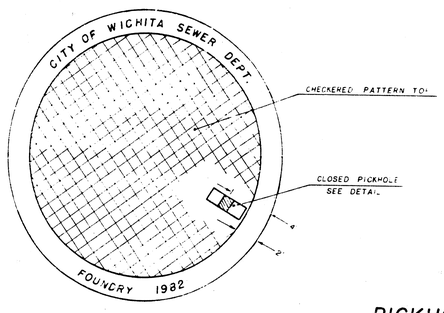
ADOPTED AS STANDARD DESIGN

BY

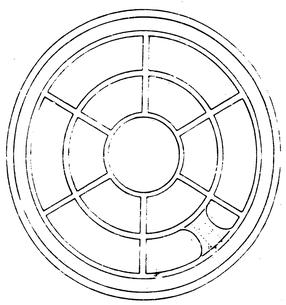
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

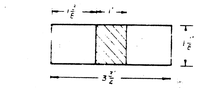


TOP VIEW

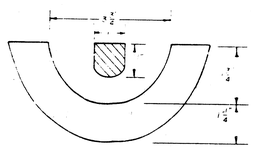


BOTTOM VIEW

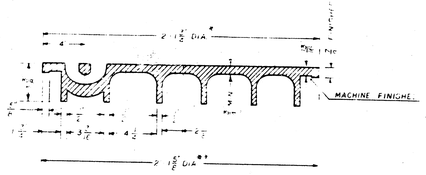
PICKHOLE DETAIL



TOP VIEW



SECTION VIEW

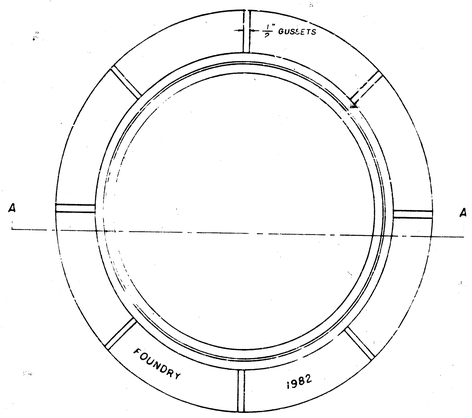


SECTION VIEW

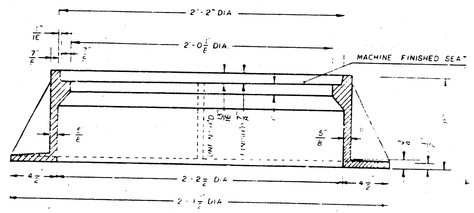
* OUTSIDE DIA TOP OF COVER
** OUTSIDE DIA BOTTOM OF COVER

MANHOLE FRAME

Weight: 240 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTE.

1. 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.

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

3. 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.

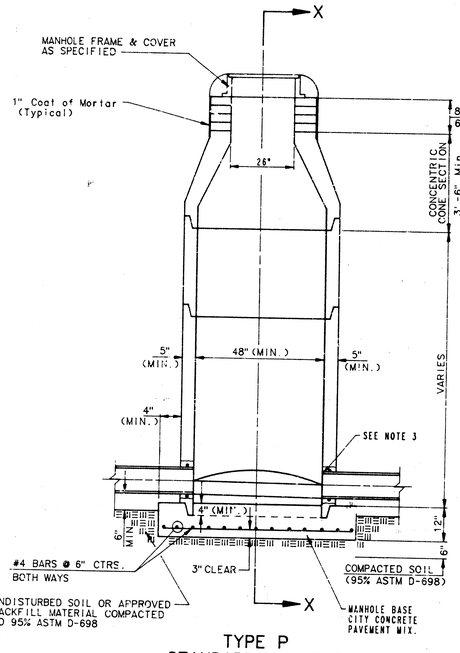
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. 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" 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.

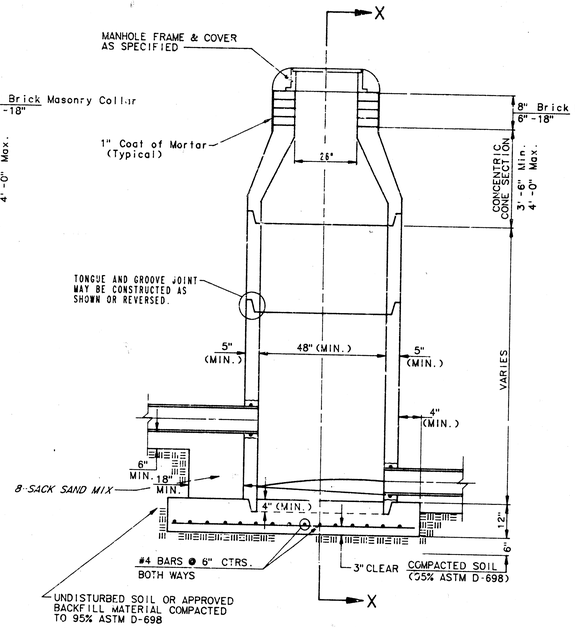
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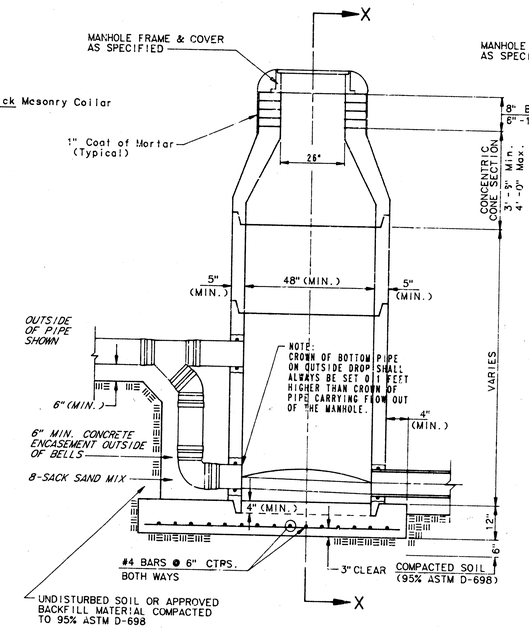
SEWER APPURTENANCES DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA



