

SANITARY SEWER EXTENSIONS

LAKESIDE MOBILE HOME PARK 2ND ADDITION

PROJECT NO. 1313

CITY OF WICHITA

PROJECT NO. 488-76-245-80000-000-000-008

JUNE 1984

LEGEND

PROPOSED SEWER LINES
PROPOSED MANHOLE
EXISTING SEWER LINE
EXISTING MANHOLE

GENERAL NOTES

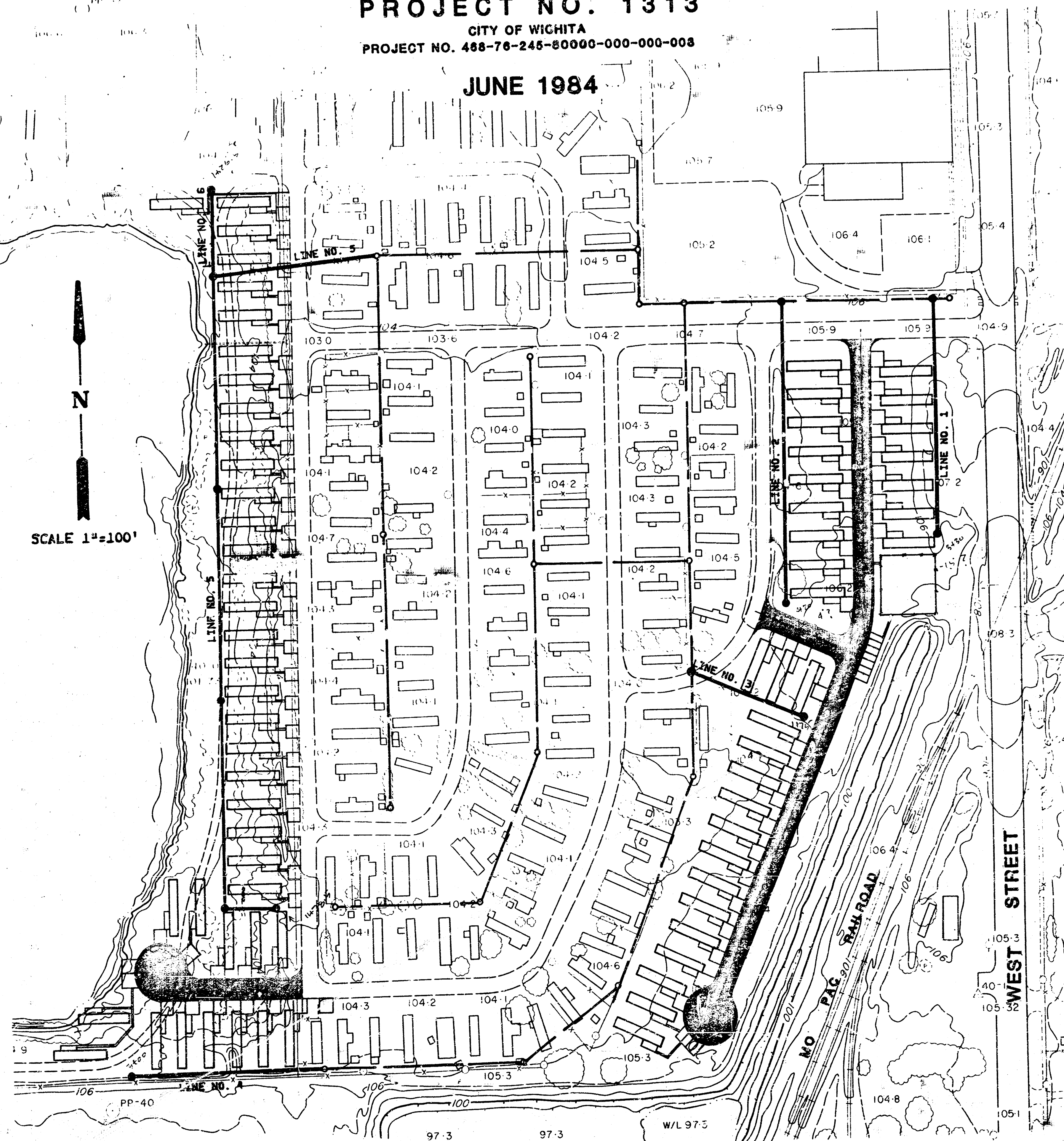
1. THE OWNER'S SURVEYOR WILL PROVIDE ALL CONSTRUCTION STAKING ON THIS PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENCED LAND SURVEYOR OR A LICENCED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.
3. NOTIFY THE FOLLOWING COMPANIES PRIOR TO ANY TRENCHING.

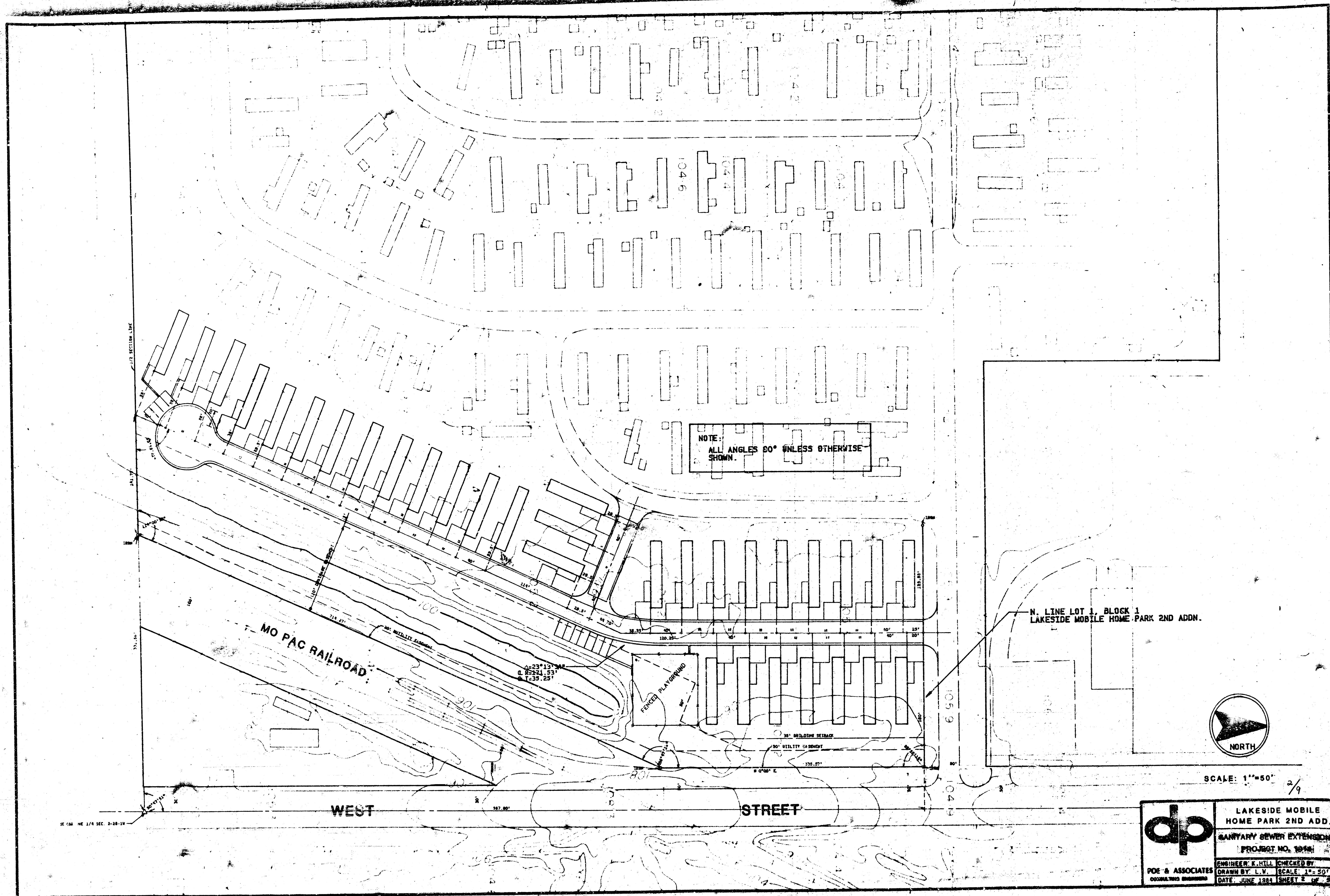
ARKLA GAS CO.	542-8350
BELL TELEPHONE CO.	268-3087
CABLEVISION	268-6817
GAS SERVICE CO.	263-7511
KANSAS GAS & ELECTRIC	261-6248
DERBY REFINING CO.	267-0361
KAN-U-DIG-IT	267-2889
LAKESIDE MOBILE HOME PARK	943-4401
4. THE CONTRACTOR WILL ARRANGE FOR AND PAY THE CITY OF WICHITA TO TELETYPE AND AIR TEST ALL PROPOSED MAIN SEWER LATERALS PRIOR TO INSTALLATION OF SERVICE CONNECTIONS TO THE MAIN. THE OWNER WILL REIMBURSE THE CONTRACTOR FOR THESE COSTS.
5. INSPECTION WILL BE BY OWNER'S ENGINEER AT NO COST TO THE CONTRACTOR.

