

# SANITARY SEWER EXTENSION LIFT STATION AND FORCE MAIN FOR MAIN 6, COWSKIN INTERCEPTOR SEWER SOUTHWEST PASSAGE ADDITION

468-84227  
OCA # 744208

## GENERAL NOTES

Contractor will be required to provide a minimum advance notice of seventy-two (72) hours to utility companies prior to starting any excavation as follows:

Kansas One-Call 687-2470

The Contractor must notify the following in case of an emergency:

Cox Communications	260-7204
Kansas Gas Service	888-482-4950
Westar	383-8600
Aquila	1-800-303-0357
SBC	1-800-286-8313
City of Wichita Water Department	262-6000
City of Wichita Sewer Maintenance	262-6000

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 location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

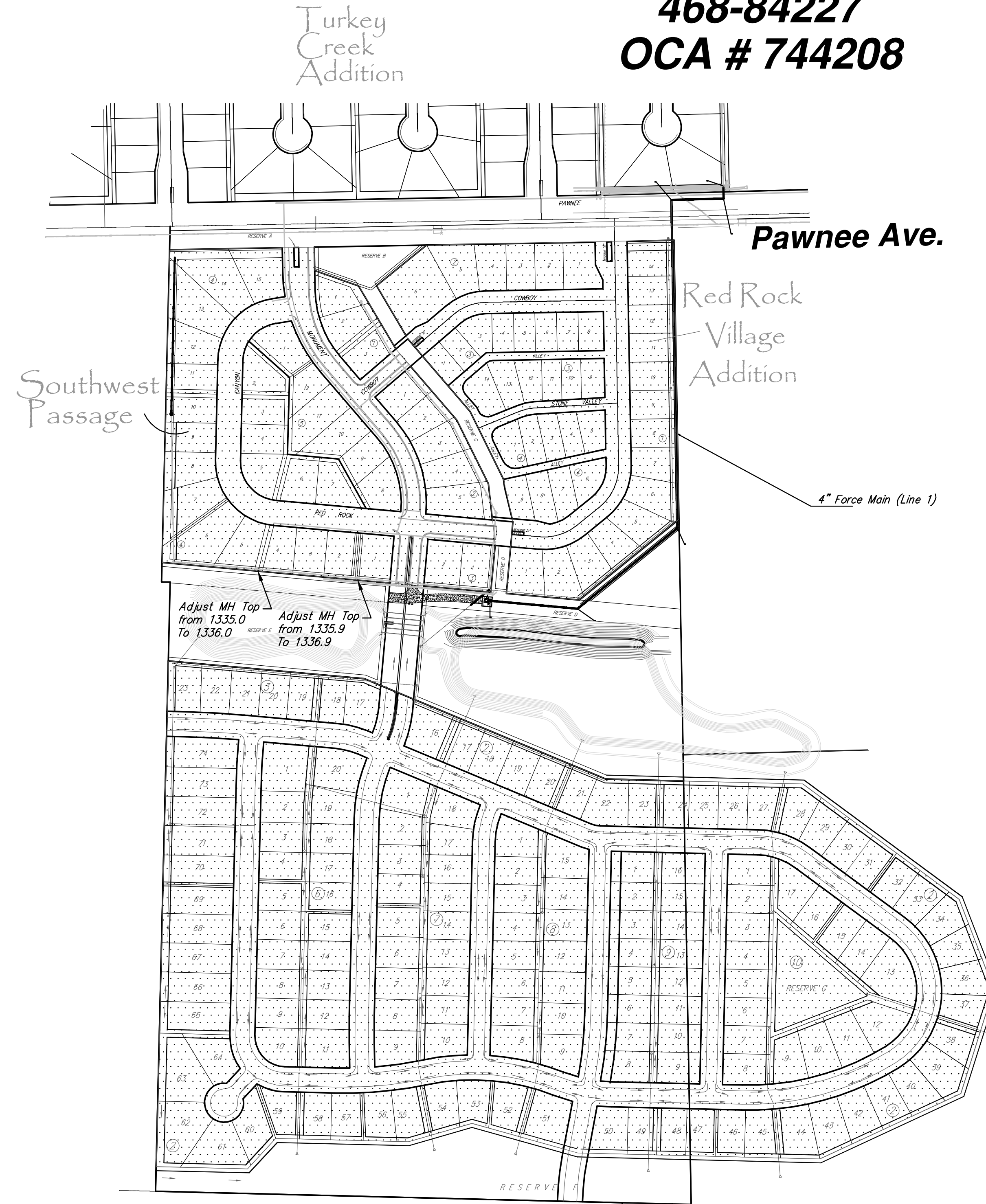
Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, 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 permitting regulations. Any material buried or stockpiled beyond approved of Engineers construction limits would require additional archeological investigations unless buried in a previously approved borrow location.

The Contractor shall give all property owners and/or tenants of developed property directly abutting the construction of this project a minimum of ten (10) days advance notice prior to start of 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.

The contractor shall remove and stockpile the topsoil throughout the project construction area prior to installation of the sanitary sewer system. The location of the topsoil stockpile will be at the backside of Lots 6 and 7, Block 1. Topsoil will be removed and stockpiled from all areas that will be disturbed by construction. Cost of this work shall be incidental to the bid item for "Site Clearing and Restoration".



**IMPROVEMENT DISTRICT**  
**CITY OF WICHITA, KANSAS**  
**JAMES L. ARMOUR, P.E. - CITY ENGINEER**

## BENCH MARK

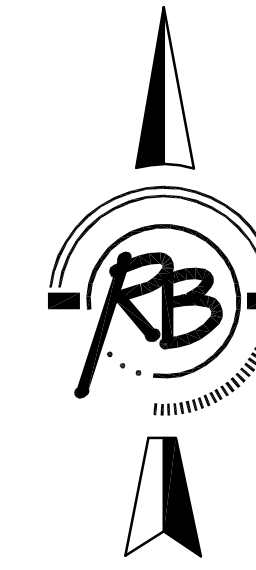
BENCHMARK: COW BENCHMARK, NE CORNER, INTERSECTION OF 135TH WEST AND PAWNEE, SOUTHWEST CORNER OF CONCRETE BASE FOR H.L.P. ELEV. 1359.65 M.S.L.

TOP OF RUGGLES & BOHM BRASS DISK SET IN CONCRETE 1112' W. & 50' S. OF THE NE CORNER, NW 1/4 SECTION 1-T28S-R2W. ELEV. = 1337.84 M.S.L.

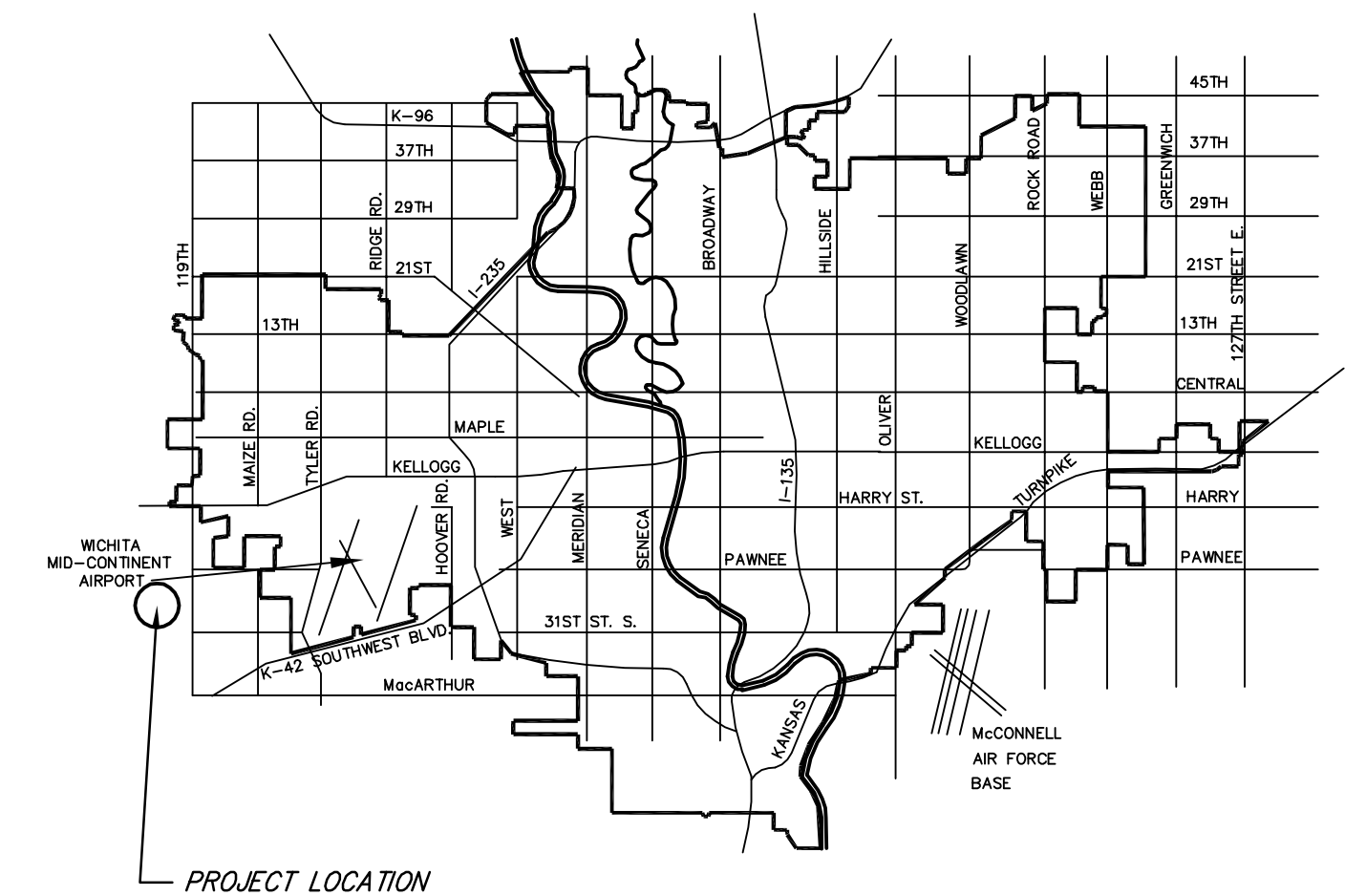
DONDLINGER CONSTRUCTION - CONTRACTOR  
J. TERHUNE - CITY OF WICHITA, FIELD PROJECT ENGINEER  
M. SHOLANDER - CITY OF WICHITA, INSPECTOR  
AS-BUILT  
RELEASE DATE: 11/19/2010  
PDF: APRosas 2/2/2011

