

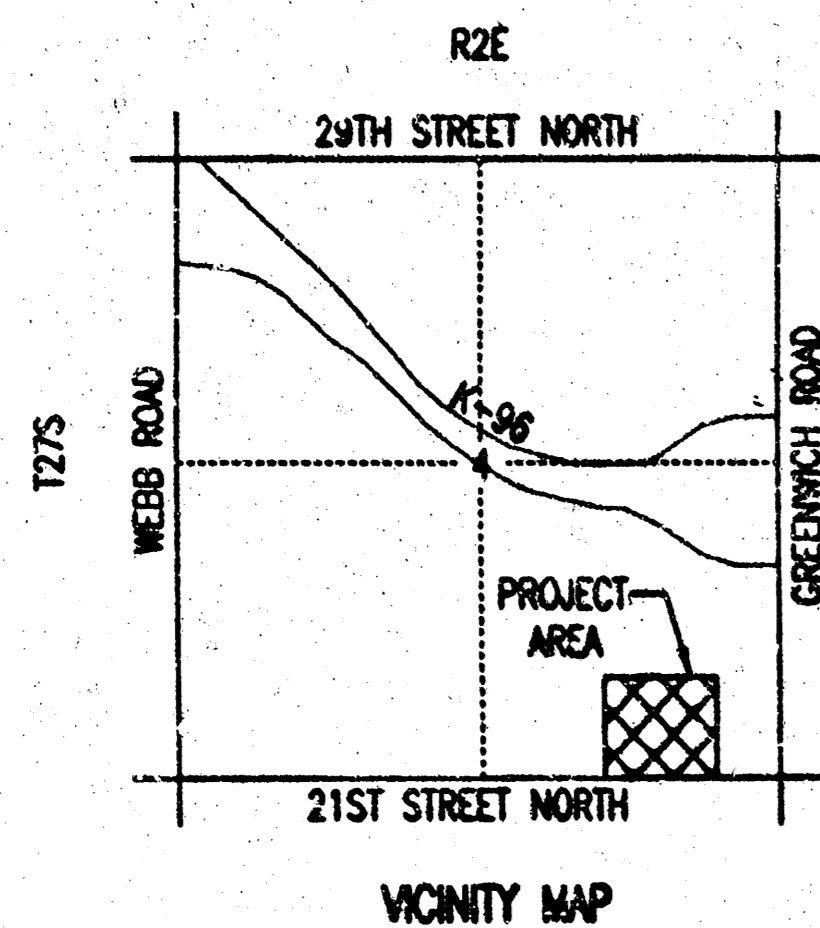
PRIVATE SANITARY SEWER EXTENSION

TO SERVE TARGET NORTHEAST

PRIVATE PROJECT NO. 1390 PPS (607861)

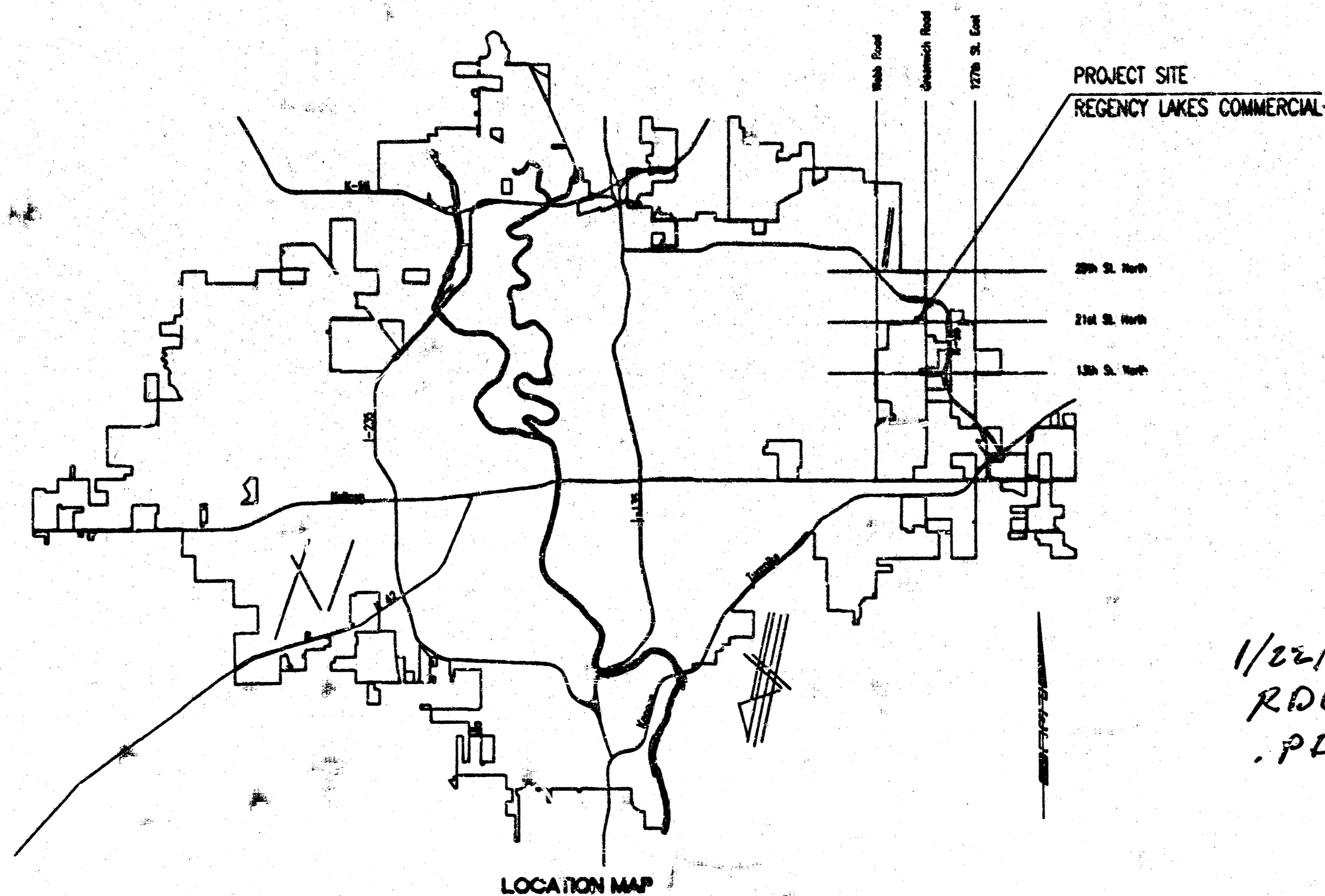
CITY OF WICHITA, KANSAS

NEIL D. CABLE, P.E.-CITY ENGINEER



NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM CONTRACTED BY THE CONTRACTOR. 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 UNTIL SUCH INSPECTION IS ARRANGED FOR AND REQUIRED BOUNDS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY. NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER. IMPROVEMENTS PERFORMED UNDER THIS PROJECT SHALL NOT BE ACCEPTED BY THE CITY UNTIL ALL APPLICABLE DOCUMENTATION HAS BEEN SUBMITTED TO THE CITY ENGINEER. THIS MAY INCLUDE: RECORD DRAWINGS, INSPECTION LOGS, TEST DOCUMENTATION, TV TAPES, AND A CERTIFICATE OF COMPLETION. THE ABOVE SHALL BE PERFORMED BY THE CONSULTING FIRM CONTRACTED TO INSPECT THIS PROJECT.



1/22/04
RDL
.PDF

AS-BUILT
1/22/04
RDL
Signed

INDEX OF SHEETS

SHEET NO. SU3.1	TITLE SHEET
SHEET NO. SU3.2	KEY MAP AND GENERAL NOTES
SHEET NO. SU3.3-SU3.4	PLAN/PROFILE
SHEET NO. SU3.5	STANDARD TYPE "P" MANHOLE DETAILS
SHEET NO. SU3.6	MANHOLE FRAME AND COVER DETAILS
SHEET NO. SU2.10	PLAT
SHEET NO. SG2.1-SG2.4	SOIL EROSION BMP DETAILS

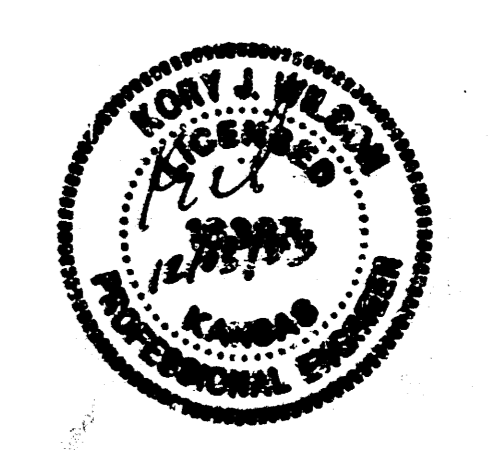
APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers URH 12/3/03
Storm Sewers _____
Driveway Approaches _____
Water Mains _____
Paving _____

TARGET REVIEWED BY:

Site Development Manager	Reviewed and Revisited	Not Reviewed	Approved
Project Architect	Reviewed and Revisited	Not Reviewed	Approved
Project Engineer (M)	Reviewed and Revisited	Not Reviewed	Approved
Project Engineer (E)	Reviewed and Revisited	Not Reviewed	Approved
Project Engineer (S)	Reviewed and Revisited	Not Reviewed	Approved

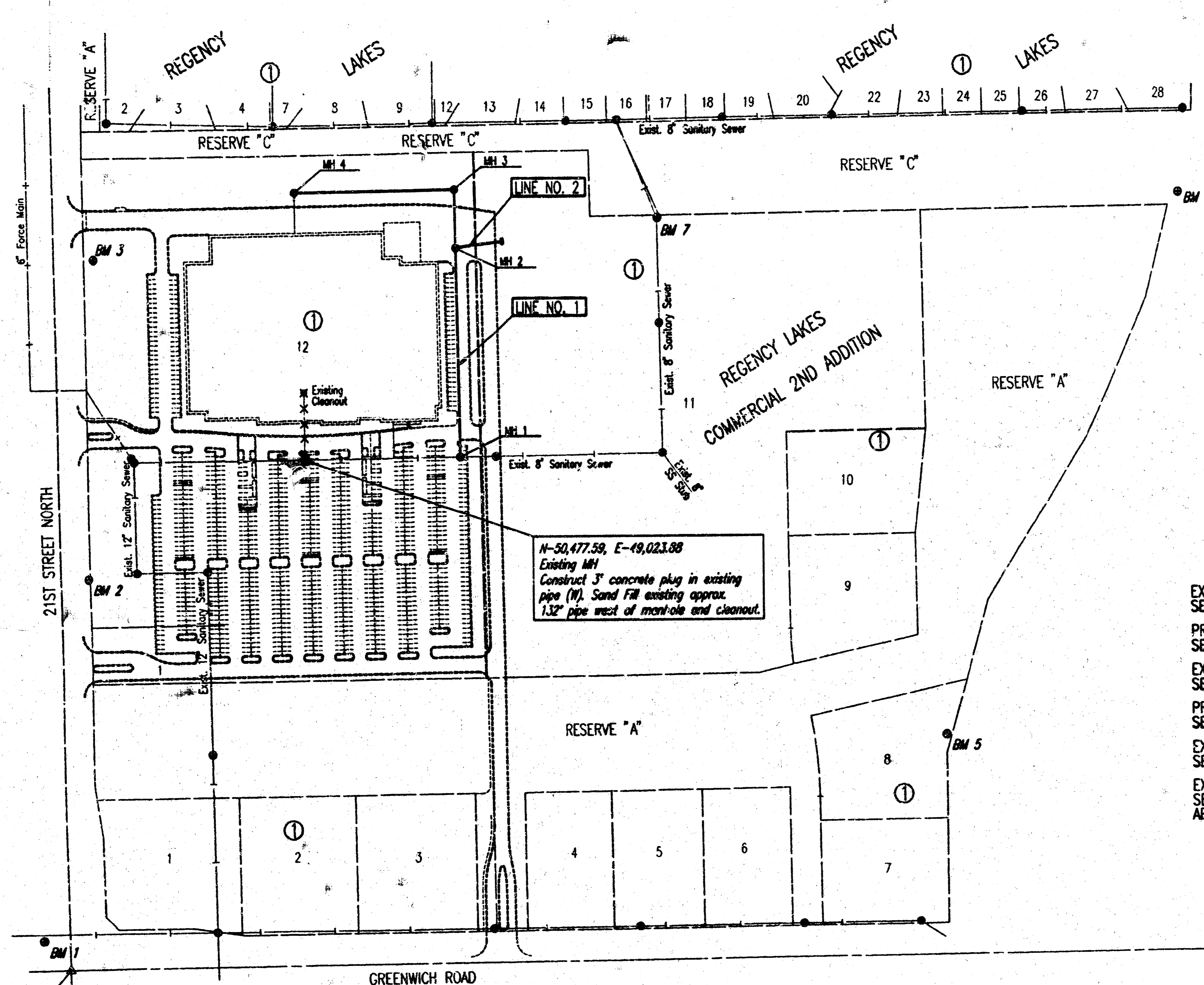
Approved only for conformance of the site construction documents to Target Developer Guide, Edition 2.3 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and consistency on the site construction documents.



