PRIVATE SANITARY SEWER EXTENSION

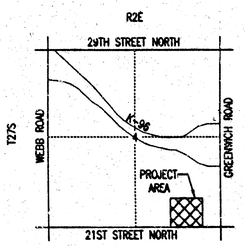
TO SERVE

TARGET NORTHEAST

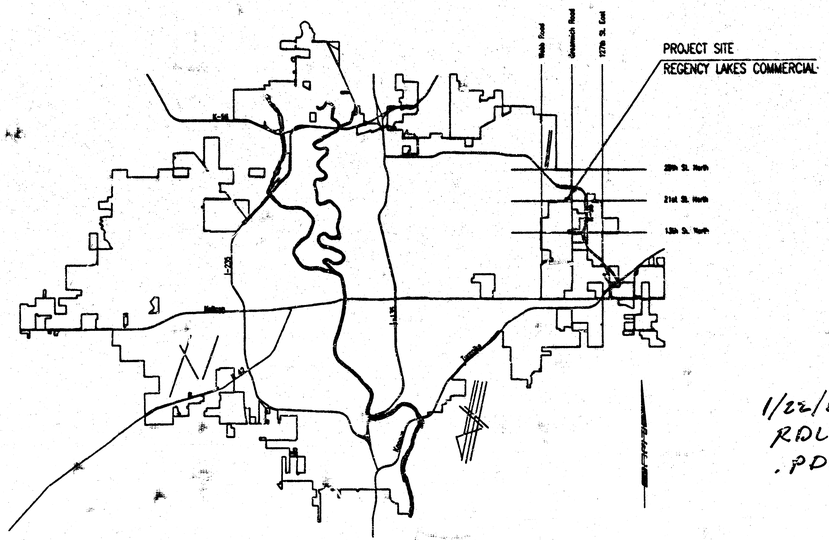
PRIVATE PROJECT NO. 1390 PPS (607861)

CITY OF WICHITA, KANSAS

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



VICINITY MAP



LOCATION MAP

1/22/04
RDL
.PDF

INDEX OF SHEETS

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APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 12/3/03

Storm Sewers _____

Driveway Approaches _____

Water Mains _____

Paving _____

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 BONDS 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.

AS-BUILT
1/2/03
Date
Signed

TARGET

REVIEWED BY:

Site Development Manager ____ / ____
__ Revise and Resubmit __ Not Reviewed __ Approved

Project Architect ____ / ____
__ Revise and Resubmit __ Not Reviewed __ Approved

Project Engineer (M) ____ / ____
__ Revise and Resubmit __ Not Reviewed __ Approved

Project Engineer (E) ____ / ____
__ Revise and Resubmit __ Not Reviewed __ Approved

Project Engineer (S) ____ / ____
__ Revise 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.

DECEMBER 2003

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

KORY J. WILSON
LICENSED
12/03/03
KANSAS
PROFESSIONAL ENGINEER

DSNR: KJW OPER: CSL SCALE: 1=1.00
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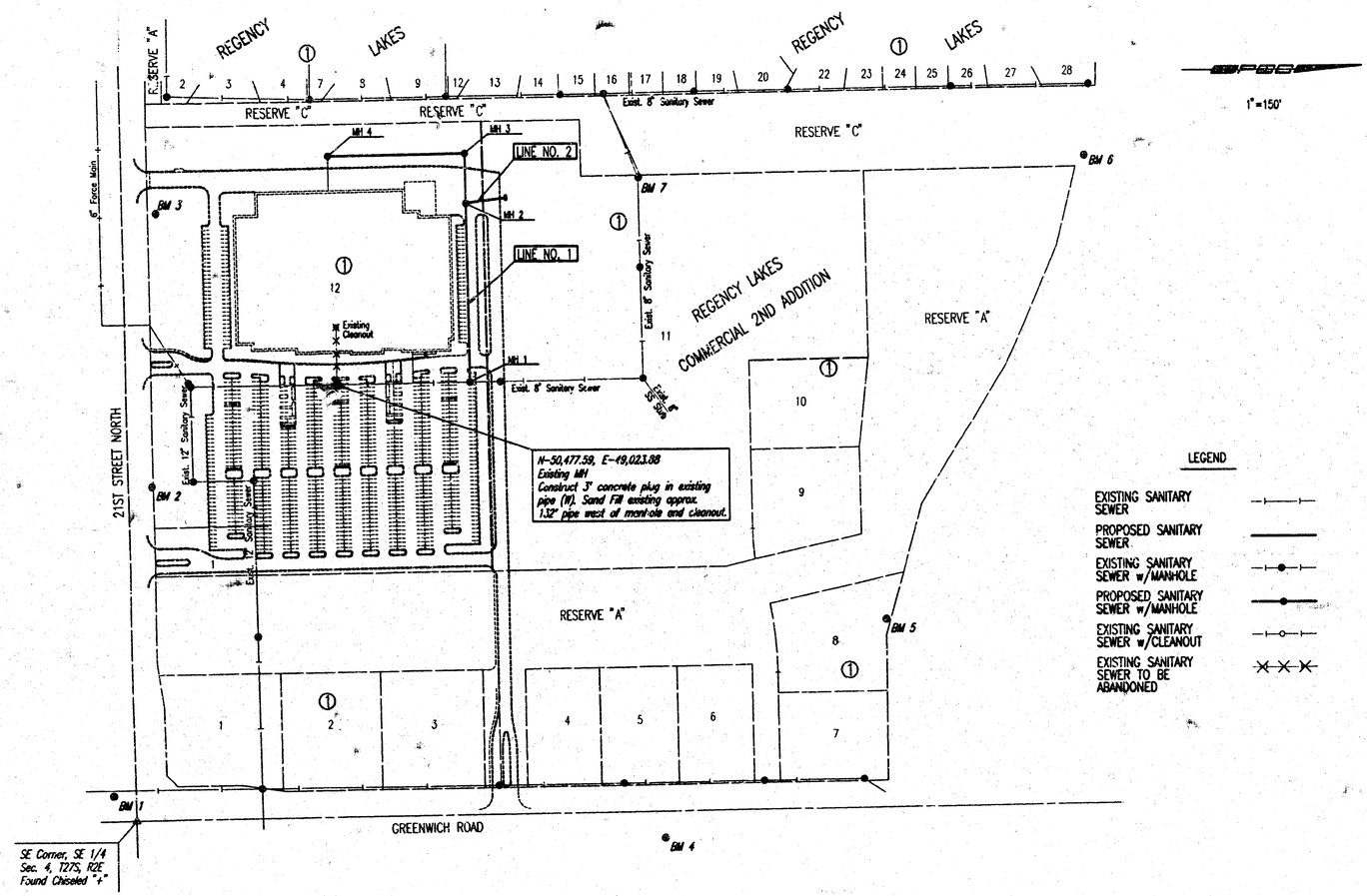