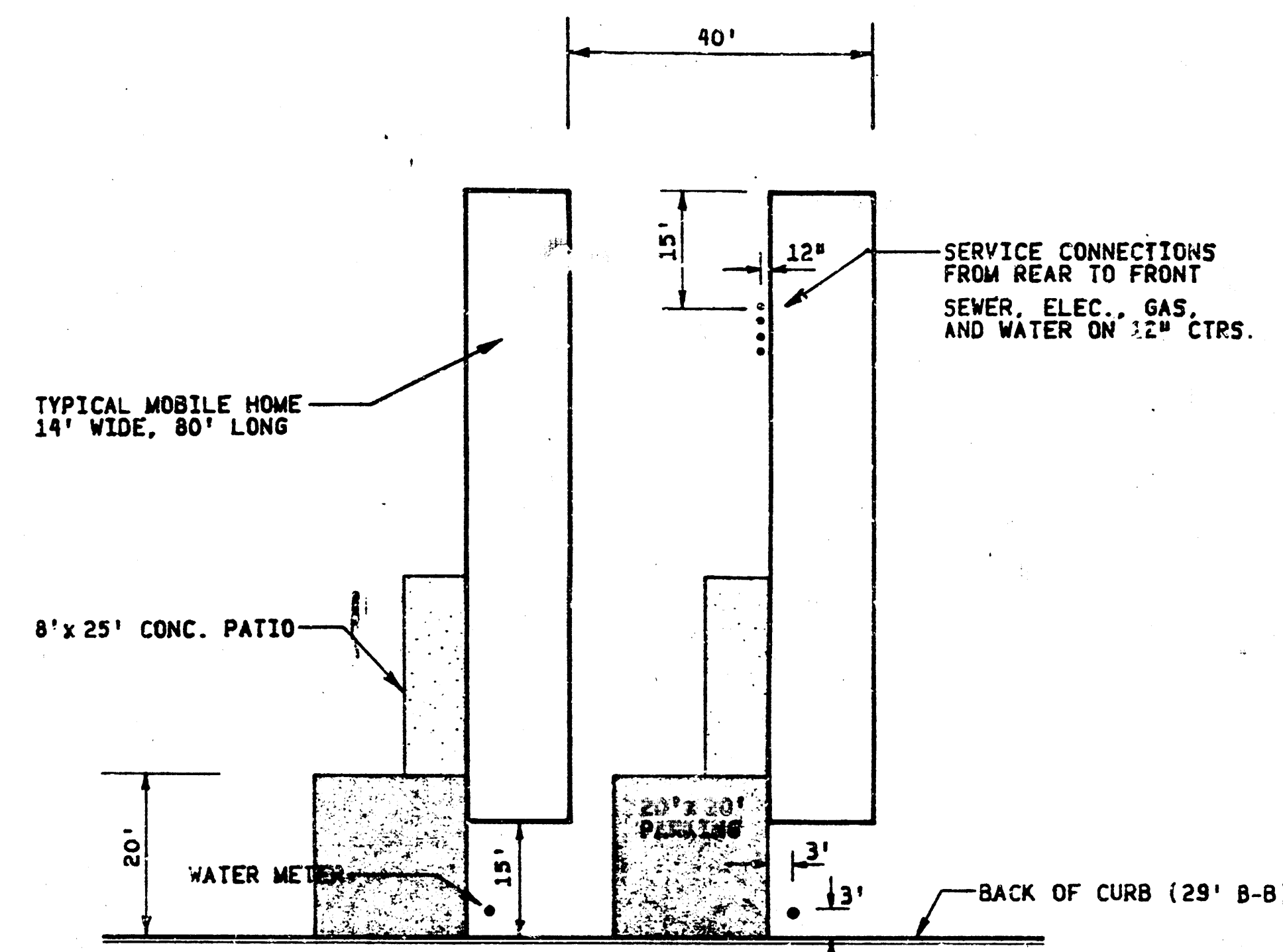
APPROVED AS NOTED
By CITY ENGINEER OF WICHITA
Sanitary Sewers *C. B. Shaker*
Storm Sewers
Driveway Approaches

NOTE TO CONTRACTOR

This project will be constructed under the supervision of the CITY ENGINEER and conforming to the SPECIFICATIONS of the CITY OF WICHITA.







TYPICAL MOBILE HOME SPACES

SCALE 1"=20'

BM #1

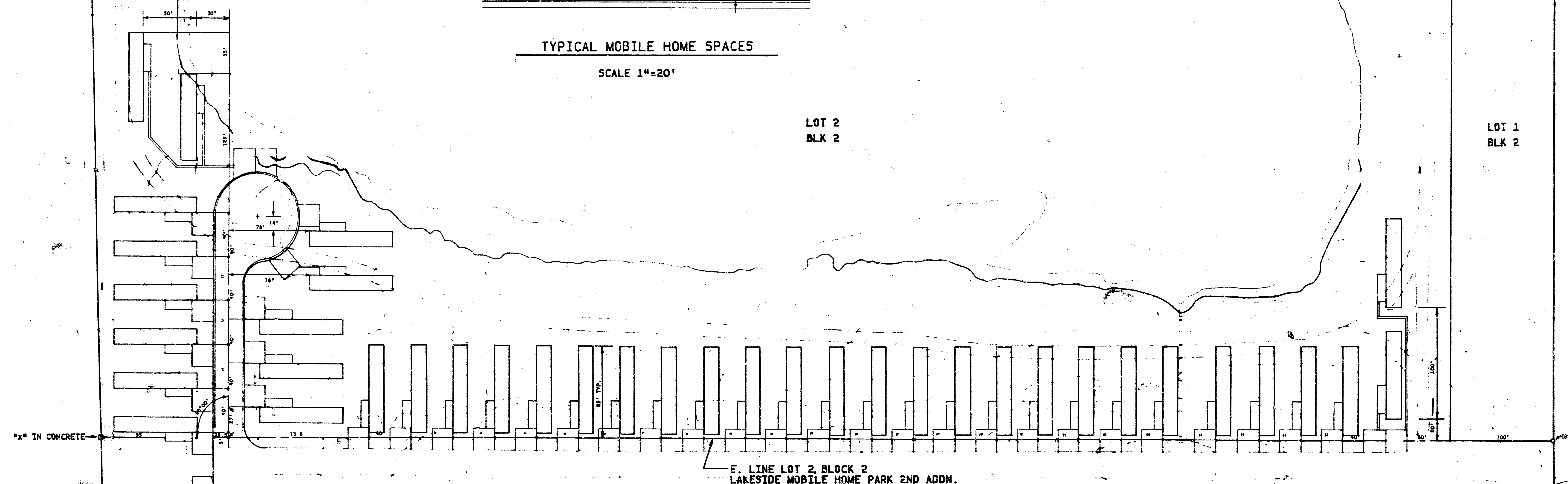
CITY DISK # 0. WEST STREET, 24.8' N. OF N.
RAIL # NE. COR. SEC. 2-28-1W
ELEV. 109.98