DECEMBER 2003

PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

OSNR, N.W. OPER. C&I, SCALE: 1"=1.00'
 01/20/03/04/15/PPS/ST/ST/11/12/03 11:30:50 am



SE Corner, SE 1/4
Sec. 4, T27S, R2E
Found Chiseled '+'

- BENCHMARKS**
- Datum BM from Proj. No. 36-02146-5328, Kitch Property C.O.M. Use in Conc. Base R.R. Signal W. Side Greenwich ± 1/2 Mile S. of 21st St. N.
 - City Datum: 183.19
MSL: 1370.59
 - BM 1: Chiseled '+' of Conc. base Traffic Signal at S.W. Corner 21st St. N. and Greenwich
City: 176.16
MSL: 1363.56
 - BM 2: Chiseled '+' of on headwall N.E. Corner RCBC under 21st St. N. 750'± W. of Greenwich
City: 175.05
MSL: 1362.45
 - BM 3: R.R. Spike in 18' Locust tree, E. end row on N. Side 21st St. N. 1350'± W. of Greenwich
City: 180.14
MSL: 1367.54
 - BM 4: W. end Bolt in Power Pole 1 1/2' above ground of Private Tr. 2400 N. Greenwich on E. side of Rd.
City: 183.80
MSL: 1371.20
 - BM 5: Chiseled '+' of on W. wing wall at W. end of S. headwall RCBC under Bike Path just S. of K-96 E.B. Ramp to Greenwich 400'± from Greenwich.
City: 179.87
MSL: 1367.27
 - BM 6: Chiseled '+' of on S.E. Cor. RCBC under Bike Path just S. of K-96, near N.W. Cor. Property
City: 182.975
MSL: 1370.375
 - BM 7: Cut '+' on N. rim S.S. Manhole near N.W. Cor. Lot 10.
City: 182.06
MSL: 1368.46

N-50,477.58, E-49,023.88
Existing MH
Construct 3' concrete plug in existing pipe (N). Sand Fill existing approx. 132" pipe west of manhole and cleanout.

- LEGEND**
- EXISTING SANITARY SEWER
 - PROPOSED SANITARY SEWER
 - EXISTING SANITARY SEWER w/MANHOLE
 - PROPOSED SANITARY SEWER w/MANHOLE
 - EXISTING SANITARY SEWER w/CLEANOUT
 - EXISTING SANITARY SEWER TO BE ABANDONED

FOR PLAT COORDINATES
SEE SHEET NO. SU2.10

- GENERAL NOTES**
- ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
 - ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM.
 - THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
 - AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
 - 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 OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL 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 IN ACCORDANCE WITH STATE LAWS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
 - CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
 - MANHOLES SHALL BE TYPE "T" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
 - ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. 4078 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
 - RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO 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 WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE 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 MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
 - THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER.
 - THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJACENT TO THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
 - ALL APPROVED EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE STOCKPILED AS APPROVED BY THE DEVELOPER AND IN ACCORDANCE WITH GENERAL NOTE NO. 10 ABOVE.
 - CONTRACTOR IS REQUIRED TO MAINTAIN CONTINUOUS FLOW OF SEWAGE IN EXISTING MAINS AT ALL TIMES.
 - THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF 50 (50) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 9 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
 - THE CONTRACTOR SHALL NOT BURY MANHOLES THAT HAVE RIM ELEVATIONS WHICH ARE LOWER THAN EXISTING GROUND AT THE MANHOLE. THE GROUND AROUND SUCH MANHOLES AND ALONG THE SEWER ALIGNMENT SHALL BE BACKFILLED TO THE APPROXIMATE ELEVATION OF THE PROPOSED GRADE ELEVATION SHOWN ON THE PLAN/PROFILE SHEETS. THE CONTRACTOR SHALL PROVIDE DRAINAGE AWAY FROM THESE MANHOLES AND SEWER LINES BY CONSTRUCTION OF TEMPORARY DITCHES OR SLOPING THE GROUND AS REQUIRED.
 - THE CONTRACTOR SHALL PROVIDE MOUNDING EARTH AT MANHOLES AND CLEANOUTS THAT HAVE TOP ELEVATIONS GREATER THAN 1 FOOT ABOVE EXISTING GRADE, AS SHOWN ON THE PLANS.
 - INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROVISED BY PROJECT SPECIAL PROVISIONS.
 - IN AREAS WHERE FUTURE PAVEMENT IS ANTICIPATED, SUCH AS PARKING LOTS OR DRIVES, THE SANITARY SEWER TRENCH SHALL BE SAND FILLED AND FLOUSHED WITH WATER PER THE REQUIREMENTS LATER IN THE STANDARD SPECIFICATIONS FOR THE CITY OF WICHITA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SANITARY SEWER TRENCHES ADJACENT TO STREET OR POND RIGHT-OF-WAY SHALL BE BACKFILLED WITH JETTED SAND UNLESS OTHERWISE SPECIFIED IN THE PLANS.
 - ROUGH SITE EARTH WORK SHALL BE COMPLETED PRIOR TO SANITARY SEWER CONSTRUCTION.
 - THE CONTRACTOR SHALL VERIFY ALL MANHOLE RIM ELEVATIONS WITH FINAL PRELIMINARY ELEVATIONS. WHEN LOCATED IN PAVED AREAS, ALL MANHOLE RIMS ARE TO BE FLUSH WITH THE TOP FINAL PAVEMENT. WHERE MANHOLE IS SET OUTSIDE PROPOSED PAVEMENT THE RIM ELEVATION SHALL BE 0.4' ABOVE PROPOSED FINAL GRADE.

TARGET

REVIEWED BY:

Site Development Manager	Reviewed and Resubmit	Not Reviewed	Approved
Project Architect	Reviewed and Resubmit	Not Reviewed	Approved
Project Engineer (M)	Reviewed and Resubmit	Not Reviewed	Approved
Project Engineer (E)	Reviewed and Resubmit	Not Reviewed	Approved
Project Engineer (S)	Reviewed and Resubmit	Not Reviewed	Approved

Approved only for conformance of the site construction documents to Target Developer Guide, Edition 2.3 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and dimensions on the site construction documents.

KEY MAP AND GENERAL NOTES

PROFESSIONAL PROJECT NO. 1390 PPS (607861)

Professional Engineering Consultants, P.A.

303 S. E. WEAVER, WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

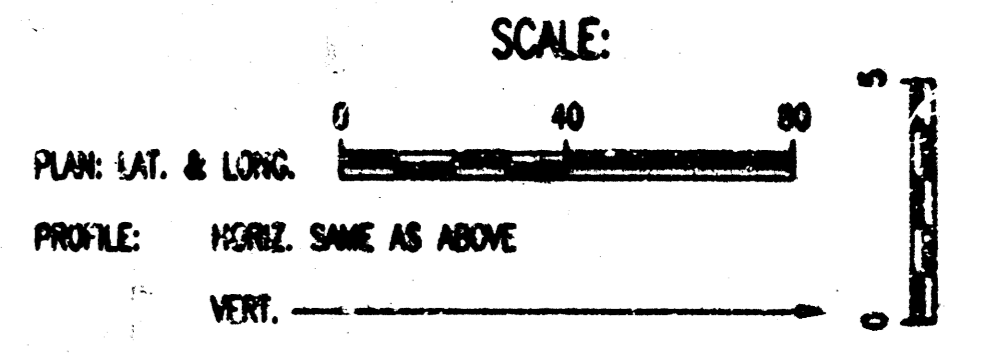
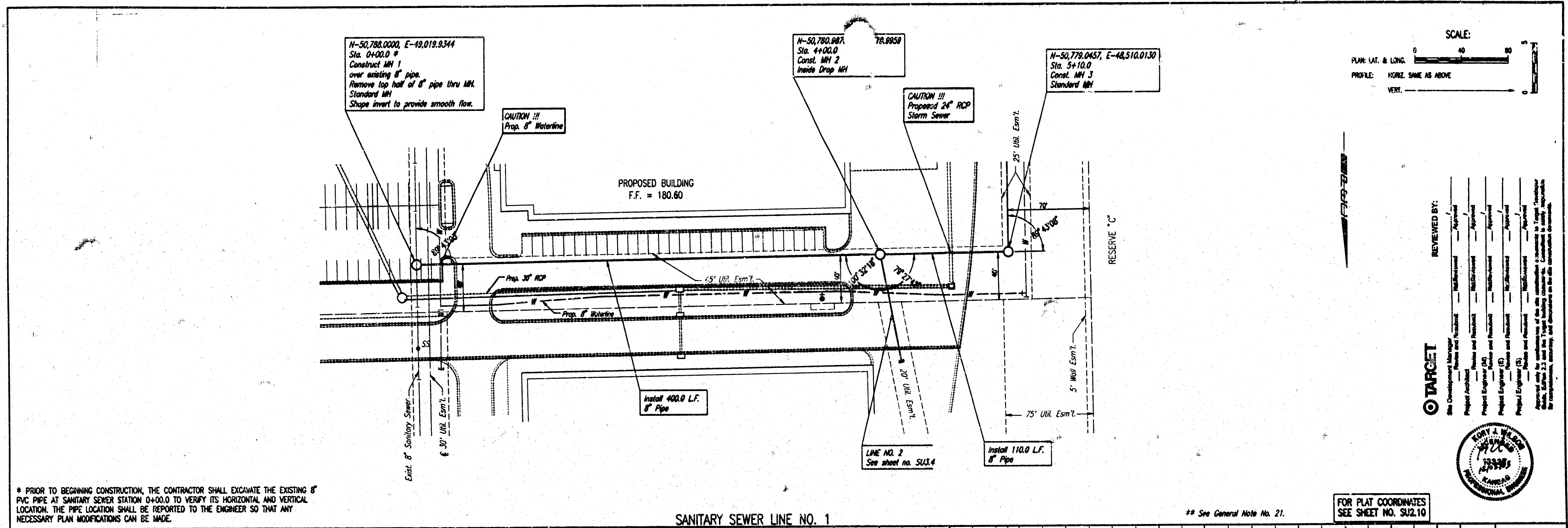
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Drawn by CSL Date AUGUST 2003

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 01-2003\03419\PPSS\SSHEVMAP 12-02-2003