1"=150'

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

BENCHMARKS

Datum BM from Proj. No. 36-02146-53(8, Kitch Property C.O.W. Disc 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 "d" Conc. base Traffic Signal at S.W. Corner 21st. N. and Greenwich

City: 176.16
MSL: 1362.56

BM 2: Chiseled "d" on headwall N.E. Corner RCBC under 21st. 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 N. 1350± W. of Greenwich

City: 180.14
MSL: 1367.54

BM 4: W. end Bolt in Power Pole 1'± above ground at Private Dr. 2400 N. Greenwich on E. side of Rd.

City: 183.80
MSL: 1371.20

BM 5: Chiseled "d" 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 "d" 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: 1369.46

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM.
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. 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.
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 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.
6. 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".
7. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
8. MANHOLES SHALL BE TYPE "F" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
9. 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, TOP 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. AR78 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".
10. 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.
11. 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.
12. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
13. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
14. 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.
15. CONTRACTOR IS REQUIRED TO MAINTAIN CONTINUOUS FLOW OF SEWAGE IN EXISTING MAINS AT ALL TIMES.
16. 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 SIX (6) 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.
17. 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 GROUND 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.
18. THE CONTRACTOR SHALL PROVIDE MOUNDED EARTH AT MANHOLES AND CLEANOUTS THAT HAVE TOP ELEVATIONS GREATER THAN 1 FOOT ABOVE EXISTING GRADE, AS SHOWN ON THE PLANS.
19. 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 PROMULGATED BY PROJECT SPECIAL PROVISIONS.
20. IN AREAS WHERE FUTURE PAVEMENT IS ANTICIPATED, SUCH AS PARKING LOTS OR DRIVES, THE SANITARY SEWER TRENCH SHALL BE SAND FILLED AND FLUSHED WITH WATER PER THE REQUIREMENTS LISTED IN THE STANDARD SPECIFICATIONS FOR THE CITY OF WICHITA UNLESS FLOWABLE FILL IS SPECIFIED ON THE PLANS. ALL SANITARY SEWER TRENCHES ADJACENT TO STREET OR ROAD RIGHT-OF-WAY SHALL BE BACKFILLED WITH JETTED SAND UNLESS OTHERWISE SPECIFIED IN THE PLANS.
21. ROUGH SITE EARTH WORK SHALL BE COMPLETED PRIOR TO SANITARY SEWER CONSTRUCTION.
22. THE CONTRACTOR SHALL VERIFY ALL MANHOLE RIM ELEVATIONS WITH FINAL PAVEMENT 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 ____ / ____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Architect ____ / ____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (M) ____ / ____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (E) ____ / ____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (S) ____ / ____
___ Revise 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.

KURT W. RAY — 16337 — 2/28/03 — KANSAS — PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS
[illegible] CABLE, P.E.- CITY ENGINEER
TARGET NORTHEAST

KEY MAP AND GENERAL NOTES

PRIVATE PROJECT NO. 1390 PPS (607861)

Professional Engineering Consultants, P.A.
303 S.T. - SKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-9003

Designed by	RRY, KJW	Job No.	35-03419-5567	Sht. SU3.2 of 11
Drawn by	CSL	Date	AUGUST 2003	