BM #2

4" CUT IN TOP MH RING 10' W. OF PUMPING
STATION # MOBILE HOME PARK ENTRANCE
ELEV. 105.61

LOT 2
BLK 2

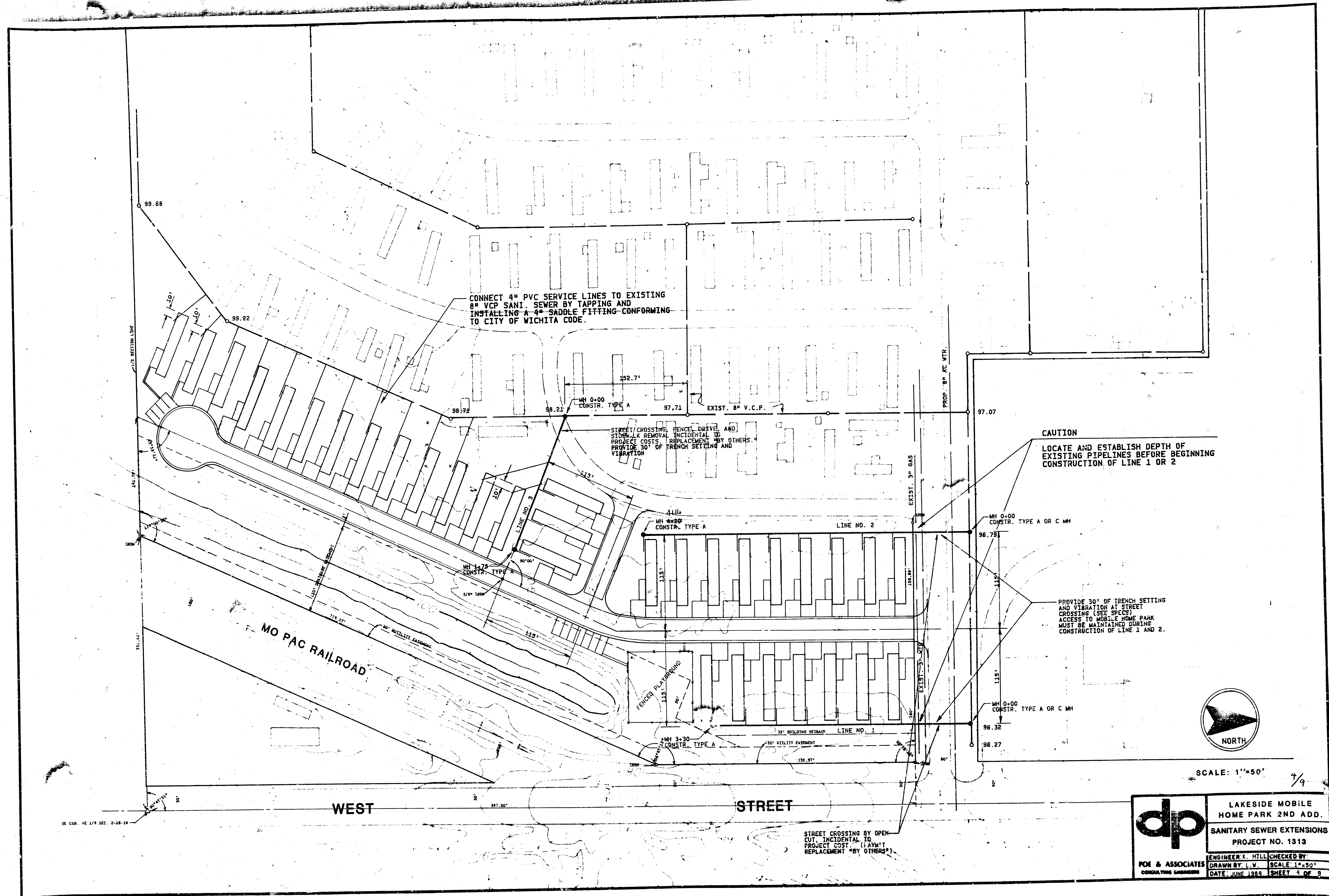
LOT 1
BLK 2



SCALE 1"=50'



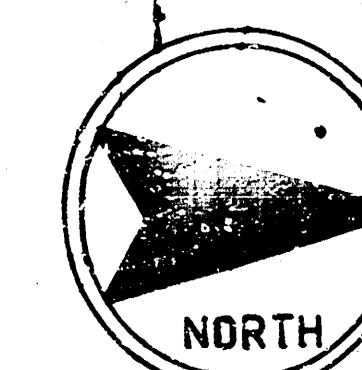
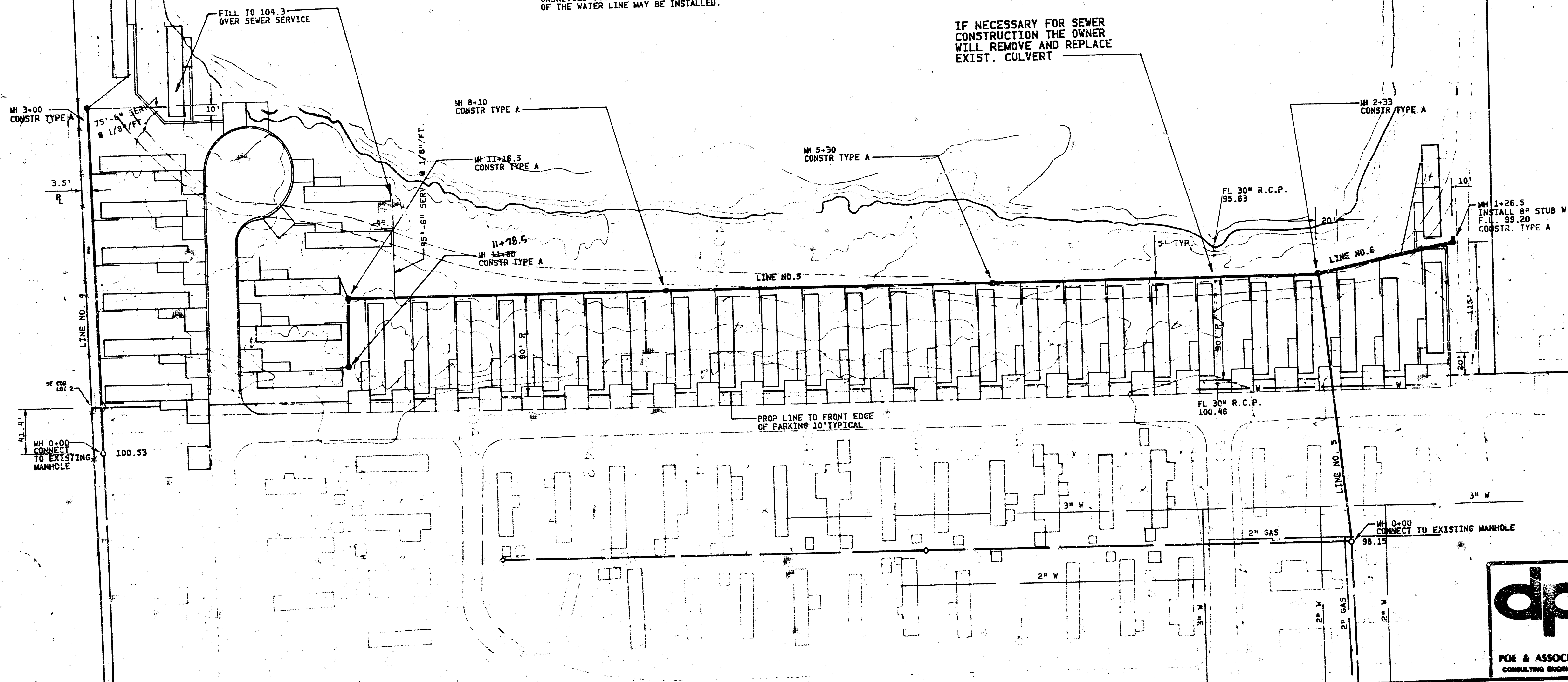
LAKESIDE MOBILE
HOME PARK 2ND ADD.
SANITARY SEWER EXTENSIONS
PROJECT NO. 1319
ENGINEER K. HILL CHECKED BY
DRAWN BY L.V. SCALE 1"=50'
DATE: JUNE 1994 SHEET 3 OF 9



LAKE

- NOTES:
1. SERVICE LINES ARE 4" UNLESS OTHERWISE SHOWN.
 2. SOLVENT WELDED JOINTS SHALL BE REQUIRED 10' EACH DIRECTION FROM WATER LINE CROSSINGS WITH LESS THAN 2' OF CLEARANCE FROM SEWERS OR ONE 20' LENGTH OF PIPE WITH GASKETED JOINTS 10' EITHER SIDE OF THE WATER LINE MAY BE INSTALLED.

IF NECESSARY FOR SEWER CONSTRUCTION THE OWNER WILL REMOVE AND REPLACE EXIST. CULVERT



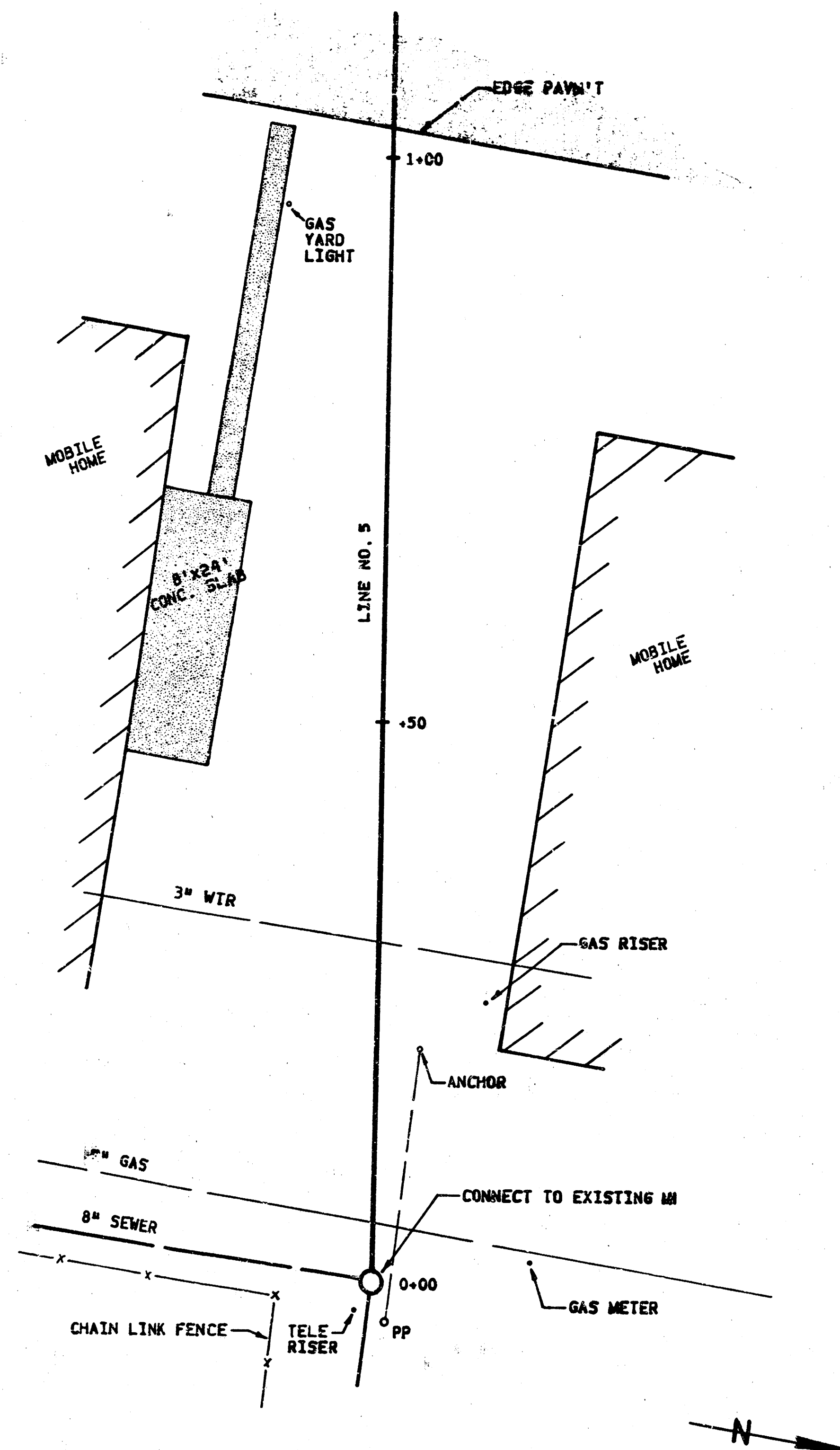
SCALE 1"=50'

