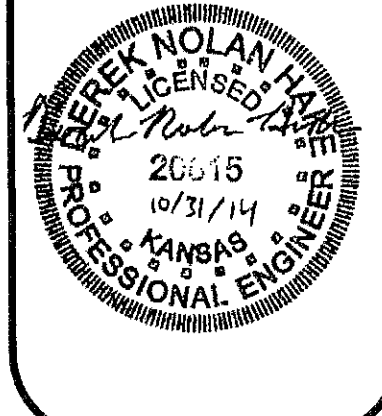


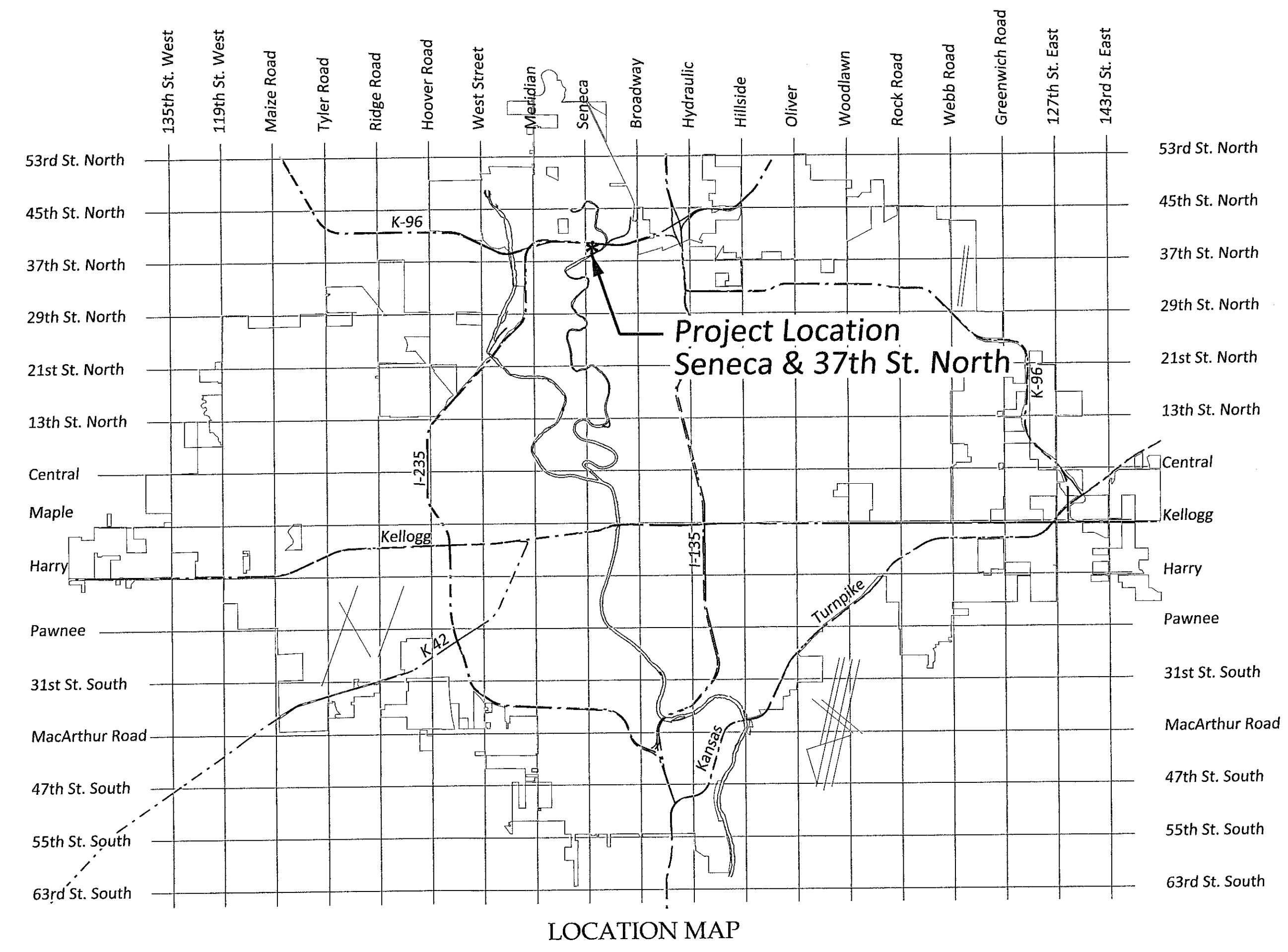
SITE SANITARY SEWER TO SERVE HERITAGE FAMILY CHURCH PRIVATE PROJECT NO. 2209 PPS (607861) CITY OF WICHITA, KANSAS GARY JANZEN, P.E. - CITY ENGINEER