PLAN
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 DATE

PROFILE
 CHECKED
 DATE

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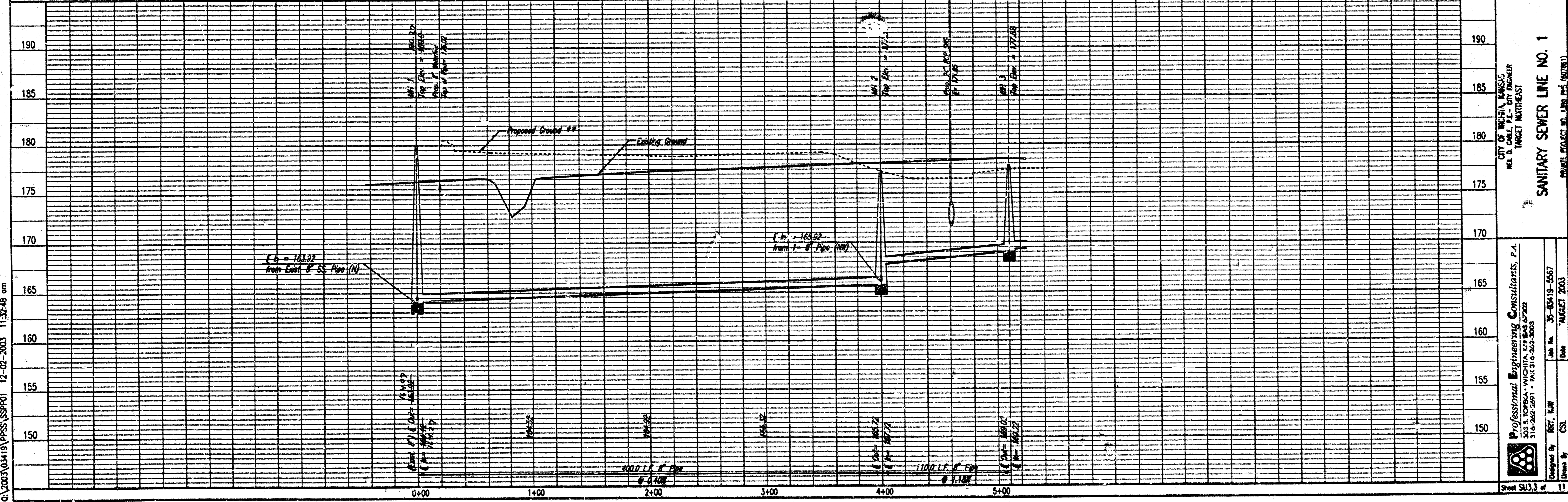
City Development Manager	Reviewed and Approved
Project Architect	Reviewed and Approved
Project Engineer (PE)	Reviewed and Approved
Project Engineer (E)	Reviewed and Approved
Project Engineer (S)	Reviewed and Approved

FOR PLAT COORDINATES
 SEE SHEET NO. SU2.10

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8\"/>

SANITARY SEWER LINE NO. 1

** See General Note No. 21.



CITY OF WICHITA, KANSAS
 REG. DIST. ENGR. # 1000000000
 TARGET ENGINEERING

SANITARY SEWER LINE NO. 1

Professional Engineering Consultants, P.A.
 303 S. TOPKA, WICHITA, KS 67202
 316-262-2661 • FAX 316-262-3003

Designed By: RNT, KUN
 Drawn By: CS

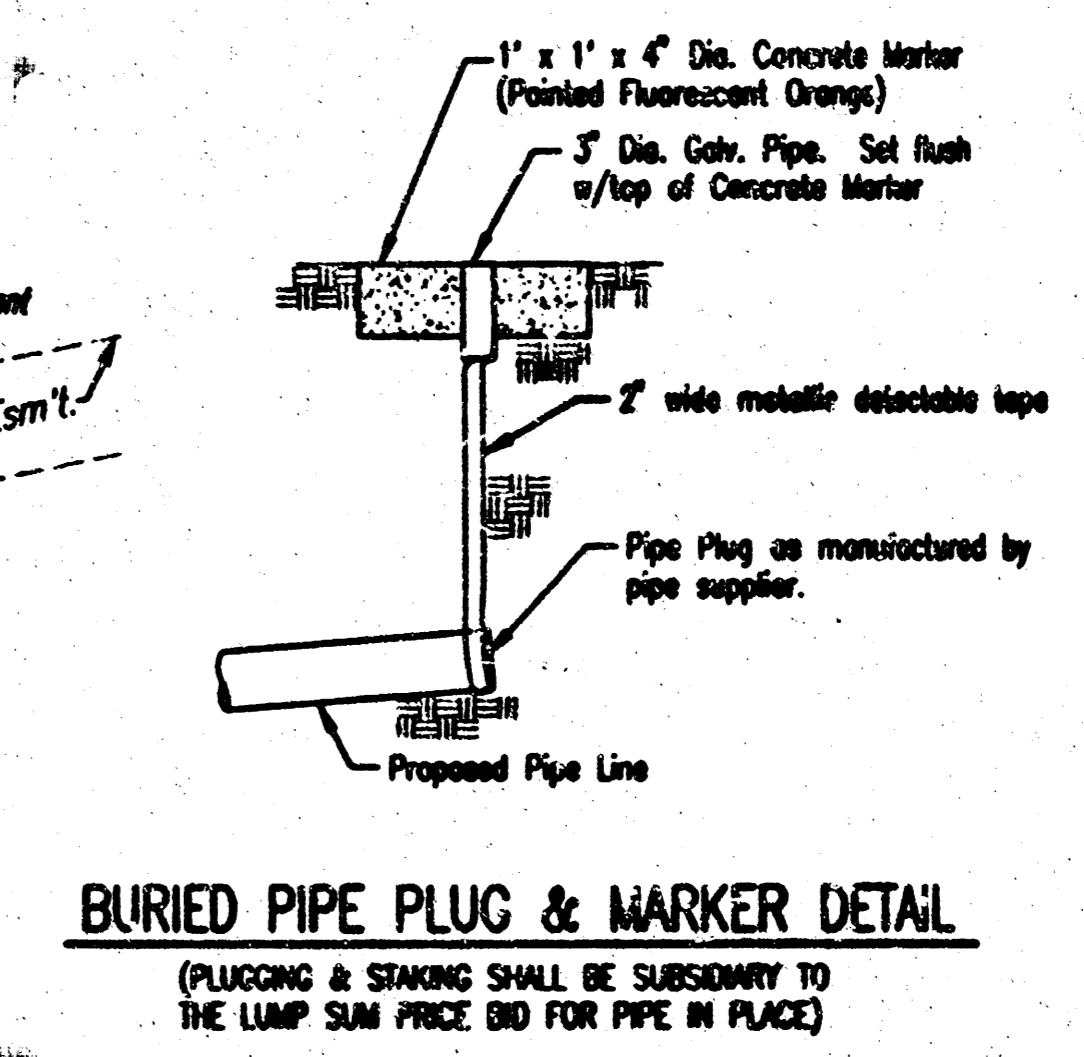
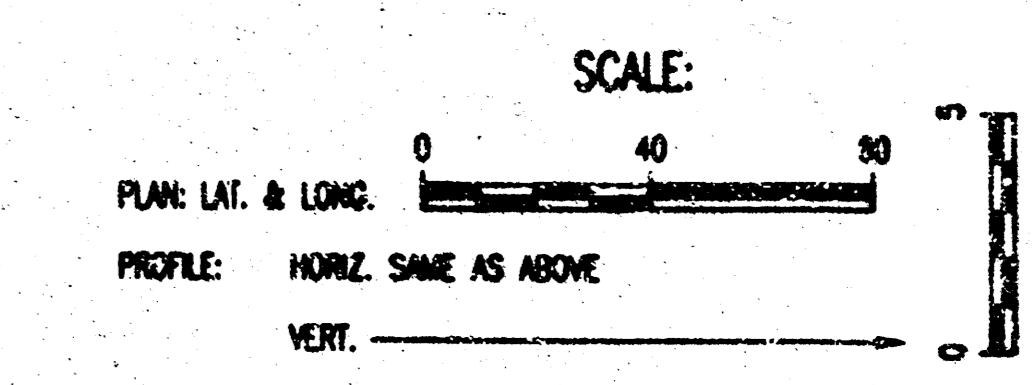
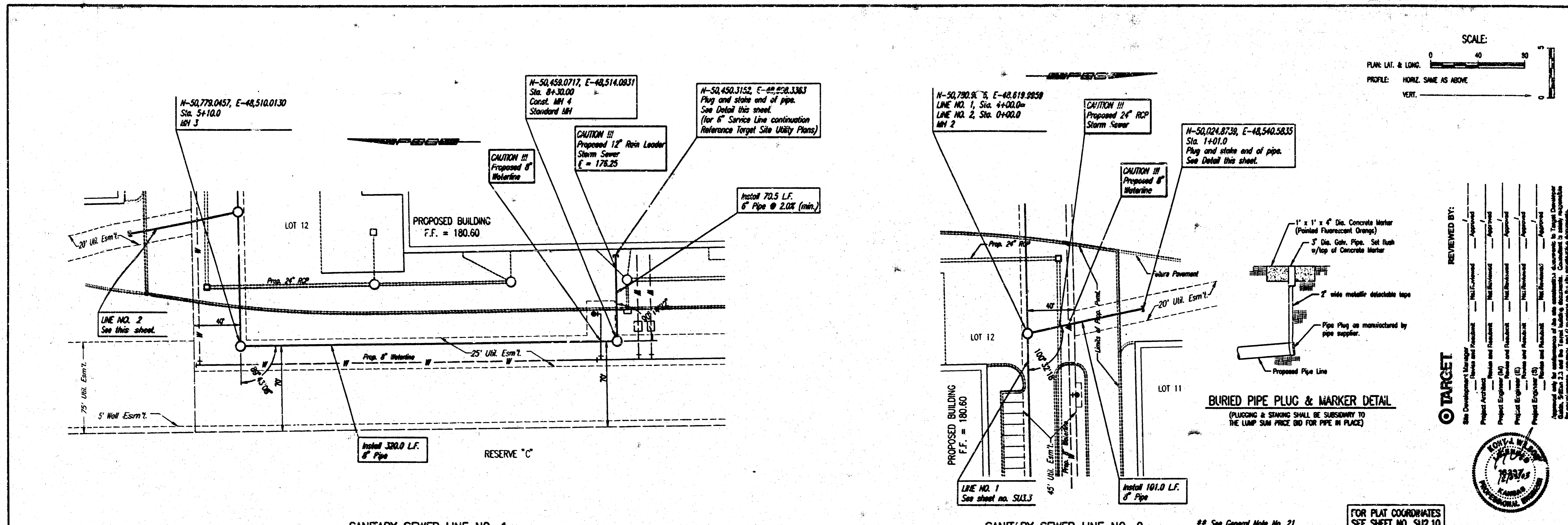
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 Date: AUGUST 2003

Sheet SU3.3 of 11

PLAN
CHECKED
DATE

PROFILE
CHECKED
DATE

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REVIEWED BY:

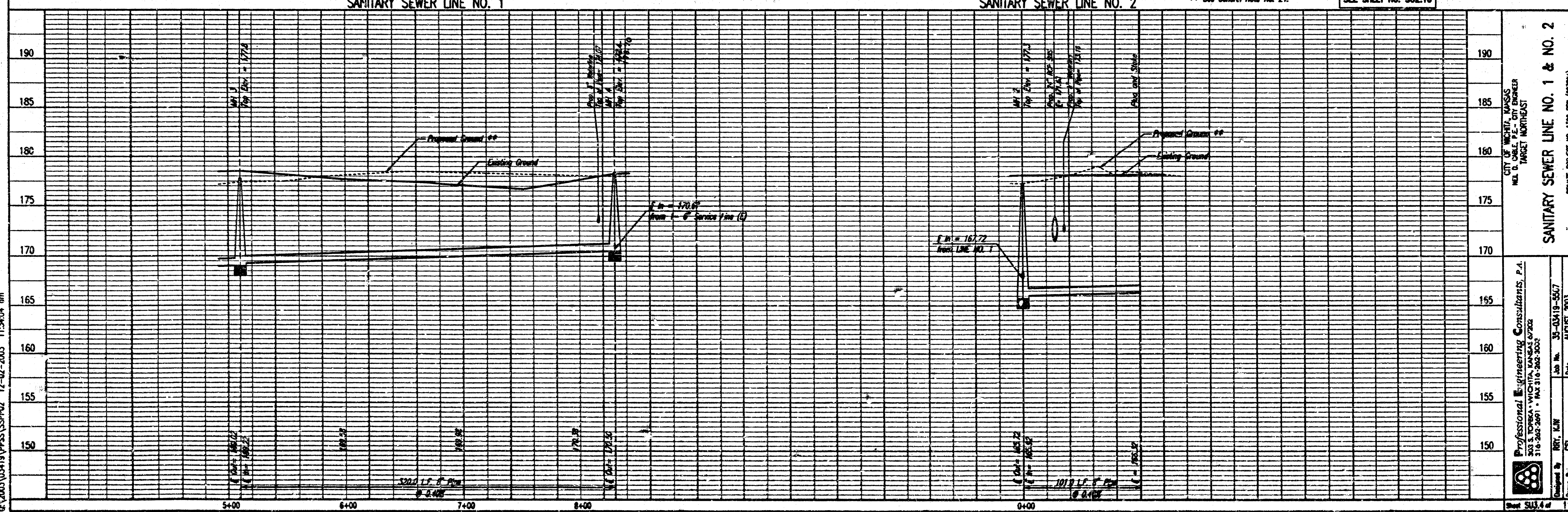
Site Development Manager	Not Reviewed	Approved
Project Architect	Not Reviewed	Approved
Project Engineer (ME)	Not Reviewed	Approved
Project Engineer (SE)	Not Reviewed	Approved
Project Engineer (S)	Not Reviewed	Approved
Project Engineer (E)	Not Reviewed	Approved

Approved only for submittals of the site conditions: equipment to Target Developer. Utility, Station 2.3 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and compliance with all applicable codes and regulations.