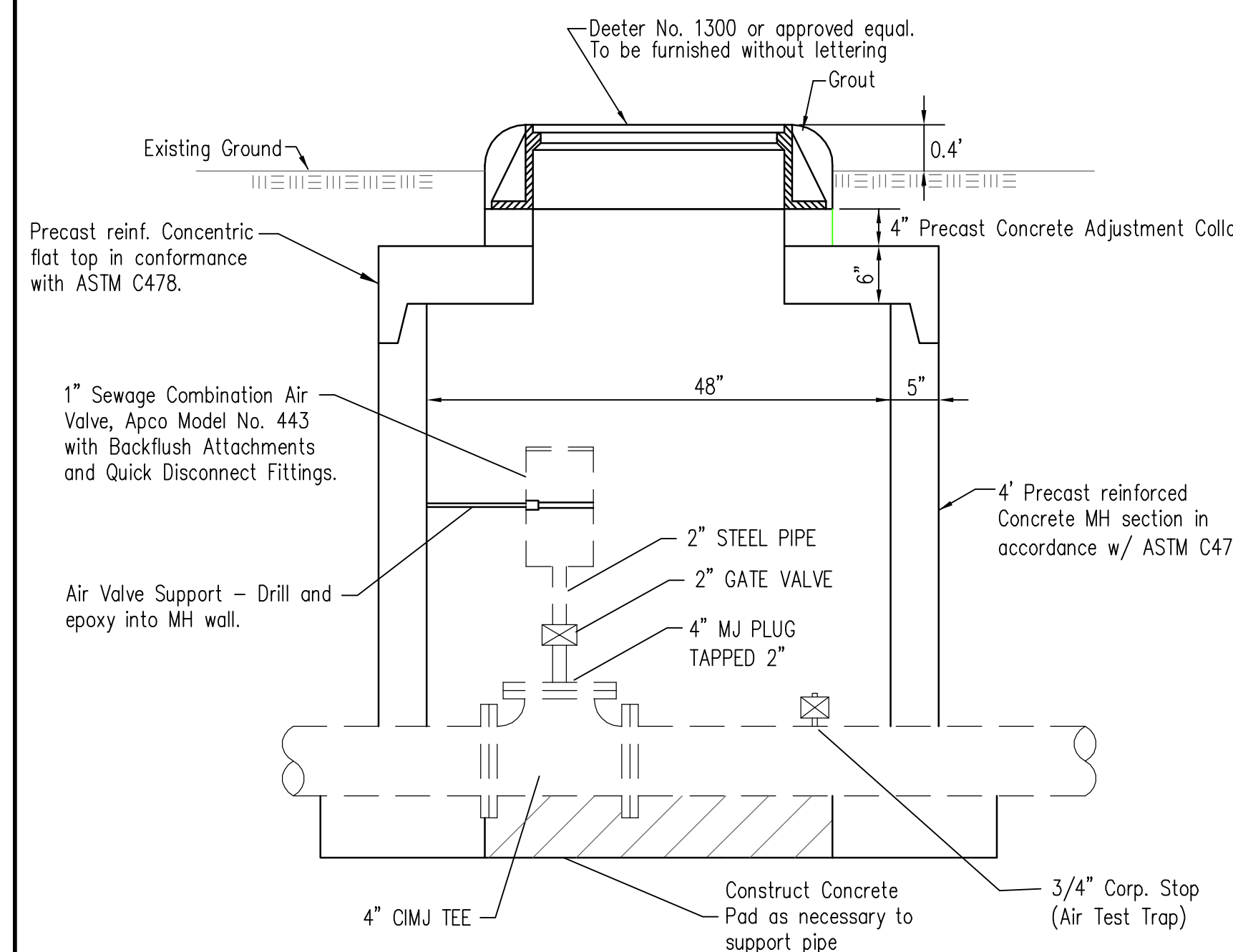
## INDEX OF SHEETS

1. TITLE SHEET
- 2-3. SANITARY SEWER PLAN/PROFILE
4. LIFT STATION DETAIL 01
5. LIFT STATION DETAIL 02
6. TYPE 'P' MANHOLE DETAIL
7. KEY MAP
8. FINAL PLAT



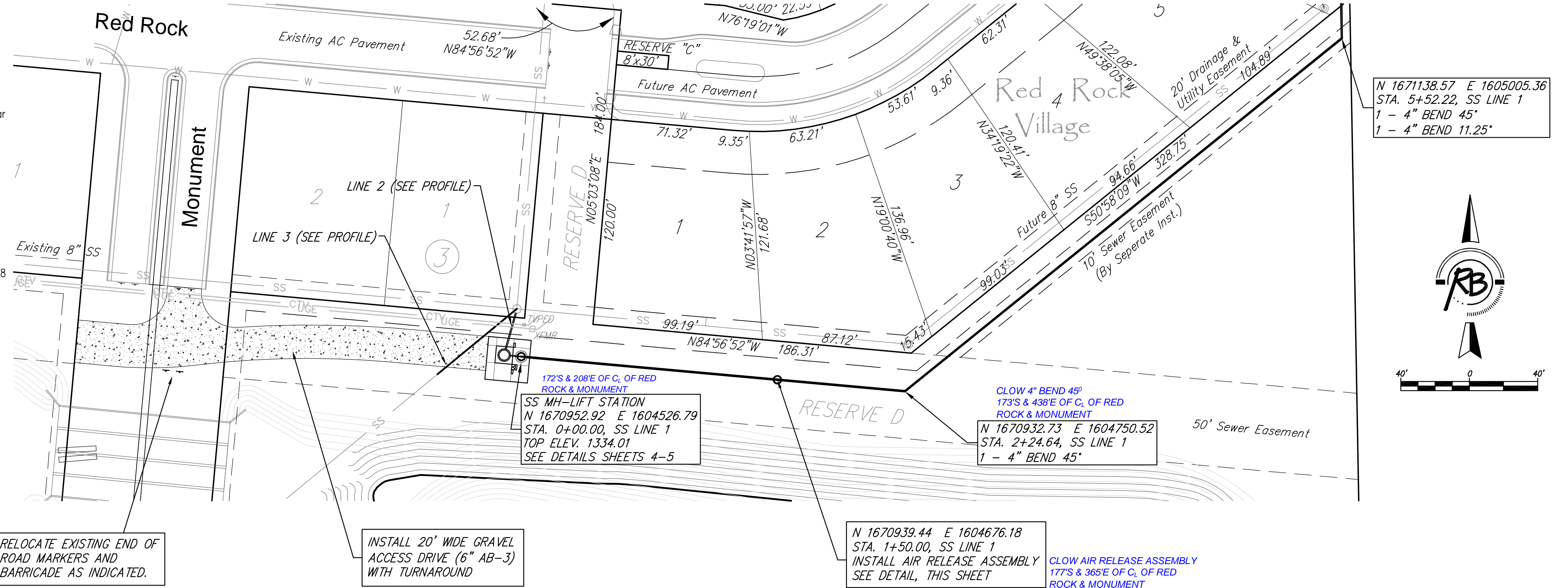
Scale: 1" = 200'





**SEWER FORCE MAIN  
AIR RELEASE ASSEMBLY DETAIL**

Contractor shall include 2 wraps of mastic or rubber gaskets (natural or synthetic) at each joint in the manhole. Provide exterior bituminous coating. (One coat Valspar high-build Bituminous coating 35-J-10, or Tnemec 46-450 Heavy Tnemecol or approved equal).