DATE: 10-31-2014
Revision 1 -
Revised Sewer
Alignment & Profile

T. Mason - City of Wichita, Inspector
Release Date: 1/8/2015
: APROSAS 1/9/2015



- GENERAL NOTES**
1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF SEVENTY-TWO (72) HOURS ADVANCE NOTICE PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS). THE CONTRACTOR SHALL CONTACT THE KANSAS DIGGERS HOTLINE, A UTILITY LOCATION SERVICE, AT 1-800-344-7233 TO REQUEST THAT LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
 2. LOCATIONS OF EXISTING BURIED SERVICE LINES SHOWN IN PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AND PRIVATE OWNERS TO IDENTIFY LOCATIONS OF THESE LINES.
 3. THE CONTRACTOR SHALL SUBMIT HIS ANTICIPATED SEQUENCE OF CONSTRUCTION PLAN PRIOR TO THE START OF CONSTRUCTION.
 4. THE CONTRACTOR SHALL PROVIDE THE OWNER ONE SET OF PLANS MARKED IN RED INK INDICATING ALL CHANGES MADE TO THE PROJECT INCLUDING ACTUAL LOCATIONS OF BURIED UTILITIES. ALL RECORD INFORMATION SHALL BE BASED ON PLAN CONTROL POINTS.
 5. THE CONTRACTOR, AT THEIR EXPENSE, SHALL REPLACE ANY CONTROL POINTS OR PROPERTY IRONS THAT ARE DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION.
 6. BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY ALPHA LAND SURVEYS, INC.
 7. PROJECT WAS SURVEYED AND IS LAID OUT USING US SURVEY FEET AS THE PRIMARY UNIT OF MEASURE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRONIC FILES UTILIZED FOR CONSTRUCTION ARE IN US SURVEY FEET AND NOT INTERNATIONAL FEET.
 8. ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WICHITA STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.



SHEET INDEX

*CV3.0	PPS TITLE SHEET
CV3.1	SITE SURVEY
*CV3.2	SITE PLAN
*CV3.3	SANITARY SEWER PLAN & PROFILE
CV3.4	MANHOLE DETAIL
CV3.5	MANHOLE FRAME & COVER DETAILS
CV3.6	SANITARY SEWER ENCASEMENT DETAILS
*	REVISED - 10-31-2014

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA
Engineering *Rebecca Gault* 10/14/14

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. 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 without such inspection, nor shall any work be commenced without written authorization by the City Engineer.

AS BUILTS

Contractor: Ewertz Excavation 1/07/2015	Project Inspector: Larry Gann KEMILLER ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242
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OCTOBER 2014



