

# AS BUILT PLANS

T. Mason - City of Wichita, Inspector  
Release Date: 12/10/2012  
:APRosas 12/10/2012

Contractor: Dondlinger Const. Co.  
Inspector: Don Eddingfield, Baughman Co.  
pdf's by: KEK, 9/26/12

## SANITARY SEWER IMPROVEMENTS TO SERVE

# West High School Addition

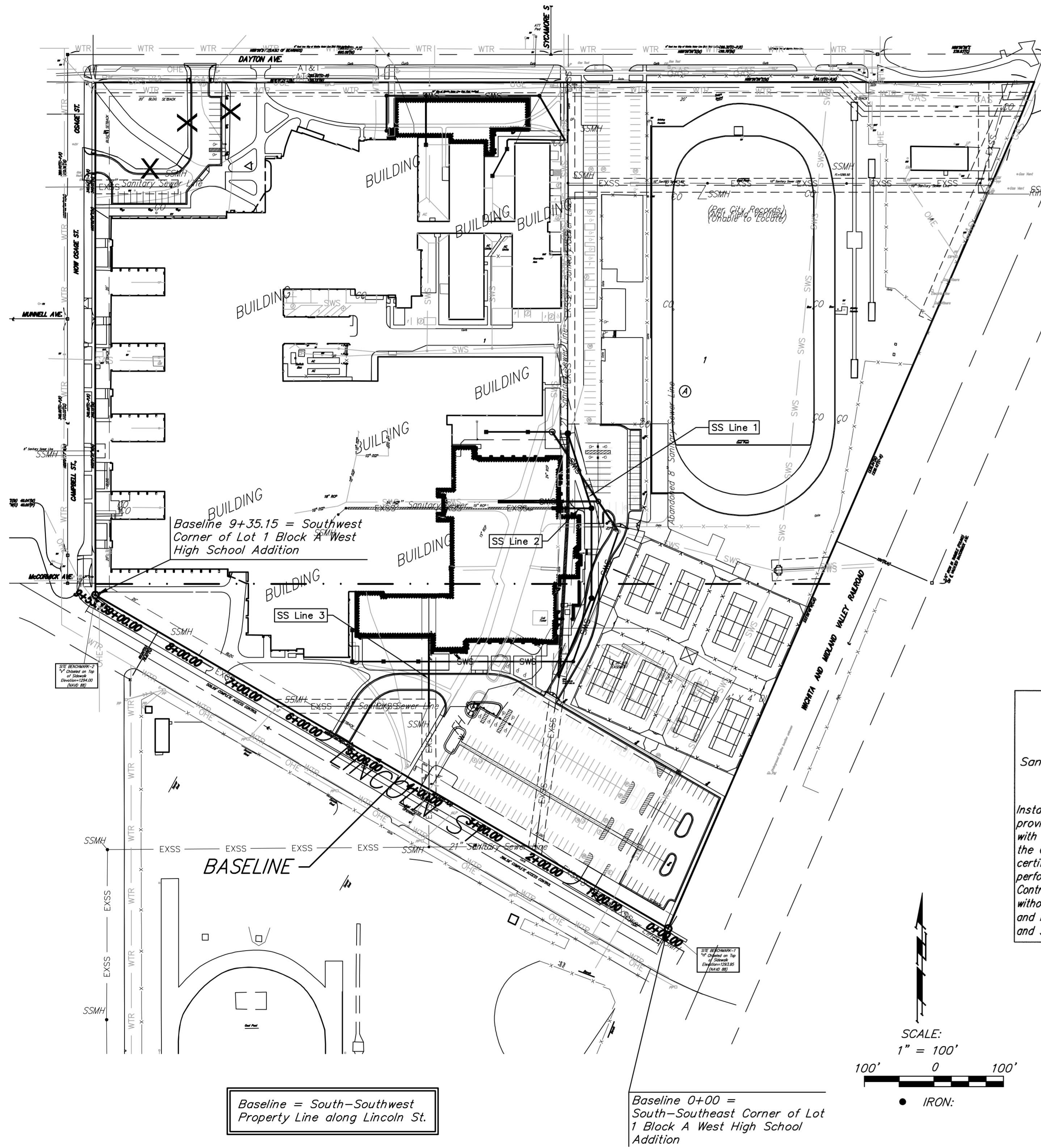
Lot 1, Block A

Private Project: 2118 PPS (607861)

CITY OF WICHITA, KANSAS

James Armour, P.E. City Engineer

December 2011



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Manhole / Ring & Cover Details Available On Request	
BMP Erosion Details	Available On Request

### General Notes

- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:  
Kansas One-Call 687-2470  
The Contractor must notify the following in case of an emergency:  
Cox Communications 262-4270  
Kansas Gas Service Company 1-888-482-4950  
Westar Energy (Electric) 383-8650  
Black Hills Energy (Gas) 1-800-303-0357  
Southwestern Bell Telephone Co. 1-800-286-8313  
City of Wichita Water Dept. (Water) 262-6000  
City of Wichita Sewer Maint. (SS) 262-6000  
City of Wichita Storm Sewer Maint. 268-4090  
City of Wichita Traffic Maint. 268-4034
- All disturbed R/W areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 Sq. Ft., fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 Sq. Ft., and mulched with Prairie Hay at a rate of 92 lb./1000 Sq. Ft. Mulch shall be "patted" with forks or punched into soil to reduce loss due to wind.
- Utility service lines, poles, valve boxes, meters, et cetera 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 location, as shown on the plans represent the best information obtainable for design and shall be field verified. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Contractor shall furnish the inspector with a copy of the manufacturer's certification for any pipe used on this project after completion of pipe installation. The engineer will not certify the project to the city until pipe certification has been received.
- Properties within the project limits may have underground sprinkler systems which conflict with new construction. Contractor will be required to remove such improvements should they not be removed by their owner at the time of construction. The Contractor will be required to salvage all sprinkler heads and/or valves and give such material to their owner. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place. All work in connection with underground sprinkler systems shall be considered as subsidiary to the contract pay items of work.
- Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Contractor shall not start on the project until all necessary bonds and permits have been obtained. Bonds may include but are not limited to Statutory, Performance & Maintenance Any work done without inspection will be required to be uncovered for inspection.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall 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 would 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 would require additional archaeological investigations unless buried in a previously approved borrow location.
- All sanitary sewer lines and appurtenances shall be installed in accordance with the most recent edition of City of Wichita, Kansas Standard Specifications for the Construction of City Projects.

