

SCALE: 1=50.00
Date 12--08--1998 01:09:22 pm



Booked
C-285
5-26-99
RDL

REVISIONS		
NUMBER	BY	DATE
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DATE: DEC 90

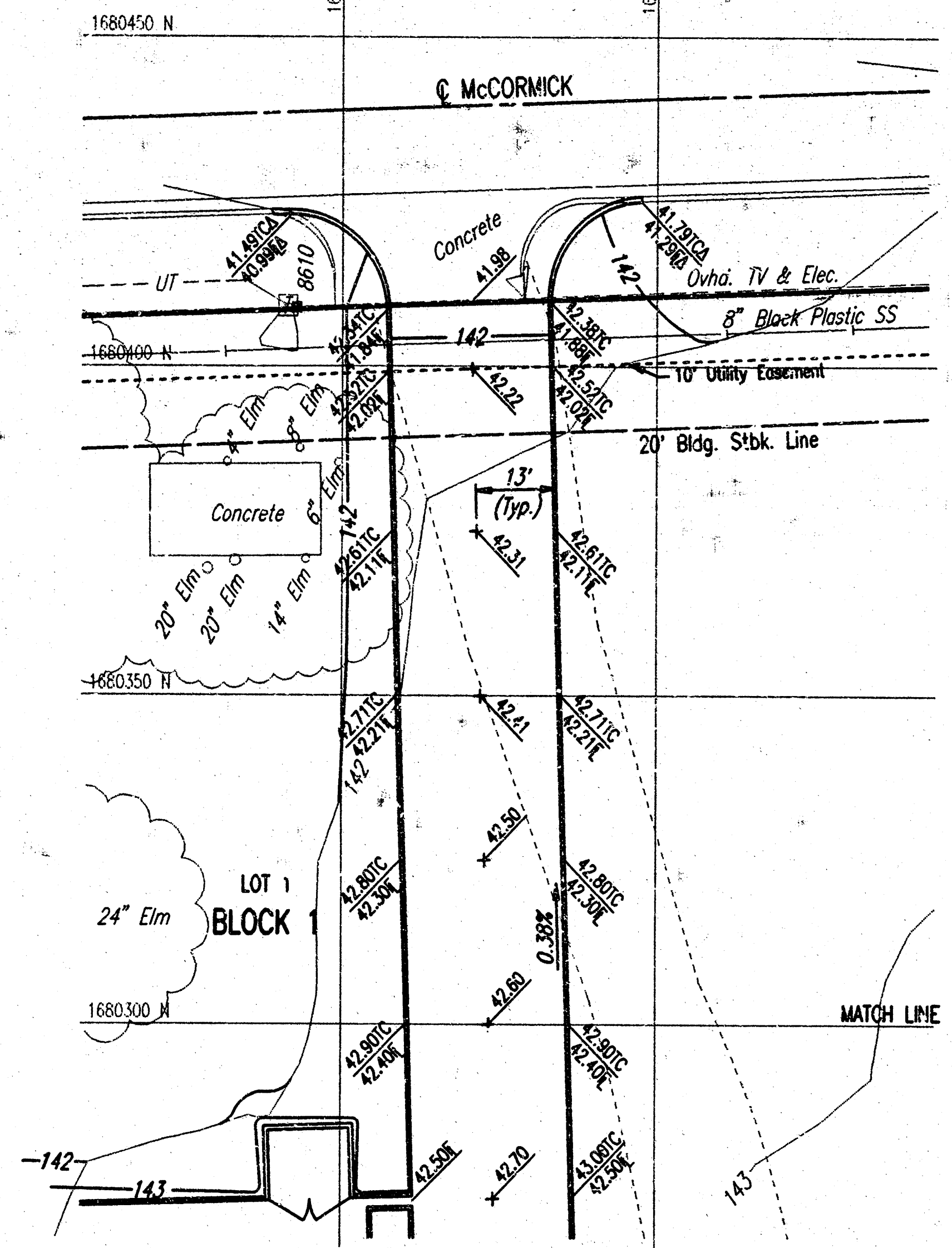
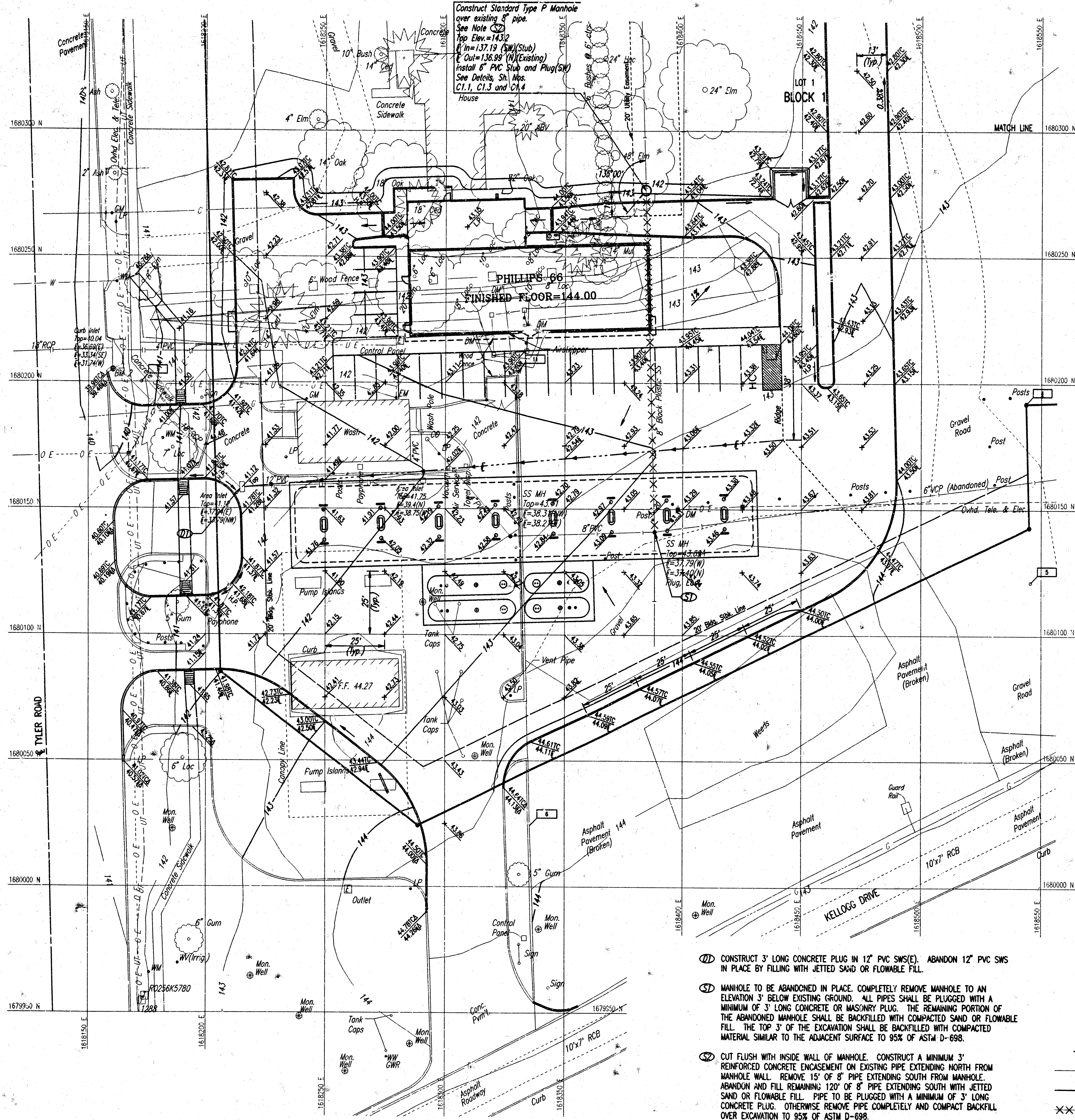
SHEET