DSNR: KJW OPER: CSL SCALE: 1=150.C
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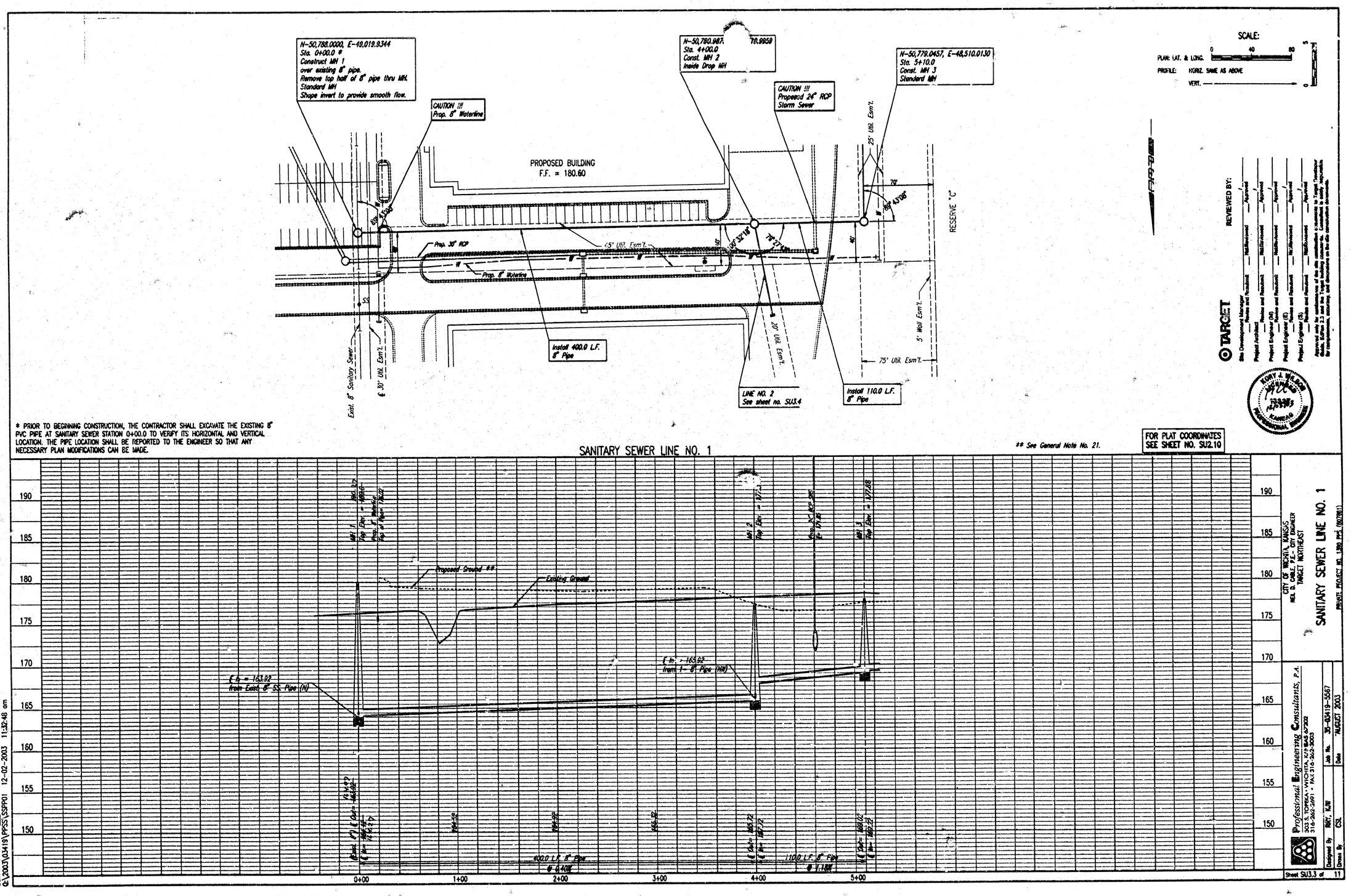