### Benchmarks

Benchmark #1 - "□" Chiseled  
on Top of Sidewalk  
Elevation=1293.95 (NAVD 88)

Benchmark #2 - "V" Chiseled  
on Top of Sidewalk  
Elevation=1294.00 (NAVD 88)

### Legal Description

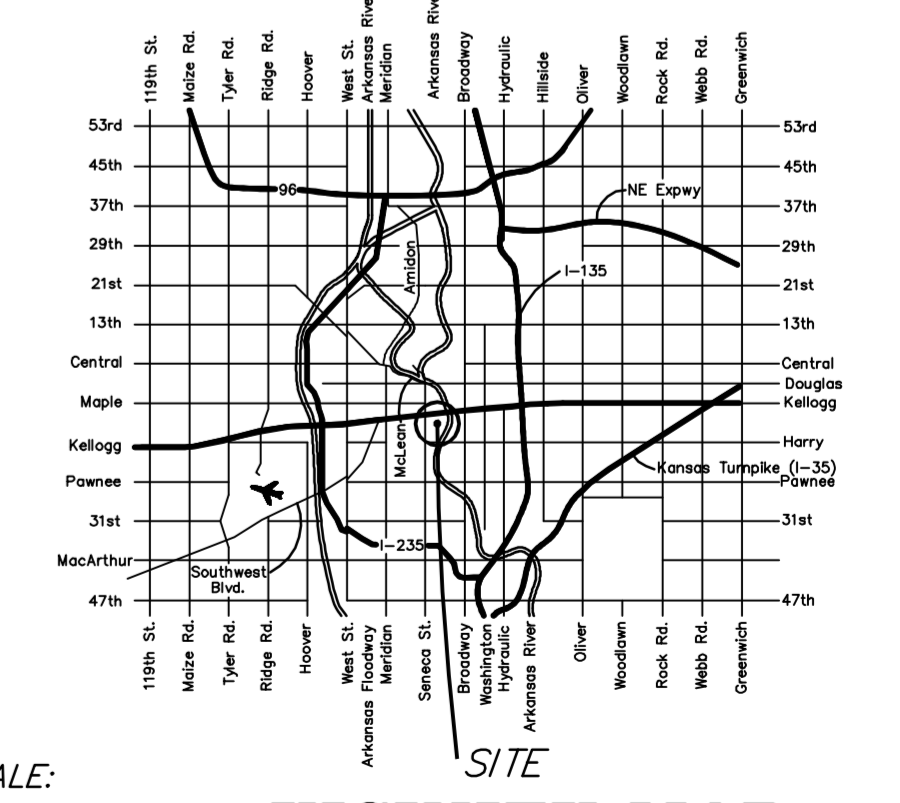
Part of Lot 1, Block A of West High School Addition, in Wichita, Sedgwick County, KS.

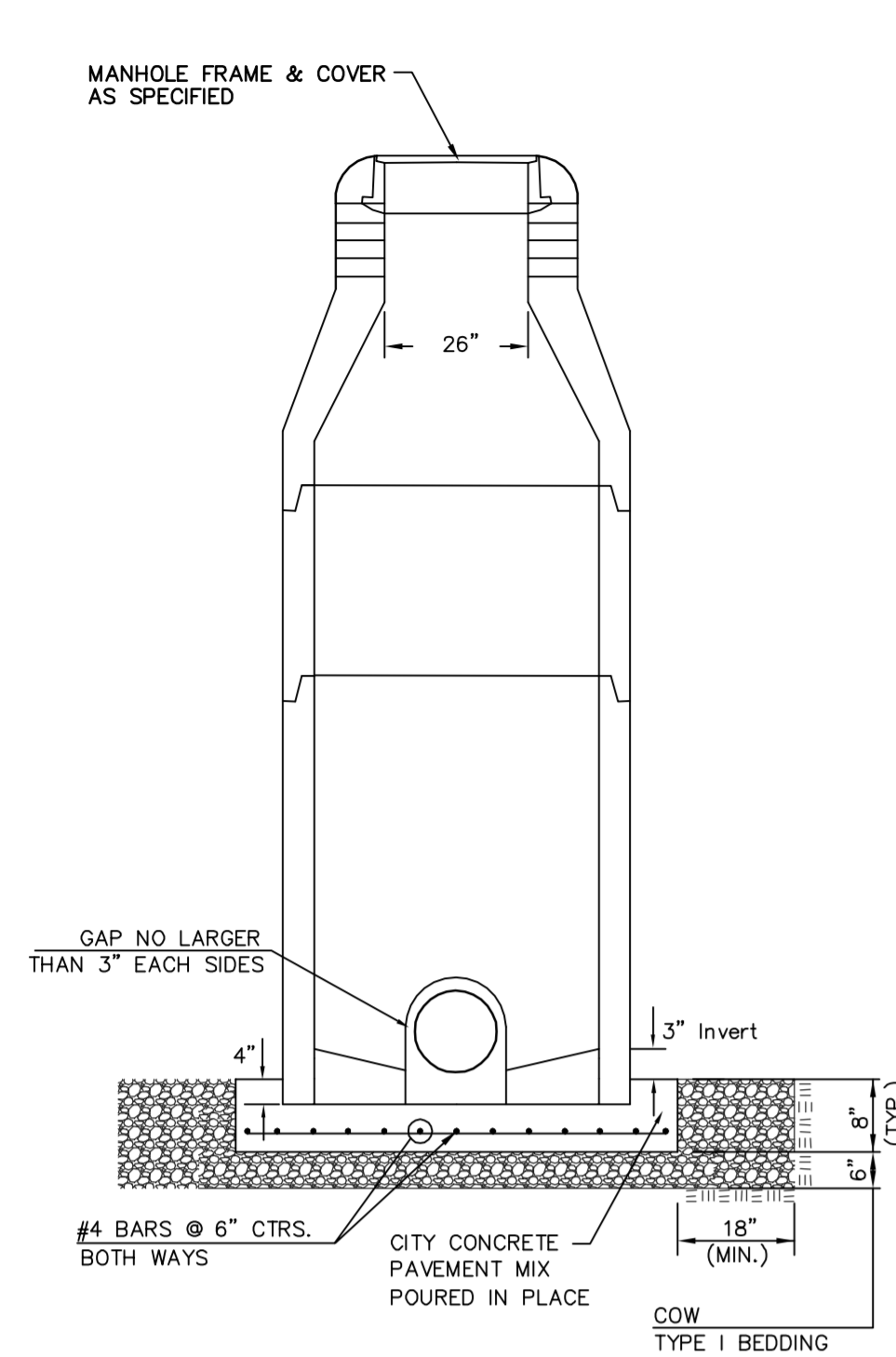
APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA