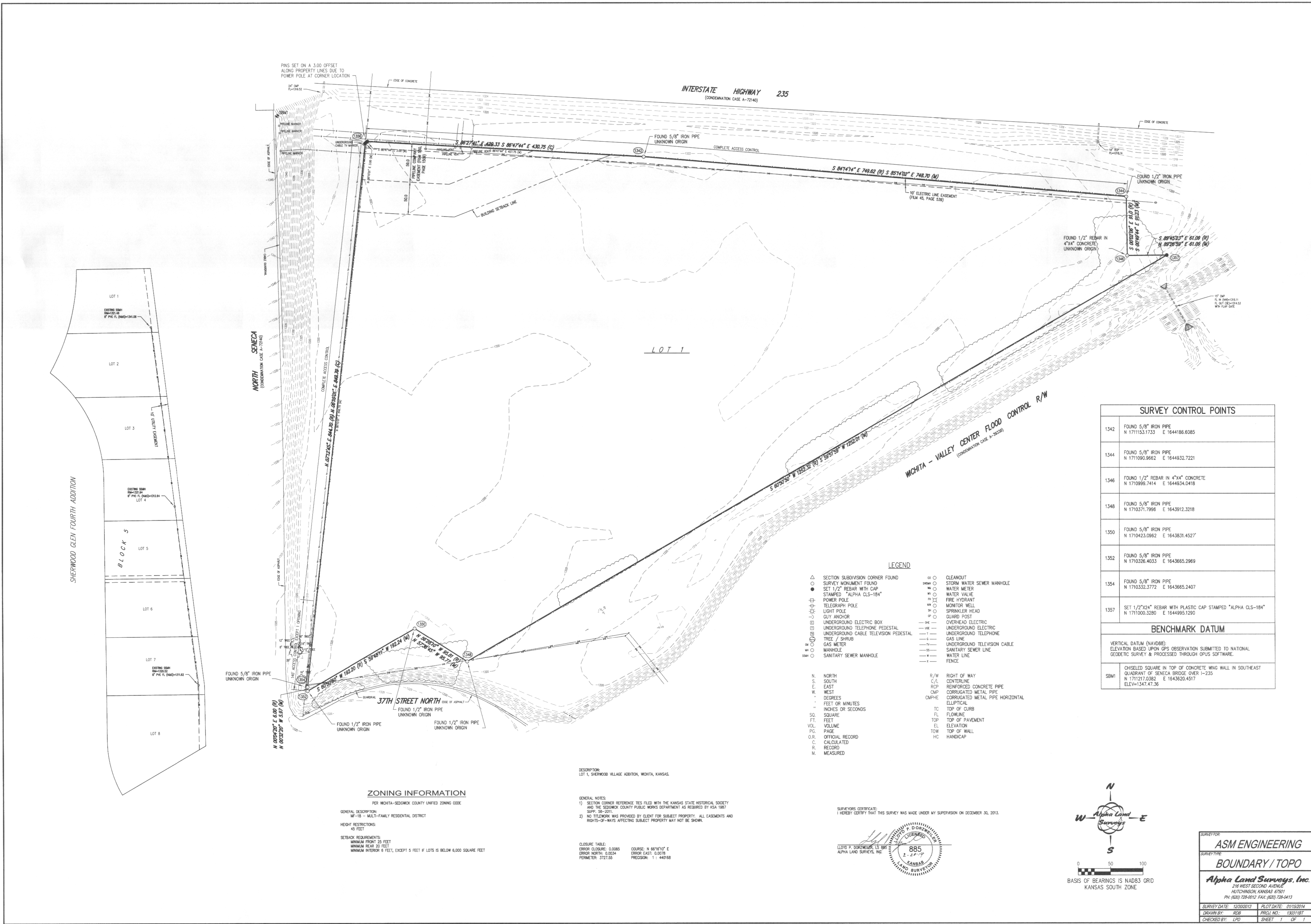
sheet
CV3.0
TITLE
SHEET

Architectural Innovations, LLC
architects
www.arch-innov.com
777 N. Jewell, Suite 110
Wichita, Kansas 67202-1000
Phone: 316.265.9179 Fax: 316.265.7601

project no. 1317

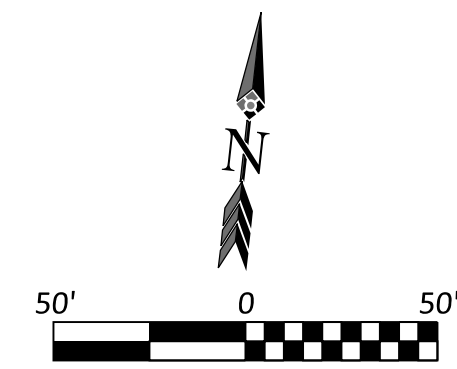
Construction Documents:
Heritage Family Church
New Gym. Building
NORTH SENECA & 37th. STREET
WICHITA, KANSAS