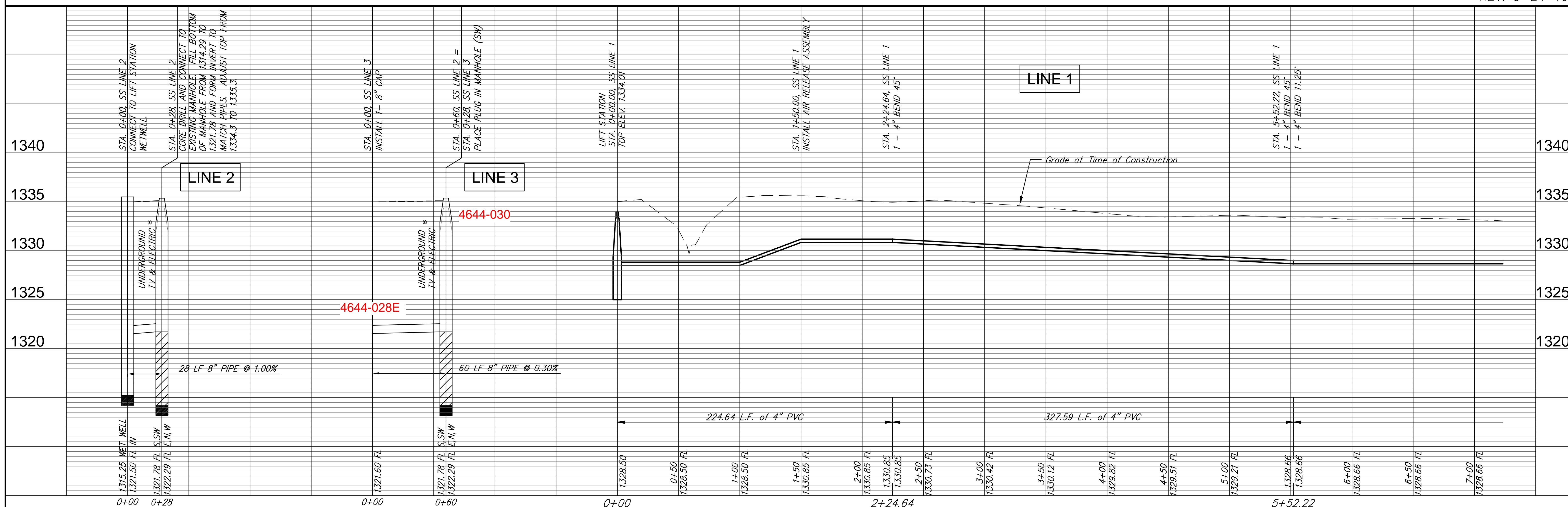
4644-LS22

4644-030

4644-LS22

4644-029AR

REV. 5-24-10

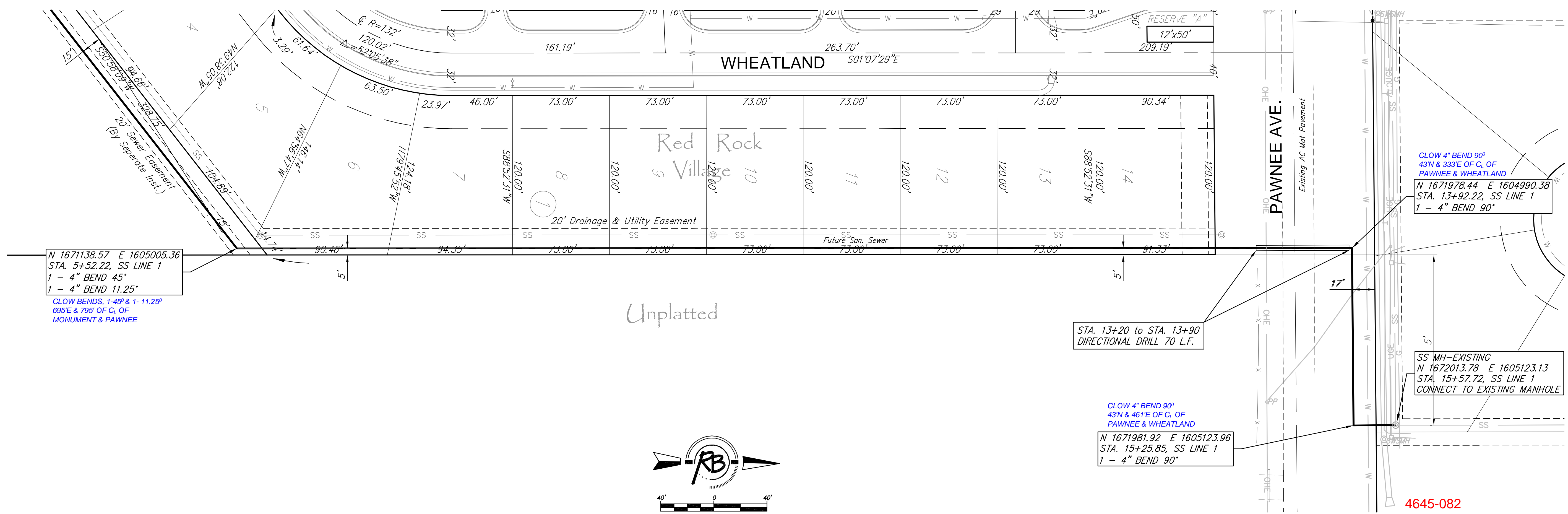


Kugler & Bohm, P.A.  
 Engineers, Surveyors, Land Planners  
 524 North Main  
 Wichita, Kansas 67202  
 Phone: 316-264-8008  
 Fax: 316-264-8021  
 www.kuglerandbohm.com

**SOUTHWEST PASSAGE ADDITION**  
**FORCE MAIN PLAN/PROFILE**  
 WICHITA, KANSAS

PROJECT NUMBER: 468-84227  
 DRAWING FILE: liftstationbase (plan 1)  
 DESIGN: KWL/JRA  
 DRAWN: KWL/JRA  
 DATE: Feb. 23, 2010  
 UTILITY REVIEW

RB JOB: 2927X  
 SHEET: 2 OF 8



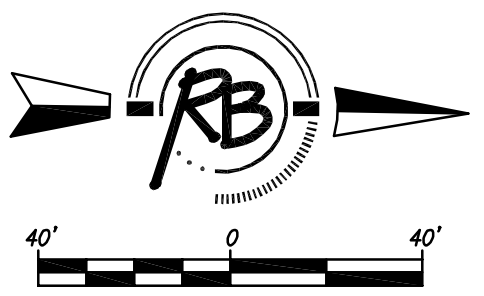
N 1671138.57 E 1605005.36  
 STA. 5+52.22, SS LINE 1  
 1 - 4" BEND 45°  
 1 - 4" BEND 11.25°  
 CLOW BENDS, 1-45° & 1-11.25°  
 695°E & 795° OF C, OF  
 MONUMENT & PAWNEE

STA. 13+20 to STA. 13+90  
 DIRECTIONAL DRILL 70 L.F.

CLOW 4" BEND 90°  
 43N & 461°E OF C, OF  
 PAWNEE & WHEATLAND  
 N 1671981.92 E 1605123.96  
 STA. 15+25.85, SS LINE 1  
 1 - 4" BEND 90°

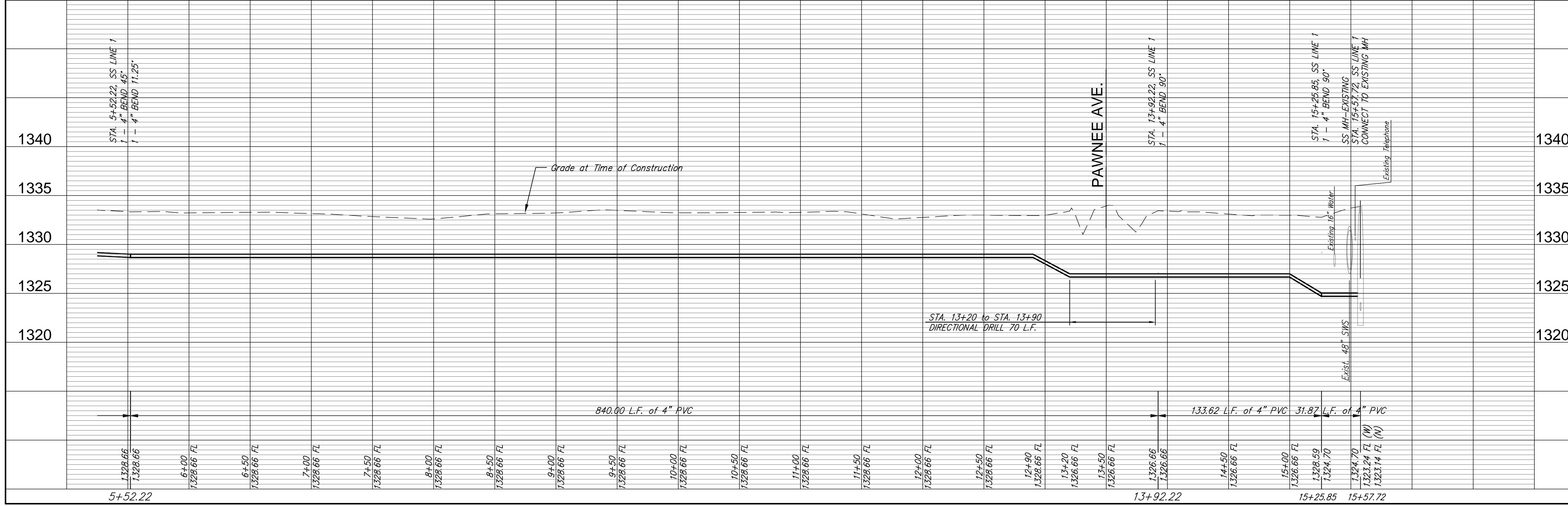
CLOW 4" BEND 90°  
 43N & 333°E OF C, OF  
 PAWNEE & WHEATLAND  
 N 1671978.44 E 1604990.38  
 STA. 13+92.22, SS LINE 1  
 1 - 4" BEND 90°

SS MH-EXISTING  
 N 1672013.78 E 1605123.13  
 STA. 15+57.72, SS LINE 1  
 CONNECT TO EXISTING MANHOLE



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4645-082



5+52.22

13+92.22

15+25.85 15+57.72

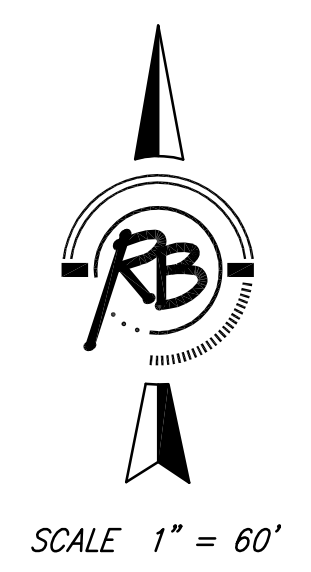
SOUTHWEST PASSAGE PHASE 1  
 FORCE MAIN PLAN/PROFILE  
 WICHITA, KANSAS

PROJECT NUMBER 468-84227	DESIGN KWL	REVISION KWL/JRA
DRAWING FILE iflstat08muse {Plan 1}	UTILITY	DATE Feb. 23, 2010
		REVIEW

Ruggles & Dohm, P.A.  
 Engineering, Surveying, Land Planning  
 102 North Main  
 Wichita, Kansas 67202  
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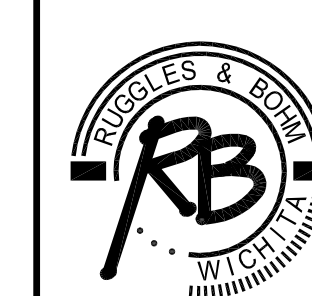
POINT TABLE			
POINT #	NORTHING	EASTING	DESCRIPTION
100	1671862.81	1604364.35	IRON
101	1671623.34	1604316.44	IRON
102	1671578.87	1604353.80	IRON
103	1671436.92	1604475.81	IRON
104	1671263.58	1604561.17	IRON
105	1671243.04	1604563.50	IRON
106	1671217.48	1604786.35	IRON
107	1671149.22	1604679.65	IRON
108	1671084.84	1604650.47	IRON
109	1671091.25	1604579.43	IRON
110	1670971.73	1604568.65	IRON
111	1670954.99	1604754.20	IRON
112	1671411.50	1604286.68	IRON
113	1671180.84	1604298.66	IRON
114	1671175.09	1604362.40	IRON
115	1671110.31	1604368.11	IRON
116	<del>1670852.92</del>	1604526.79	STA. 0+00, 4' DIA MANHOLE
117	1670939.44	1604676.18	STA. 1+50, AIR RELEASE VALVE
118	1670932.73	1604750.52	STA. 2+24.64, 1 - 4" MJ BEND 45°
119	1671138.57	1605005.36	STA. 5+52.22, 1 - 4" MJ BEND 45°
120	1671978.44	1604990.38	STA. 13+92.22 1 - 4" MJ BEND 90°
121	1671981.92	1605123.96	STA. 15+25.85 1 - 4" MJ BEND 90°
122	1672013.78	1605123.13	STA. 15+57.72 EXISTING SS (Contractor to Verify)
123	<del>16723.0253</del>	<del>17154.9404</del>	N.E. CORNER, NW 1/4, SEC. 1, T28S, R2W
124	1670939.78	1604505.52	S.W. CORNER CONC PAD
125	1670937.53	1604530.42	S.E. CORNER CONC PAD
126	1670962.43	1604532.67	N.E. CORNER CONC PAD
127	1670964.67	1604507.77	N.W. CORNER CONC PAD