N-50,788.0000, E-49,019.9344
Sta. 0+00.0 *
Construct MH 1
over existing 8" pipe.
Remove top half of 8" pipe thru MH.
Standard MH
Shape invert to provide smooth flow.
CAUTION !!!
Prop. 8" Waterline
N-50,780.987, 78.9959
Sta. 4+00.0
Const. MH 2
Inside Drop MH
CAUTION !!!
Proposed 24" RCP
Storm Sewer
N-50,779.0457, E-48,510.0130
Sta. 5+10.0
Const. MH 3
Standard MH
PROPOSED BUILDING
F.F. = 180.60
Prop. 30" RCP
Prop. 8" Waterline
45' Util. Esm't.
25' Util. Esm't.
20' Util. Esm't.
5' Wall Esm't.
75' Util. Esm't.
RESERVE "C"
Install 400.0 L.F.
8" Pipe
LINE NO. 2
See sheet no. SU3.4
Install 110.0 L.F.
8" Pipe
Exist. 8" Sanitary Sewer
℄ 30' Util. Esm't.
SCALE:
PLAN: LAT. & LONG.
PROFILE: HORIZ. SAME AS ABOVE
VERT.
REVIEWED BY:
TARGET
Site Development Manager
Project Architect
Project Engineer (M)
Project Engineer (E)
Project Engineer (S)
Approved only for conformance of the site construction documents to Target Developer Guide, Section 2.3 and the Target building documents. Consultant is solely responsible for completeness, accuracy, and discretion on the site construction documents.
KORY J. WILSON
PROFESSIONAL ENGINEER
* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" PVC PIPE AT SANITARY SEWER STATION 0+00.0 TO VERIFY ITS HORIZONTAL AND VERTICAL LOCATION. THE PIPE LOCATION SHALL BE REPORTED TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE.
SANITARY SEWER LINE NO. 1
** See General Note No. 21.
FOR PLAT COORDINATES
SEE SHEET NO. SU2.10
Proposed Ground **
Existing Ground
℄ In = 163.92
from Exist. 8" SS. Pipe (N)
℄ In = 165.92
from 1- 8" Pipe (NW)
400.0 L.F. 8" Pipe
110.0 L.F. 8" Pipe
0+00
1+00
2+00
3+00
4+00
5+00
190
185
180
175
170
165
160
155
150
PLAN
PROFILE
CHECKED
DATE
BY
DSNR: KJW OPER: CSL SCALE: 1=40.00
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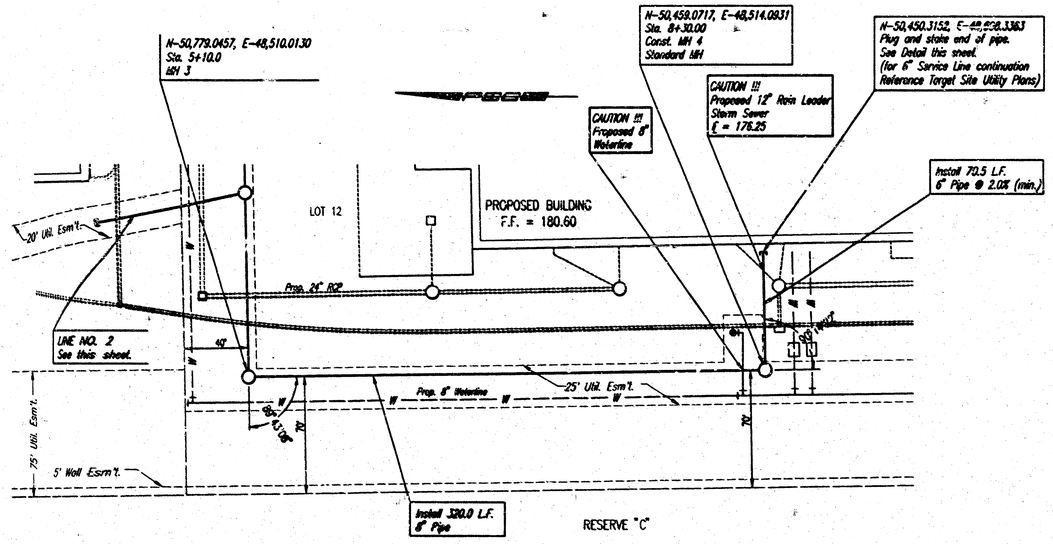
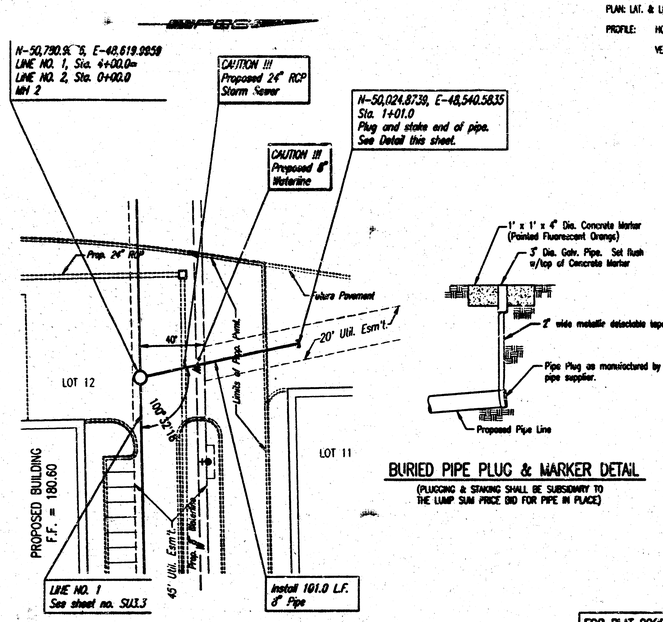
CITY OF WICHITA, KANSAS
NEIL D. CABLE, P.E. - CITY ENGINEER
TARGET NORTHEAST
SANITARY SEWER LINE NO. 1
PRIVATE PROJECT NO. 1380 PPS (807881)
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003
Designed By RRT, KJW
Drawn By CSL
Job No. 35-03419-5567
Date AUGUST 2003
Sheet SU3.3 of 11

PLAN | CHECKED | CHECKED | BY | DATE





BURIED PIPE PLUG & MARKER DETAIL

(PLUGGING & STAKING SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR PIPE IN PLACE)

SCALE:

PLAN: LAT. & LONG. 0 40 80

PROFILE: HORIZ. SAME AS ABOVE

VERT. 0 5

REVIEWED BY:

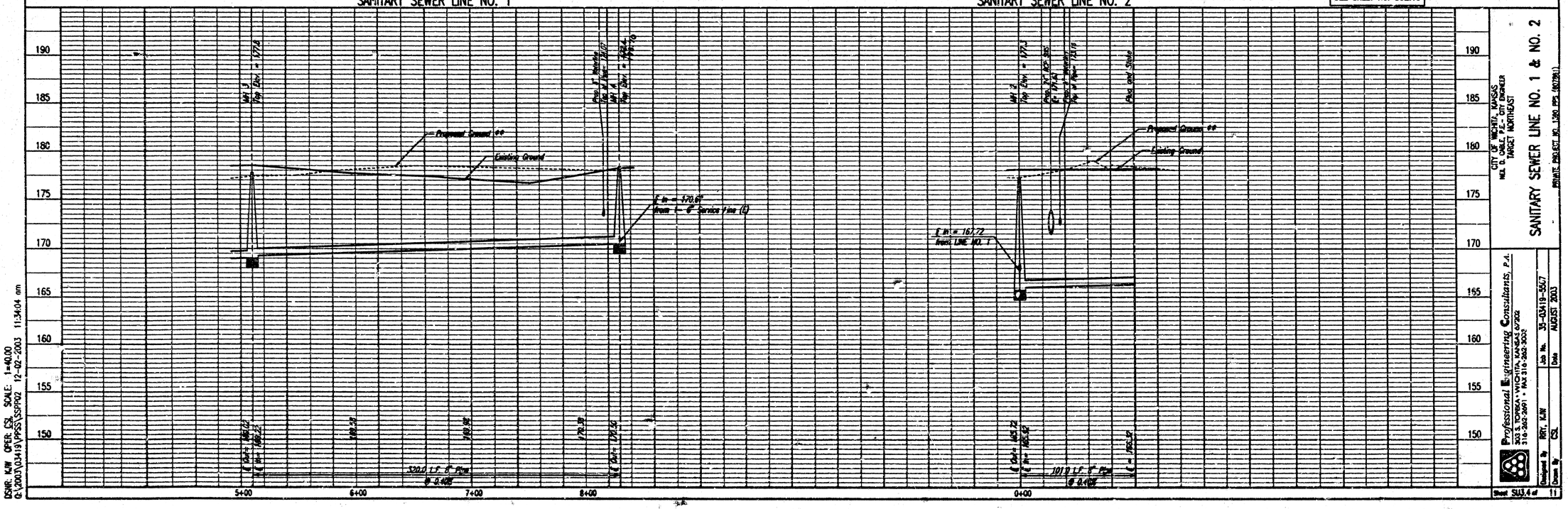
Site Development Manager ___ Not Reviewed ___ Approved
Project Architect (A) ___ Return and Resubmit ___ Not Reviewed ___ Approved
Project Engineer (M) ___ Return and Resubmit ___ Not Reviewed ___ Approved
Project Engineer (E) ___ Return and Resubmit ___ Not Reviewed ___ Approved
Project Engineer (S)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

Approval only for conformance of this site construction documents to Target Developer Guide, Section 2.3, and the Tenant building documents. Consultant is solely responsible for compliance, accuracy, and all omissions on this site construction documents.

TARGET

KONRAD W. PORTER
12937
12/31/03
KANSAS
PROFESSIONAL ENGINEER

PROFILE | CHECKED | CHECKED | BY | DATE



CITY OF WICHITA, KANSAS
NO. 03-03419 PUBLIC SEWER
TARGET NORTHEAST

SANITARY SEWER LINE NO. 1 & NO. 2

PRIVATE PROJECT NO. 1360 (PPS 1360781)

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-8008

Job No. 35-03419-5507
Date AUGUST 2003
Designed By RRT, KJW
Drawn By CSL
Sheet SU3.4 of 11