Sanitary Sewers *Julianne Kallman 3-9-12*

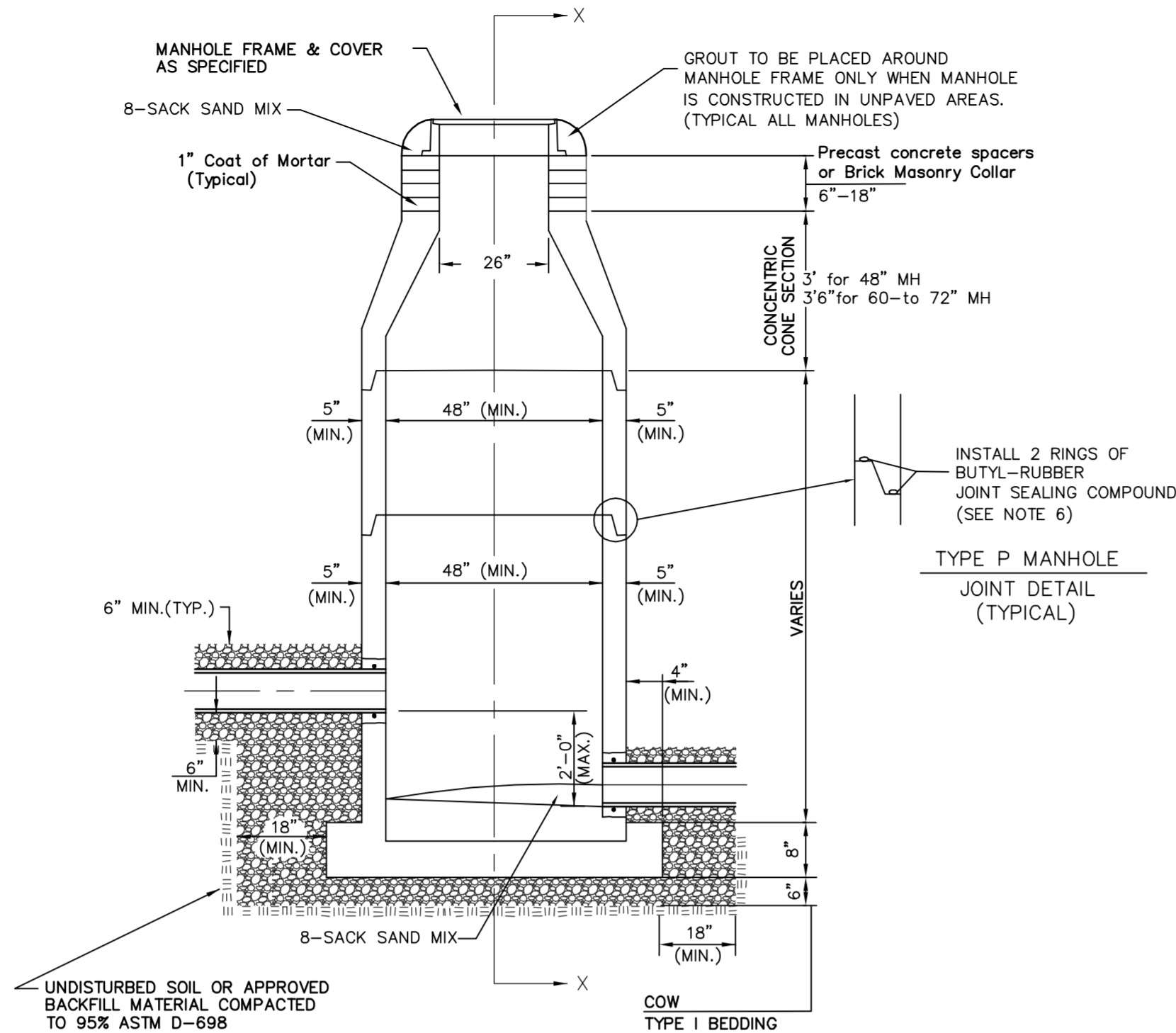
NOTE TO CONTRACTORS

Installation, inspection and testing for this project is 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. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