C1.1

JOB NUMBER

2501-07

DATE: 1-20-00
 TIME: 12:08-1998 01:10:29 pm
 SCALE: 1"=20'



BM 2: CHISELED "d" IN TOP OF CURB S.W. CORNER CURB INLET ON EAST SIDE TYLER WEST OF CAR WASH. ELEV.=140.08
 BM 3: CHISELED "d" IN TOP OF CURB AT WEST END OF MEDIAN BETWEEN WEST BOUND KELLOGG AND KELLOGG DRIVE ADJACENT TO S.E. ENTRANCE TO PHILLIPS 66. ELEV.=43.40

NOTES

1. VARIOUS UTILITY APPURTENANCES AND CONNECTIONS MAY NEED TO BE ALTERED AND/OR ADJUSTED TO MATCH GRADING PLAN.
2. SEE ARCHITECTURAL DRAWINGS FOR GEOMETRIC LAYOUT AND PAVING DETAILS.

SCALE: 1"=20'

LEGEND

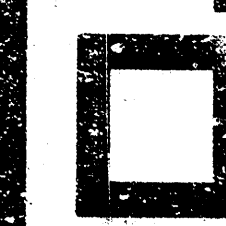
- Δ MATCH EXISTING ELEVATION
- H.P. HIGH POINT
- L.P. LOW POINT
- TC TOP OF CURB ELEVATION
- EL FLOWLINE ELEVATION
- FLOW DIRECTION
- 140 EXISTING CONTOUR
- 140 PROPOSED CONTOUR
- XXXXXX EXISTING SANITARY SEWER TO BE ABANDONED/REMOVED

871PPS

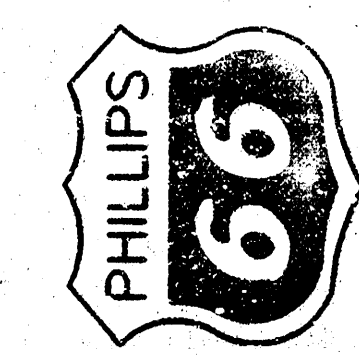
CONTROL POINTS			
POINT	NORTH	EAST	DESCRIPTION
4	1,680,191.9600	1,618,543.3400	#4 Bar (Baughman)
5	1,680,121.1400	1,618,545.4200	#4 Bar (Baughman)
6	1,680,024.2800	1,618,336.1500	Chiseled "d"
9	1,680,200.1500	1,618,172.7100	#4 Bar (Baughman)
11	1,680,204.7000	1,618,330.9900	#4 Bar (Baughman)