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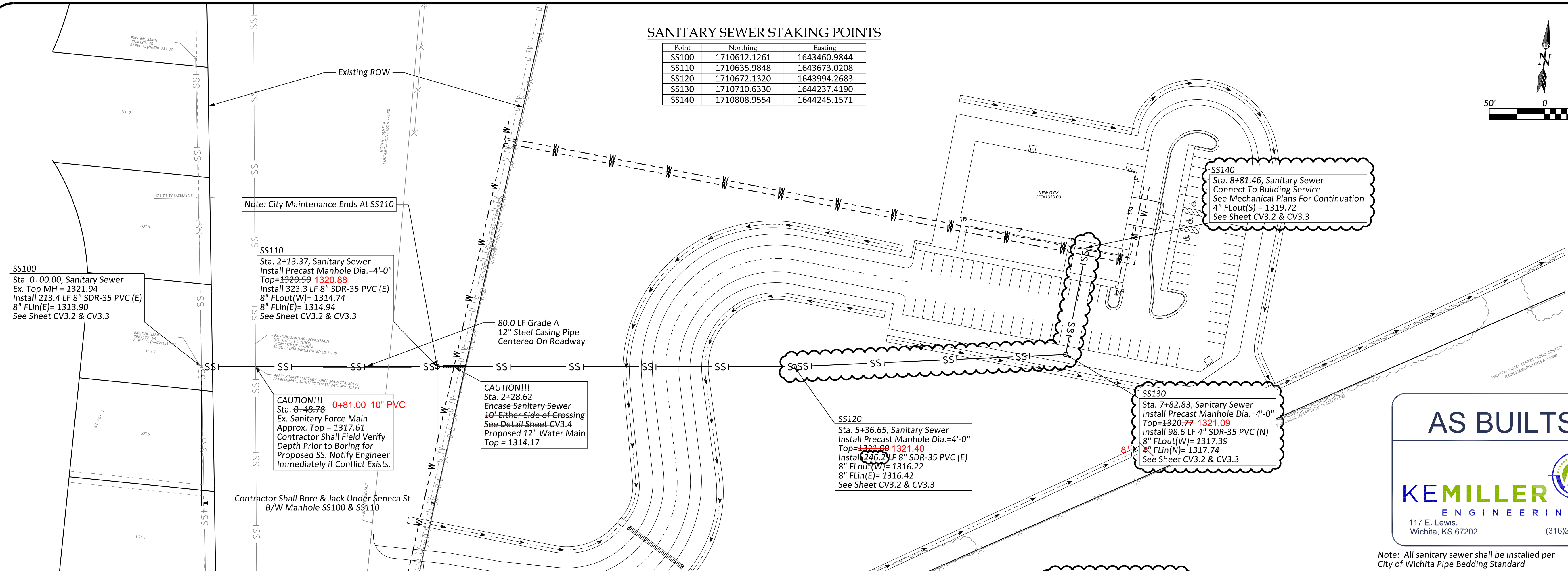
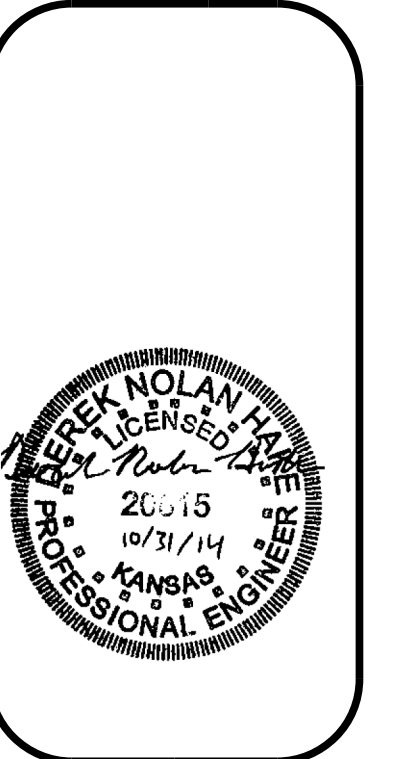


SANITARY SEWER STAKING POINTS

Point	Northing	Easting
SS100	1710612.1261	1643460.9844
SS110	1710635.9848	1643673.0208
SS120	1710672.1320	1643994.2683
SS130	1710710.6330	1644237.4190
SS140	1710808.9554	1644245.1571