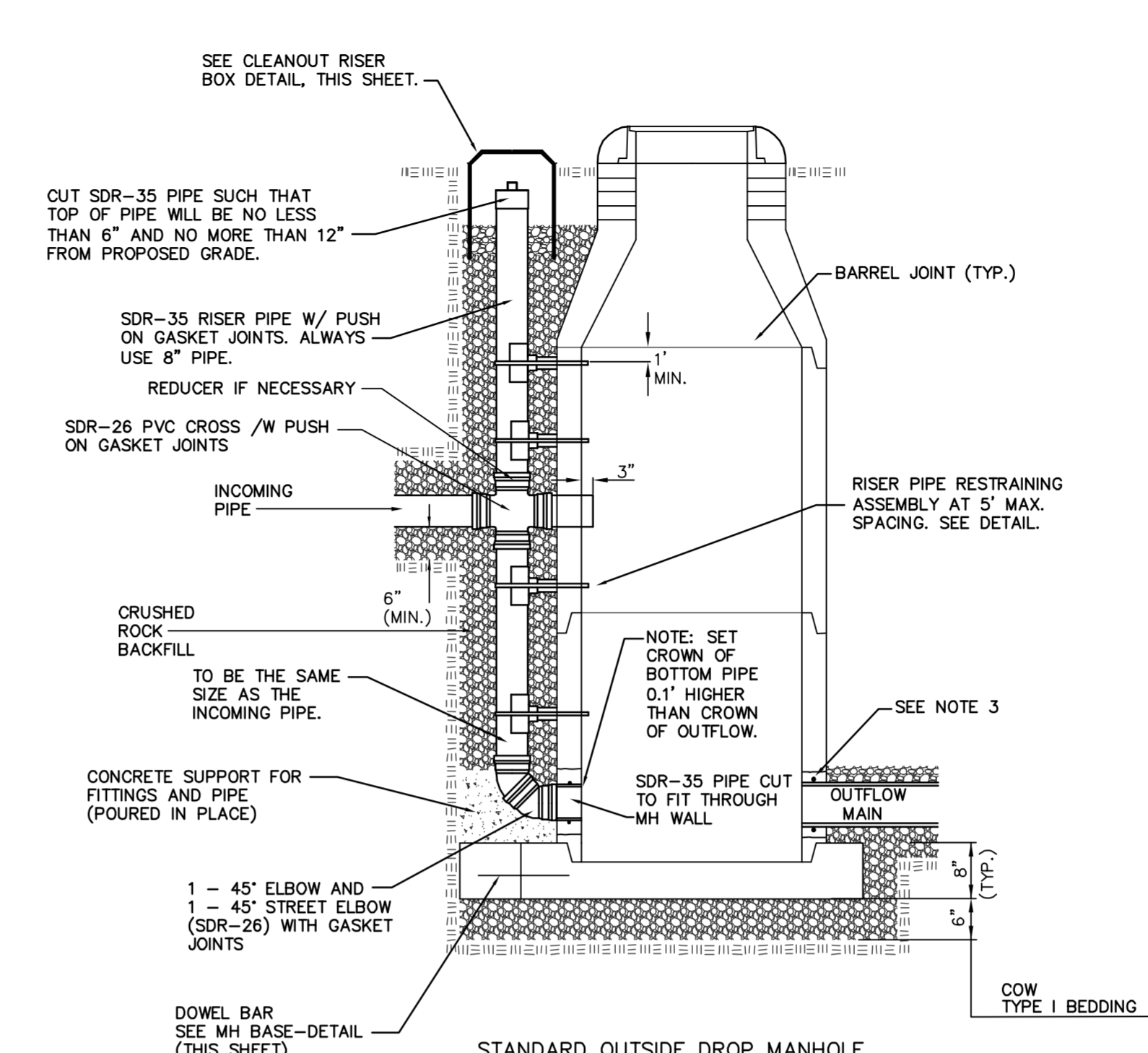




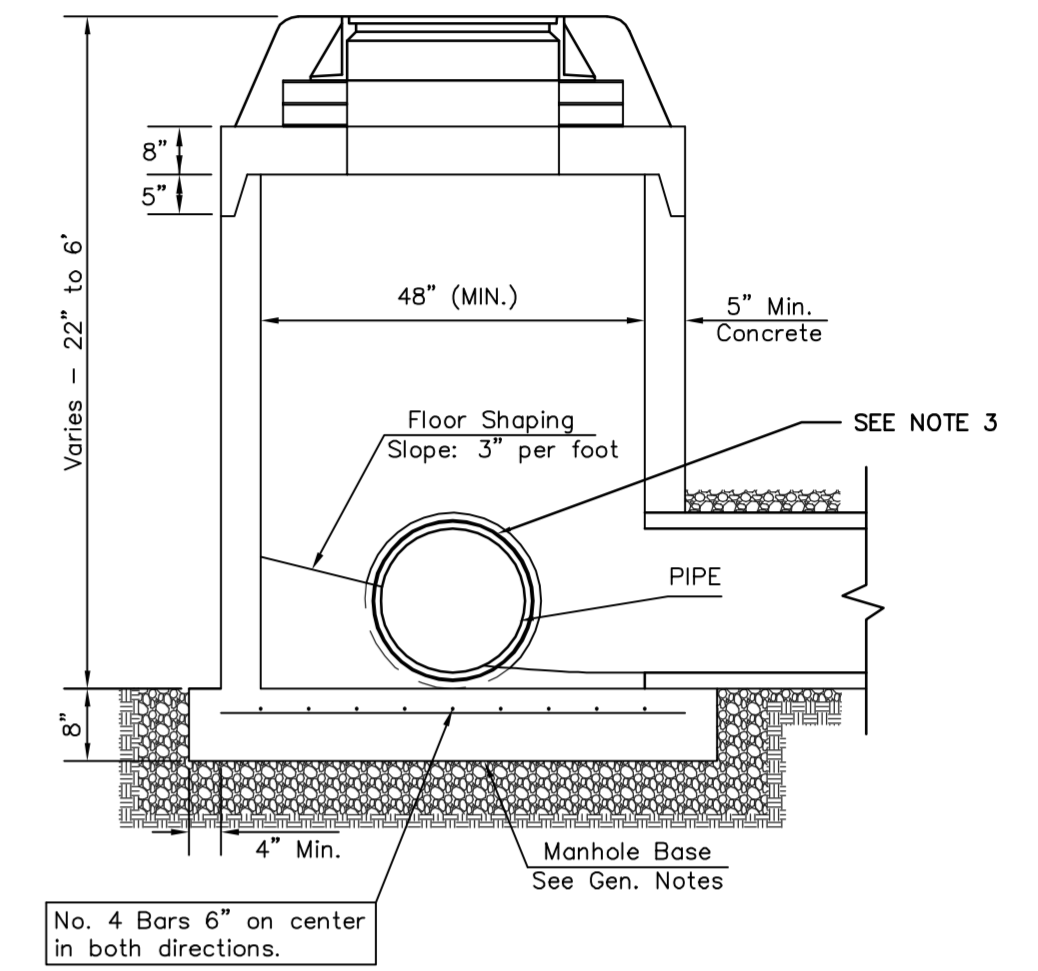
**DOG HOUSE MANHOLE**  
(OVER EXISTING PIPE)  
Not to Scale



**STANDARD MANHOLE**  
Not to Scale



**STANDARD OUTSIDE DROP MANHOLE**  
Not to Scale

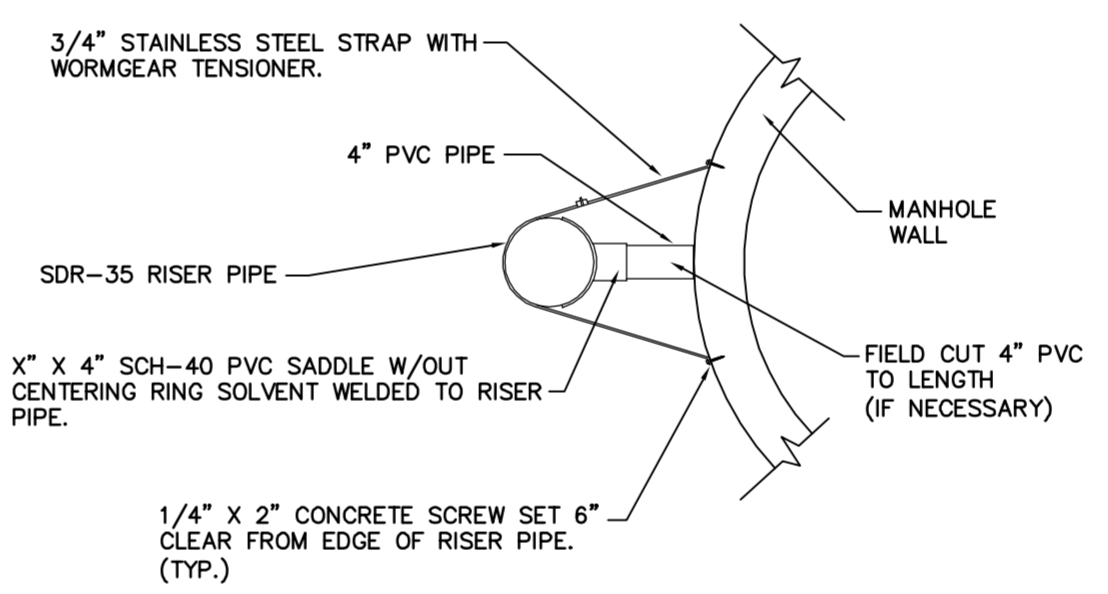


**SHALLOW MANHOLE**  
Not to Scale

 = COW TYPE I BEDDING  
 = UNDISTURBED SOIL

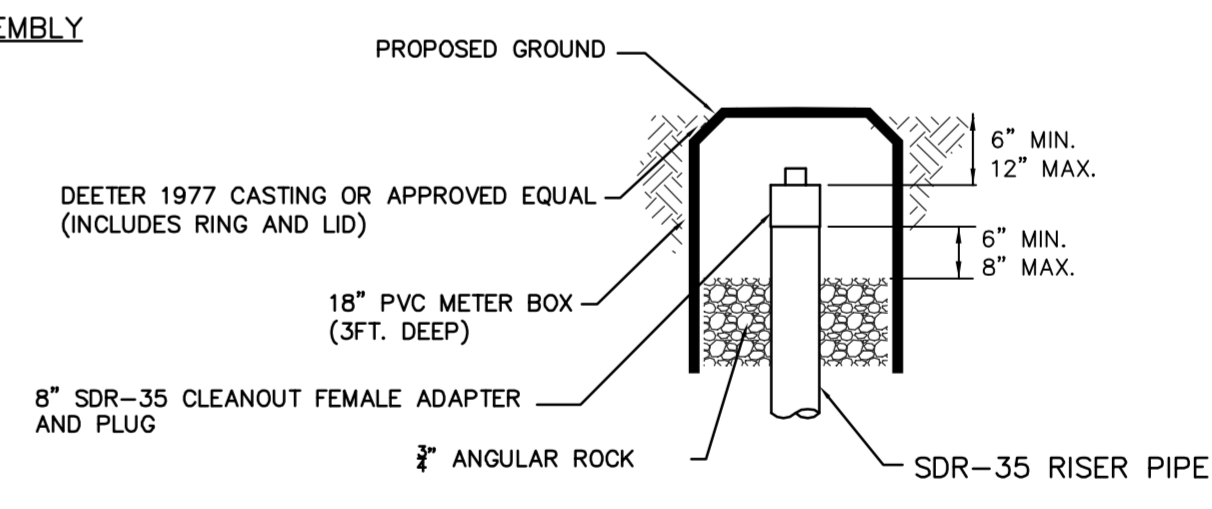
### PRECAST MANHOLE GENERAL NOTES

- 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 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.