4 = CONTROL POINT

Wickham Jarvi and Warman
 ARCHITECTS



PHILLIPS 66
 Kellogg & Tyler Road
 Wichita, KS



REVISION
 NUMBER BY DATE

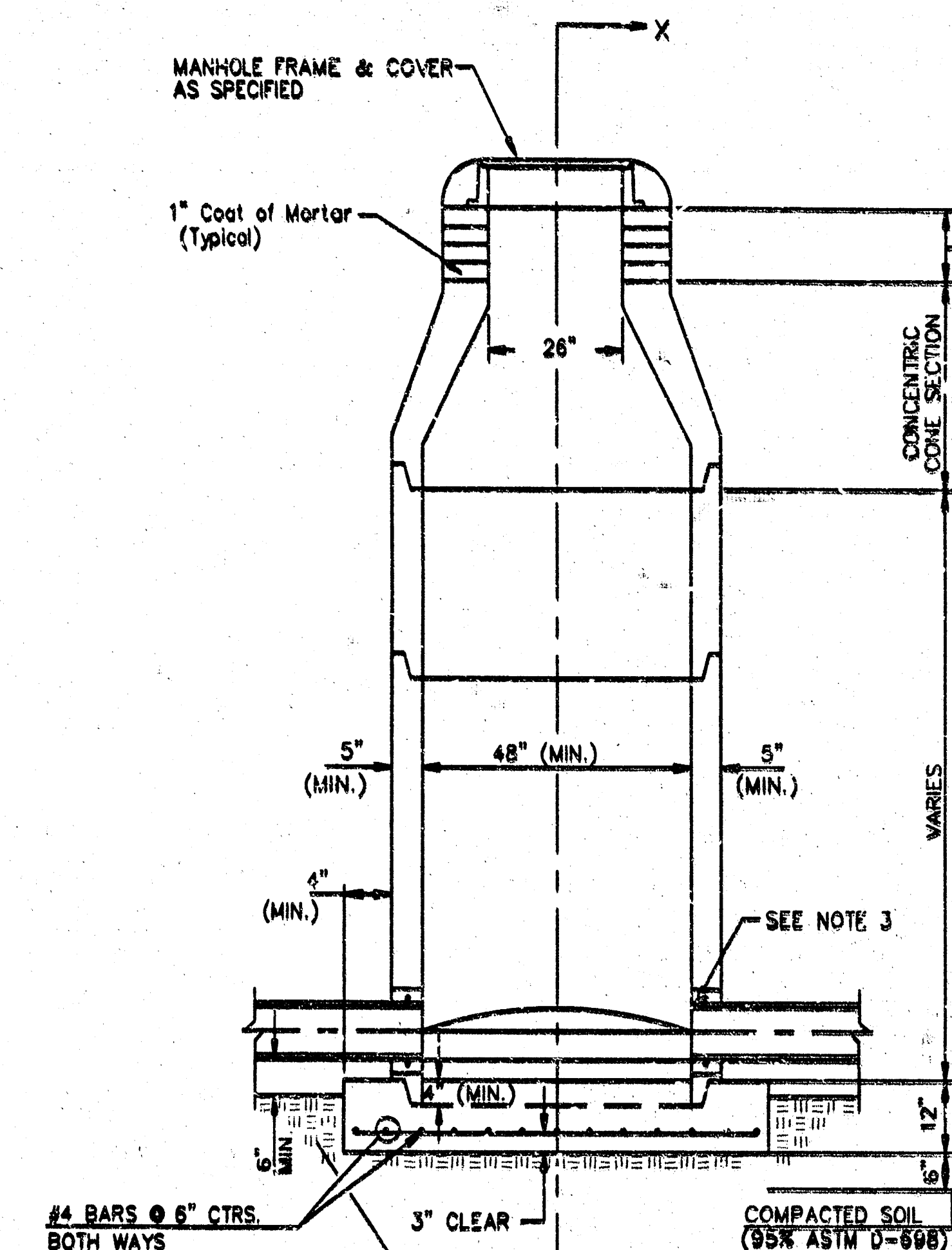
DATE: DEC 1998

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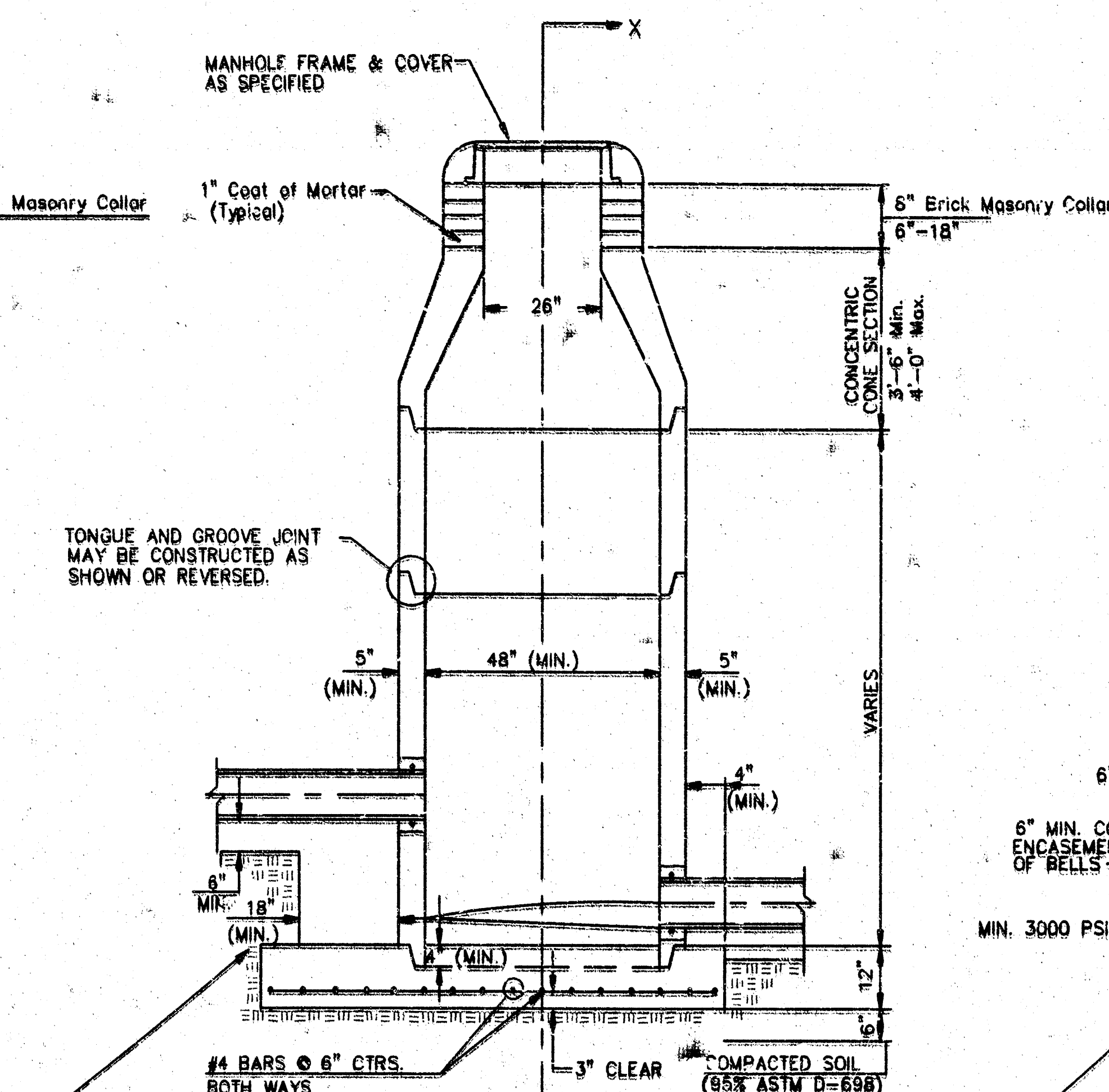
JOB NUMBER
 2581-97