DATE: 10-31-2014
Revision 1 -
Revised Sewer
Alignment & Profile

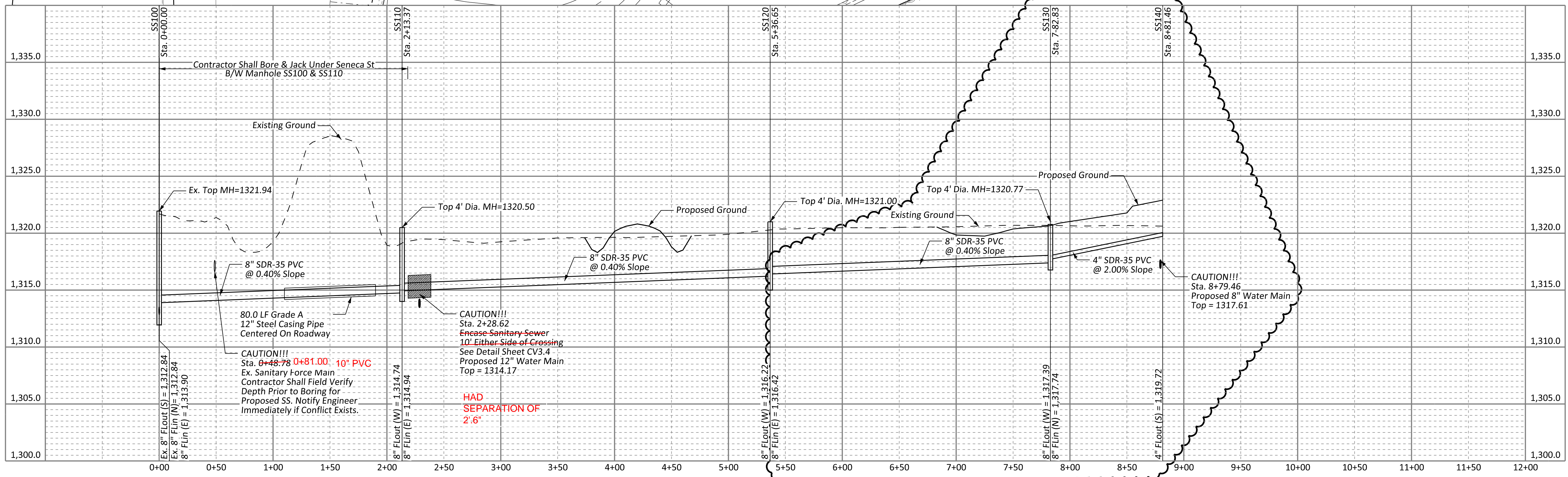


AS BUILTS

KEMILLER ENGINEERING PA

117 E. Lewis,
Wichita, KS 67202 (316)264-0242

Note: All sanitary sewer shall be installed per
City of Wichita Pipe Bedding Standard



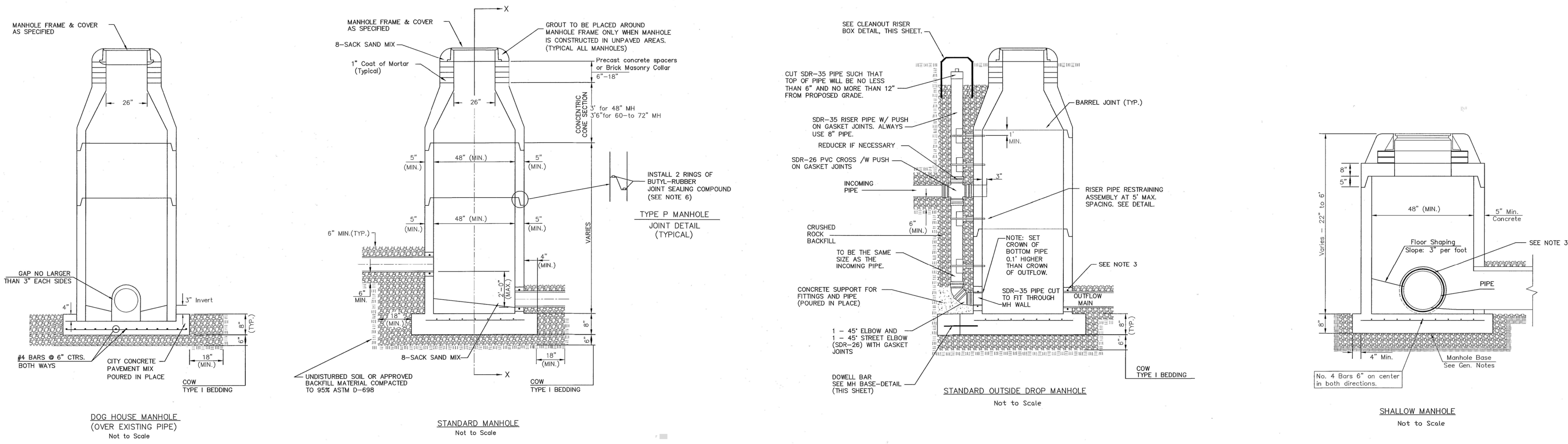
project no. 1317

Construction Documents:
Heritage Family Church
New Gym. Building
NORTH SENECA & 37th STREET
WICHITA, KANSAS