DSNR: KJW OPER: CSL SCALE: 1=40.00
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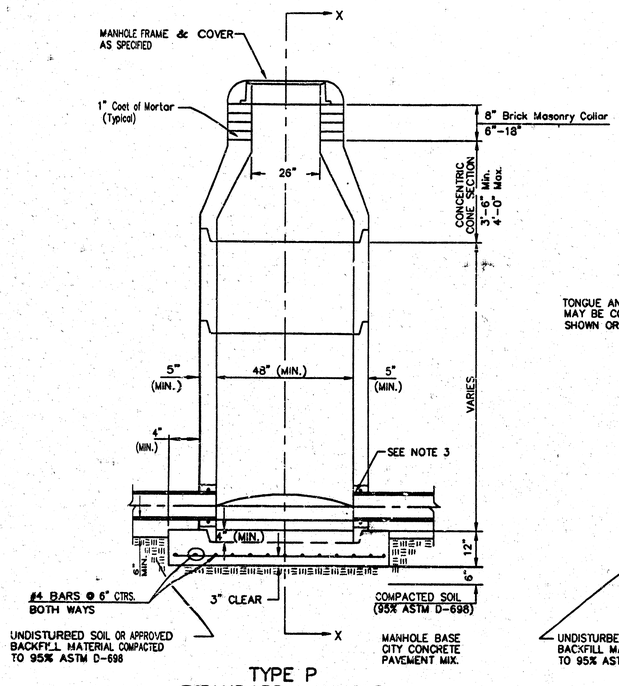
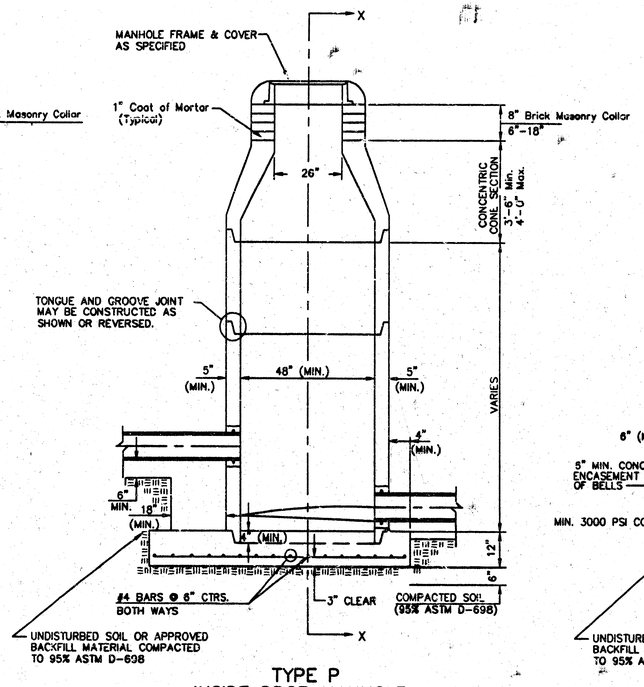
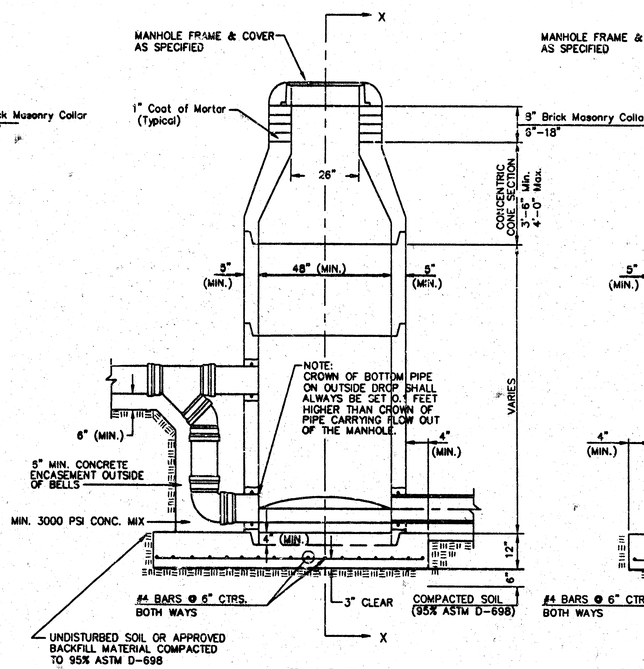
SEWER APPURTENANCES DETAILS



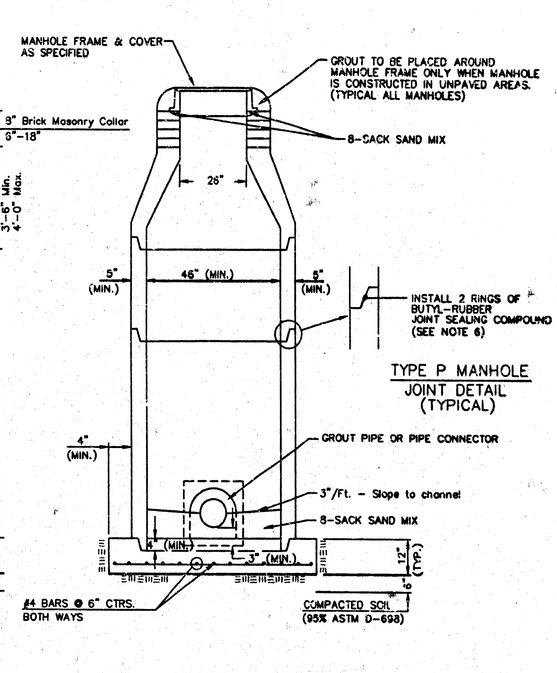
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE



SECTION X
(TYPICAL)

GENERAL NOTES

PRECAST MANHOLE NOTES

1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEMEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMENOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.

TARGET

REVIEWED BY:

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

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - FOURTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4351
(316) 268-4519 FAX

STANDARD TYPE 'P' MANHOLES

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

PROJECT NUMBER	CCA NO.
1390 PPS	(607861)

DATE MAR 96

SHEET SU3.5 OF 11

DSNR: KJW OPER: GSL SCALE: 1=1.00
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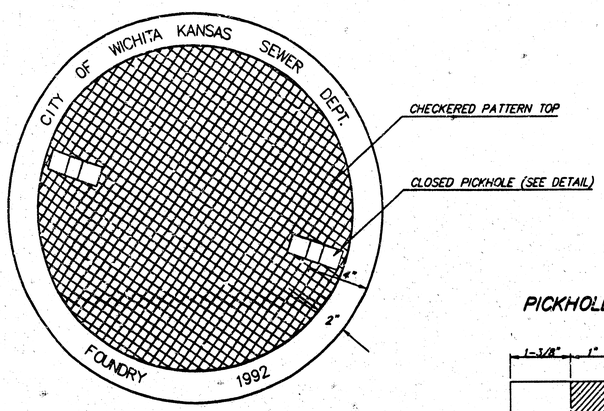
MANHOLE FRAME AND COVER DETAIL