1025 SWIFT SUITE 305
 NORTH CHANDLER CITY
 MISSOURI 64116
 (816) 474-2255
 FAX (816) 474-1414
 njw@wjarvi.com

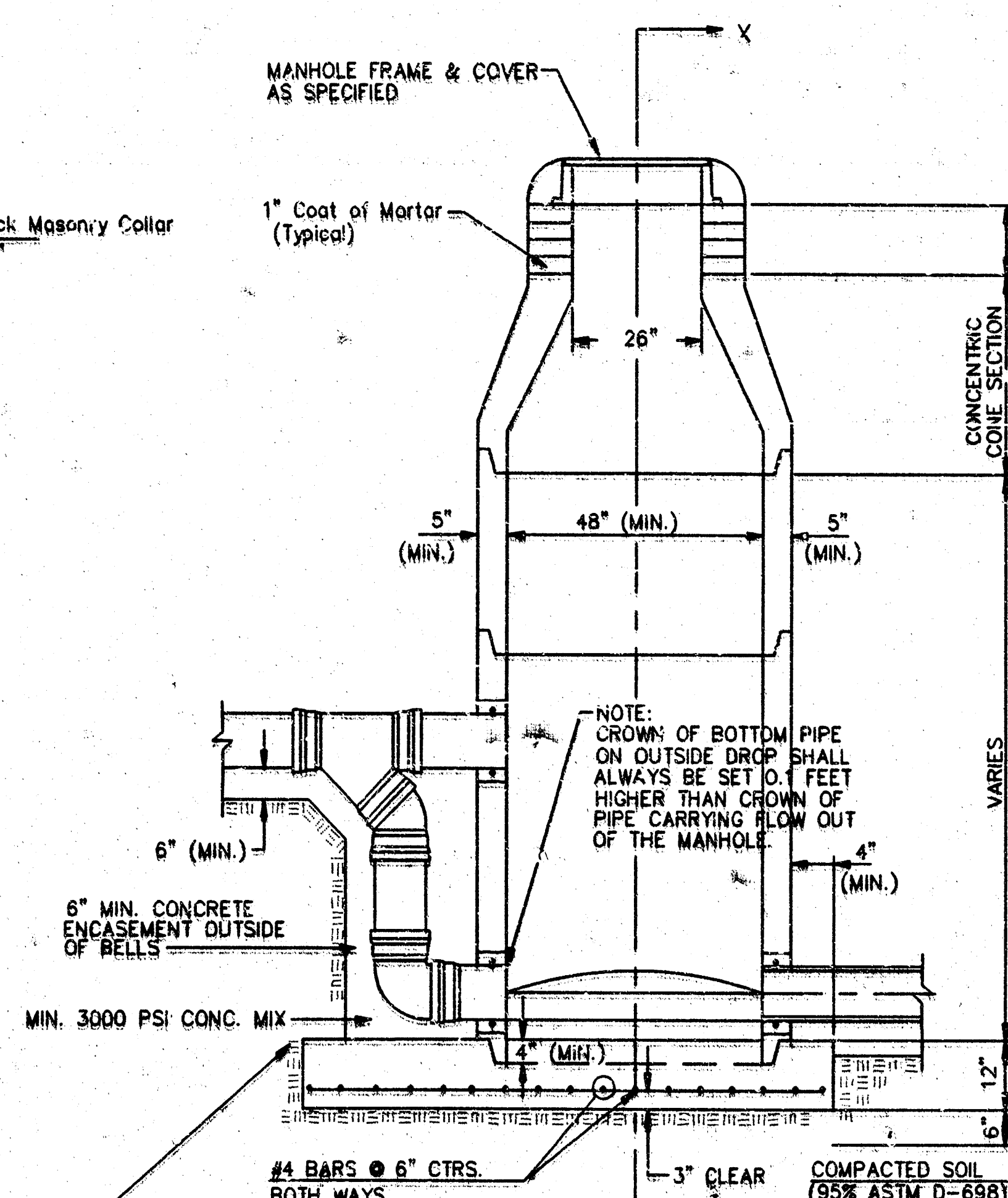
SEWER APPURTENANCES DETAILS



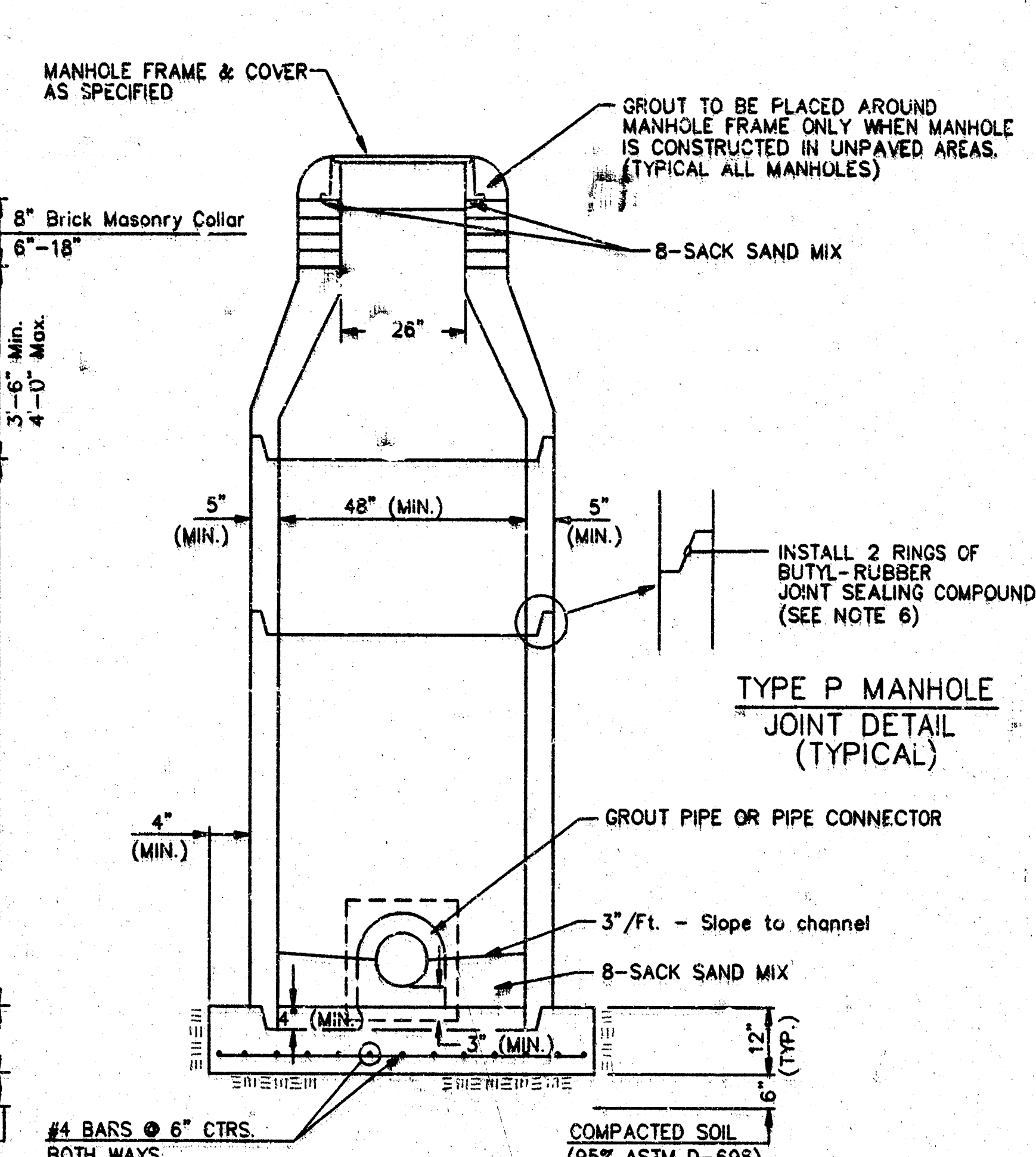
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL 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 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.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEC SERIES 88 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 833 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 BAGS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN IN 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 REAR LINES FOR THE FULL INSIDE DIAMETER 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 OF 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 CONCRETE DONE. 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.