1670952.92

1671930.99 1604820.38

REVISED Aug. 10, 2010 RA

Southwest Passage  
Coordinate Control Map  
WICHITA, KANSAS



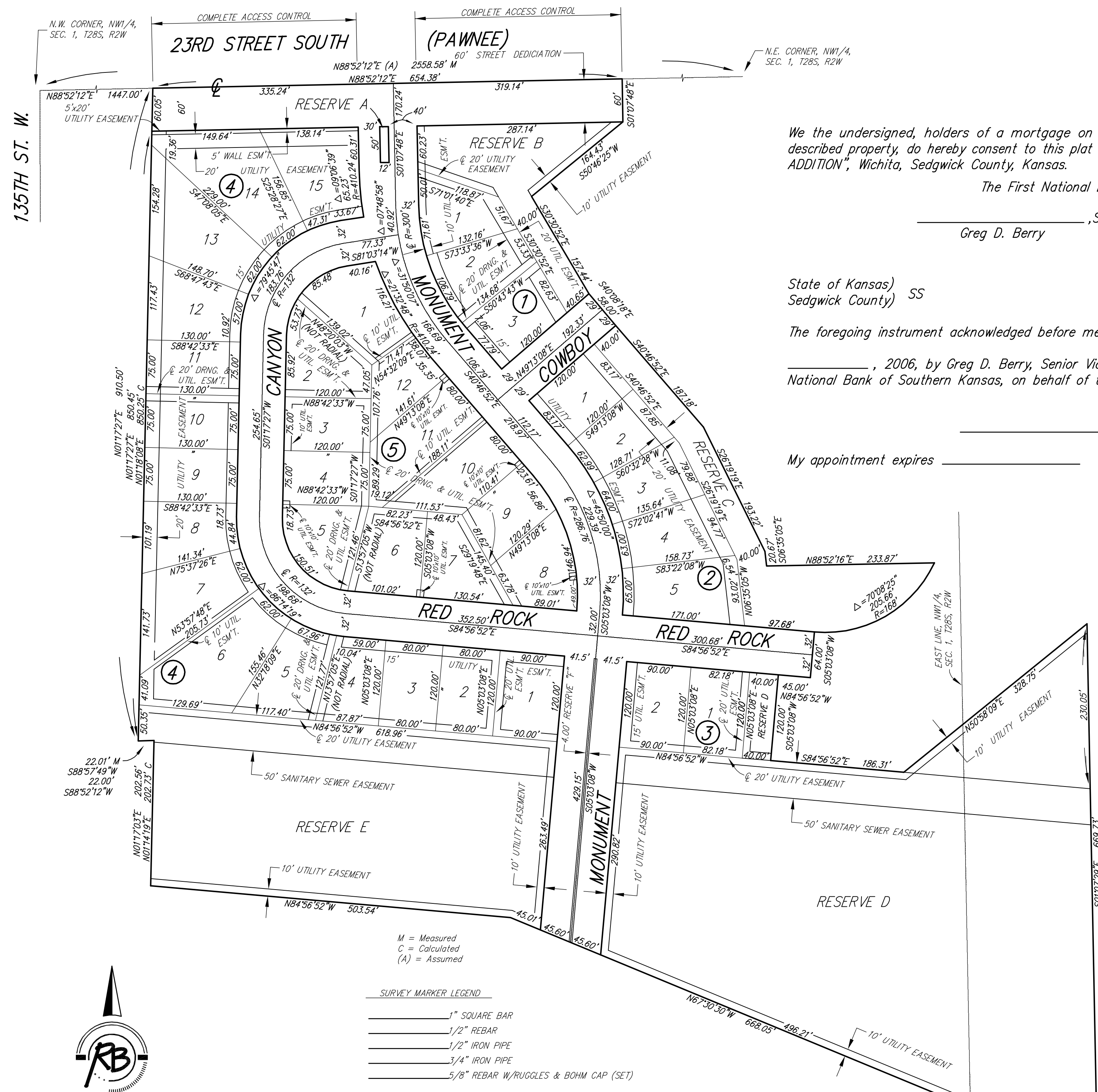
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(316) 264-4621 fax  
E-mail: info@rbkansas.com

DRAWING FILE: liftstationbase [Keymap] PROJECT NUMBER: 468-84227 DATE: Feb. 23, 2010

DESIGN	KWL	SHEET 7 OF 8
DRAWN	KWL	
REVIEW		
UTILITY		

# SOUTHWEST PASSAGE ADDITION

## Wichita, Sedgwick County, Kansas



**SURVEY MARKER LEGEND**

- 1" SQUARE BAR
- 1/2" REBAR
- 1/2" IRON PIPE
- 1/4" IRON PIPE
- 5/8" REBAR W/RUGGLES & BOHM CAP (SET)

**BENCHMARK:** COW BENCHMARK, NE CORNER, INTERSECTION OF 135TH WEST AND PAWNEE, SOUTHWEST CORNER OF CONCRETE BASE FOR H.L.P. ELEV. 1339.65 M.S.L.

**ON-SITE BENCH MARK:** TOP OF RUGGLES & BOHM BRASS DISK SET IN CONCRETE 112' W & 50' S. OF THE NE CORNER, NW 1/4, SECTION 1-1285-R2W. ELEV. = 1337.84 M.S.L.

BLOCK	LOT NO.	ELEVATION (N.G.V.D.)
3	1, 2	1,335.4
4	1, 2, 3, 4, 5, 6	1,337.2

We the undersigned, holders of a mortgage on a portion of the above described property, do hereby consent to this plat of "SOUTHWEST PASSAGE ADDITION", Wichita, Sedgwick County, Kansas.

The First National Bank of Southern Kansas

\_\_\_\_\_, Senior Vice President  
Greg D. Berry

State of Kansas) SS  
Sedgwick County)

The foregoing instrument acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2006, by Greg D. Berry, Senior Vice President of The First National Bank of Southern Kansas, on behalf of the bank.

\_\_\_\_\_, Notary Public

My appointment expires \_\_\_\_\_

State of Kansas)  
Sedgwick County) SS

We, Ruggles & Bohm, P.A., Land Surveyors in aforesaid county and state, do hereby certify that, under the supervision of the undersigned, we have surveyed and platted "SOUTHWEST PASSAGE ADDITION", Wichita, Sedgwick County, Kansas, and that the accompanying plat is a true and correct exhibit of the property surveyed, described as follows:

**LEGAL DESCRIPTION:**  
That part of Sec. 1, T28S, R2W of the 6th P.M., Sedgwick County, Kansas described as commencing at the N.W. corner of said Sec. 1; thence N88°52'12"E, along the north line of said Sec. 1, 1447.00 feet to the place of beginning; thence continuing N88°52'12"E, along said north line, 654.38 feet; thence S01°07'48"E, 60.00 feet; thence S50°46'25"W, 163.43 feet; thence S30°30'52"E, 157.44 feet; thence S40°08'18"E, 58.00 feet; thence S40°46'52"E, 187.18 feet; thence S26°19'19"E, 193.22 feet; thence S06°35'05"E, 20.67 feet; thence N88°52'16"E, 233.87 feet; thence along a curve to the right, having a radius of 168.00 feet, a chord distance of 193.06 feet, bearing S59°58'55"W, 205.66 feet; thence S05°03'08"W, 64.00 feet; thence N84°56'52"W, 45.00 feet; thence S05°03'08"W, 120.00 feet; thence S84°56'52"E, 186.31 feet; thence N50°58'09"E, 328.75 feet; thence S01°07'29"E, 669.73 feet; thence N88°42'14"W, 199.73 feet; thence N67°30'30"W, 668.05 feet; thence N84°56'52"W, 503.54 feet; thence N01°17'03"E, 202.56 feet; thence S88°52'12"W, 22.00 feet; thence N01°17'27"E, 910.50 feet to the place of beginning.

State of Kansas) SS  
Sedgwick County)

The foregoing instrument acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2006, by \_\_\_\_\_, Land Surveyor  
Thomas C. Ruggles

Know all men by these presents that we, the undersigned, have caused the land described in the surveyor's certificate to be platted into Lots, Blocks, Reserves and Streets to be known as "SOUTHWEST PASSAGE ADDITION", Wichita, Sedgwick County, Kansas. Reserve "A" is hereby reserved for entry features, signage, irrigation, lighting and landscaping. Reserve "B" is hereby reserved for signage, irrigation, walls, lighting, landscaping, drainage, drainage structures and utilities confined to easements. Reserve "C" is hereby reserved for irrigation, lighting, landscaping, drainage, drainage structures, gazebos, playground structures and utilities confined to easements. Reserves "D" and "E", are hereby reserved for irrigation, walls, signage, gazebos, playground structures, picnic areas/ tables with canopies, walks, lighting, landscaping, berms, lakes, drainage, drainage structures and utilities confined to easements. Reserve "F" is hereby reserved for a medial island and landscaping. The Reserves shall be owned by the Home Owners Association for the addition. The Home Owners Association will be responsible for the reconstruction of improvements within Reserves "A" and "B" when Pawnee is reconstructed. The streets are hereby dedicated to and for the use of the public. Access Controls as indicated are hereby granted to the appropriate governing body. The wall easement is hereby granted to the Home Owners Association for a screening wall. Utility Easements are hereby granted for the construction and maintenance of all public utilities. Drainage Easements are hereby granted to the public as indicated for drainage purposes. A drainage plan has been developed for this plat; the property shall remain at established grades, or as modified with the approval of the City Engineer, and unobstructed to allow for the conveyance of storm water.

Development Partnership

\_\_\_\_\_, Partner  
Mark A. Chappelle

\_\_\_\_\_, Partner  
Michael J. Dold

\_\_\_\_\_, Partner  
Mark A. Murphy

State of Kansas)  
Sedgwick County) SS

The foregoing instrument acknowledged before me, this \_\_\_\_\_ day of \_\_\_\_\_, 2006, by Mark A. Chappelle, Partner, on behalf of Development Partnership.

\_\_\_\_\_, Notary Public  
Mildred E. Franz

My appointment expires \_\_\_\_\_

State of Kansas)  
Sedgwick County) SS

The foregoing instrument acknowledged before me, this \_\_\_\_\_ day of \_\_\_\_\_, 2006, by Michael J. Dold, Partner, on behalf of Development Partnership.

\_\_\_\_\_, Notary Public  
Mildred E. Franz

My appointment expires \_\_\_\_\_

State of Kansas)  
Sedgwick County) SS

The foregoing instrument acknowledged before me, this \_\_\_\_\_ day of \_\_\_\_\_, 2006, by Mark A. Murphy, Partner, on behalf of Development Partnership.

\_\_\_\_\_, Notary Public  
Mildred E. Franz

My appointment expires \_\_\_\_\_

This plat of "SOUTHWEST PASSAGE ADDITION", Wichita, Sedgwick County, Kansas, has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

Wichita-Sedgwick County Metropolitan Area Planning Commission

\_\_\_\_\_, Chair  
Harold L. Warner, Jr.

\_\_\_\_\_, Secretary  
John L. Schlegel

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

At the Direction of the City Council

\_\_\_\_\_, Mayor  
Carlos Mayans

\_\_\_\_\_, City Clerk  
Karen Sublett

Reviewed in accordance with K.S.A. 58-2005 on this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

Deputy County Surveyor  
Sedgwick County Kansas  
Tricia L. Robello, LS #1246

Entered on transfer record this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

\_\_\_\_\_, County Clerk  
Don Brace

State of Kansas)  
Sedgwick County) SS

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this \_\_\_\_\_ day of \_\_\_\_\_, 2006, at \_\_\_\_\_ o'clock \_\_\_\_\_ M, and is duly recorded.