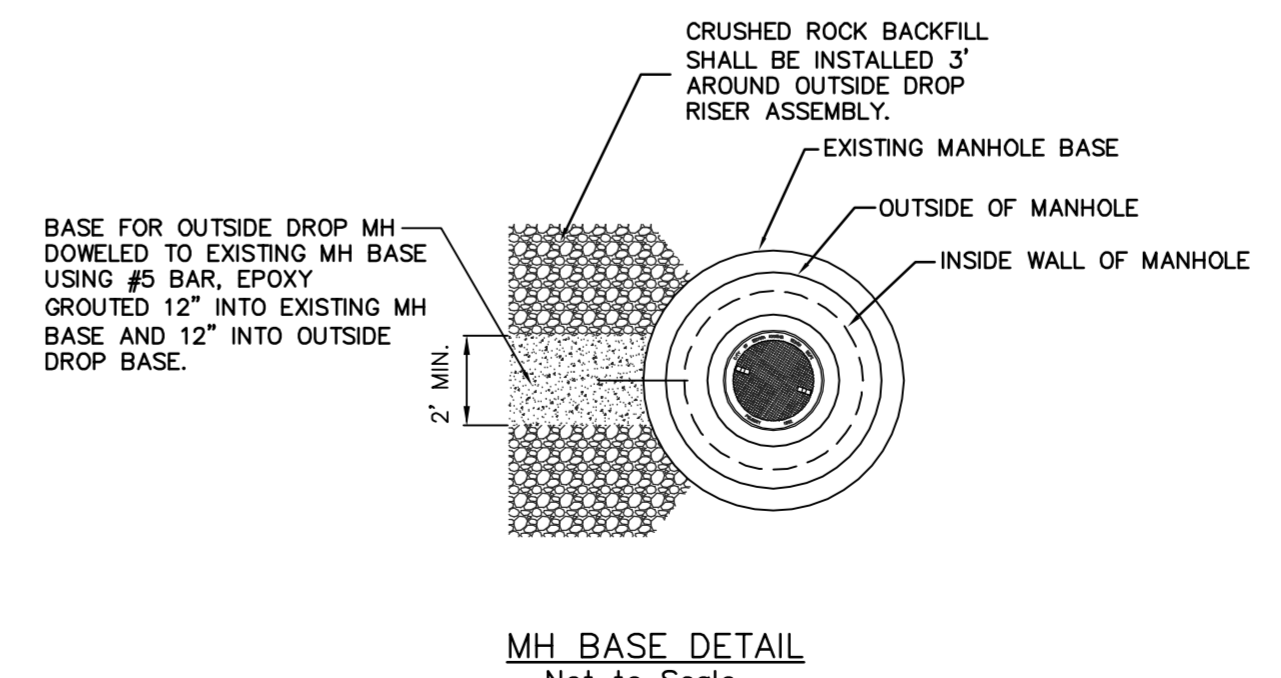


**RISER PIPE RESTRAINING ASSEMBLY**  
Not to Scale

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



**CLEANOUT RISIER BOX DETAIL**  
Not to Scale



**MH BASE DETAIL**  
Not to Scale



**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

**PRECAST SANITARY SEWER MANHOLE**

CITY ENGINEER  
**JAMES L. ARMOUR, P.E., L.S.**

PROJECT NUMBER <b>2118 PPS</b>	OCA NUMBER <b>NA</b>	DATE <b>01/2012</b>
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CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
**2 of 4**

Benchmark #1 - "□" Chiseled on Top of Sidewalk  
Elevation=1293.95 (NAVD 88)

Benchmark #2 - "V" Chiseled on Top of Sidewalk  
Elevation=1294.00 (NAVD 88)

S.S. Sta 0+00, Line 1  
B.L. Sta 3+17.85, 233.17' Rt.  
Begin Construction of new 21" Sanitary Sewer Line. Core into Existing Manhole. Reshape invert as needed. Grout and Seal watertight.

See Cover Sheet for Baseline Information

S.S. Sta 1+22.6, Line 1  
B.L. Sta 3+34.25, 355.26' Rt.  
Construct Standard Manhole, with COW liner system.  
Top Elev. = 1293.25

S.S. Sta 2+51.9, Line 1 = S.S. Sta. 0+00, Line 2  
B.L. Sta 3+99.36, 466.88' Rt.  
Construct Standard Manhole, with COW liner system.  
Top Elev. = 1294.42

S.S. Sta 3+64.5, End Line 1  
B.L. Sta 4+82.74, 542.76' Rt.  
Construct Standard Manhole w/ eccentric cone, over existing 21" SS Line, with COW liner system.  
Top Elev. = 1294.64