5/9

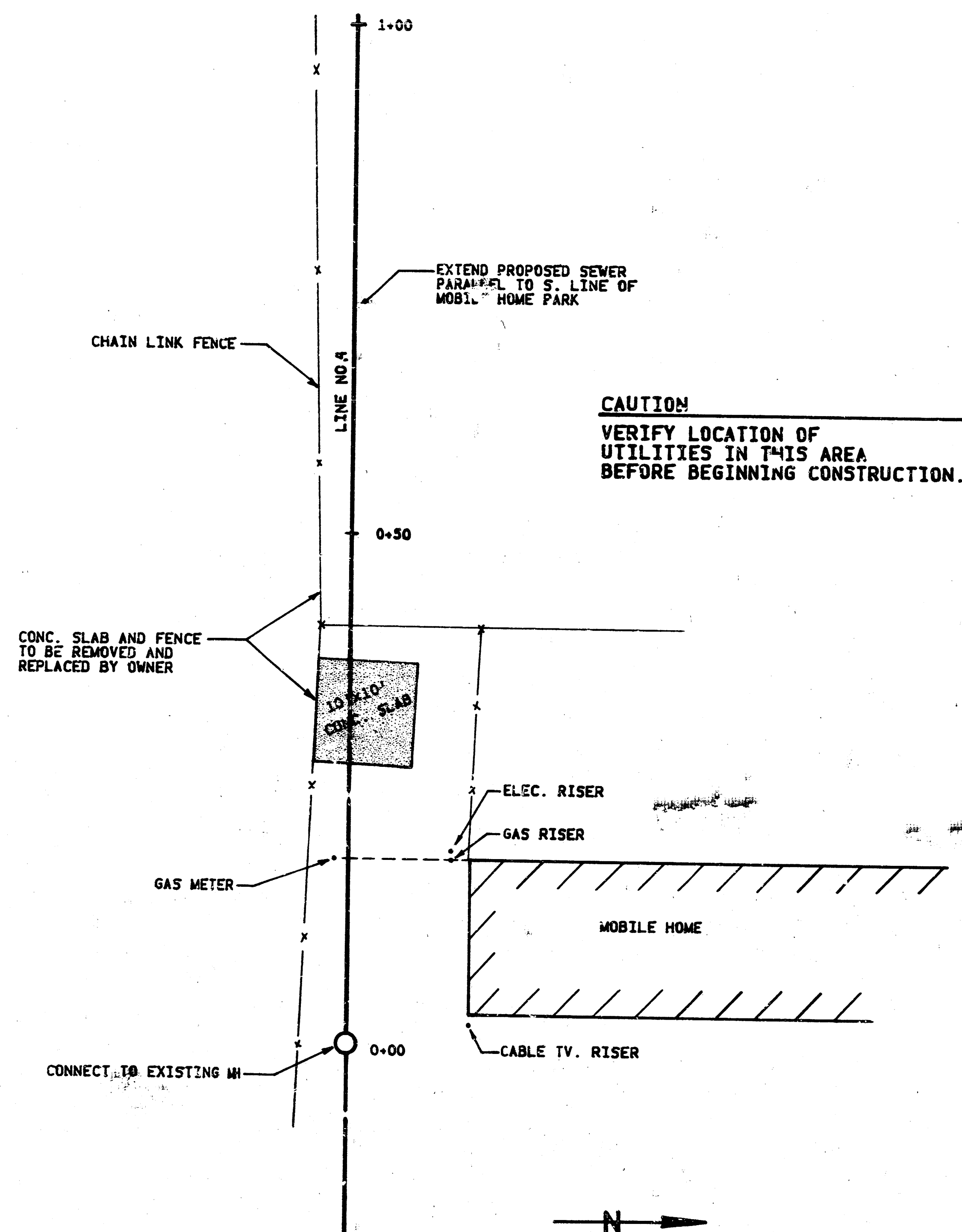


LAKESIDE MOBILE HOME PARK 2ND ADD.	
SANITARY SEWER EXTENSIONS	
PROJECT NO. 1313	
ENGINEER K. HILL	CHECKED BY:
DRAWN BY: L.V.	SCALE: 1"=50'
DATE: JUNE 1984	SHEET 5 OF 9

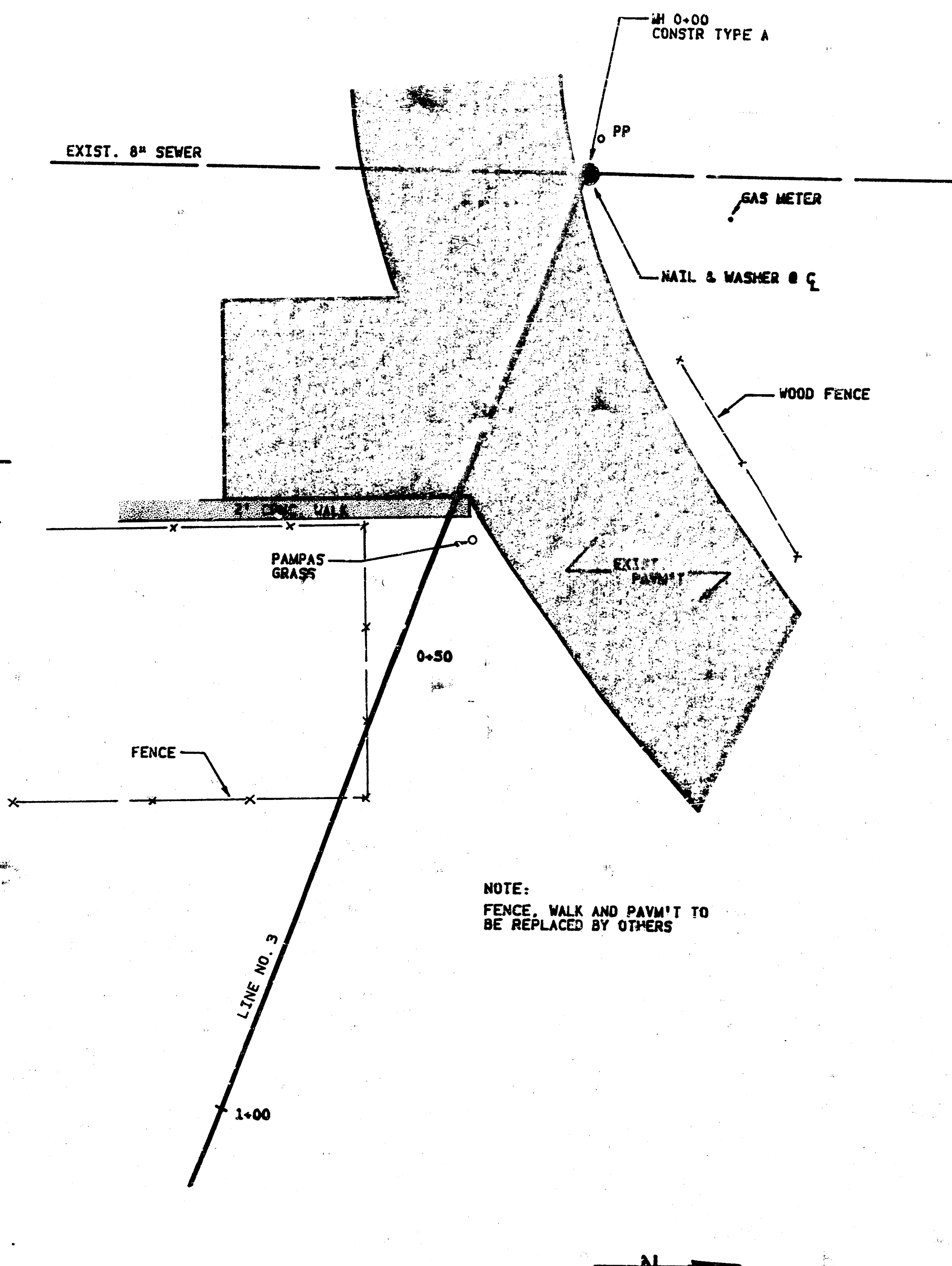
FILMED FROM THE BEST



LINE NO. 5
SCALE 1"=10'



LINE NO. 4
SCALE 1"=10'