Wickham Jarvi and Warman
ARCHITECTS

PHILLIPS 66
Kellogg & Tyler Road
Wichita, KS

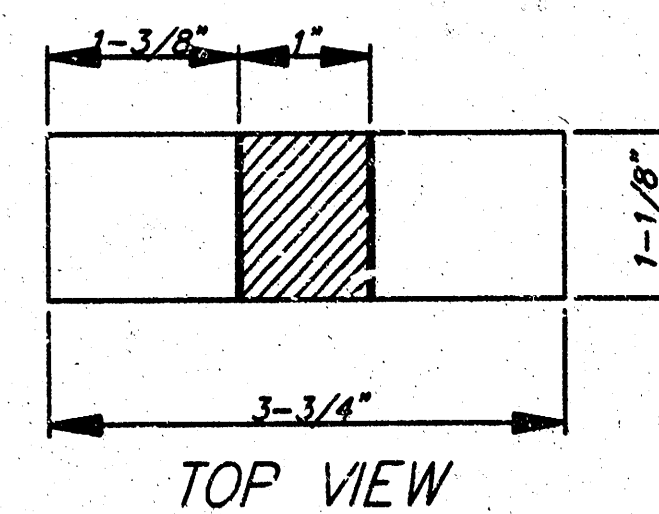


REVISIONS		
NUMBER	BY	DATE
DATE: DEC 98		
SHEET		
C1.3		
JOB NUMBER		
2661-97		

10230 SHIF, SUITE 203
FLYING 66
NORTH KANSAS CITY
MISSOURI 64116
HYPOCRIT@comcast.com

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

PICKHOLE DETAIL



MANHOLE FRAME
Weight = 240 Lbs.