TARGET

PROFESSIONAL SEAL

FOR PLAN COORDINATES SEE SHEET NO. SU2.10



SANITARY SEWER LINE NO. 1 & NO. 2

CITY OF WICHITA, KANSAS
 MEL D. CABLE P.E., CITY ENGINEER
 TARGET NORTHWEST

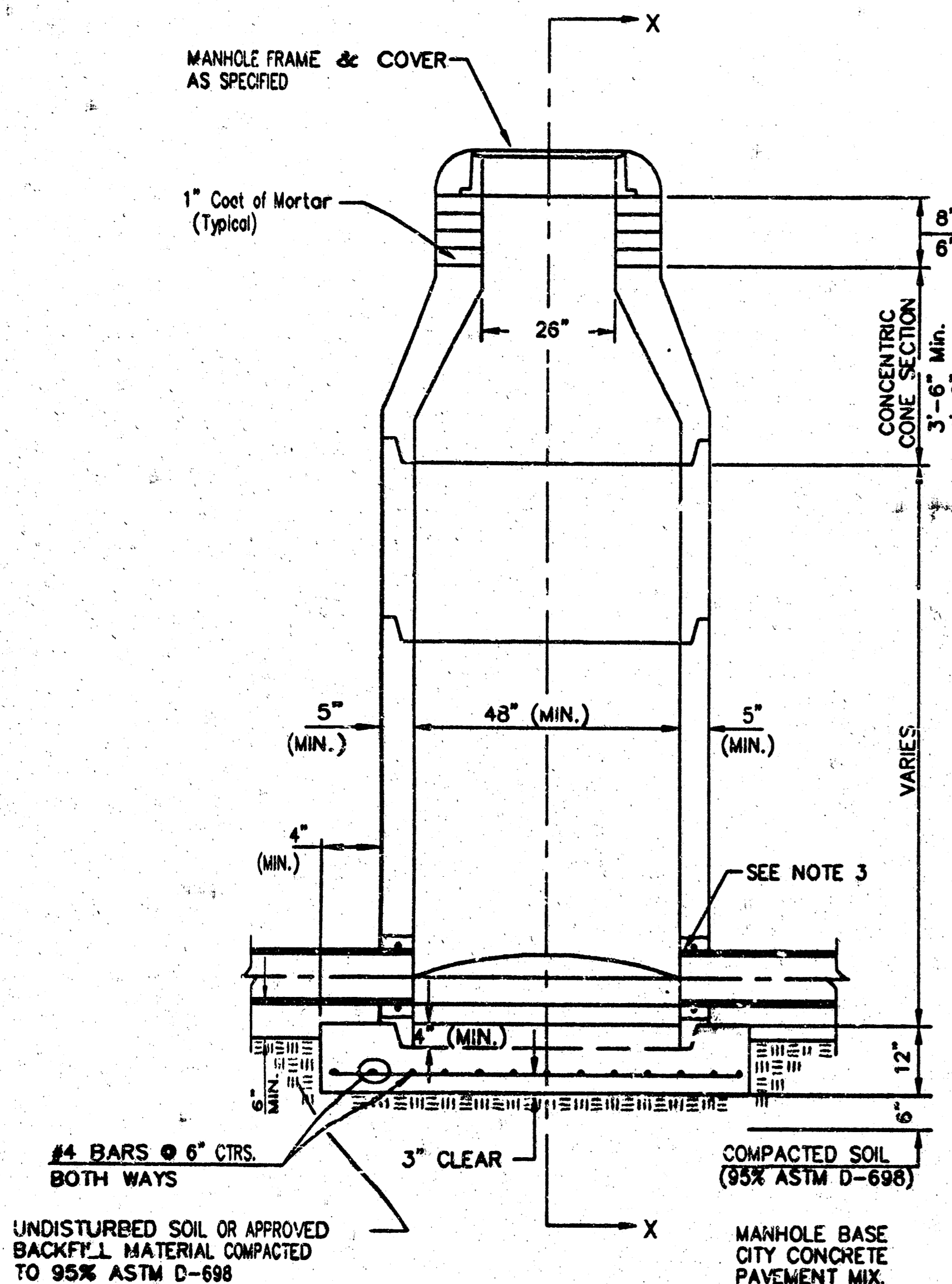
Professional Engineering Consultants, P.C.
 303 S. TORREY - WICHITA, KANSAS 67202
 316-265-5891 • Fax: 316-265-5888

Designed by: R.K., K.W.
 Drawn by: C.S.L.

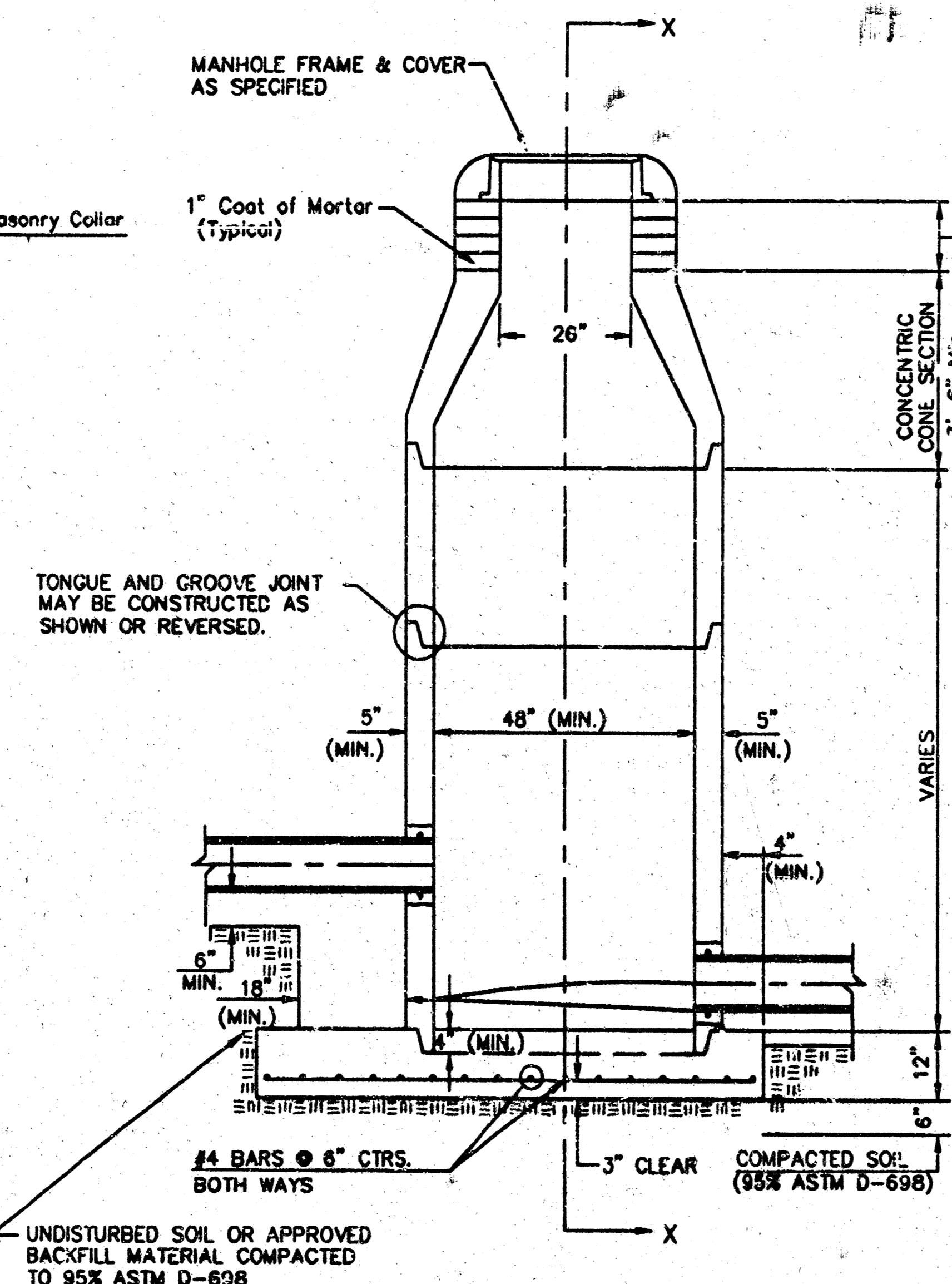
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 Date: AUGUST 2003