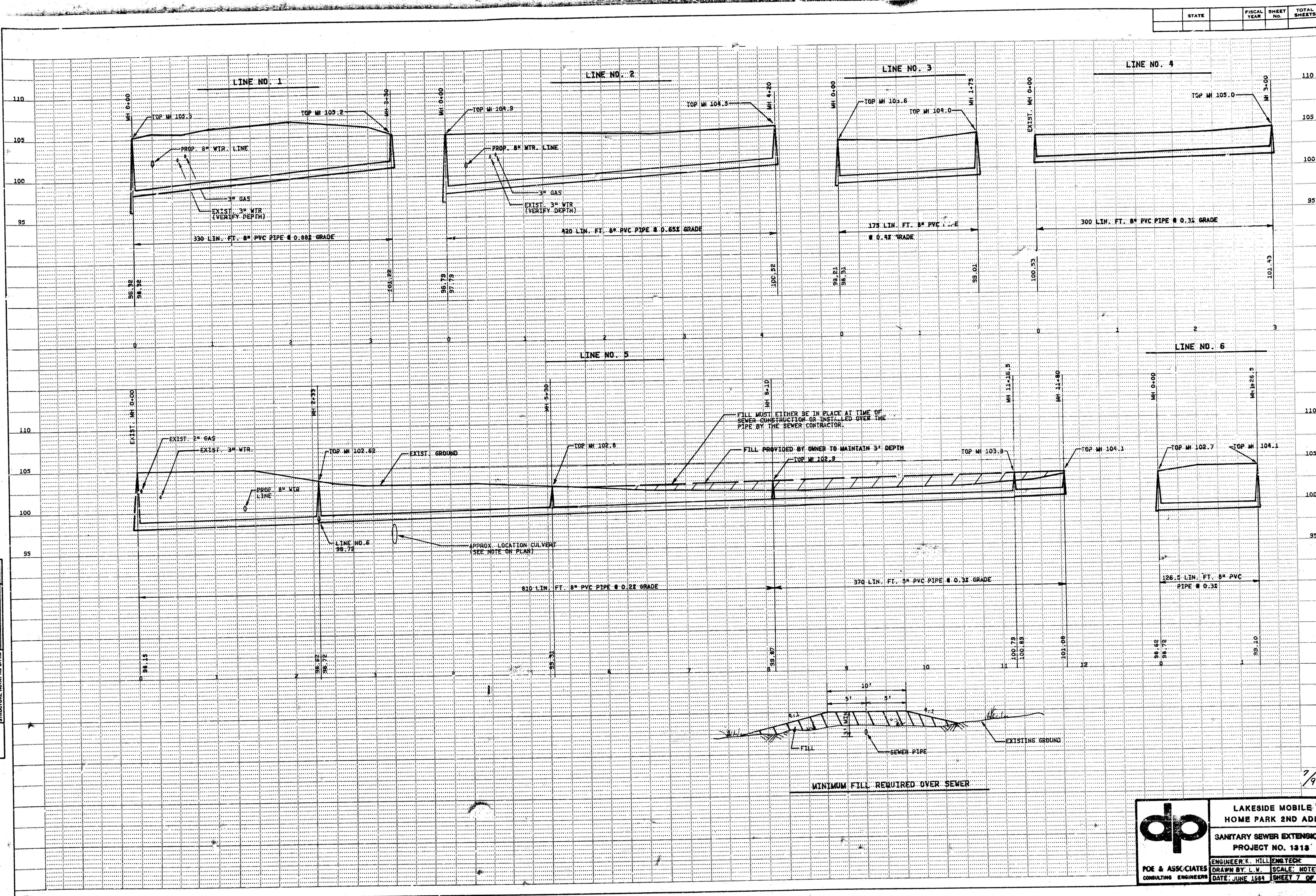


LINE NO. 3
SCALE 1"=10'

6/9

	LAKESIDE MOBILE HOME PARK 2ND ADD.	
	SANITARY SEWER EXTENSIONS	
	PROJECT NO. 1313	
	ENGINEER: K. HILL	CHECKED BY:
DRAWN BY: L.W.	SCALE: NOTED	
DATE: JUNE 1984		SHEET 6 OF 9

PROFILE		BY	DATE
SURVIVED			
PLOTTER			
GRADES CHECKED			
S 144 NOTED			
STUDY TOURE NOTATED CHMD			
NO.			



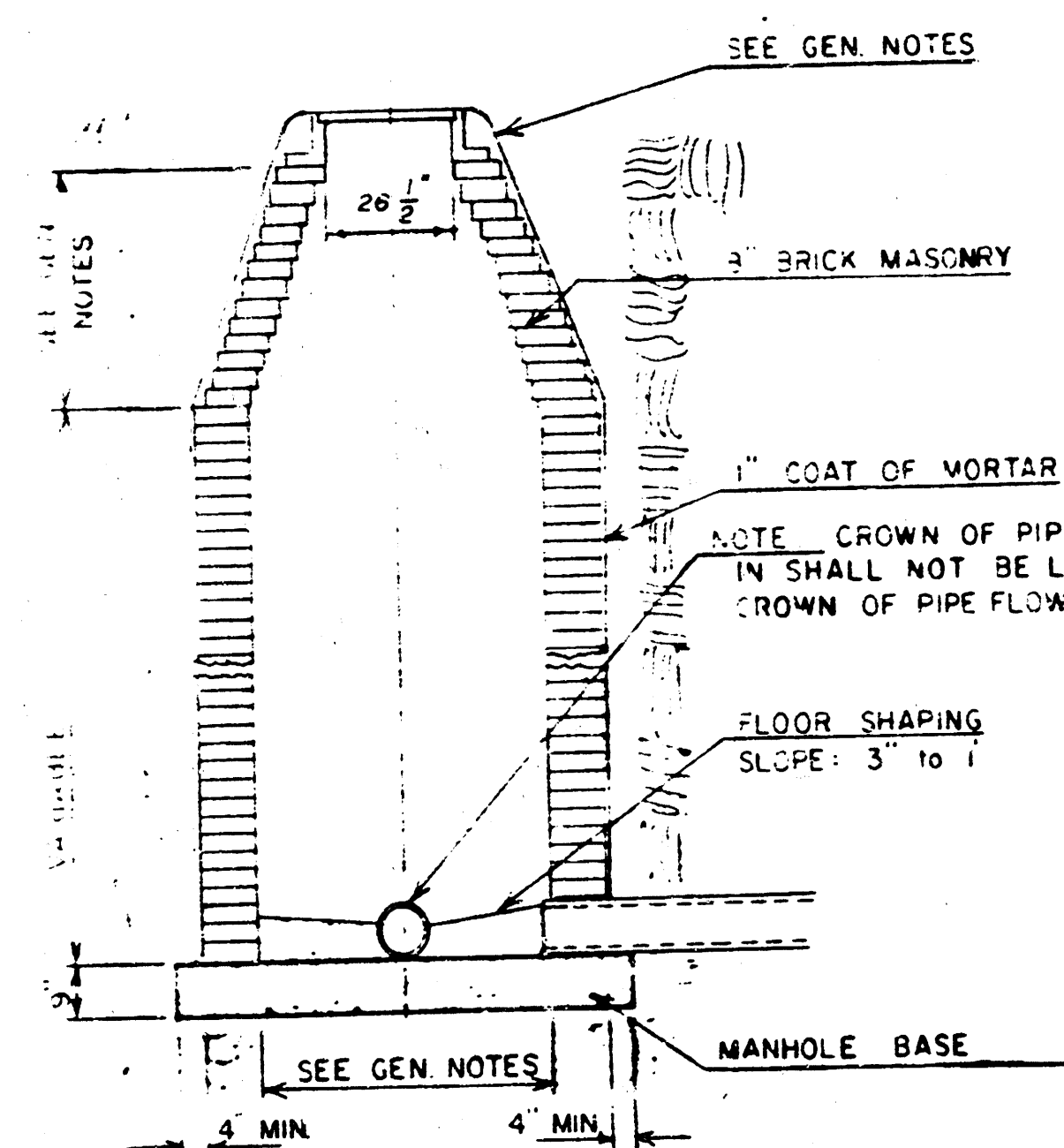
SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN
BY