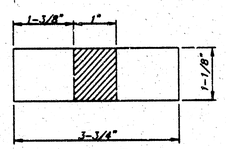
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

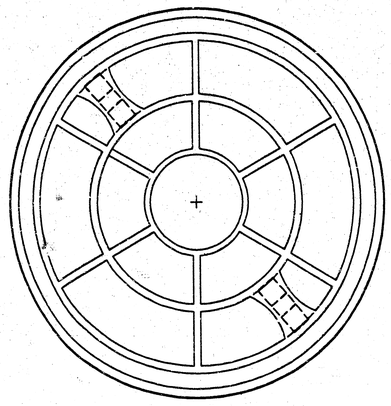


TOP VIEW

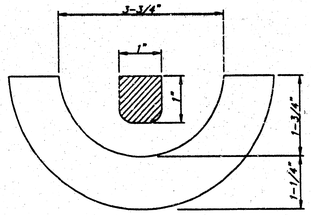
PICKHOLE DETAIL



TOP VIEW

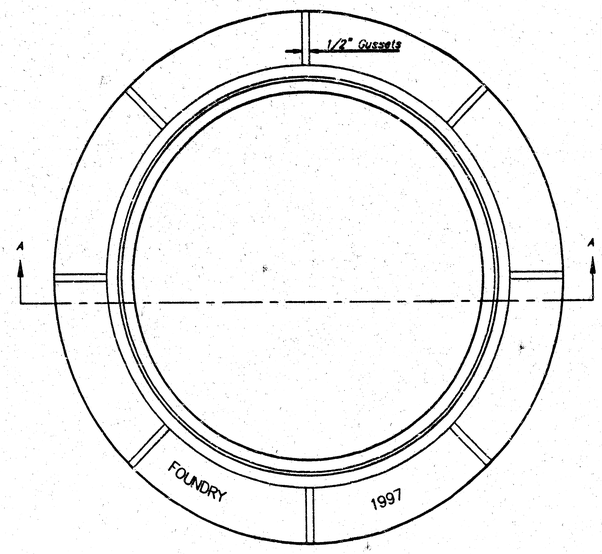


BOTTOM VIEW

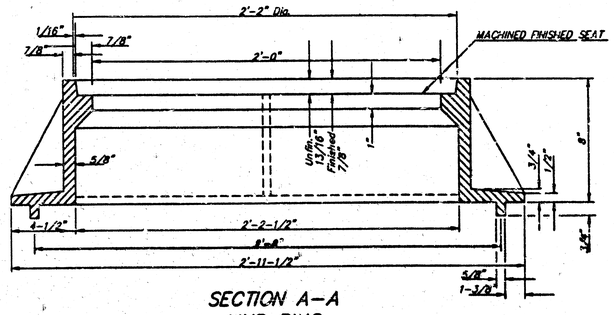


SECTION VIEW

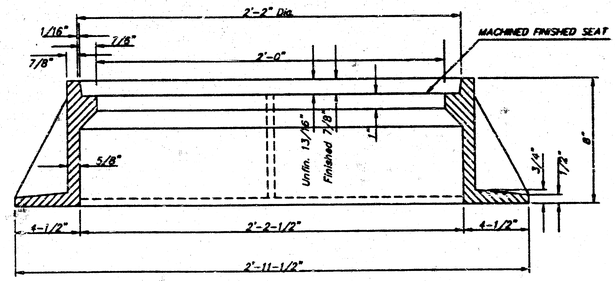
MANHOLE FRAME
Weight = 240 Lbs.



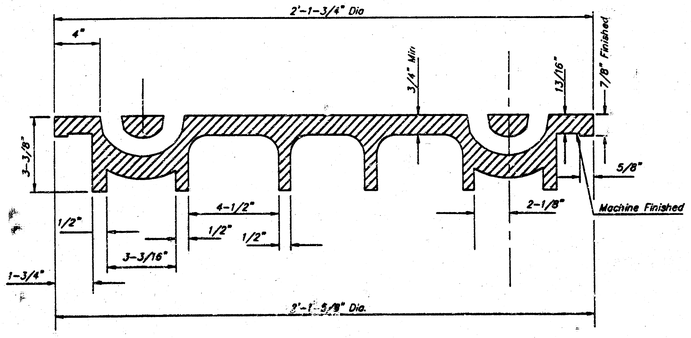
TOP VIEW



SECTION A–A
MUD RING



SECTION A–A



SECTION VIEW

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. 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.
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 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.

TARGET

REVIEWED BY:

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

Approval only for conformance of the site construction documents to Target Developer Guide, Section 2.3 and the Target building department. CenterLine is solely responsible for completeness, accuracy, and dimensions on the site construction documents.

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL – TENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4419 FAX

MANHOLE FRAME AND COVER

NEIL D. CABLE, P.E. – CITY ENGINEER

PROJECT NUMBER	CDA NO.
1380 PPS	(607861)
DATE	SHEET SU3.6 OF 11
MAR 96	

DSNR: KJW OPER: CSL SCALE: 1=1.00
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REGENCY LAKES COMMERCIAL 2ND ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

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

N.W. COR. S.E. 1/4
SEC. 4, T27S, R2E

COORDINATE LIST		
POINT	NORTH	EAST
1	50,050.4762	49,454.3154
2	50,032.9319	48,449.4588
3	50,817.8667	48,439.4485
4	51,054.8374	48,436.4369
5	51,057.0504	48,561.4074
6	50,835.4212	49,444.3064

① = COORDINATE POINT NO.