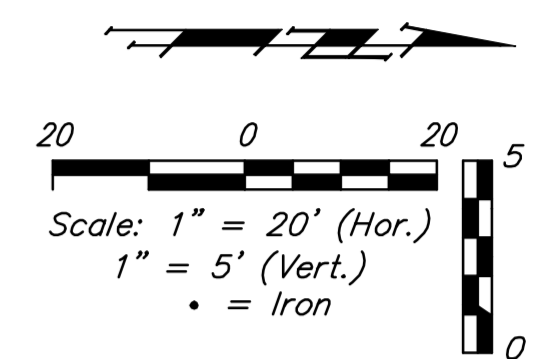
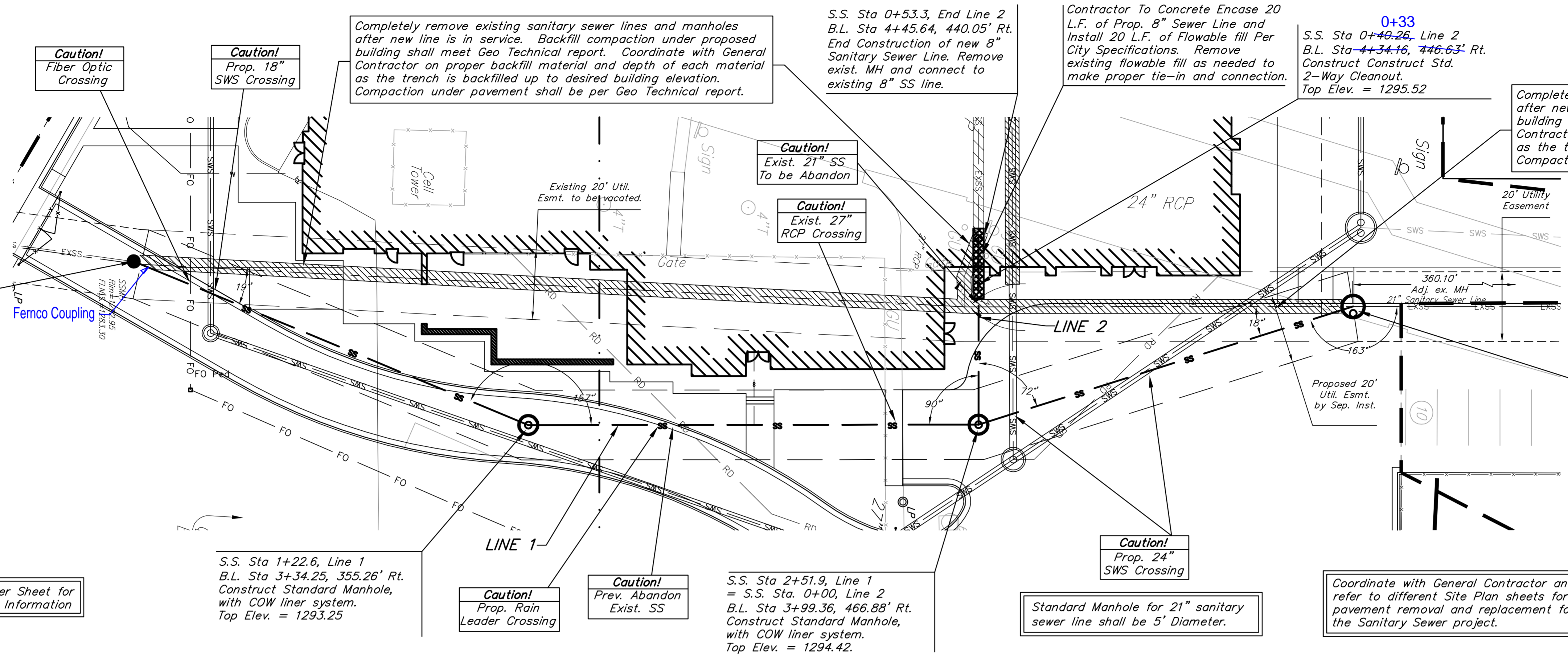
Completely remove existing sanitary sewer lines and manholes after new line is in service. Backfill compaction under proposed building shall meet Geo Technical report. Coordinate with General Contractor on proper backfill material and depth of each material as the trench is backfilled up to desired building elevation. Compaction under pavement shall be per Geo Technical report.

S.S. Sta 0+53.3, End Line 2  
B.L. Sta 4+45.64, 440.05' Rt.  