\_\_\_\_\_, Register of Deeds  
Bill Meek

\_\_\_\_\_, Deputy  
Tonya Buckingham

BUILDING SETBACK LINES PER ZONING REGULATIONS  
ALL DIMENSIONS ARE PLATTED UNLESS OTHERWISE NOTED

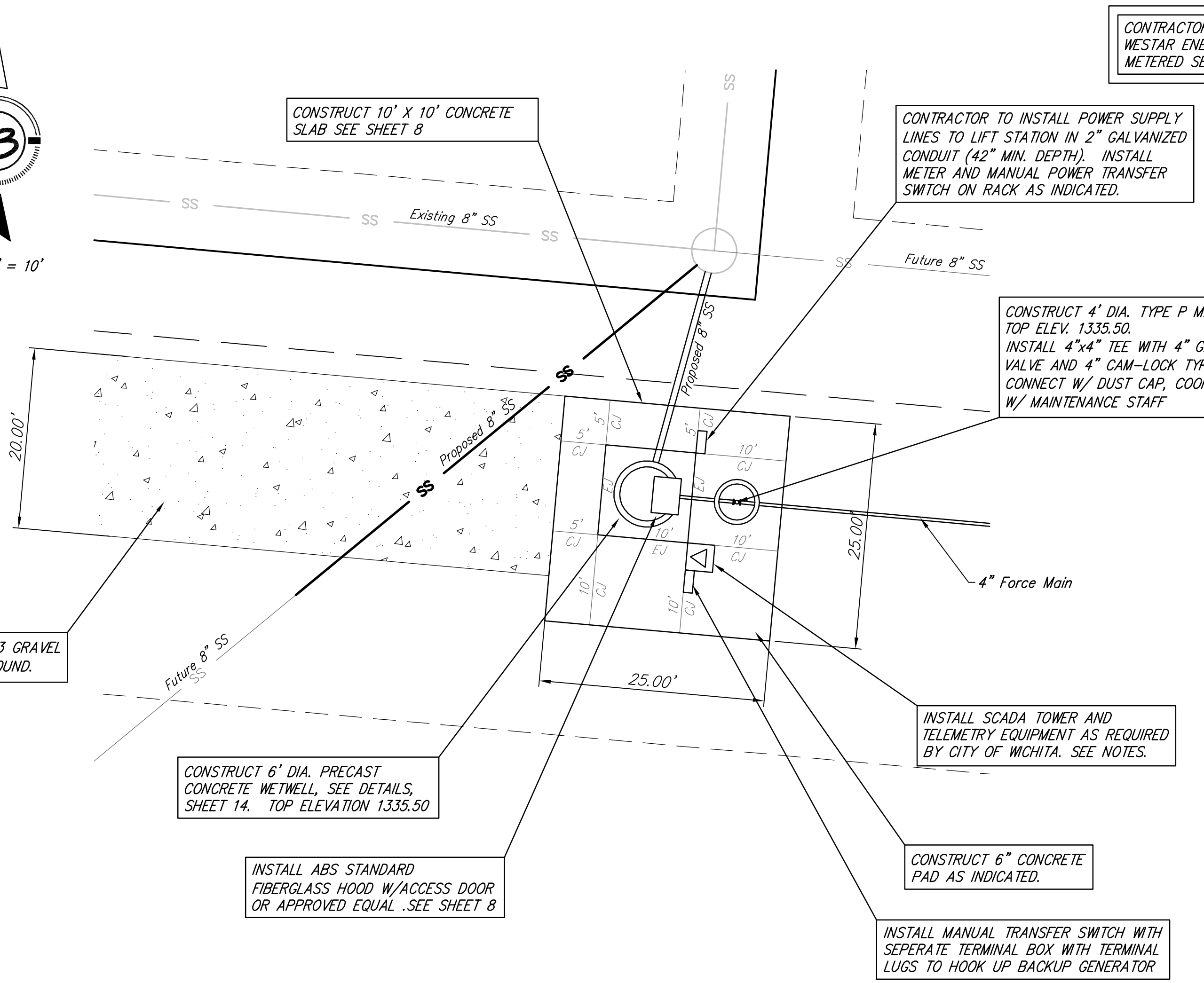
**Ruggles & Bohm, P.A.**  
Engineering, Surveying, Land Planning

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Wichita, Kansas 67203 (316) 264-4621 fax  
www.rbkansas.com E-mail: info@rbkansas.com

DWG FILE: SURVEY BASE  
PROJECT NO. 2717P  
JULY 12, 2006



Scale 1" = 10'



CONTRACTOR TO COORDINATE WITH WESTAR ENERGY FOR INSTALLATION OF METERED SERVICE AND POWER HOOKUP.

CONTRACTOR TO INSTALL POWER SUPPLY LINES TO LIFT STATION IN 2" GALVANIZED CONDUIT (42" MIN. DEPTH). INSTALL METER AND MANUAL POWER TRANSFER SWITCH ON RACK AS INDICATED.

CONSTRUCT 4' DIA. TYPE P MANHOLE TOP ELEV. 1335.50. INSTALL 4"x4" TEE WITH 4" GATE VALVE AND 4" CAM-LOCK TYPE QUICK CONNECT W/ DUST CAP, COORDINATE W/ MAINTENANCE STAFF

INSTALL SCADA TOWER AND TELEMETRY EQUIPMENT AS REQUIRED BY CITY OF WICHITA. SEE NOTES.

CONSTRUCT 6" CONCRETE PAD AS INDICATED.

INSTALL MANUAL TRANSFER SWITCH WITH SEPERATE TERMINAL BOX WITH TERMINAL LUGS TO HOOK UP BACKUP GENERATOR

CONSTRUCT 6" AB-3 GRAVEL DRIVE W / TURNAROUND.

CONSTRUCT 6' DIA. PRECAST CONCRETE WETWELL, SEE DETAILS, SHEET 14. TOP ELEVATION 1335.50

INSTALL ABS STANDARD FIBERGLASS HOOD W/ACCESS DOOR OR APPROVED EQUAL .SEE SHEET 8

**NOTES**

All items indicated on sheets 8 to 11 shall be incidental to the lump sum bid item for "Lift Station". This includes labor and materials for the installation of all items.

**Wet Well**

The wet well is a Class 1, Division 1 & 2 environment. This should be taken into account for all electrical requirements per applicable codes. Due to the corrosive atmosphere, all anchors, hardware, assembly bolt sets and brackets must be 304 stainless steel. The wet well shall be lined with a primer coating of Zebtron Low Temp Epoxy at a thickness of 2 to 3 mils minimum and than a final protective lining of Zebtron 386 or Warren S-301 Epoxy applied at a minimum thickness of 100 mils. QSR Patching material to be used to fill cracks, joints and any rough areas. Wet Well Access Doors shall be constructed of 1/4" thick aluminum floor plate reinforced to 300 p.s.f. live load. The door shall be equipped with a flush aluminum drop handle that does not protrude above the cover. The door shall be removable for maintenance after construction. A safety grate is required and must be rated for 300 lbs.

The contractor shall provide an outlet flange connection 12-inches from the inside wall. Inlet and outlet wall sleeves shall be provided and installed by the contractor and shall be in alignment with one another. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through the wall and joint no less than two(2) feet from the exterior wall. Flanges of inlet and outlet pipes shall be in proper alignment and bolt pattern shall be rotated in such a way that valves and other fittings shall be in their proper vertical alignment when installed.

The contractor shall install a mega lug, restrained joint, or approved equal on the exterior walls of the wetwell, which shall be manufactured of ductile iron conforming to ASTM A 536-80, heat treated to a minimum hardness of 370 BHN and have a working pressure of at least 250 P.S.I.

**Confined Space Warning Sign**

The "Confined Space Warning" sign shall be fastened to the top of the wet well. Acceptable materials: Aluminum 73415HH, Plastic 73439HH, or S.A. Vinyl 73463HH.

**Concrete**

All water retaining concrete structures shall conform to ACI 350 "Environmental Engineering Concrete Structures" and be detailed per the "ACI Detailing Manual" Special Publication SP-66. All concrete shall have 4000 PSI minimum compressive strengths at 28 days with a maximum water/cement ratio of 0.45. Minimum cementitious material content shall be 564 lb. per cubic yard. A slump of 1" to 3" shall be provided in the concrete unless an acceptable high-range water reducer is used. Portland cement shall conform to ASTM C-150, Type II. All aggregate for normal weight concrete shall meet ASTM C33. Aggregates shall be proportioned such that mix design shall contain a minimum of 50% coarse aggregates by gradation requirements set forth in ASTM C33. Coarse aggregate shall meet No. 67 grading requirements. Concrete shall have from 4 to 7% entrained air, conforming to ASTM C 260. concrete shall be in strict conformance with the current "ACI Manual of Concrete Practice". Chamfer all exposed edges of concrete 3/8", unless noted otherwise. Special care should be provided for the formwork of watertight structures with form ties having waterstops. Formwork shall comply to the ACI 347 "Guide to Formwork for Concrete". Concrete joints shall occur at locations shown on the drawings. Waterstops shall be Polyvinyl Chloride with a 3/8" minimum thickness and have a minimum width of 6". Adhesive waterstops, where noted on the drawings shall be Greenstreak "HydroTite" or approved equal. Placement of concrete shall be in conformance with ACI 304R. Special corner bar configuration is needed at watertight construction, see drawings for details.

**Pumps**

Pumps shall be ABS Model AFP1040M28/4EX-4", 4 HP, 220/1/60 or approved equal. The pump shall be a submersible 4 HP pump capable of operating at 100 gpm with 26 feet of total dynamic head with a single pump in operation. Guide Rail and Pumps to be installed in accordance with manufacturer's specifications. 4" Guide Rail and Pumps to be installed in accordance with manufacturer's specifications. Pumps are designed to operate in a duplex configuration such that pumps 1 & 2 will operate in a lead/lag configuration. An alternating device shall be provided with three positions: Pump 1, Pump 2, Alternate Pumps 1 & 2. The standard operation will be in the alternate position, with the other two positions reserved for one pump to be taken offline for maintenance.

**Valves**

Valves shall meet City of Wichita specifications for valves.

**Control Panel**

The control panel shall be ABS Model QCI or approved equal. The control panel shall be mounted in a NEMA 12 enclosure and mounted inside the provided fiberglass building. The conduit from the vaults and control panel shall be installed to allow installation of a second panel in the future. Control Panel shall have the following options included: elapsed time meter, push test pump fail indicator, high temperature indicator, push test high temp indicator, push test seal alarm indicator, seal failure dry contacts, common alarm dry contacts, 460V 3 phase power monitor, 3 phase lightning arrester, and a time delay starting lag. The control panel shall be equipped with two (2) 110 volt service outlets. The contractor shall submit shop drawings and material specifications prior to installation. Stainless steel unistruts and hardware required for mounting control panel.