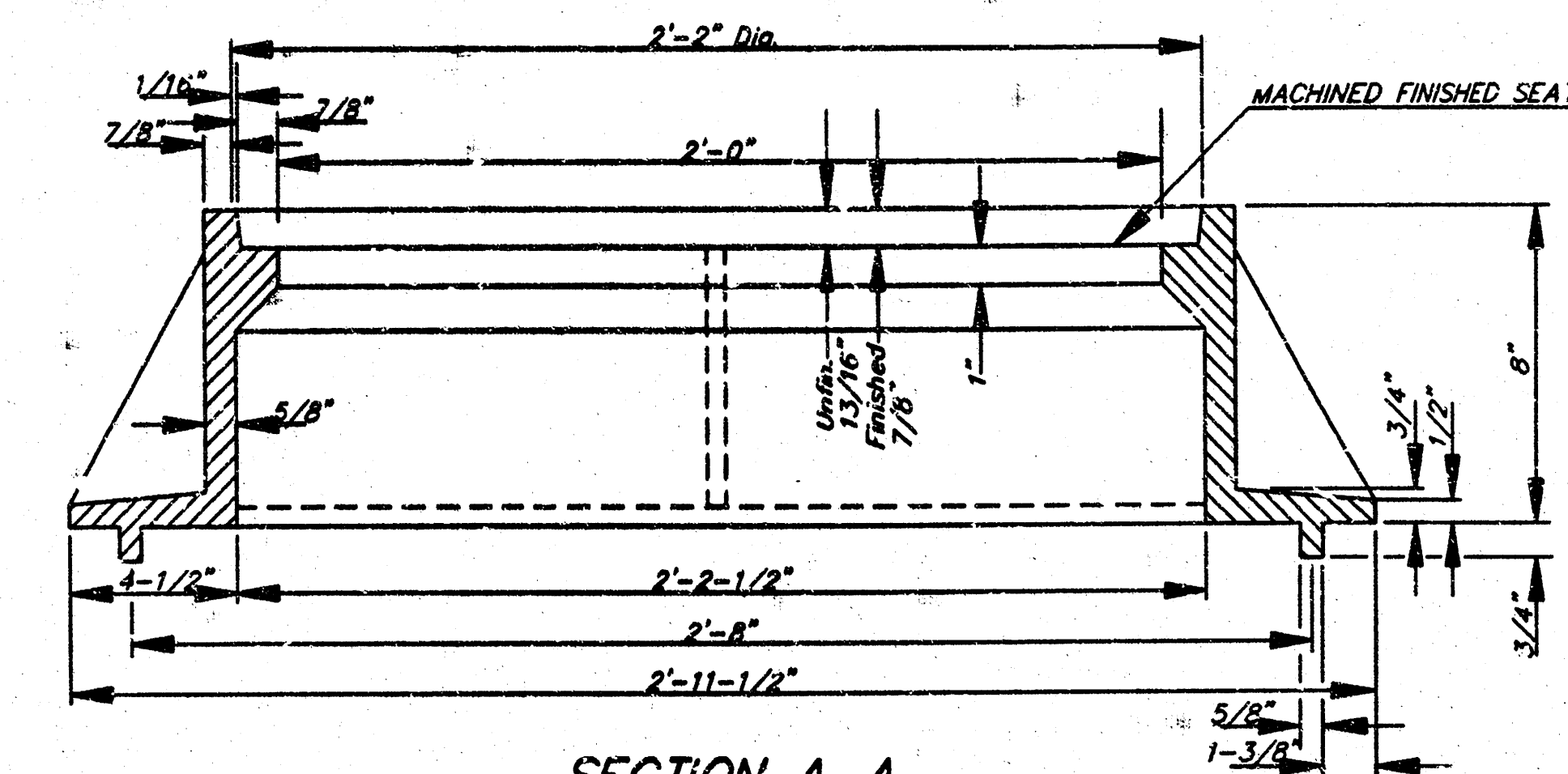
1/2" GUSSETS

FOUNDRY

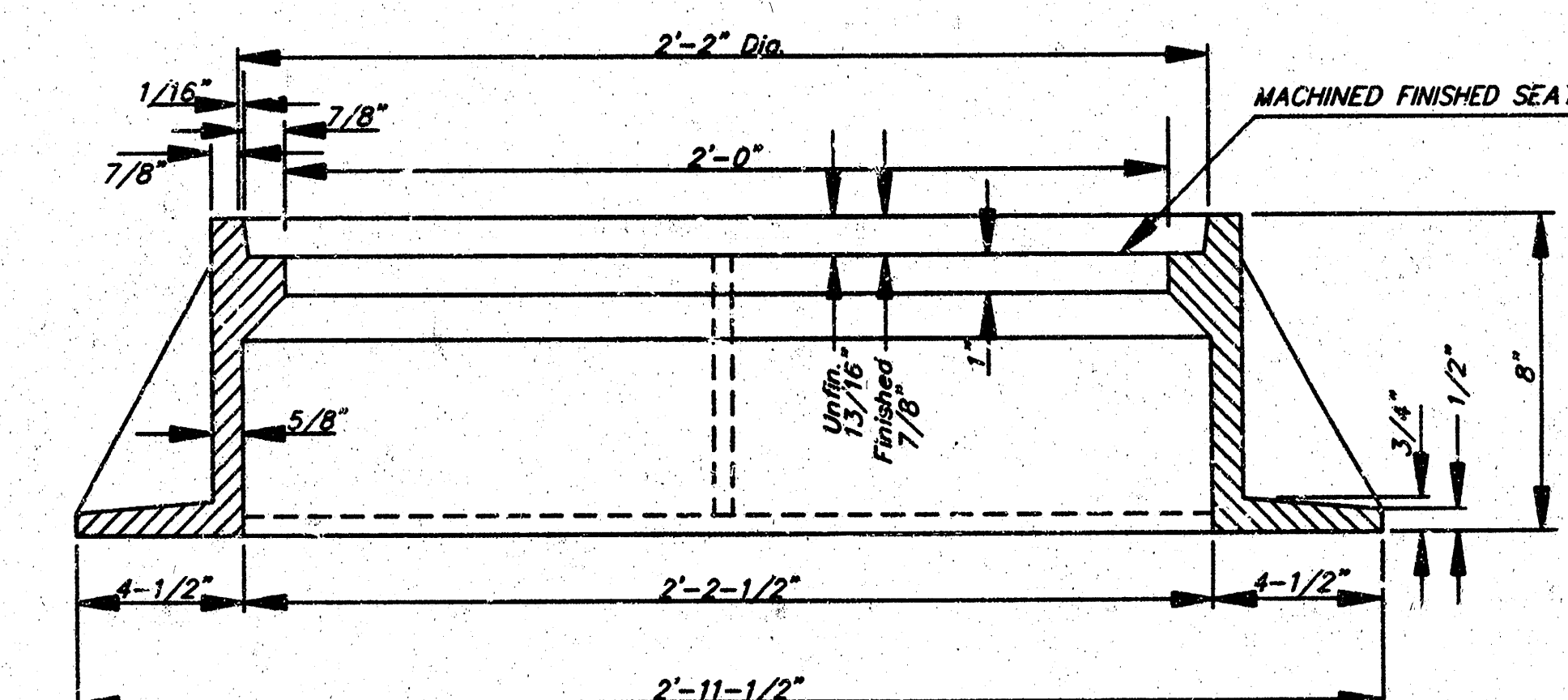
1997

GENERAL NOTES

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 WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.
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 AND FRAME SURFACE. THE SURFACE OF THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING 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 LOCATION ON FRAME OR COVER 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 THROUGHOUT 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.