End Construction of new 8" Sanitary Sewer Line. Remove exist. MH and connect to existing 8" SS line.

Contractor To Concrete Encase 20 L.F. of Prop. 8" Sewer Line and Install 20 L.F. of Flowable fill Per City Specifications. Remove existing flowable fill as needed to make proper tie-in and connection.

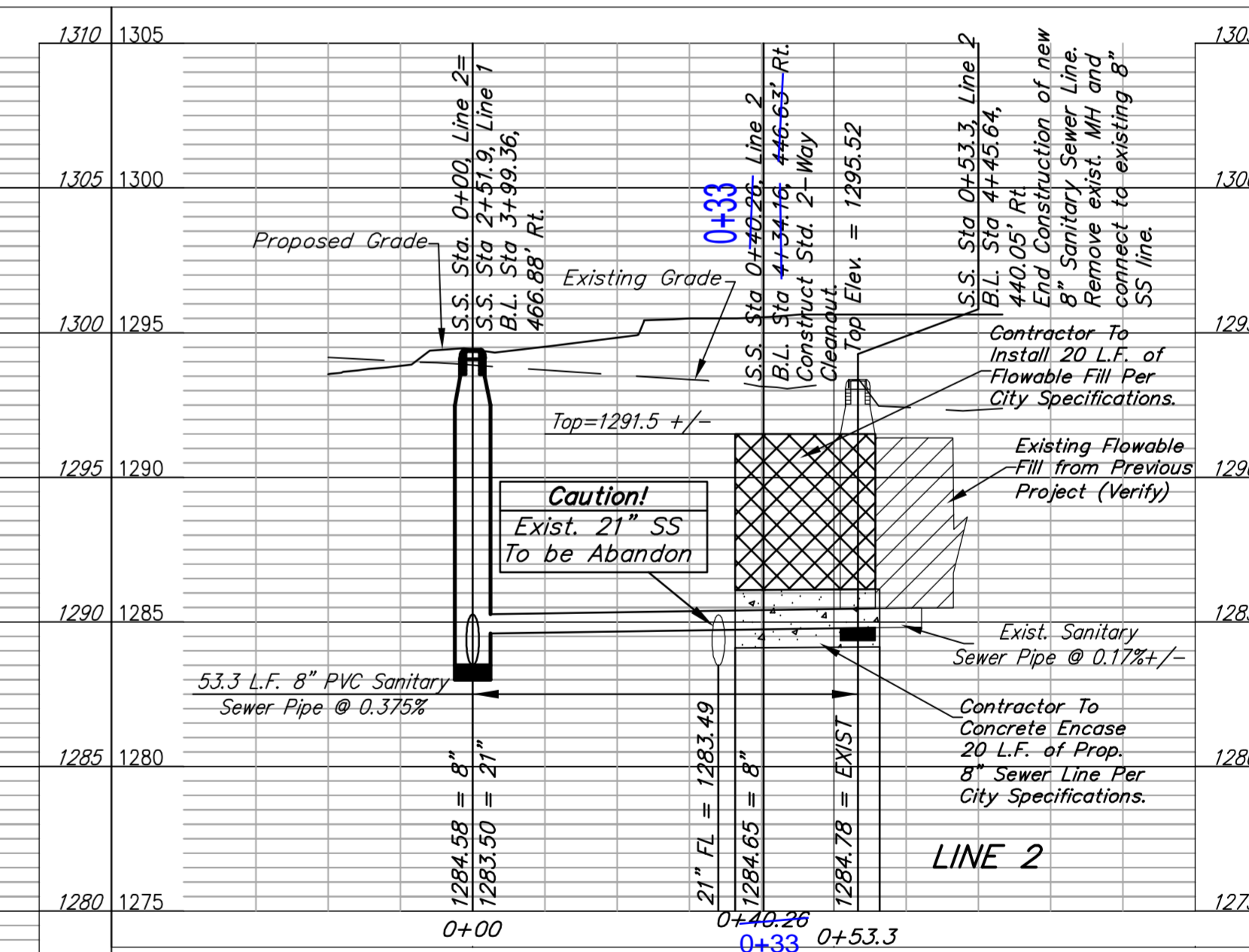
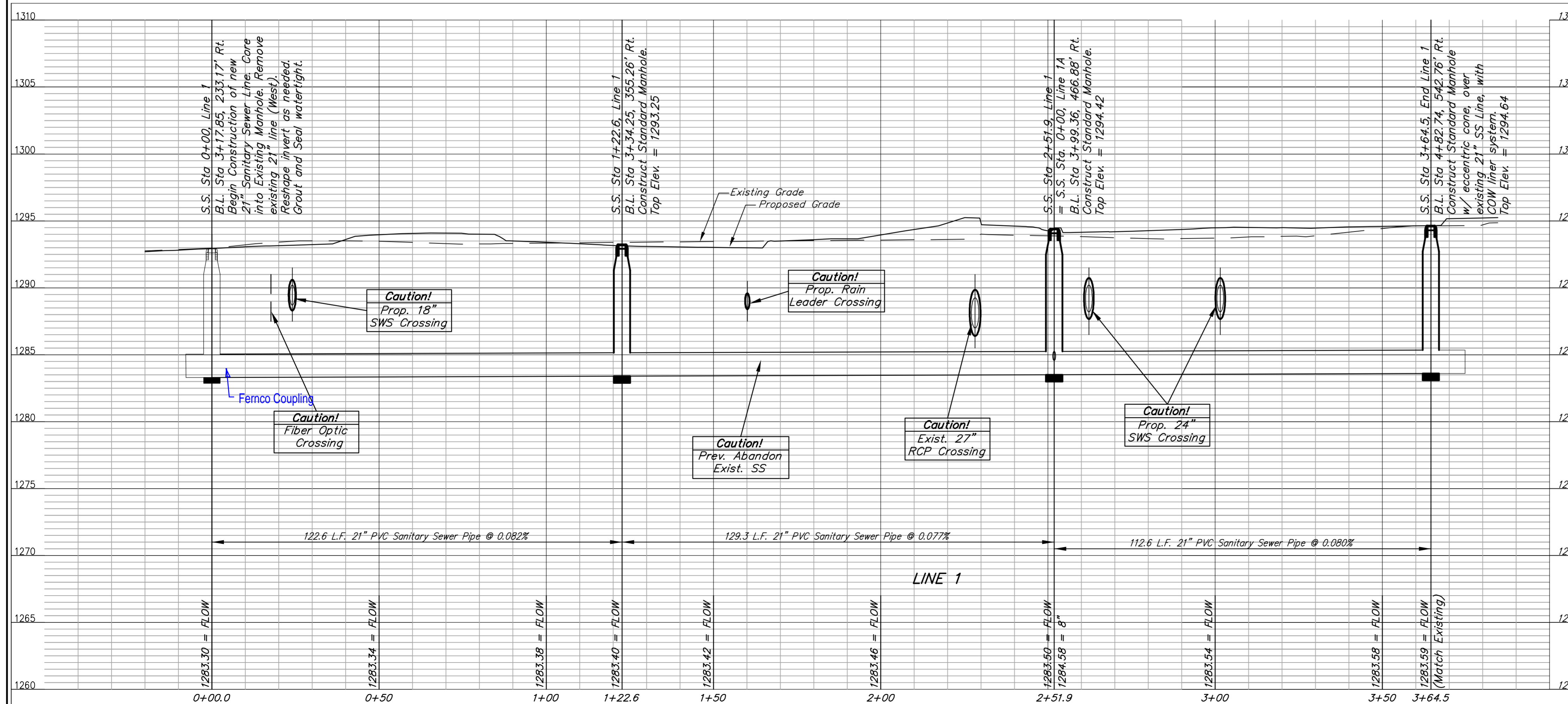
0+33  
S.S. Sta 0+40.26, Line 2  
B.L. Sta 4+34.16, 446.63' Rt.  
Construct Construct Std. 2-Way Cleanout.  
Top Elev. = 1295.52