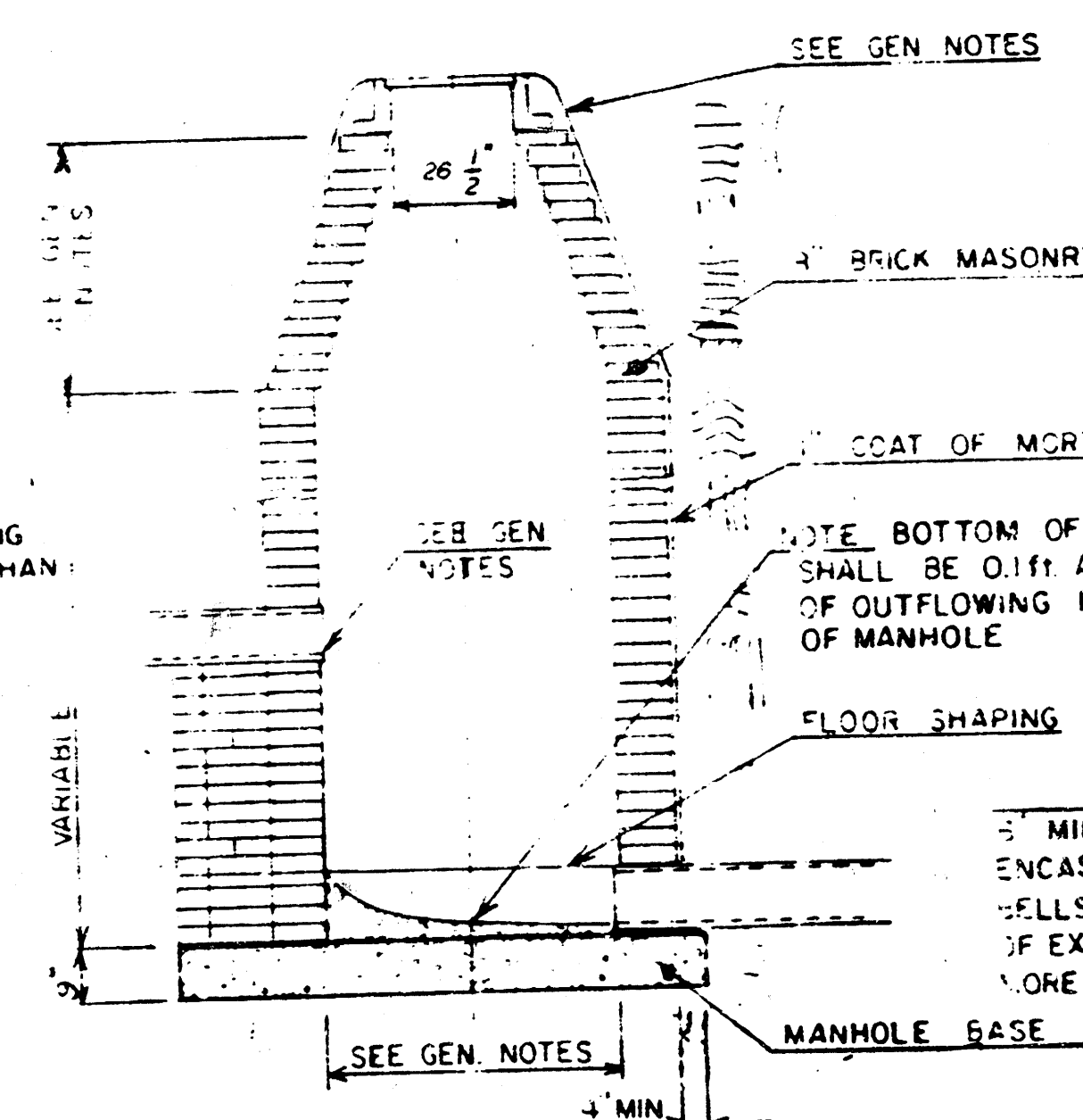
CITY of WICHITA, KANSAS

REVISED SEPTEMBER 1980
REVISED DECEMBER 1981

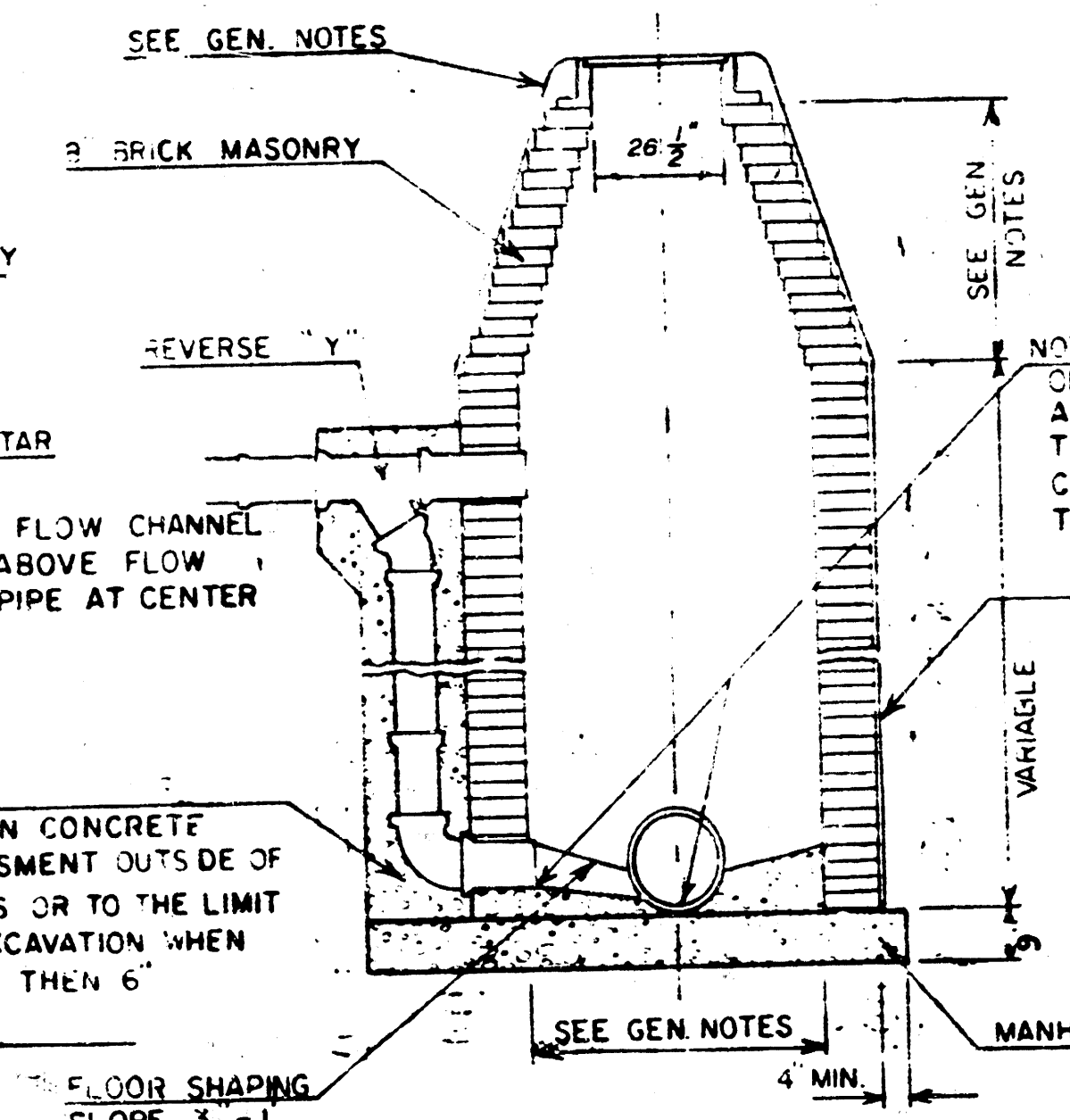
TYPE "A" MANHOLE



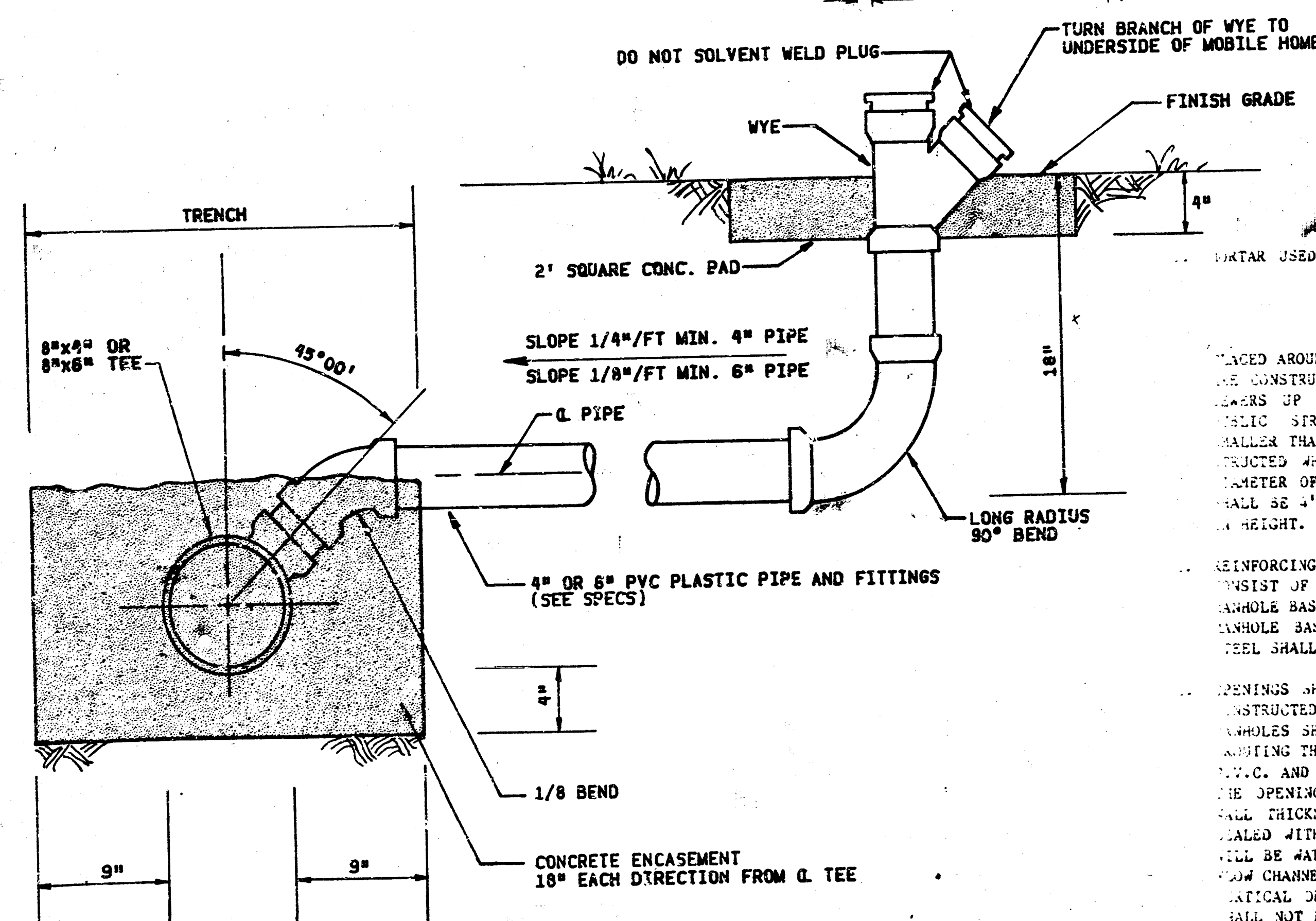
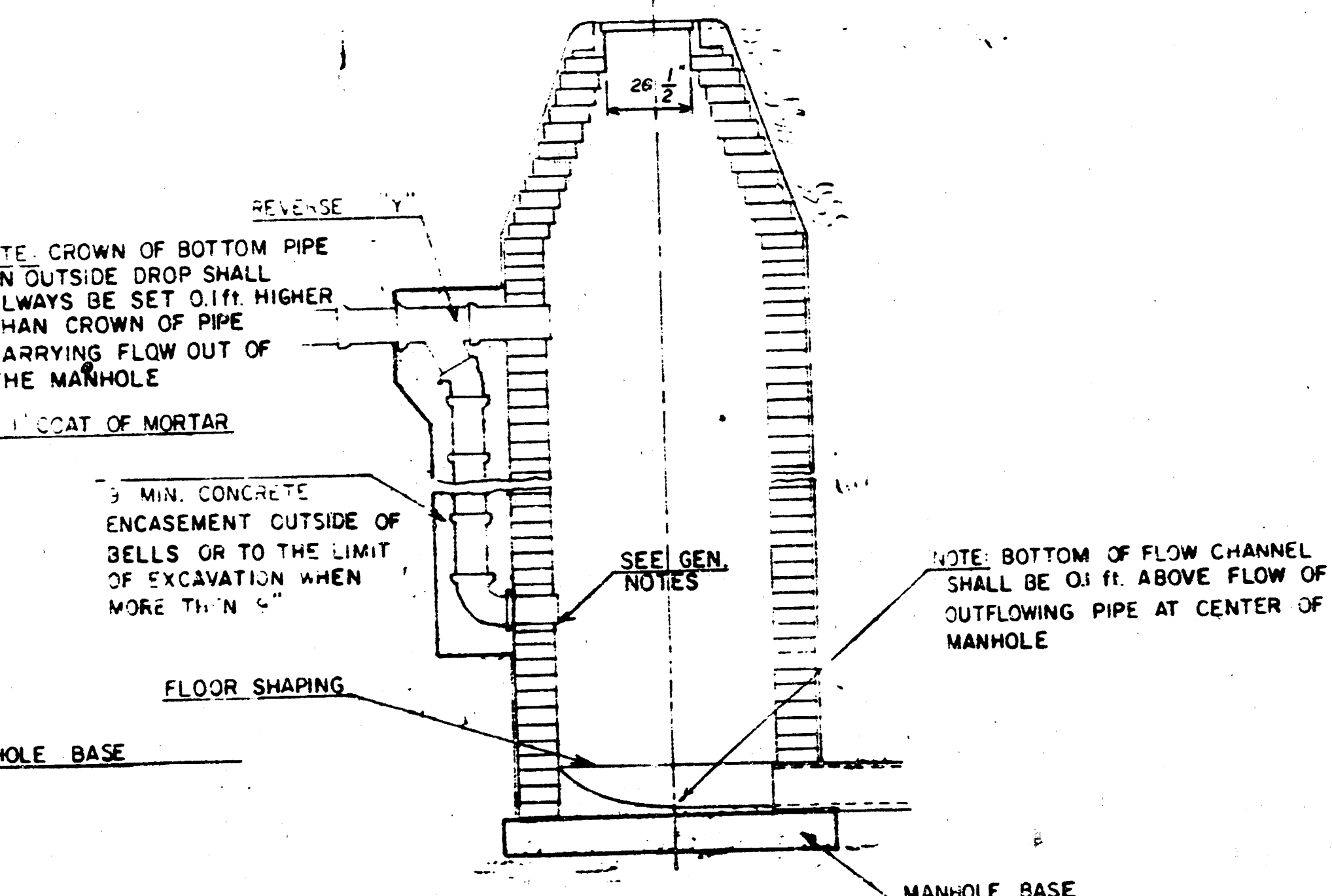
TYPE "A" INSIDE DROP MANHOLE



TYPE "A" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP
CONSTRUCTED ON EXISTING MANHOLE



TYPICAL SERVICE LINE

SCALE 1 1/2"=1'-0"

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 9" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR THE MANHOLE.

REVISIONS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE INSTALLED ON EXISTING MANHOLES. SUCH REVISIONS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND ADJUSTING THE NEW PIPE IN PLACE. WATERSTOP ASSETS SHALL BE USED WITH PVC, C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE ROUTED INTO THE OPENING USING AN APPROVED WATERSTOP ASSET FROM THE EXISTING 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. THE VERTICAL DROP FROM THE LOWER PIPE IN SUCH OUTSIDE DROP CONNECTIONS SHALL NOT EXCEED 4' FOR INFLUING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLUING PIPES SIZED LARGER THAN 12". EXCEPT THE CROWN OF THE LOWER PIPE SHALL NEVER BE SET BELOW THE CROWN OF ANY LARGER OUTFLOWING PIPE. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.