Sheet SU3.4 of 11

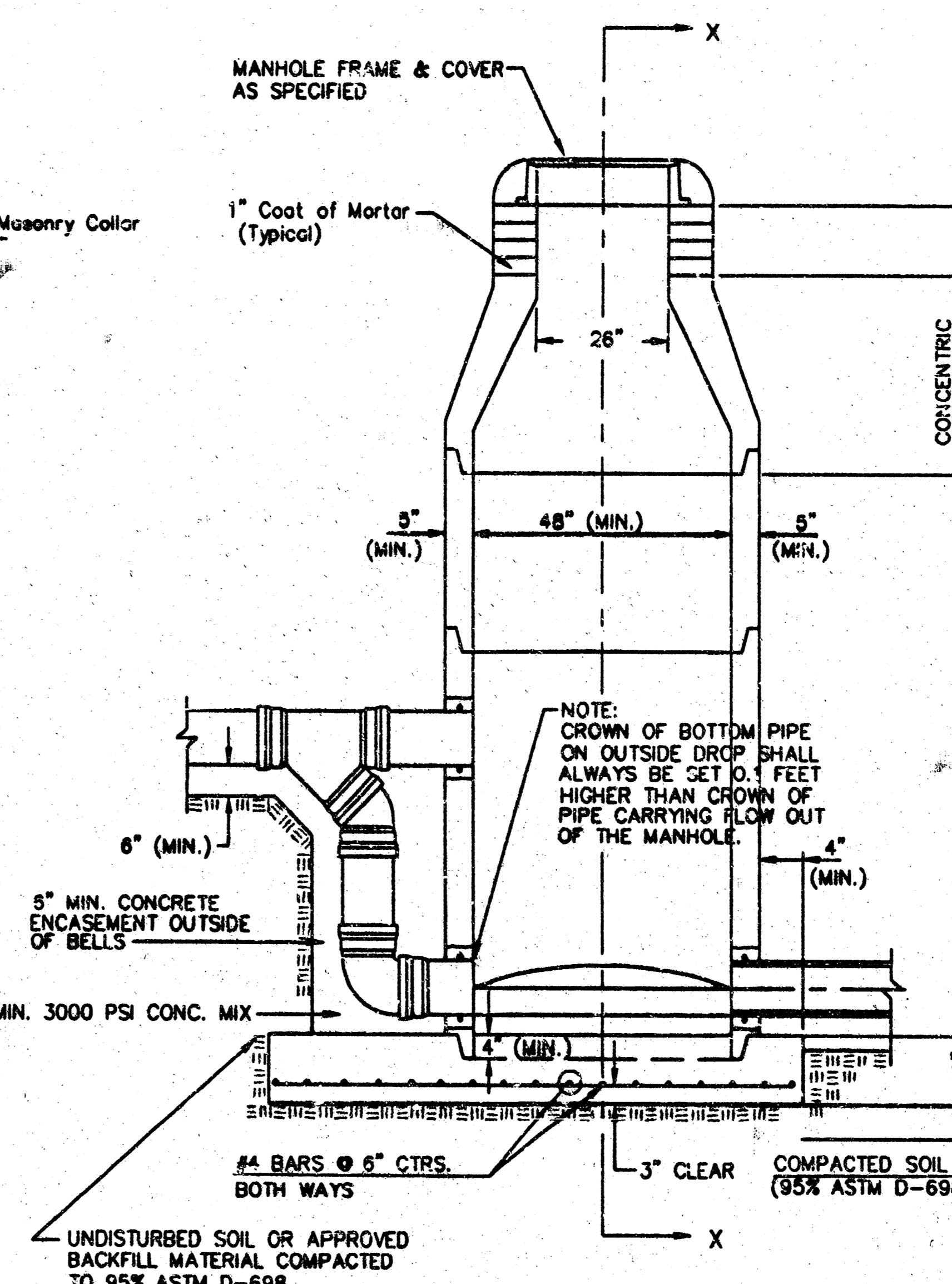
SEWER APPURTENANCES DETAILS



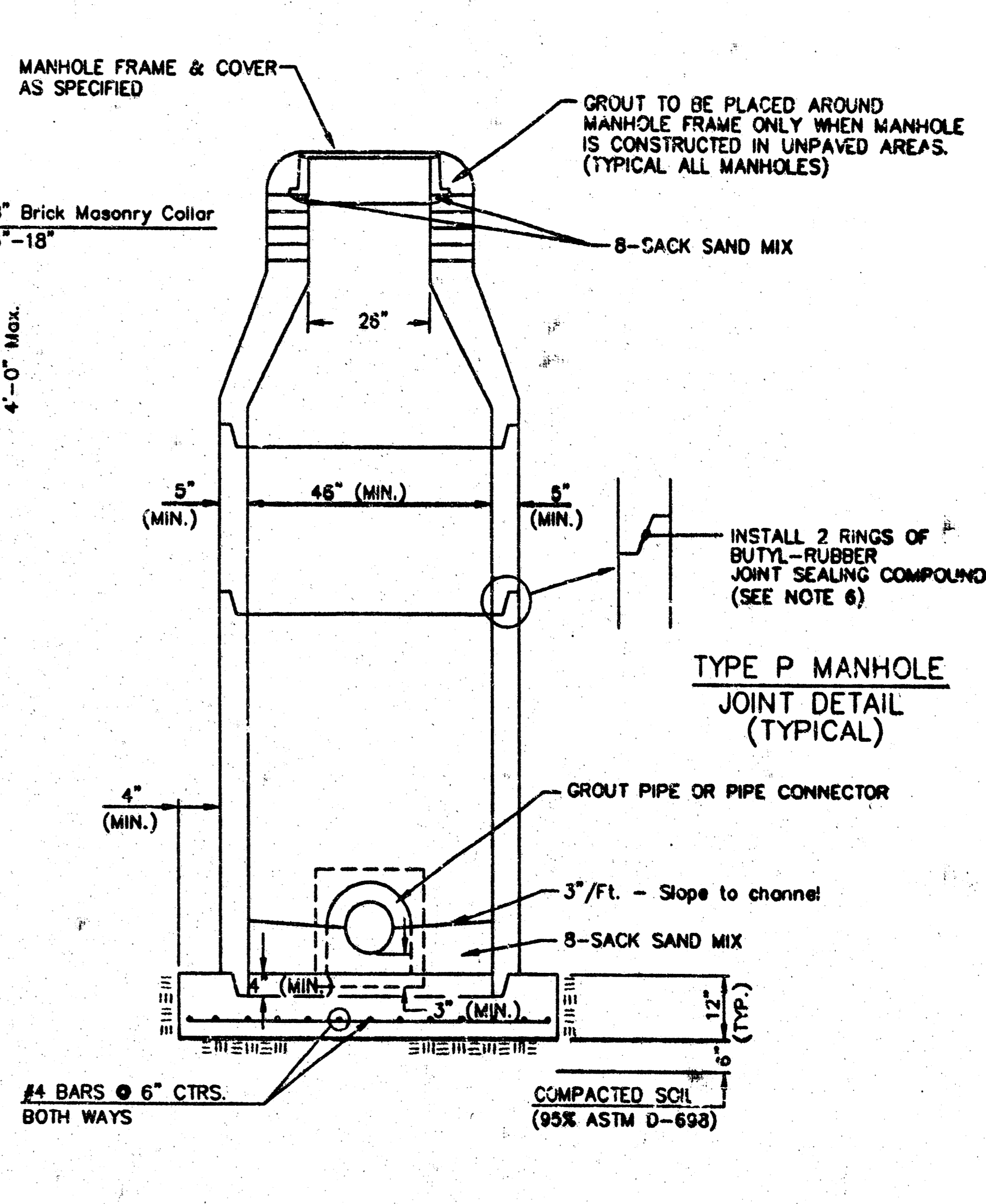
TYPE P STANDARD MANHOLE



TYPE P INSIDE DROP MANHOLE



TYPE P OUTSIDE DROP MANHOLE



SECTION X (TYPICAL)

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 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 THEMEX SERIES 68 H-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT 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 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.

- 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 SLUDGS 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.
- 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.

DSNR: KJV OPER. CSJ SCALE: 1"=1'-0"
 01/37/51 pm
 01/2003/02/19/PPS/Edwmbh. 12-02-2003

TARGET

Reviewed only for conformance of the site construction documents to Target Developer Guide, Edition 2.3 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and dimensions on the site construction documents.

REVIEWED BY:	
Site Development Manager	Not Reviewed / Approved
Project Architect	Not Reviewed / Approved
Project Engineer (M)	Not Reviewed / Approved
Project Engineer (E)	Not Reviewed / Approved
Project Engineer (S)	Not Reviewed / Approved



THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
100 SOUTH MAIN STREET
WICHITA, KANSAS 67202
(316) 261-1114 FAX

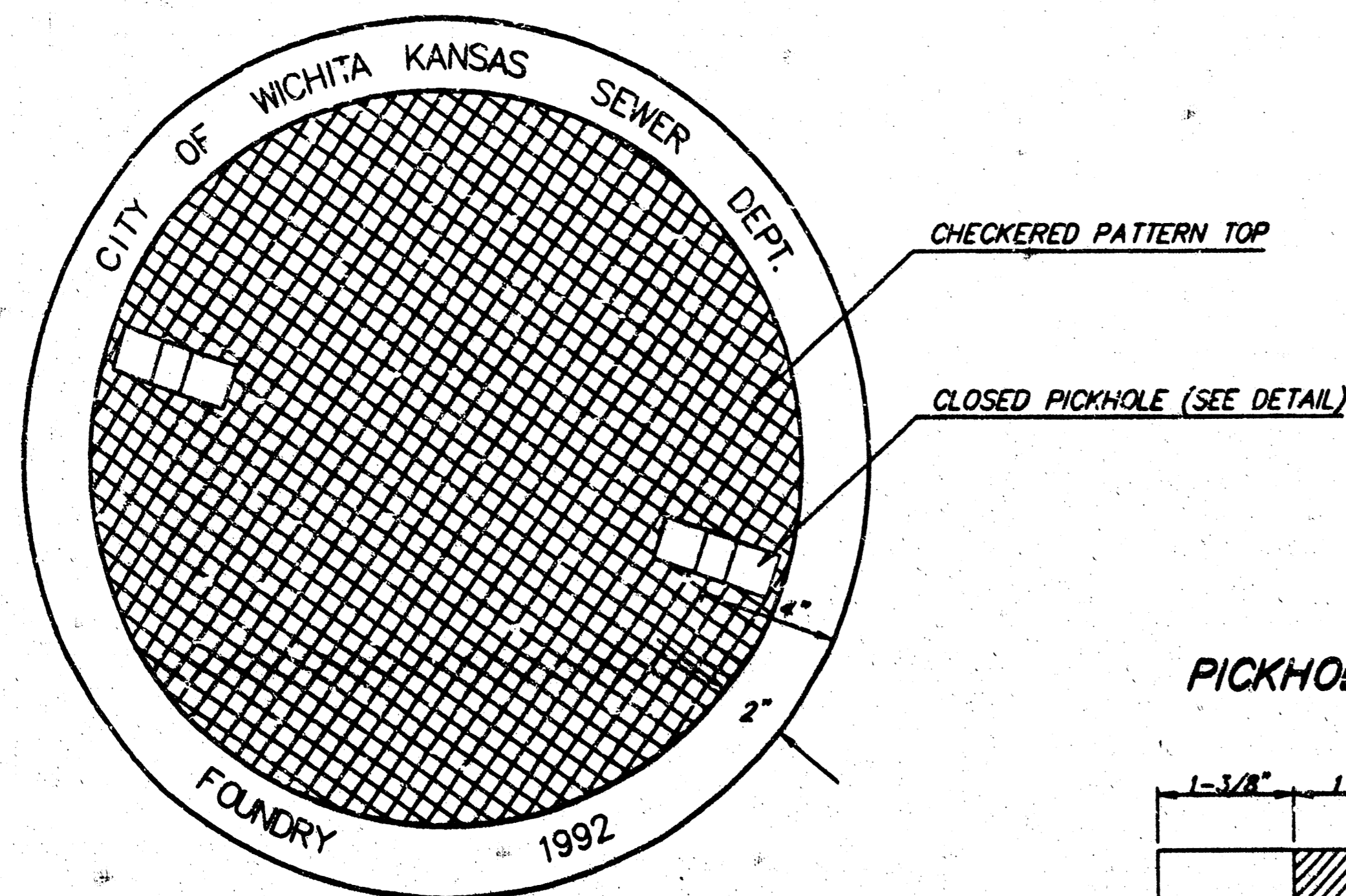
STANDARD TYPE 'P' MANHOLES

NEIL D. CABLE, P.E. - CITY ENGINEER

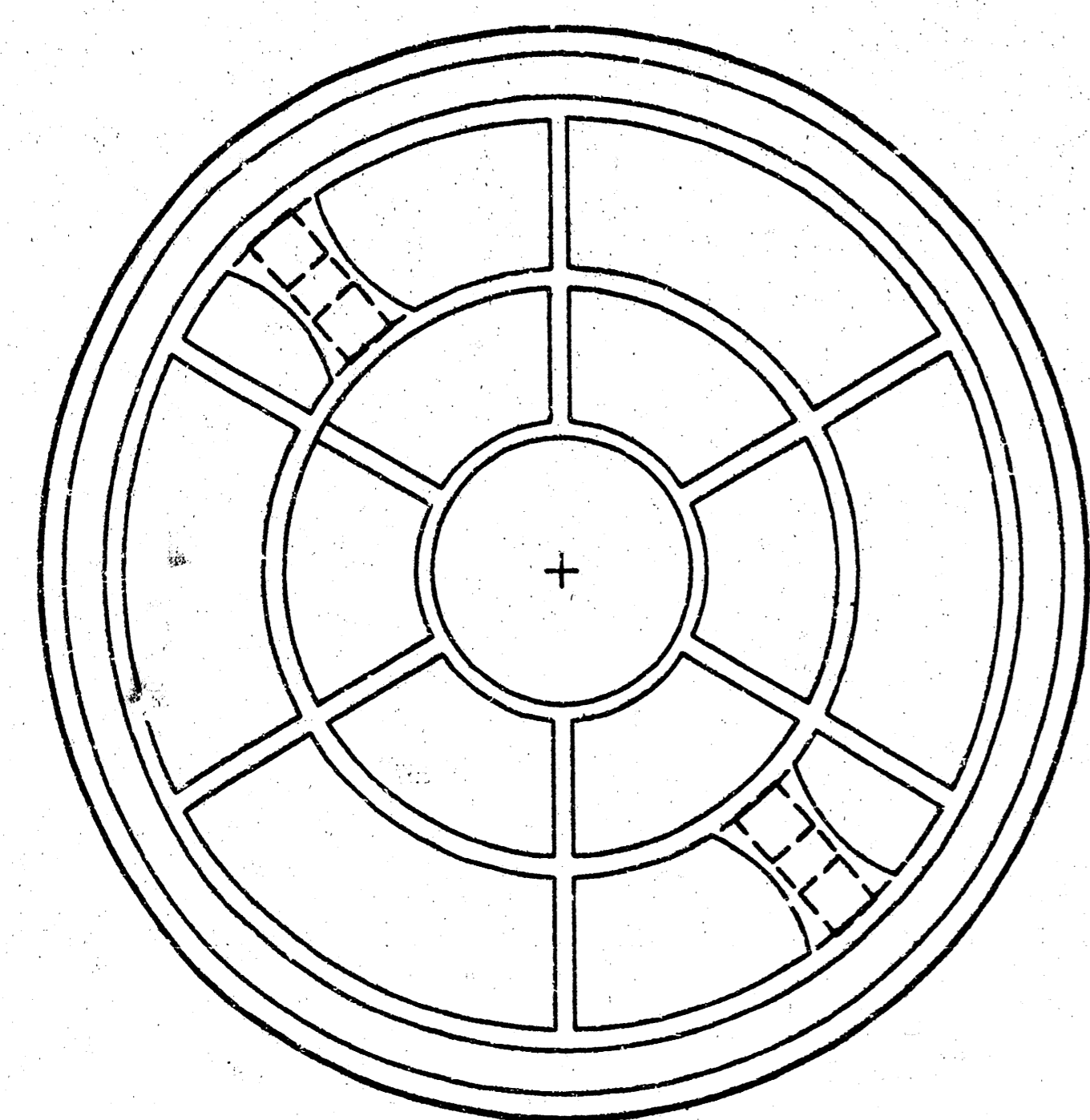
PROJECT NUMBER: 1380 PPS
SQA NO.: (607861)