SECTION A-A
MUD RING



SECTION A-A

Wickham Jarvi and Warman
A R C H I T E C T S

**PHILLIPS 66
Kellogg & Tyler Road
Wichita, KS**



REVISIONS		
NUMBER	BY	DATE

DATE: DEC 98

SHEET

C1.4

JOB NUMBER

2561-97

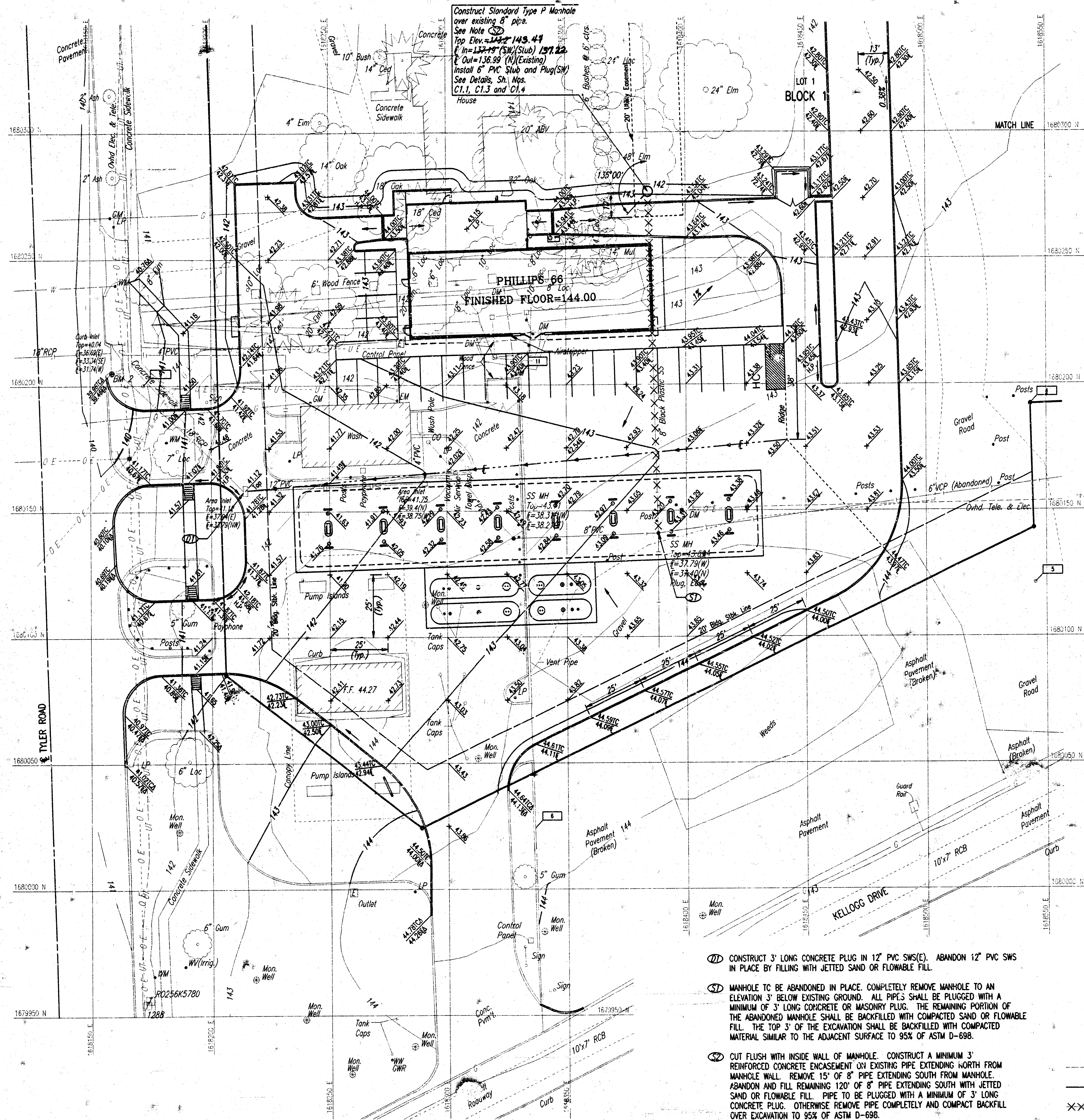
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2561-97

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05-13-1999 10:35:21 am

SCALE: 1"=20.00
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- BM 2: CHISELED "d" IN TOP OF CURB S.W. CORNER CURB INLET ON EAST SIDE TYLER WEST OF CAR WASH. ELEV.=140.08
- BM 3: CHISELED "d" IN TOP OF CURB AT WEST END OF MEDIAN BETWEEN WEST BOUND KELLOGG AND KELLOGG DRIVE ADJACENT TO S.E. ENTRANCE TO PHILLIPS 66. ELEV.=143.40
- NOTES
1. VARIOUS UTILITY APPURTENANCES AND CONNECTIONS MAY NEED TO BE ALTERED AND/OR ADJUSTED TO MATCH GRADING PLAN.
 2. SEE ARCHITECTURAL DRAWINGS FOR GEOMETRIC LAYOUT AND PAVING DETAILS.

SCALE: 1"=20'

LEGEND

- Δ MATCH EXISTING ELEVATION
- H.P. HIGH POINT
- L.P. LOW POINT
- TC TOP OF CURB ELEVATION
- EL FLOWLINE ELEVATION
- FLOW DIRECTION
- 140 — EXISTING CONTOUR
- 140 — PROPOSED CONTOUR
- XXXXXX EXISTING SANITARY SEWER TO BE ABANDONED/REMOVED

PROJECT INSPECTED BY BAUGHMAN CO., P.A.
 ASBEST 0199

CONTROL POINTS			
POINT	NORTH	EAST	DESCRIPTION
4	1,680,191.9600	1,618,543.3400	#4 Bar (Baughman)
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△ = CONTROL POINT

Wickham Jarvi and Warman
 ARCHITECTS

PHILLIPS 66
 Kellogg & Tyler Road
 Wichita, KS



REVISIONS
 NUMBER BY DATE

DATE: DEC 1998

SHEET
 C1.2

JOB NUMBER
 2561-97

0528 SHIRT SUITE 355
 NORTH KANSAS CITY
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 (816) 414-2325
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