sheet
CV3.3
SANITARY SEWER
PLAN & PROFILE

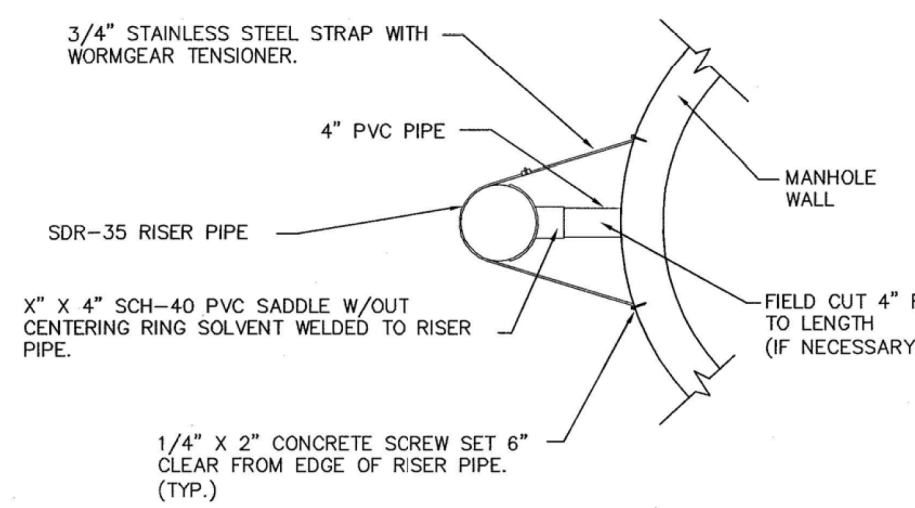
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= COW TYPE I BEDDING
 = UNDISTURBED SOIL