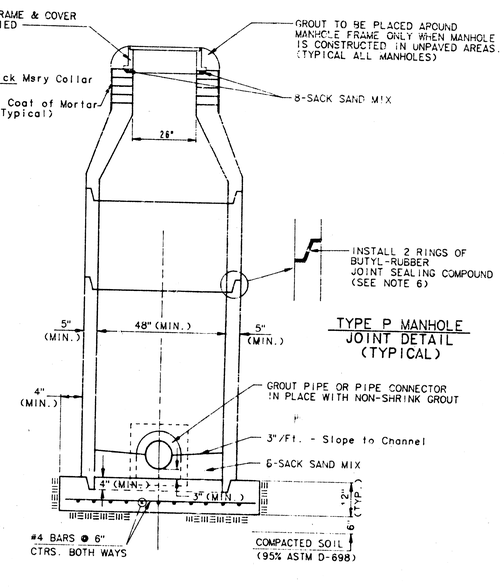
TYPE P
STANDARD MANHOLE



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 REVISION 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 THEWEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 6 MILS (MIN.)

5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOS 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 4' 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.

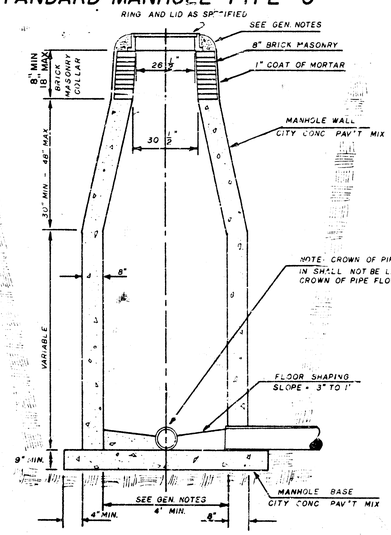
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SEWER APPURTENANCES DETAILS

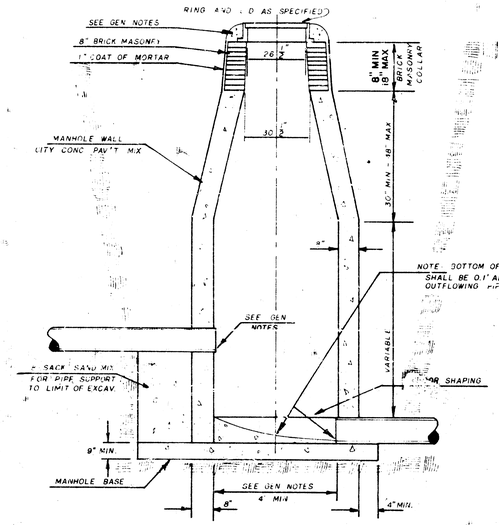
ADOPTED AS STANDARD DESIGN
BY

City of Wichita, Kansas

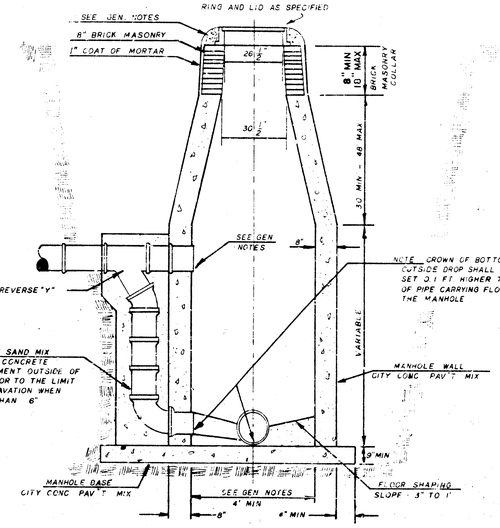
STANDARD MANHOLE TYPE "C"



INSIDE DROP MANHOLE TYPE "C"



OUTSIDE DROP MANHOLE TYPE "C"



GENERAL NOTES

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE WALLS AND 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. TYPE "C" MANHOLES CAN BE CONSTRUCTED ONLY WHERE PIPE SIZES ARE 8" OR SMALLER. THE INSIDE DIAMETER OF TYPE "C" MANHOLES SHALL BE 4'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

2. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASE. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. REINFORCING STEEL SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. COST OF FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

3. AN OPENING SHALL BE CUT IN THE MANHOLE WALL FOR THE UPPER INLET PIPE FOR INSIDE AND OUTSIDE DROP MANHOLES. THE UPPER INLET PIPE SHALL BE GROUTED INTO THIS OPENING WITH NON-SHRINK GROUT. THE EXTERIOR OF THIS COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT.

4. 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 MANHOLE 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.

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JNL JAN. 1982

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