**Backup Power**

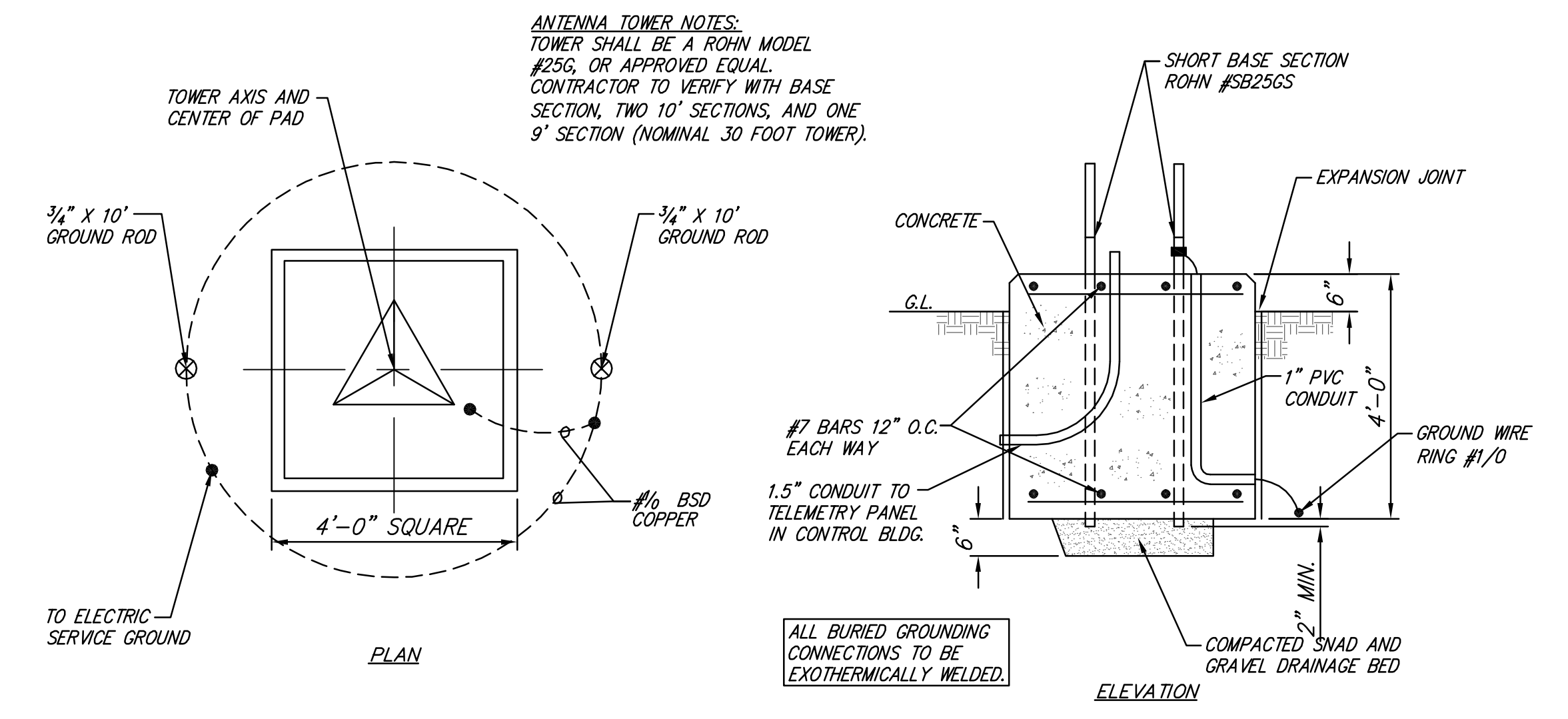
No backup generator is to be installed with this lift station. The contractor shall provide connections for a temporary generator to be connected to the lift station in the event of a power outage. A manual transfer switch shall be installed where indicated. Contractor shall coordinate with City of Wichita for Receptacle for Genset hookup.

**Level Control System Notes**

A PAC 2 level control system compatible with City of Wichita specifications shall be installed for level control. Floats shall be installed for alarm control as follows: Low, Hi and HiHi. The HiHi level float shall serve as an alarm and a back up to the PAC 2 for pump start.

**Power Supply**

The contractor will be responsible for the coordination of the installation of the metered service for the site, including submittal of plans to Westar. The contractor shall connect the lift station to the metered service with buried cable in 2" conduit buried at a minimum depth of 42".



**TELEMETRY TOWER FOUNDATION**

**PUMP STATION DESIGN DATA**

Design Flow: 80 lots @ 900 gpd = 72,000 gpd = 50 gpm  
Force main: 156.3 L.F. 4" PVC

Static head: 1329 (elevation at outfall) - 1315 (pump off) = 14 feet

Dynamic head loss @ 100 gpm = 12' feet (156.3 L.F. of 4")

Total Dynamic Head (T.D.H.) = 14 + 12 = 26 feet

**Drawdown Volume**

V @ 80 Lots = t (2 X Q) / 4 = 20 min ( 2 X 50 gpm) / 4 = 500 gal.  
If 6' Dia. Vault, volume is 634 gallons for 3.0 foot drawdown.

**Design Cycle Time (Based on 80 Lots)**

t = 634 / 50 + 634 / (100-50) = 25 min

**Foundations/Soils**

All soils work shall be performed under the supervision of the field engineer. All footings shall bear on undisturbed soils or engineered fill at elevations shown or noted on details and plans. All bearing materials shall be verified for the allowable bearing pressure stated above. All footings below grade may be earth formed with neat excavations, foundation walls shall be formed.

**Electrical**

Complete all work in accordance with the National Electrical Code (NEC), National Electrical Safety Code (NESC), and local regulations. All electrical equipment shall be U.L. listed. The construction drawings are schematic in nature and show relative locations of devices and equipment. Coordinate with the actual equipment installed. Coordinate electrical work with the work of other trades. All starters shall have 120 volt controls. Provide fused connection for units operating at 120 volts line to neutral. All charges from Westar to install and/or modify electric service to these facilities will be paid by the contractor.

**Telemetry**

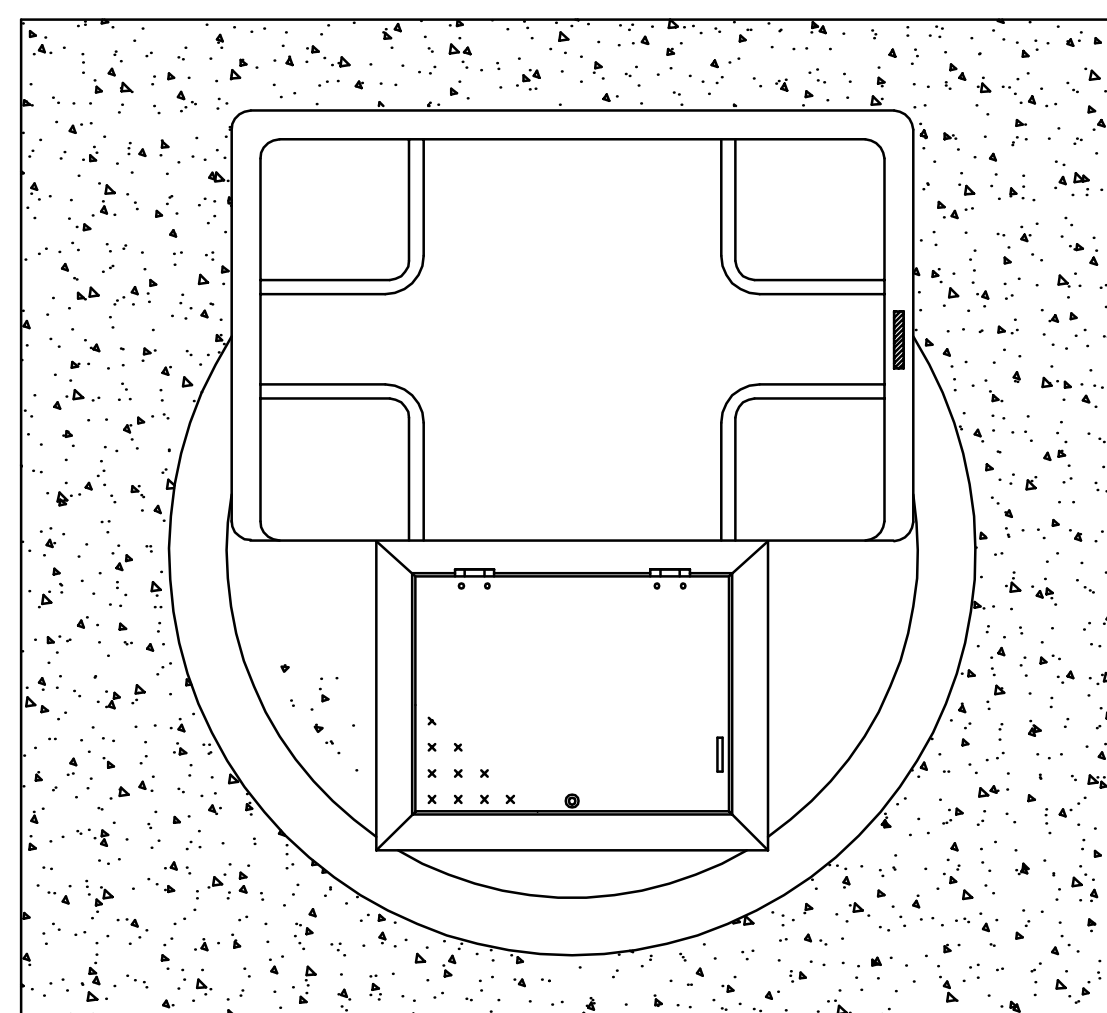
All telemetry equipment shall meet City of Wichita specifications. Contractor to coordinate with Robert Bigley at 269-4769 for telemetry settings. Install owner provided coaxial cable between telemetry panel and antenna. The City of Wichita will provide hardware and software modifications to telemetry panel.