Completely remove existing sanitary sewer lines and manholes after new line is in service. Backfill compaction under proposed building shall meet Geo Technical report. Coordinate with General Contractor on proper backfill material and depth of each material as the trench is backfilled up to desired building elevation. Compaction under pavement shall be per Geo Technical report.



Profile View of SS Line 1

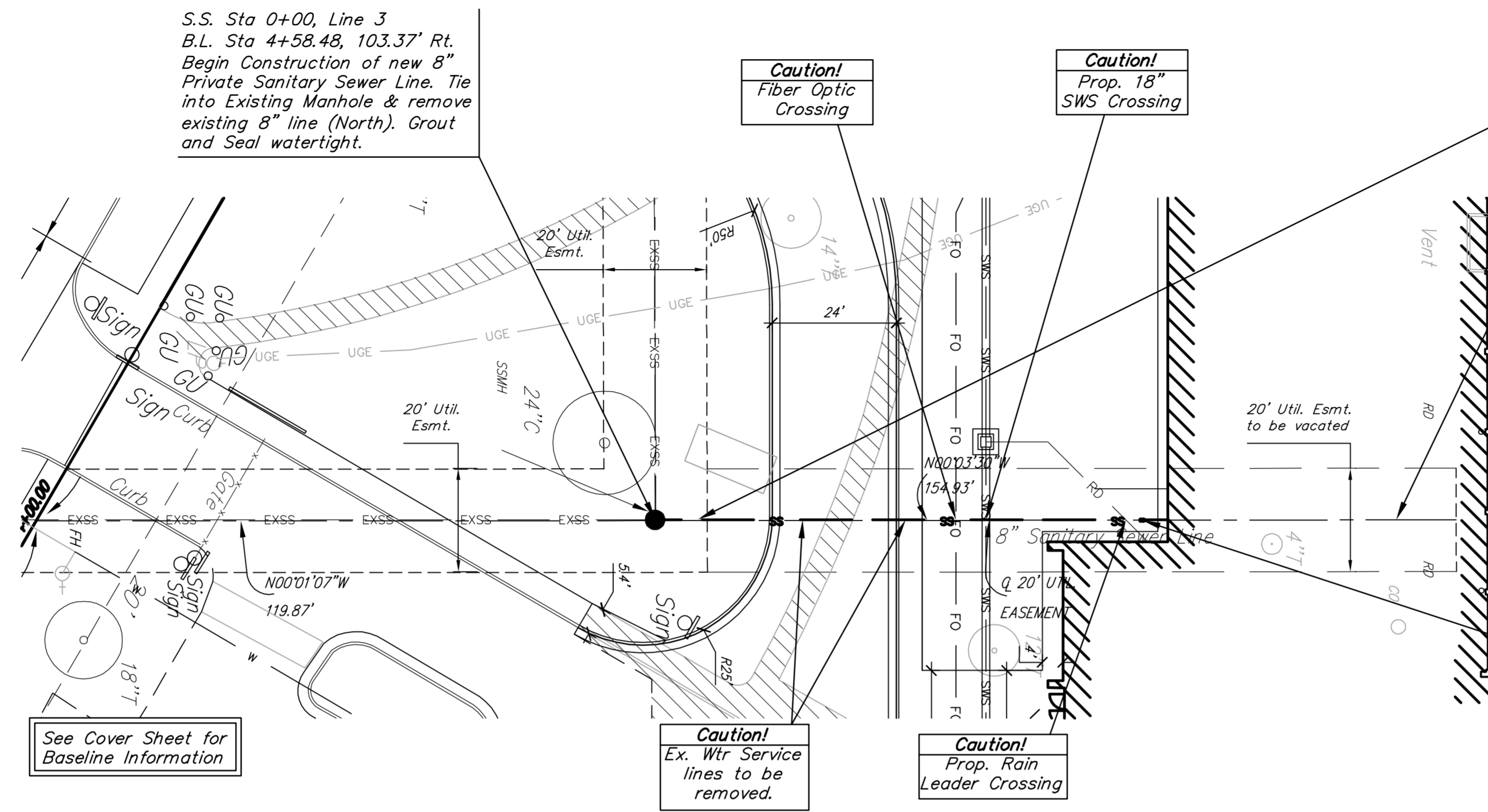
Profile View of SS Line 2



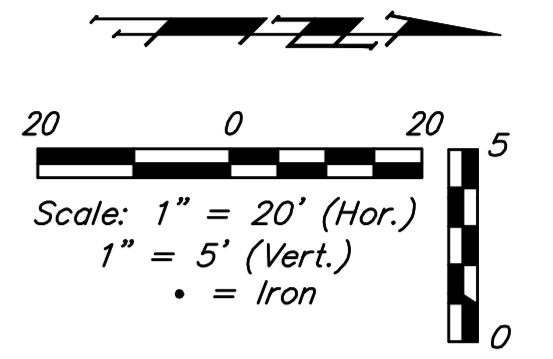
	<b>Line 1 &amp; 2</b> Wichita, Kansas	
	2118 PPS (607861)	
DESIGN PSB	DRAWN IMS	
APPROVED PSB	DATE 11/22/2011	
SCALE varies		
SHEET <b>3 OF 4</b>		

Benchmark #1 - "□" Chiseled  
on Top of Sidewalk  
Elevation=1293.95 (NAVD 88)

Benchmark #2 - "V" Chiseled  
on Top of Sidewalk  
Elevation=1294.00 (NAVD 88)



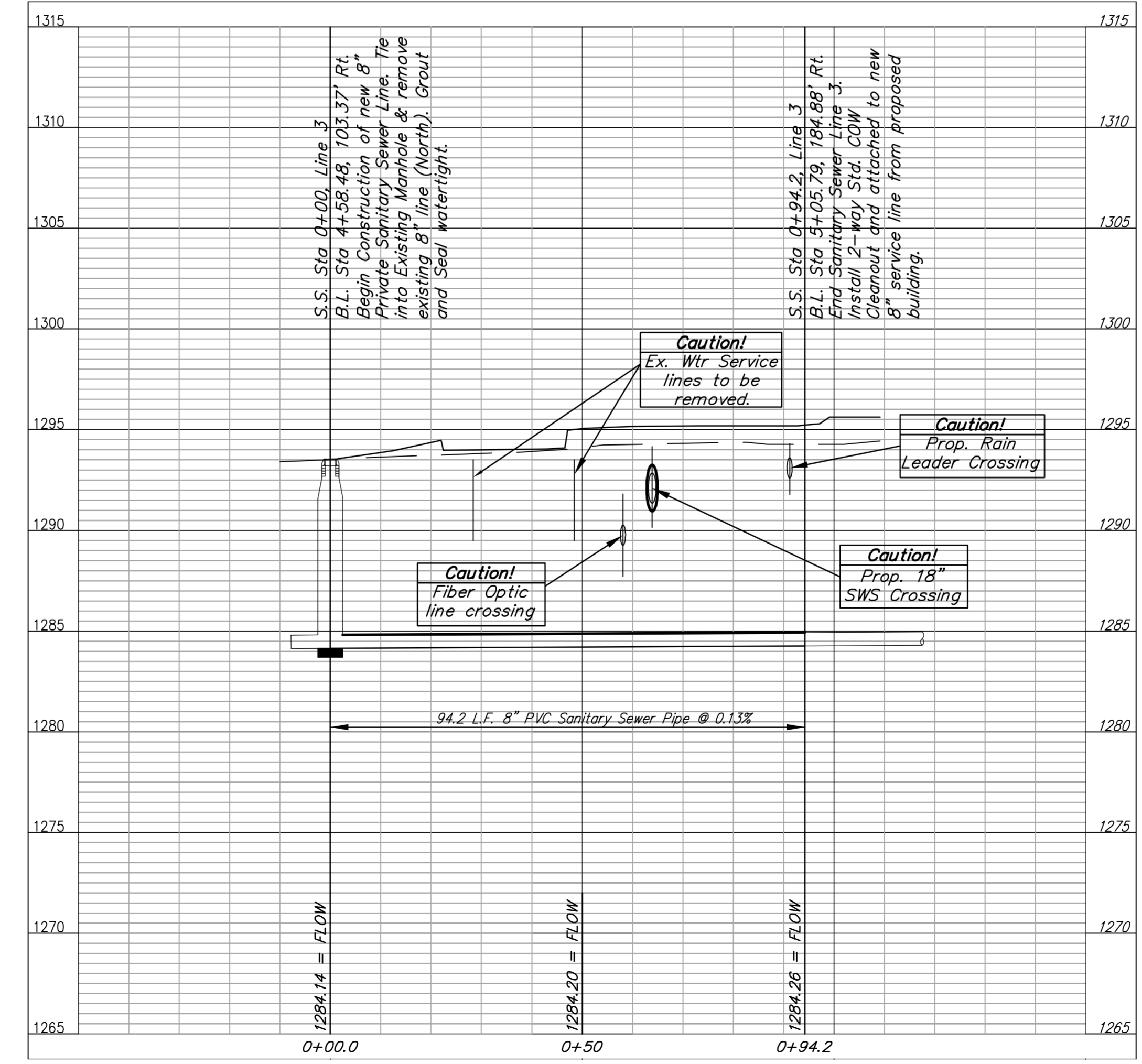
Completely remove existing sanitary sewer lines and manholes during new line construction. Backfill compaction under proposed building shall meet Geo Technical report. Coordinate with General Contractor on proper backfill material and depth of each material as the trench is backfilled up to desired building elevation. Compaction under pavement shall be per Geo Technical report.



S.S. Sta 0+94.2, Line 3  
B.L. Sta 5+05.79, 184.88' Rt.  
End Sanitary Sewer Line 3. Install 2-way Std. COW Cleanout and attached to new 8" service line from proposed building.  
Top Elev. = 1295.20

Coordinate with General Contractor and refer to different Site Plan sheets for pavement removal and replacement for the Sanitary Sewer project.

Profile View of SS Line 3



	USD 259 West High School	
	<b>Line 3</b> Wichita, Kansas	
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE</small>		
<small>PROJECT NUMBER 2118 PPS (607861)</small>	<small>DESIGN PSB</small>	<small>DRAWN TNT</small>
<small>APPROVED PSB</small>	<small>DATE 11/22/2011</small>	<small>SCALE varies</small>
<small>REVISIONS:</small>	<small>SHEET</small>	<small>4 OF 4</small>
<small>E:\Projects\USD 259 West High (11-08-E664)\Engineering\PPS.dwg</small>		