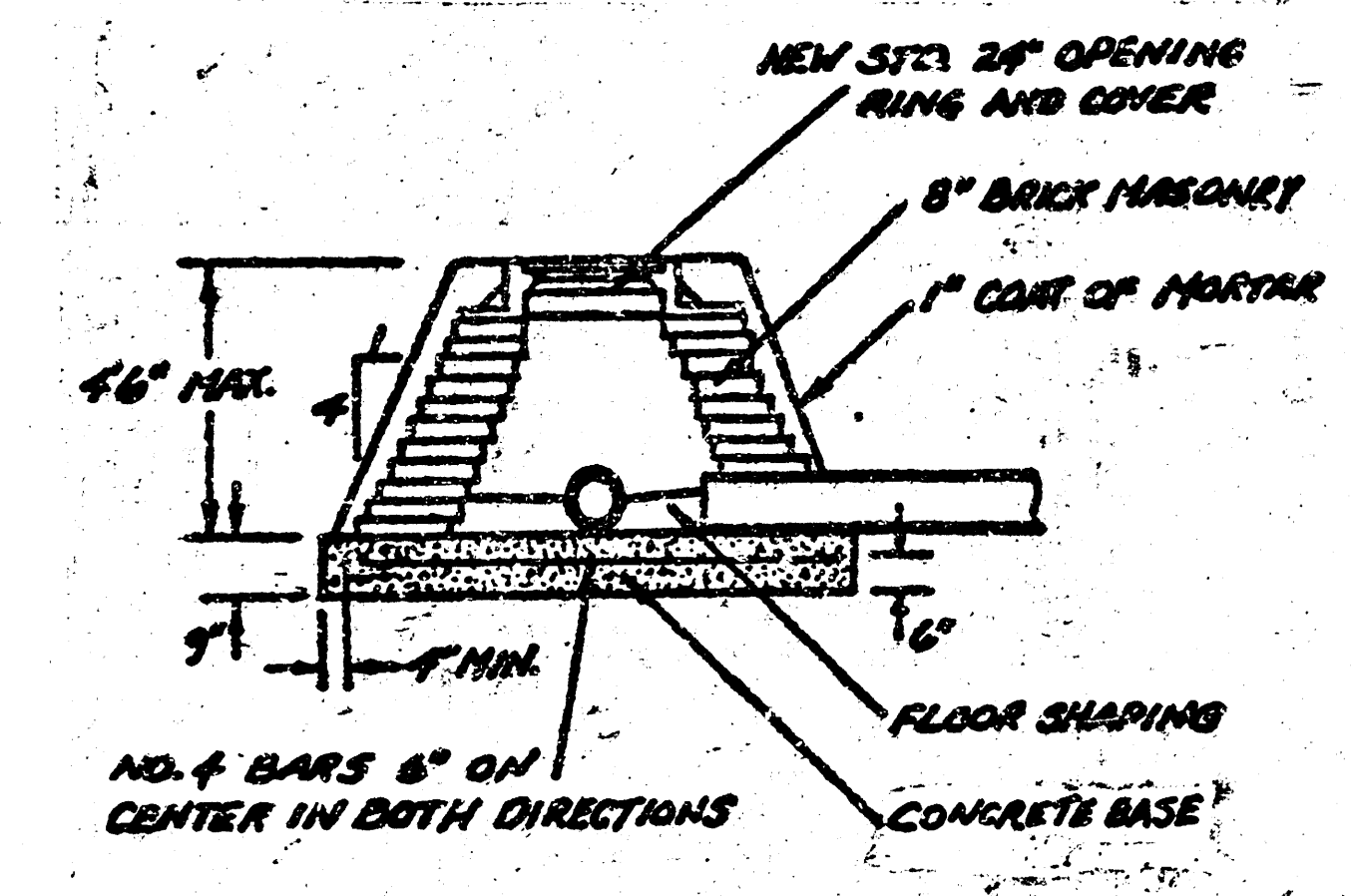
THE FLOORS OF ALL MANHOLES SHALL BE SLOPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE DEBRIS COULD BE ACCUMULATED. FLOW CHANNELS SHALL BE FORMED FROM THE FIRST PIPES TO THE OUTLET PIPES. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLUING PIPES AND THE OUTFLOWING PIPES AS SHOWN BY THE DRAWINGS EXCEPT FOR OUTSIDE DROP MANHOLES. FLOW CHANNELS FOR OUTSIDE DROP MANHOLES SHALL BE INTRODUCED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3:1 TOWARD THE FLOW CHANNELS. PIPES Laid THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO REAT LINES FOR THE FLOW 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 GRADED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE GRADE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE GRADE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. JOINTS SHALL BE WITHIN MANHOLE EXCAVATION. ALL JOINTS SHALL BE ADJACENT TO MANHOLE WALLS. MANHOLE SHALL BE FINISHED WITH A 1/2" RADIUS AT THE MANHOLE.

MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL BE STANDARD CITY OF WICHITA MANHOLE CASTINGS.

VERTICAL DROP OF EXISTING MANHOLE SHALL NOT EXCEED 4' FOR INFLUING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLUING PIPES LARGER THAN 12". THE GRADE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE GRADE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. JOINTS SHALL BE WITHIN MANHOLE EXCAVATION. ALL JOINTS SHALL BE ADJACENT TO MANHOLE WALLS. MANHOLE SHALL BE FINISHED WITH A 1/2" RADIUS AT THE MANHOLE.

EXISTING MANHOLES THAT ARE NOT STANDARD MANHOLE TYPES SHALL BE REPAIRED OR REPLACED WITH STANDARD MANHOLES. THE EXISTING MANHOLE SHALL BE REPAIRED OR REPLACED WITH STANDARD MANHOLES. THE EXISTING MANHOLE SHALL BE REPAIRED OR REPLACED WITH STANDARD MANHOLES. THE EXISTING MANHOLE SHALL BE REPAIRED OR REPLACED WITH STANDARD MANHOLES.



SPECIAL MANHOLE "TYPE A"

LAKESIDE MOBILE HOME PARK 2ND ADD.
SANITARY SEWER EXTENSIONS
PROJECT NO. 1318
JUNE 1984 SHEET NO. 8 OF 9

FILMED FROM THE BEST

City of Wichita, Kansas

STANDARD MANHOLE TYPE "C"

RING AND LID AS SPECIFIED

SEE GEN. NOTES

8" BRICK MASONRY

1" COAT OF MORTAR

MANHOLE WALL

NOTE: CROWN OF PIPE FLOWING IN SHALL NOT BE LOWER THAN CROWN OF PIPE FLOWING OUT

FLOOD SHAPING SLOPE: 3" TO 1"

MANHOLE BASE

SEE GEN. NOTES

4" MIN.

4" MIN.

8"

9" MIN.

VARIABLE

30" MIN. - 48" MAX.

36" MIN. MASONRY COLLAR

26"

30"

8"

INSIDE DROP MANHOLE TYPE "C"

SEE GEN. NOTES

RING AND LID AS SPECIFIED

8" BRICK MASONRY

1" COAT OF MORTAR

MANHOLE WALL

30" MIN. - 48" MAX.

16" MIN. BRICK MASONRY COLLAR

8"

NOTE: BOTTOM OF SHALL BE 0.1' ABOVE OUTFLOWING PIPE

SEE GEN. NOTES

FOR PIPE SUPPORT TO LIMIT OF EXCAV.

8" MIN.

MANHOLE BASE

SEE GEN. NOTES

4" MIN.

8"

4" MIN.

FLOOR SHAPING

30" MIN. - 48" MAX.

16" MIN. BRICK MASONRY COLLAR

8"

NOTE: BOTTOM OF SHALL BE 0.1' ABOVE OUTFLOWING PIPE

SEE GEN. NOTES

FOR PIPE SUPPORT TO LIMIT OF EXCAV.

8" MIN.

MANHOLE BASE

SEE GEN. NOTES

4" MIN.

8"

4" MIN.

FLOOR SHAPING

OUTSIDE DROP MANHOLE TYPE "C"

Cross-Section View (Top):

- SEE GEN. NOTES
- 8" BRICK MASONRY
- 1" COAT OF MORTAR
- RING AND I.D. AS SPECIFIED
- 26"
- 30"

Side Elevation View (Right):

- 8" MIN. BRICK MASONRY
- 30" MIN. - 48" MAX.
- NOTE: CROWN OF BOTTOM PIPE ON OUTSIDE DROP SHALL ALWAYS BE SET 0.1 FT. HIGHER THAN CROWN OF PIPE CARRYING FLOW OUT OF THE MANHOLE.
- MANHOLE WALL
- 9" MIN.
- FLOOR SHAPING SLOPE 3" TO 1'

Internal Features and Labels:

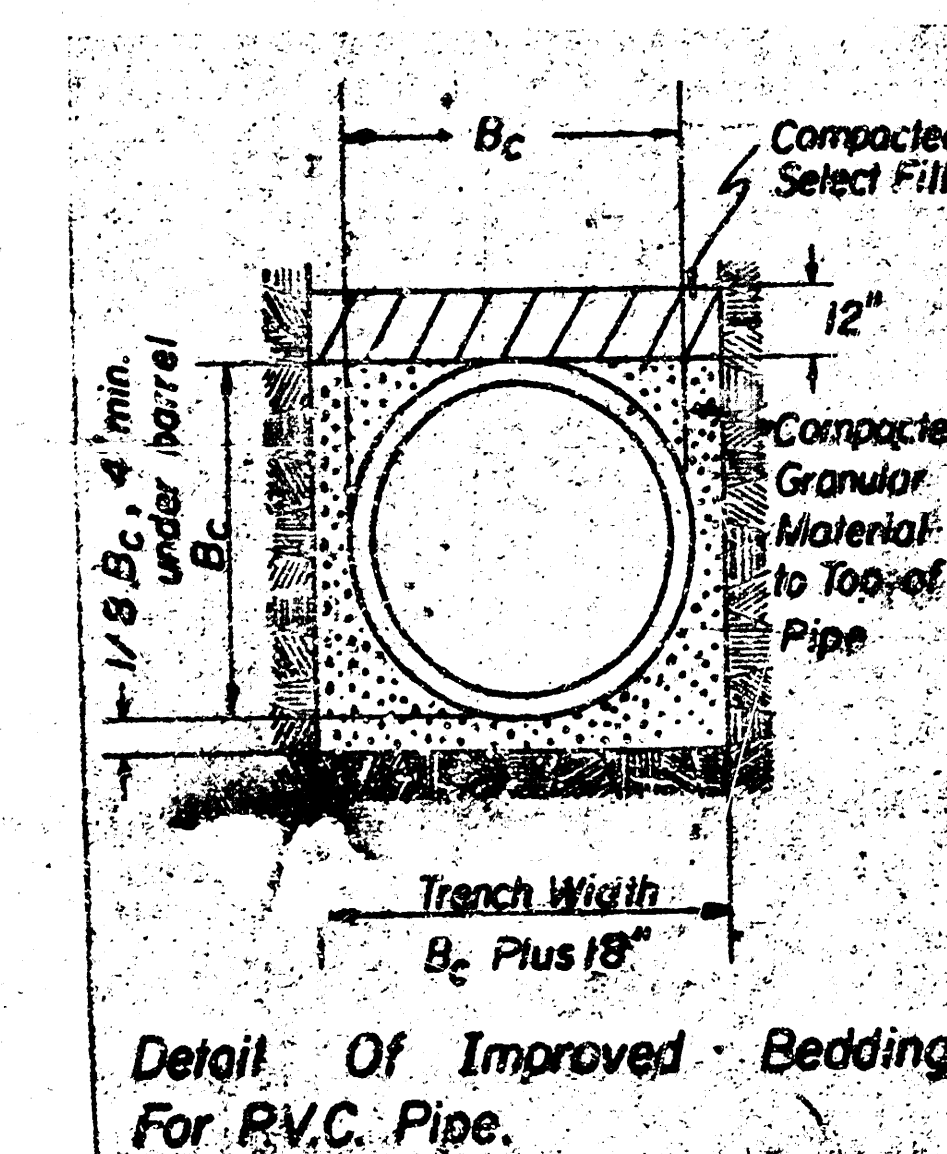
- CHANNEL FLOW OF ENTER
- REVERSE "Y"
- SEE GEN. NOTES
- 8"
- 6" MIN. CONCRETE ENCASUREMENT OUTSIDE OF BELLS OR TO THE LIMIT OF EXCAVATION WHEN MORE THAN 6"
- MANHOLE BASE
- SEE GEN. NOTES
- 4" MIN.
- 4" MIN.

1. MORTAR USED IN MASONRY CONSTRUCTION SHALL BE AS SPECIFIED. 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 INSIDE 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 VALVE OF THE INFLOWING WATER MAIN TO THE OUTLET 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.

5. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE COVERED WITH CRADLE UP TO THE LIMIT 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 TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
6. MANHOLE COVER STANDARDS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
7. THE VERTICAL DROP IN INSIDE DOWNS FOR MANHOLES SHALL NOT EXCEED 4" FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2" FOR INFLOWING PIPES LARGER THAN 12". THE SLOPES OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.



LAKESIDE MOBILE,
HOME PARK AND ADD.
SANITARY SEWER EXTENSION
PROJECT NO. 1319

JUNE 1984 SHEET 9 OF 9

D - 16