DATE: MAR 96
SHEET SU3.5 OF 11

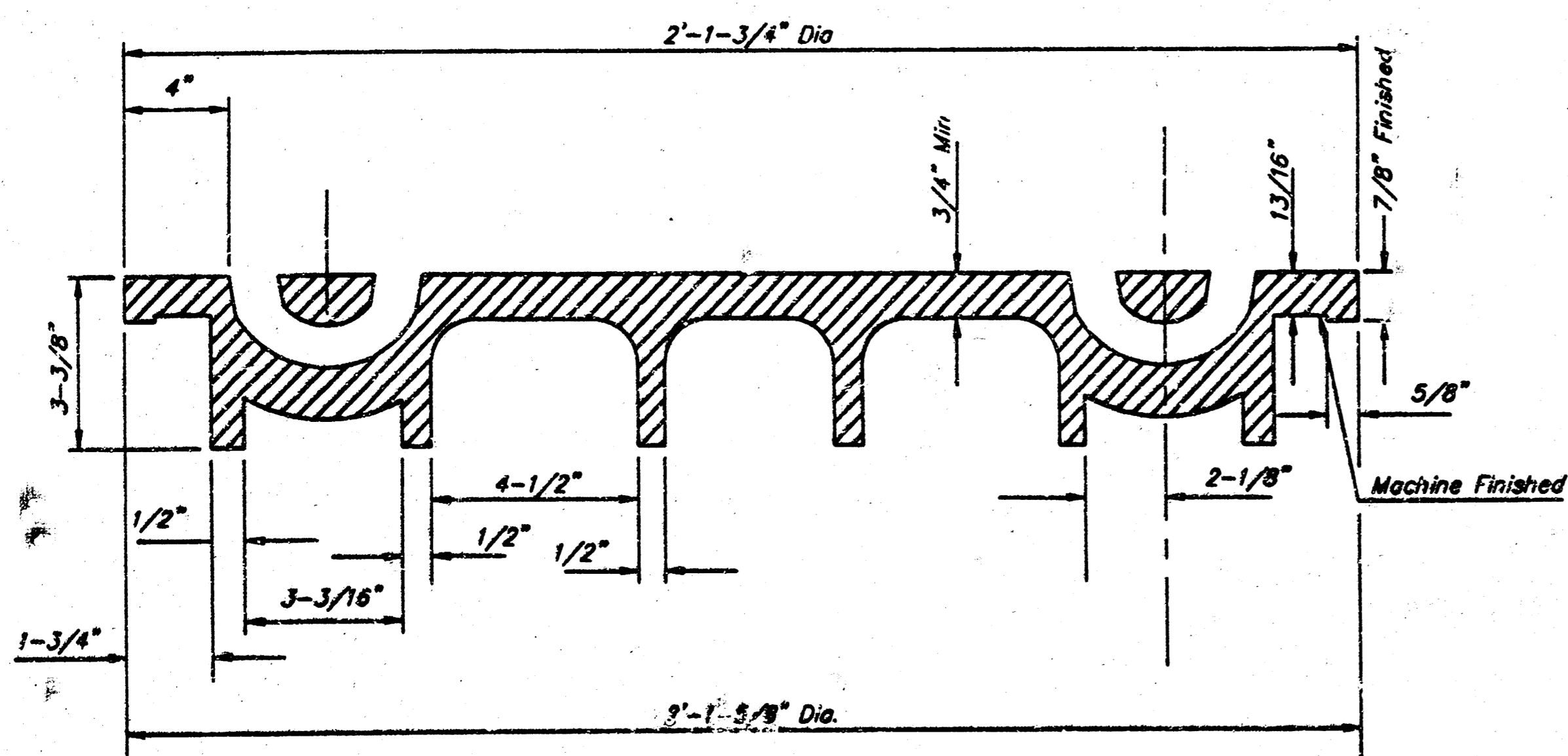
MANHOLE COVER
Weight = 180 Lbs.



TOP VIEW



BOTTOM VIEW

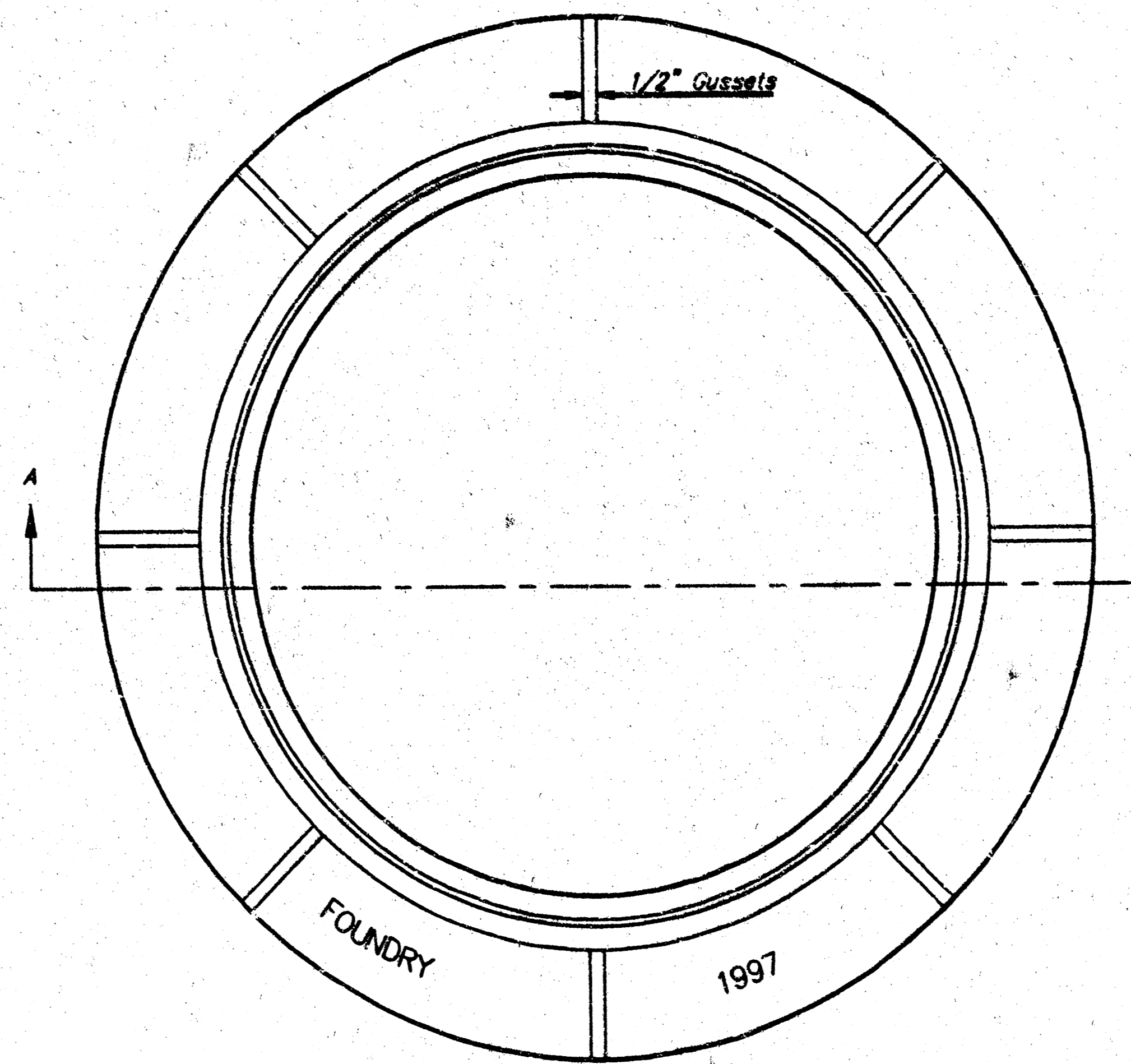


SECTION VIEW

MANHOLE FRAME AND COVER DETAIL

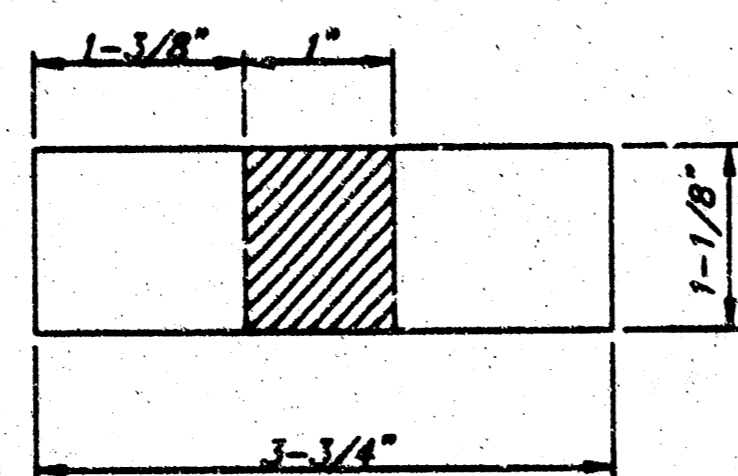
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE FRAME
Weight = 240 Lbs.