**General Structural Notes**

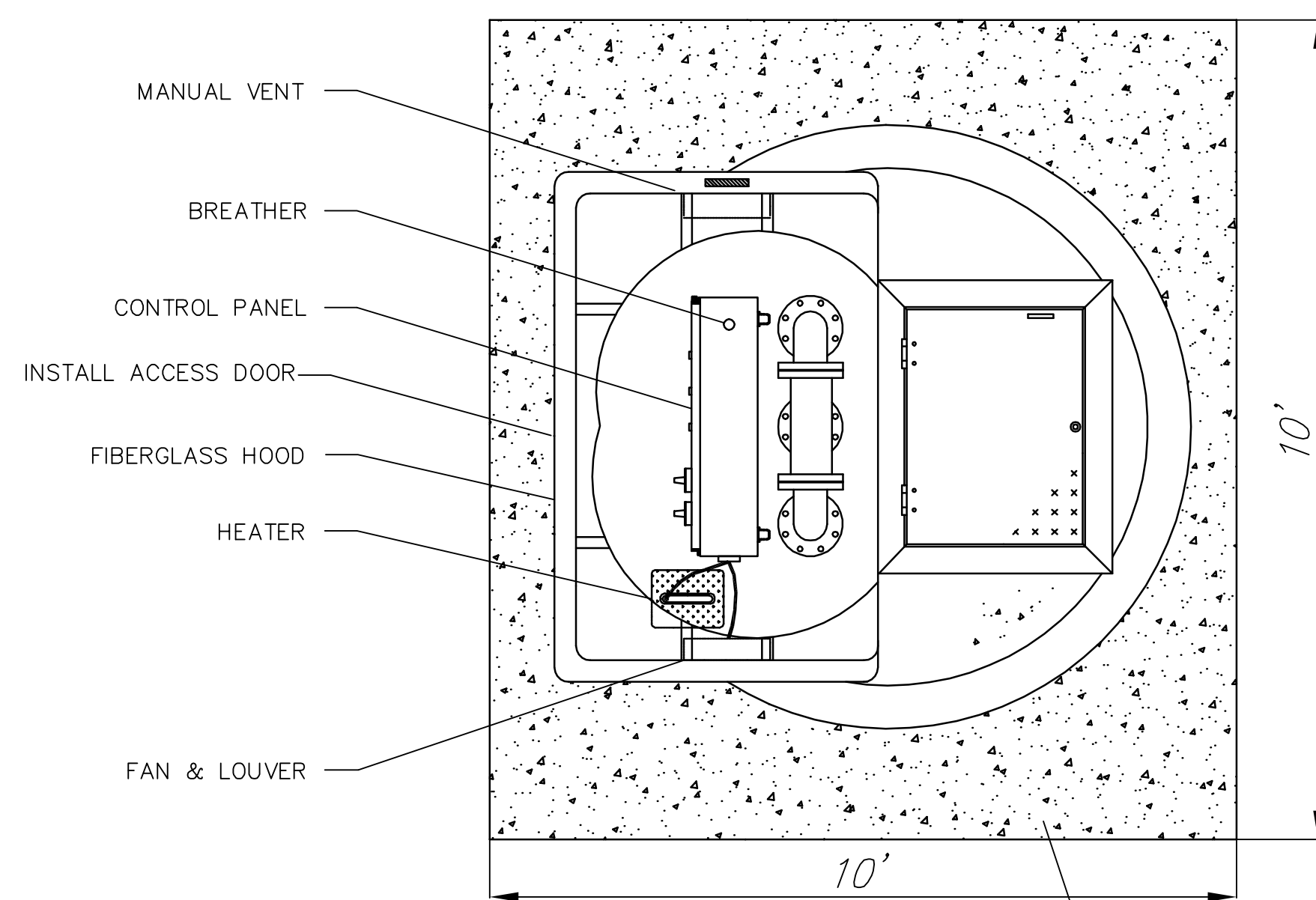
The general contractor shall review and stamp all shop drawings before submittal for approval. Verify all dimensions and elevations with plans prior to starting work. Contractor shall design, provide, and maintain temporary bracing, shoring, guying, etc., and other methods as required to prevent excessive loading and to stabilize structural elements during construction. These methods shall remain in place until all members and final connections have been completed. Structure top shall be designed for 150 psf live load.

Rev. 5-25-10

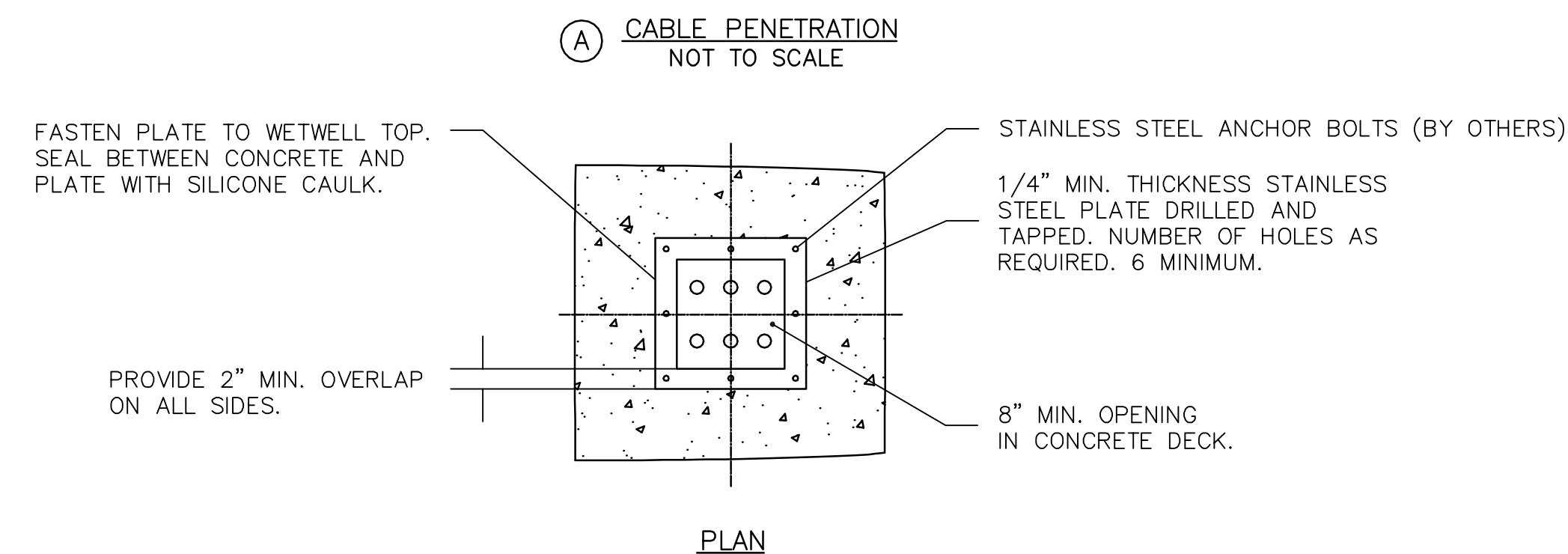
<b>SOUTHWEST PASSAGE ADDITION LIFT STATION PLAN WICHITA SEDGWICK COUNTY, KANSAS</b>		DESIGN KWL DRAWN KWL REVIEW KWL UTILITY DATE Feb. 23, 2010	PROJECT NUMBER 468-84227	SHEET 4 OF 8
		Ruggles & Bohm, P.A. Engineering, Surveying, Land Planning 924 North Main Wichita, Kansas 67203 www.rbkansas.com (316) 264-8008 (316) 264-4621 fax E-mail: info@rbkansas.com		
DRAWING FILE lift station		PROJECT NUMBER 468-84227		