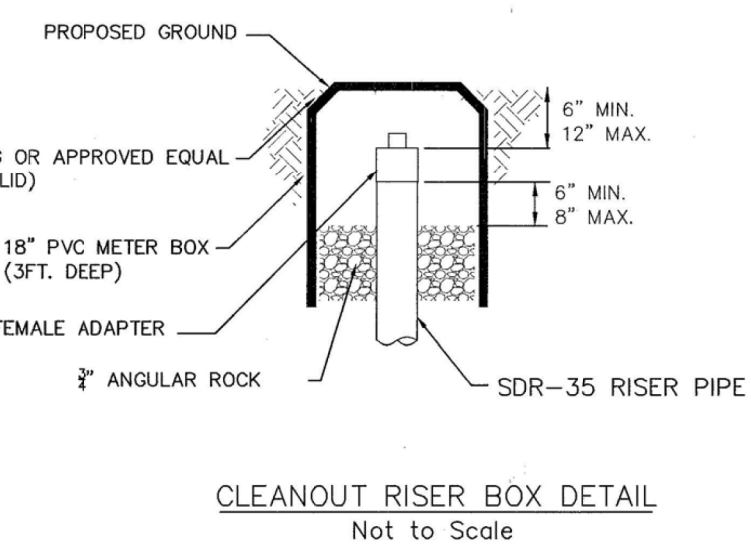
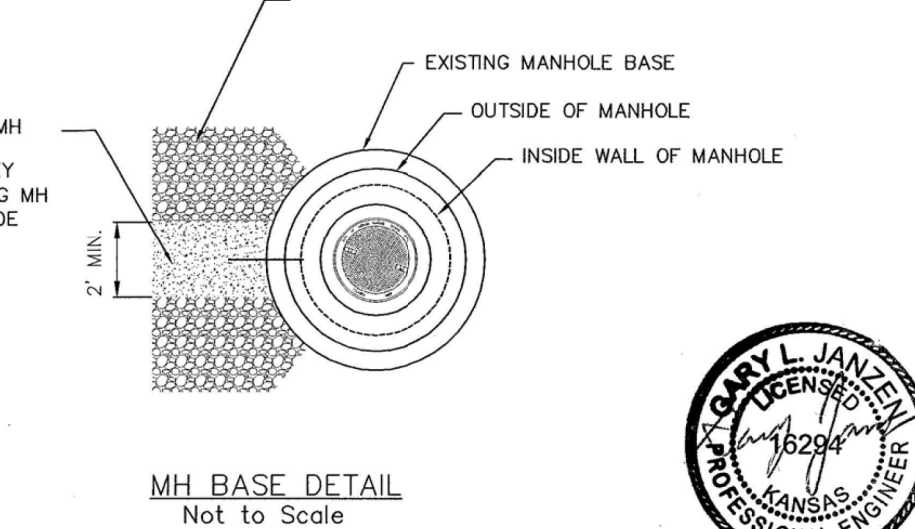
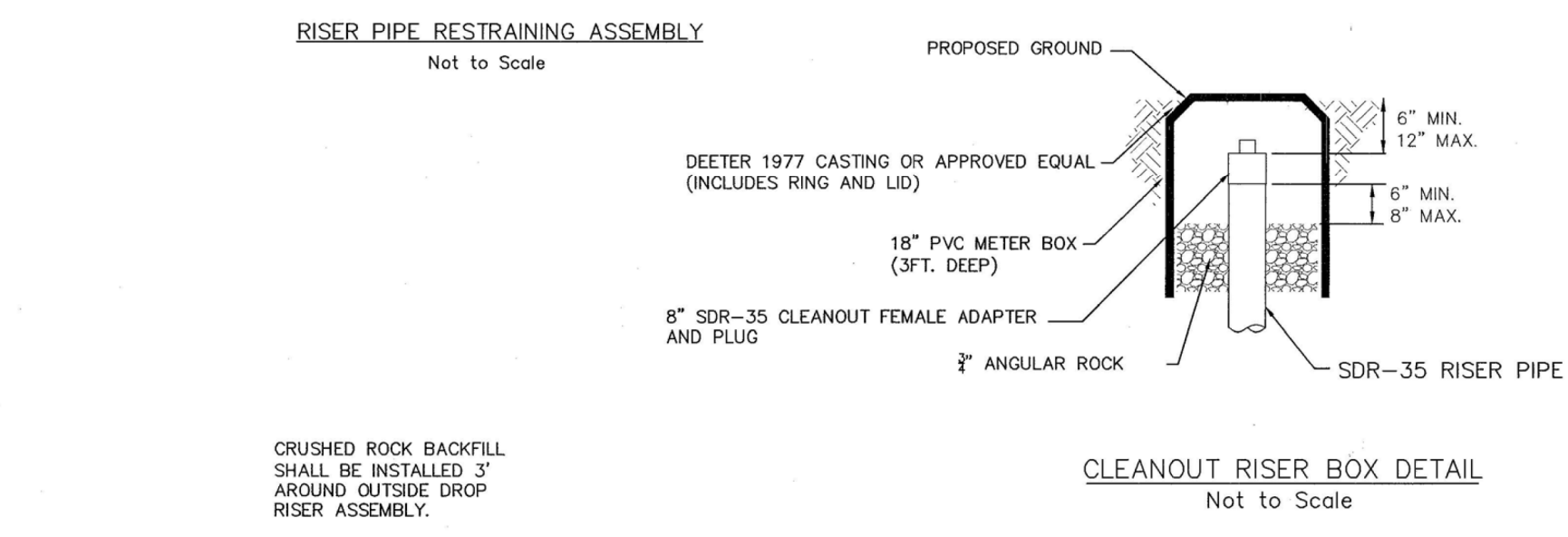
PRECAST MANHOLE GENERAL NOTES

- 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 SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK 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 PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
- ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12" DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
- 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. 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.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED 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. 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. 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.
- 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 STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD 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.
- PRECAST CONCRETE SPACERS OR 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.
- THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
- REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	15'-30'	21"-30"
6'	>30'	36"-60"



04/24/14

CITY OF WICHITA

 PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

REVISED JANUARY 2014

PRECAST SANITARY SEWER MANHOLE

 CITY ENGINEER

GARY JANZEN, P.E.

 PROJECT NUMBER OCA NUMBER DATE

 CITY ENGINEER'S OFFICE

 CITY HALL - SEVENTH FLOOR

 455 NORTH MAIN STREET

 WICHITA, KANSAS 67202-1620

 (316) 268-4501

SS-101

project no. 1317

Construction Documents:
 Heritage Family Church
 New Gym. Building
 NORTH SENECA & 37th STREET
 WICHITA, KANSAS

sheet
CV3.4
 MANHOLE
 DETAIL

ASM

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