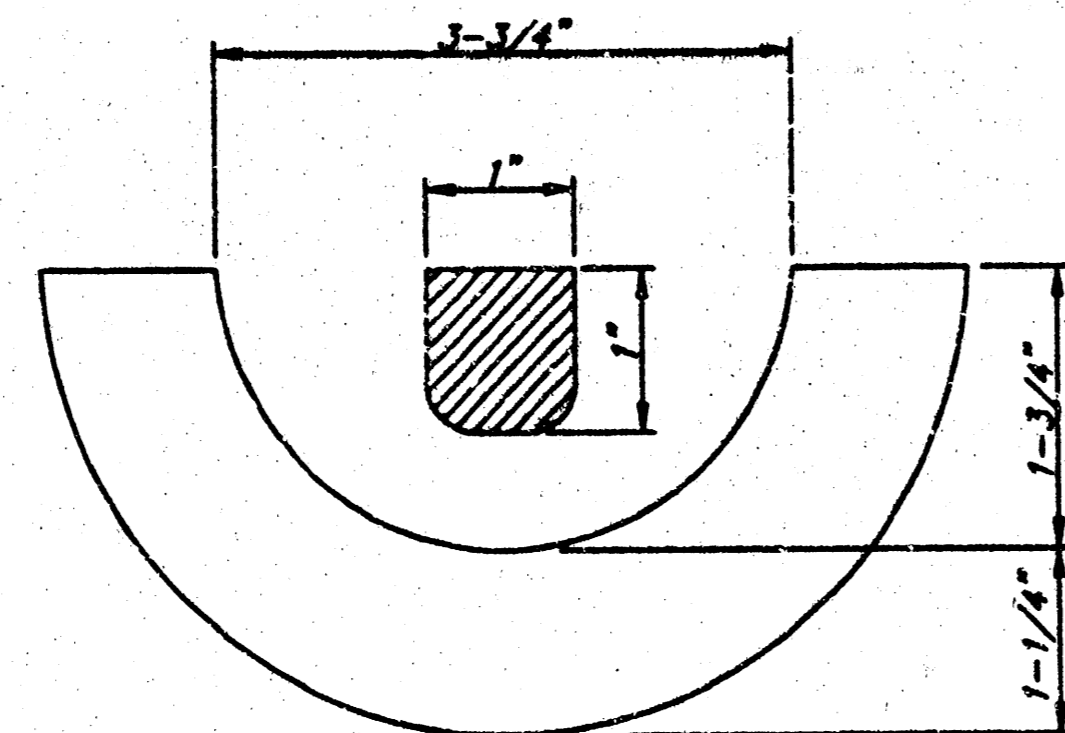


TOP VIEW

PICKHOLE DETAIL



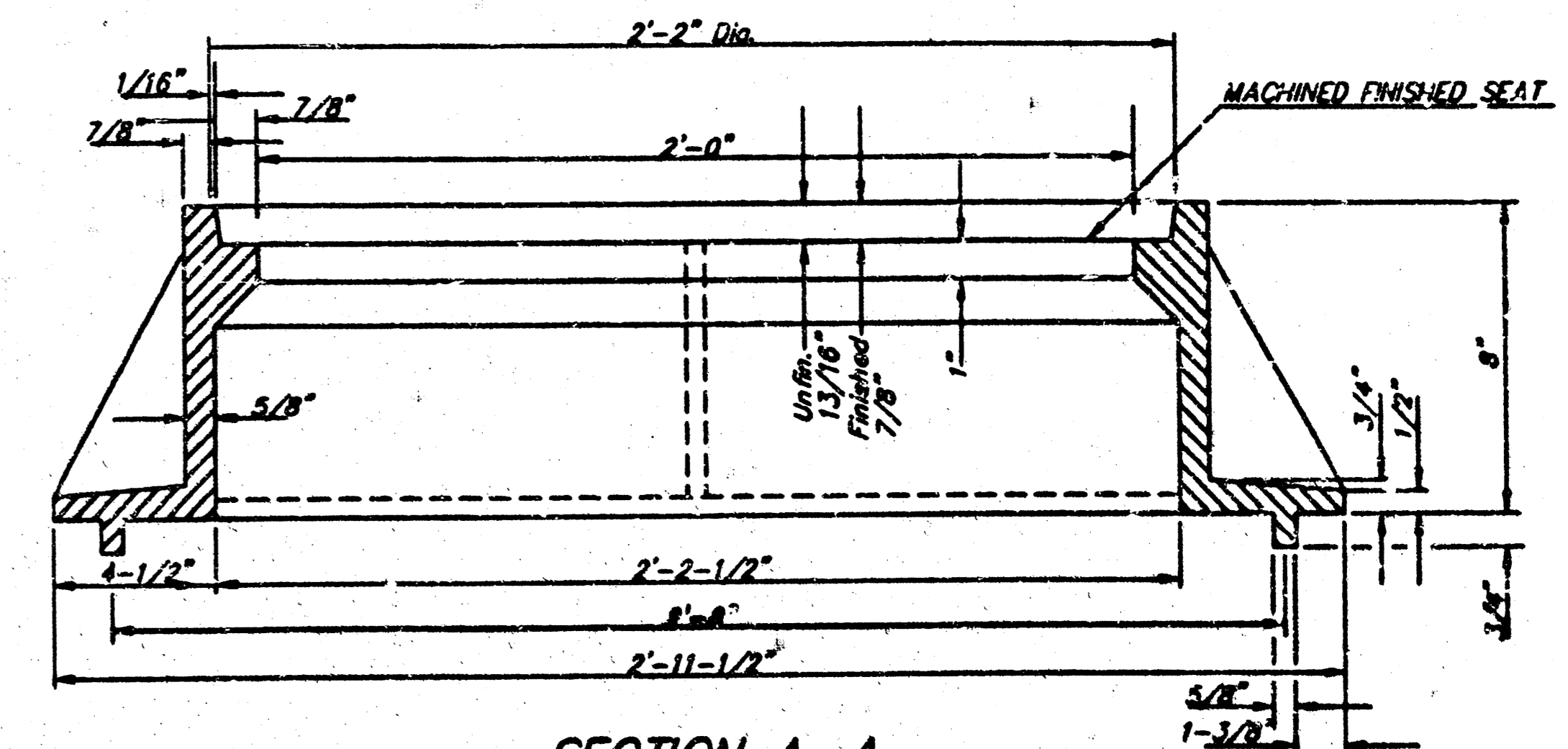
TOP VIEW



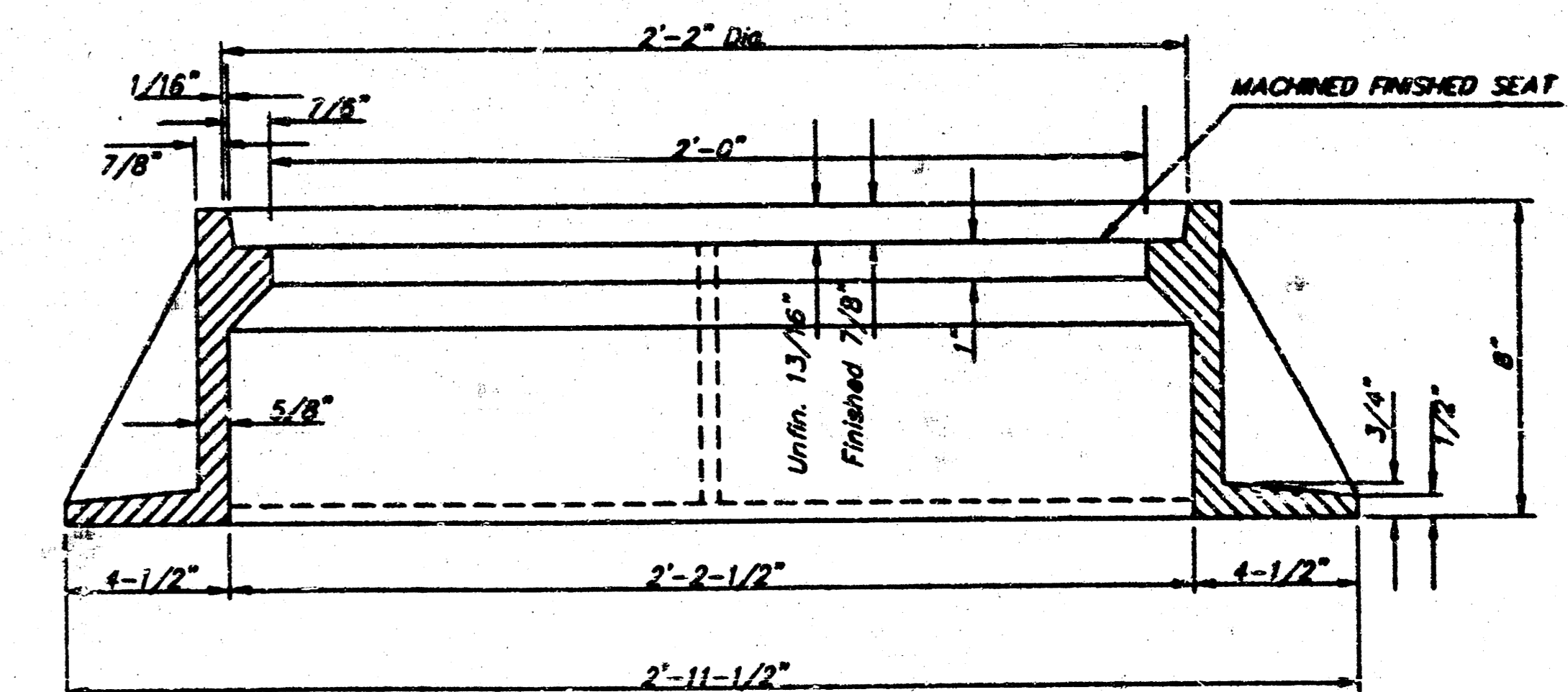
SECTION VIEW

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 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.
- 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" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN 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.
- 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.



SECTION A-A
MUD RING

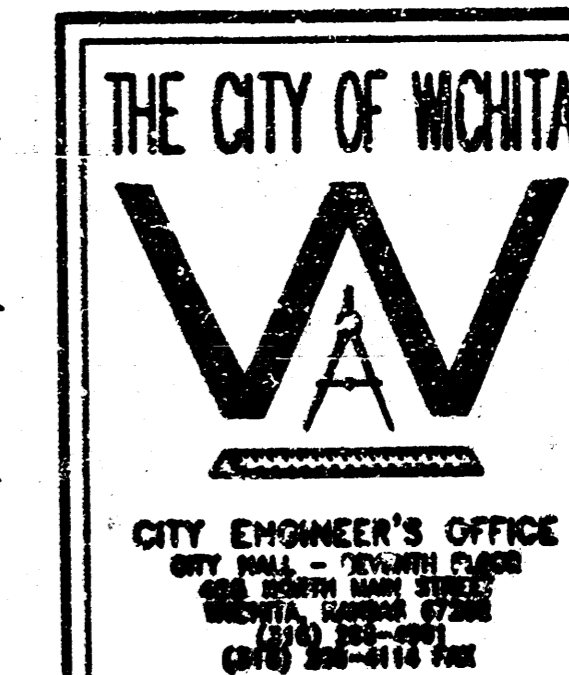


SECTION A-A

TARGET

Site Development Manager	Reviewed	Not Reviewed	Approved
Project Architect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Engineer (M)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Engineer (E)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Engineer (S)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REVIEWED BY:



MANHOLE FRAME
AND COVER

NEIL B. CABLE, P.E. - CITY ENGINEER

PROJECT NUMBER: 1390 PPS
DATE: MAR 98
SHEET SUJ.6 OF 11

REGENCY LAKES COMMERCIAL 2ND ADDITION

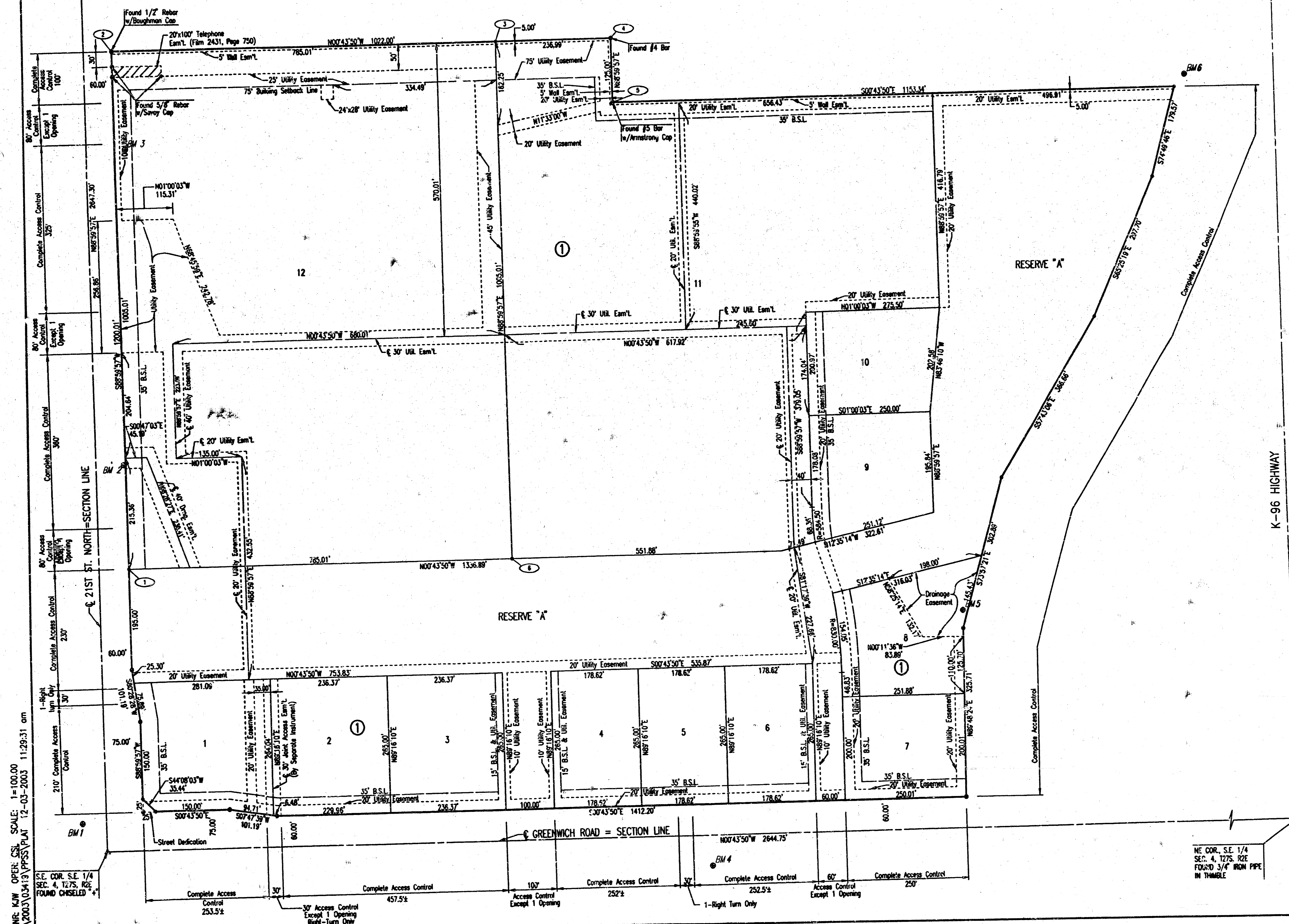
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

N.W. COR. SE. 1/4
SEC. 4, T27S, R2E

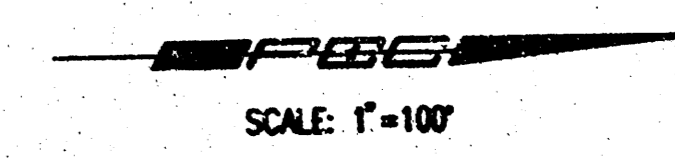
S.W. COR. SE. 1/4
SEC. 4, T27S, R2E
FOUND 1/2" REBAR
WITH MIKEC CAP

COORDINATE LIST		
POINT	NORTH	EAST
1	50,060.4762	49,454.3154
2	50,032.9319	48,448.4588
3	50,817.8667	48,438.4485
4	51,054.8374	48,438.4569
5	51,057.0504	48,561.4074
6	50,535.4212	48,444.3064

① = COORDINATE POINT NO.



K-96 HIGHWAY



SCALE: 1"=100'

- = FOUND #5 BAR W/MIKEC CAP (UNLESS OTHERWISE NOTED)
- = SET 1/2" REBAR W/PEC CAP (UNLESS OTHERWISE NOTED)

- REMARKS:**
- C.O.R. Disc in Conc. Base R.R. Signal W. Side Greenwch ± 1/2 Mile S. of 21st St. N. City Datum: 143.10 N.G.V.A.: 1370.29
 - BM 1: Chisled "f" of Conc. base Traffic Signal at S.E. Corner 21st. N. and Greenwch City Datum: 178.18 N.G.V.A.: 1383.58
 - BM 2: Chisled "f" on horizontal N.E. Corner RCBC under 21st. N. 750' E. of Greenwch City Datum: 175.05 N.G.V.A.: 1352.43
 - BM 3: R.R. Spike in 10' Local Iron, E. end run on N. Side 21st N. 1300' E. of Greenwch City Datum: 180.14 N.G.V.A.: 1367.34
 - BM 4: W. and Bolt in Power Pole 12' above ground of Private Dr. 2400 N. Greenwch on E. side of Rd. City Datum: 189.80 N.G.V.A.: 1371.2
 - BM 5: Chisled "f" on W. wing wall of E. end of S. horizontal RCBC under the Path just S. of K-96 E.B. Ramp to Greenwch 400' from Greenwch. City Datum: 179.97 N.G.V.A.: 1367.27
 - BM 6: Chisled "f" on S.E. Cor. 800' from Site Path just S. of K-96, near N.W. Cor. Property City Datum: 182.875 N.G.V.A.: 1381.925

DSMR, KJV OPER. C&S, SCALE: 1"=100.00
REV 2003/04/19 PPS/PLAT 12-05-2003 11:29:31 am

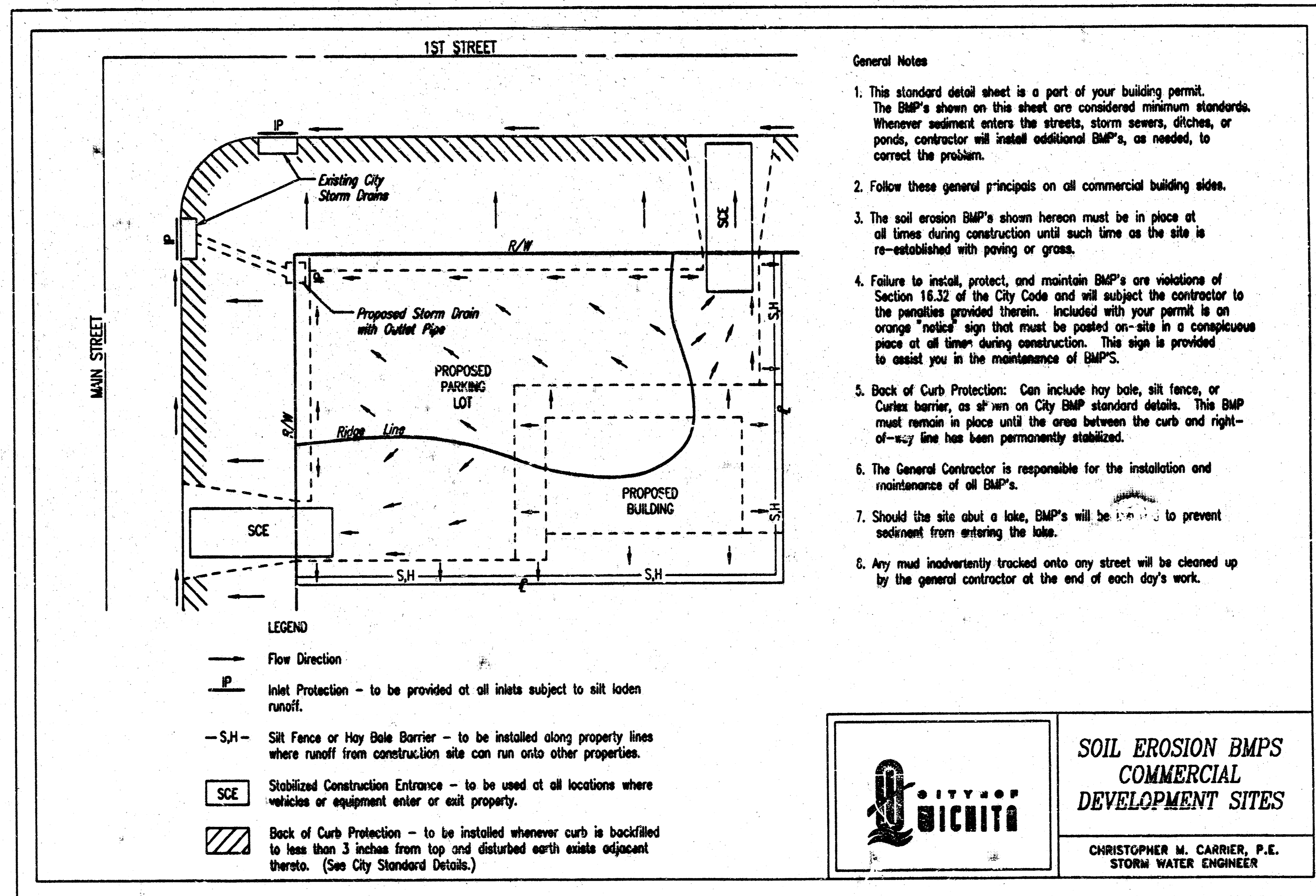
S.E. COR. SE. 1/4
SEC. 4, T27S, R2E
FOUND CHISELED

N.E. COR. SE. 1/4
SEC. 4, T27S, R2E
FOUND 3/4" IRON PIPE
IN TRIANGLE

REVIEWED BY:	
Site Development	_____
Professional Engineer	_____
Professional Surveyor	_____
Professional Architect	_____
Professional Electrician	_____
Professional Mechanical	_____
Professional Civil	_____
Professional Chemical	_____
Professional Industrial	_____
Professional Marine	_____
Professional Mining	_____
Professional Nuclear	_____
Professional Petroleum	_____
Professional Transportation	_____
Professional Other	_____

PLAT PRIVATE PROJECT NO. 1390 PPS (007861)	
Professional Engineering Consultants, P.A. 303 S. TOPERA - WICHITA, KANSAS 67202 316-262-2091 • FAX 316-262-3008	
Designed by	RKY, KJV
Drawn by	_____
Job No.	35-03418-5567
Date	AUGUST 2003
Sheet	SU.2.10 of 11

DSNR: RRY OFER: CS SCALE: 1=1.00
 G:\2003\0319\PPSS\SEBMP_FC_COMMERCIAL 12-02-2003 11:44:46 am



General Notes

1. This standard detail sheet is a part of your building permit. The BMP's shown on this sheet are considered minimum standards. Whenever sediment enters the streets, storm sewers, ditches, or ponds, contractor will install additional BMP's, as needed, to correct the problem.
2. Follow these general principals on all commercial building sites.
3. The soil erosion BMP's shown hereon must be in place at all times during construction until such time as the site is re-established with paving or grass.
4. Failure to install, protect, and maintain BMP's are violations of Section 16.32 of the City Code and will subject the contractor to the penalties provided therein. Included with your permit is an orange "notice" sign that must be posted on-site in a conspicuous place at all times during construction. This sign is provided to assist you in the maintenance of BMP's.
5. Back of Curb Protection: Can include hay bale, silt fence, or Curlex barrier, as shown on City BMP standard details. This BMP must remain in place until the area between the curb and right-of-way line has been permanently stabilized.
6. The General Contractor is responsible for the installation and maintenance of all BMP's.
7. Should the site abut a lake, BMP's will be installed to prevent sediment from entering the lake.
8. Any mud inadvertently tracked onto any street will be cleaned up by the general contractor at the end of each day's work.



**SOIL EROSION BMPs
COMMERCIAL
DEVELOPMENT SITES**

CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER



REVIEWED BY:

Site Development Manager	Review and Resubmit	Not Reviewed	Approved
Project Architect	Review and Resubmit	Not Reviewed	Approved
Project Engineer (M)	Review and Resubmit	Not Reviewed	Approved
Project Engineer (E)	Review and Resubmit	Not Reviewed	Approved
Project Engineer (S)	Review and Resubmit	Not Reviewed	Approved

Approved only for conformance of the site construction documents to Target Developer Guide, Section 2.2 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and dimensions on the site construction documents.

Revision		No.	By	Date	
CITY OF WICHITA, KANSAS MEL D. CARLE, P.E. - CITY ENGINEER TARGET NORTHEAST SOIL EROSION BMPs COMMERCIAL DEVELOPMENT SITES PRIVATE PROJECT NO. 1380 PPS (807881) Professional Engineering Consultants, P.A. 563 S. TOPERA WICHITA, KANSAS 67202 316-262-2991 • FAX 316-262-3003					
Designed by	RRY, K/W	Job No.	35-03419-5567	Sheet	SG2.1 of 11
Drawn by		Date	AUGUST 2003		