SCALE: 1"=100'

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

BENCHMARKS:

C.O.W. Disc in Conc. Base R.R. Signal W. Side Greenwich ± 1/2 Mile S. of 21st St. N.
City Datum: 183.19
N.G.V.D.: 1370.59

BM 1: Chiseled "d" Conc. base Traffic Signal at S.W. Corner 21st. N. and Greenwich
City Datum: 178.18
N.G.V.D.: 1363.56

BM 2: Chiseled "d" on headwall N.E. Corner RCBC under 21st. N. 750'± W. of Greenwich
City Datum: 175.05
N.G.V.D.: 1362.45

BM 3: R.R. Spike in 18" Locust tree, E. and row on N. Side 21st N. 1350'± W. of Greenwich
City Datum: 180.14
N.G.V.D.: 1367.54

BM 4: W. end Bolt in Power Pole 1'± above ground at Private Dr. 2400 N. Greenwich on E. side of Rd.
City Datum: 189.80
N.G.V.D.: 1371.2

BM 5: Chiseled "d" 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 Datum: 179.97
N.G.V.D.: 1367.27

BM 6: Chiseled "d" on S.E. Cor. RCBC under Bike Path just S. of K-96, near N.W. Cor. Property
City Datum: 182.975
N.G.V.D.: 1370.375

REVIEWED BY:

Site Development Manager	— Not Reviewed — Approved
Project Architect — Review and Assistance	— Not Reviewed — Approved
Project Engineer (Water and Wastewater)	— Not Reviewed — Approved
Project Engineer (ITE)	— Not Reviewed — Approved
Project Engineer (Traffic) — Review and Assistance	— Not Reviewed — Approved

Approval only for conformance of the site construction documents to Target Development Criteria. Approval does not relieve the owner or his agents of responsibility for the construction documents, and shall not relieve the owner or his agents of responsibility for the construction documents.

TARGET

No.	Revision	By	Date

CITY OF WICHITA, KANSAS
NEIL D. CABLE, P.E.- CITY ENGINEER
TARGET NORTHEAST

PLAT

PRIVATE PROJECT NO. 1390 PPS (607861)

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	RRY, KJW	Job No.	35-03419-5567
Drawn by		Date	AUGUST 2003

Sht. SU2.10 of 11

DGN:C: KJW OPER: CSL SCALE: 1=100.00
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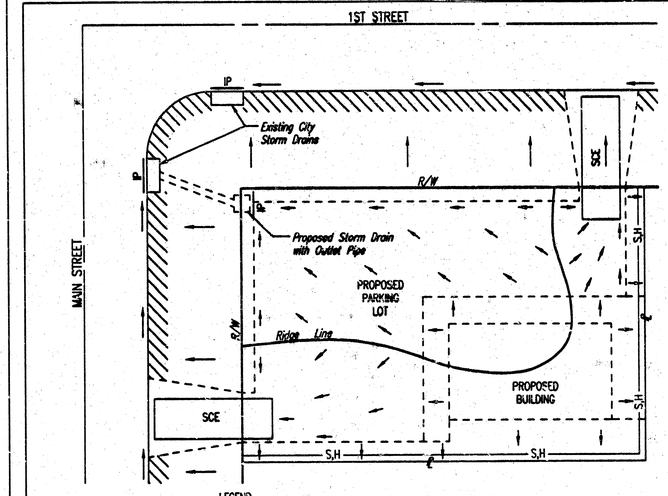

LEGEND

- Flow Direction
- IP — Inlet Protection – to be provided at all inlets subject to silt laden runoff.
- —S,H— Silt Fence or Hay Bale Barrier – to be installed along property lines where runoff from construction site can run onto other properties.
- SCE — Stabilized Construction Entrance – to be used at all locations where vehicles or equipment enter or exit property.
- Back of Curb Protection – to be installed whenever curb is backfilled to less than 3 inches from top and disturbed earth exists adjacent thereto. (See City Standard Details.)

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 [illegible] 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.

CITY OF WICHITA

SOIL EROSION BMPS COMMERCIAL DEVELOPMENT SITES

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

TARGET

REVIEWED BY:

Site Development Manager ____/____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Architect ____/____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (M) ____/____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (E) ____/____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

Project Engineer (S) ____/____
___ Revise and Resubmit ___ Not Reviewed ___ Approved

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No.	Revision	By	Date

CITY OF WICHITA, KANSAS
NEIL D. CABLE, P.E.- CITY ENGINEER
TARGET NORTHEAST
SOIL EROSION BMPS COMMERCIAL DEVELOPMENT SITES
PRIVATE PROJECT NO. 1390 PPS (807861)

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by RRY, KJW | Job No. 35-03419-5567
Drawn by | Date AUGUST 2003
Std. SG2.1 of 11

DSNR: RRY OPER: GSL SCALE: 1=1.00
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