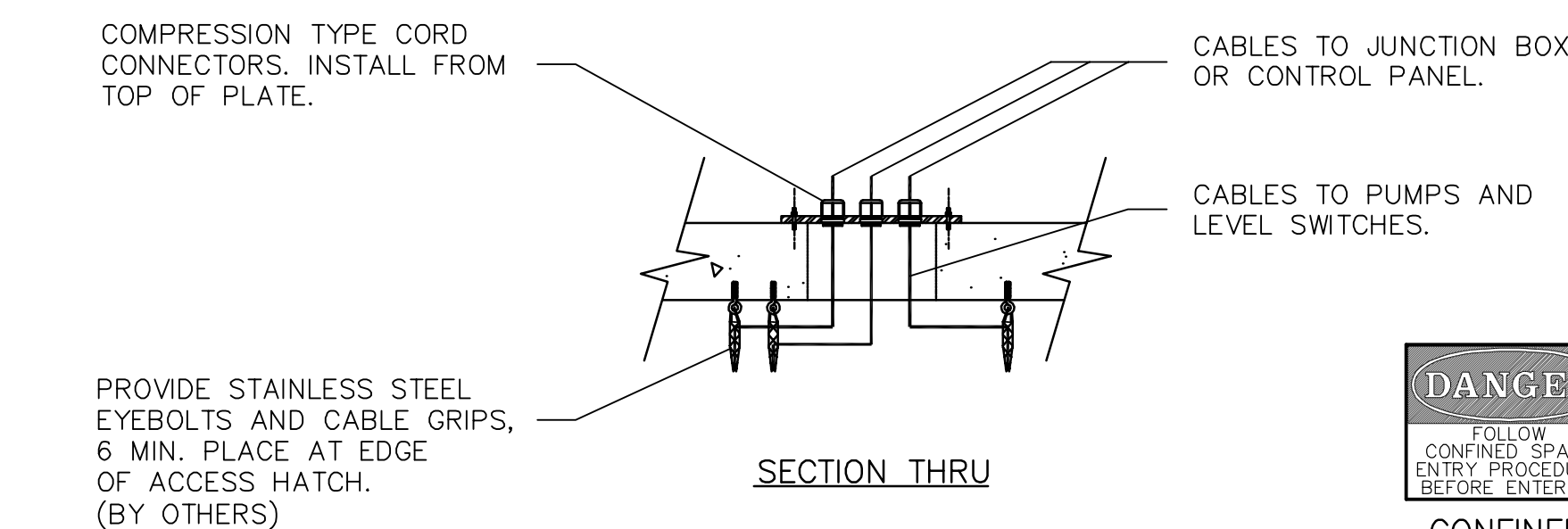
PLAN  
NOT TO SCALE



PLAN  
NOT TO SCALE



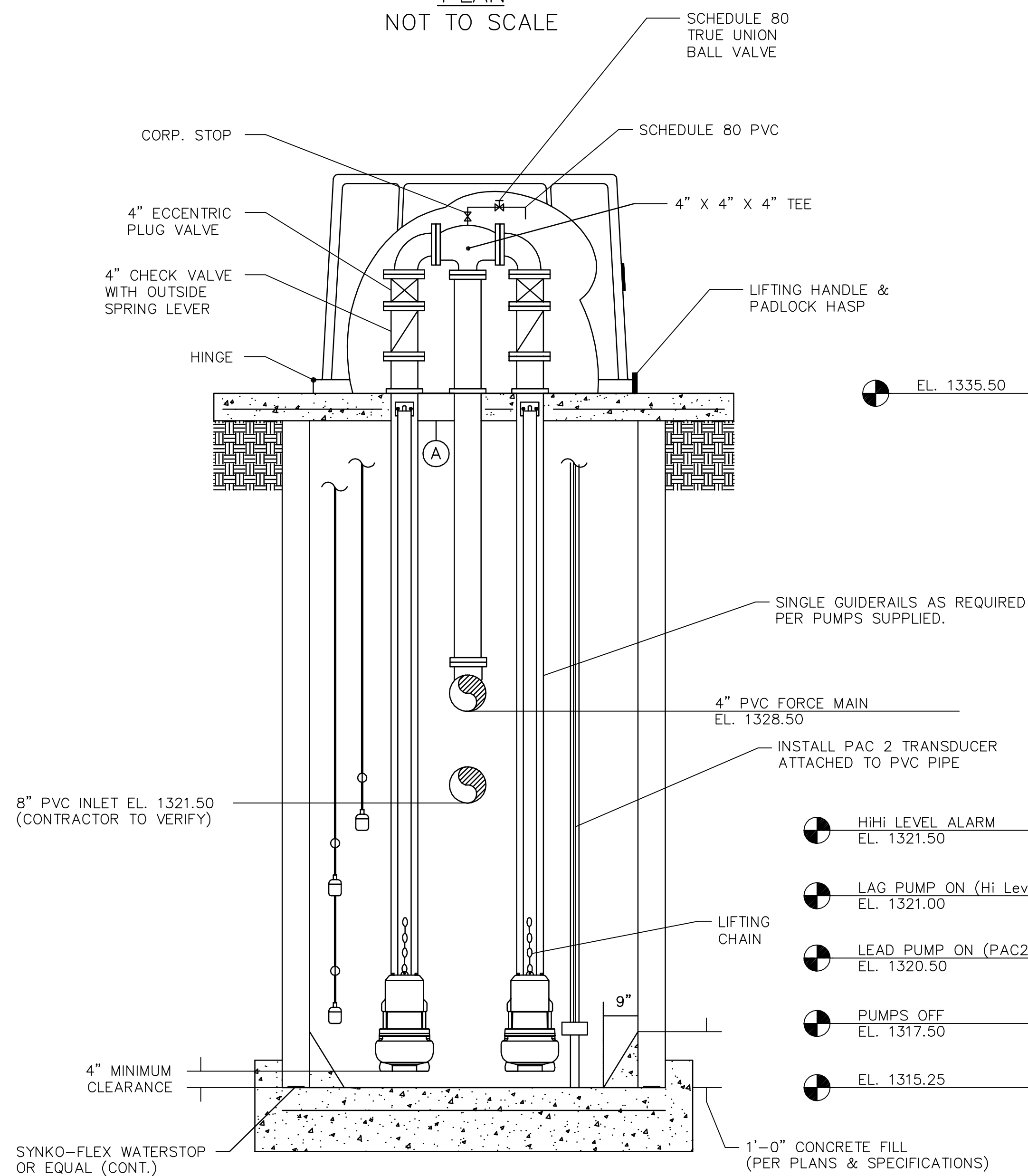
PLAN



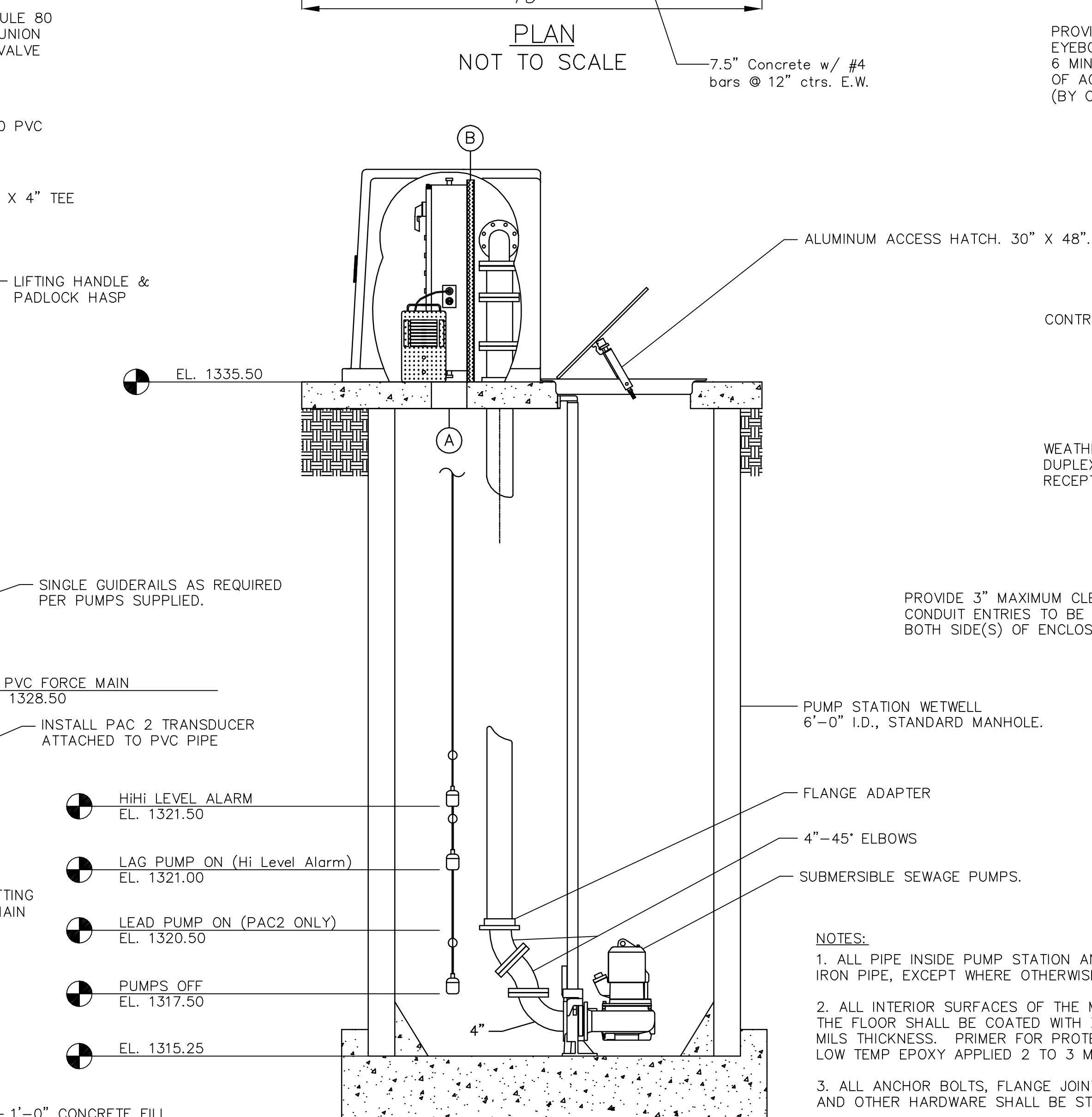
SECTION THRU



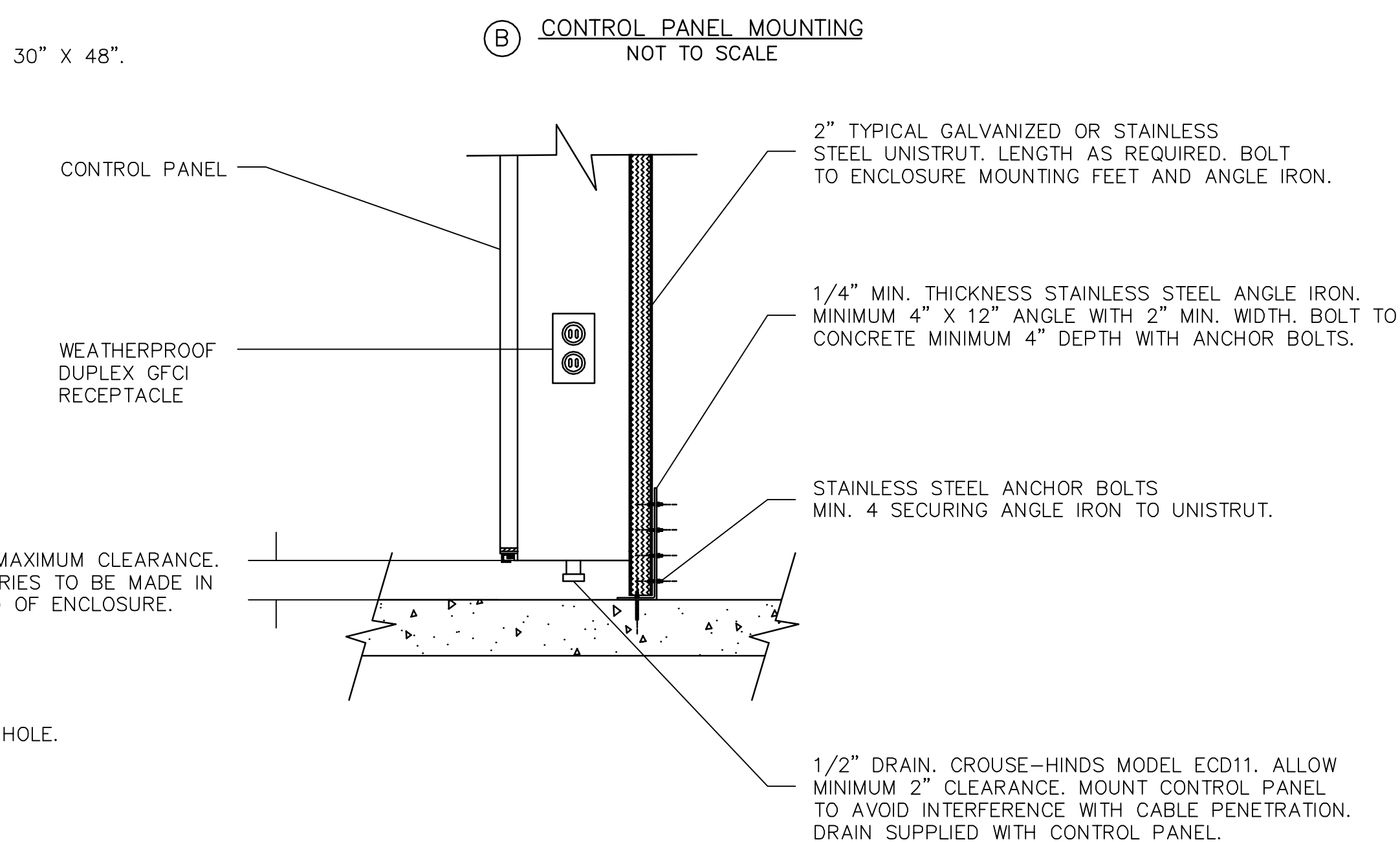
**CONFINED SPACE SIGN DETAIL**  
INSTALL SIGN ON MANHOLE TOP.



SECTION  
NOT TO SCALE



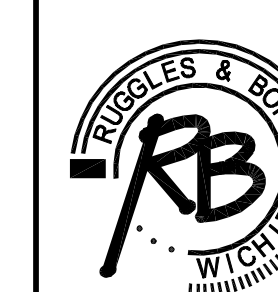
SECTION  
NOT TO SCALE



SECTION THRU

- NOTES:**
1. ALL PIPE INSIDE PUMP STATION AND WETWELL TO BE 4" DIA. DUCTILE IRON PIPE, EXCEPT WHERE OTHERWISE NOTED.
  2. ALL INTERIOR SURFACES OF THE MANHOLE WITH THE EXCEPTION OF THE FLOOR SHALL BE COATED WITH ZEBRON 386 AT A MINIMUM 100 MILS THICKNESS. PRIMER FOR PROTECTIVE COATING SHALL BE ZEBRON LOW TEMP EPOXY APPLIED 2 TO 3 MILL MINIMUM THICKNESS.
  3. ALL ANCHOR BOLTS, FLANGE JOINT BOLTS AND NUTS, FASTENERS AND OTHER HARDWARE SHALL BE STAINLESS STEEL.
  4. DO NOT SUPPORT DISCHARGE PIPING ON GUIDE RAIL BASE ELBOWS.
  5. HINGE LOCATION ON FIBERGLASS HOOD **MUST** BE DETERMINED PRIOR TO SHIPMENT AS HOOD CAN NOT BE ROTATED IN THE FIELD.
  6. LOCATE PAC 2 TRANSDUCER IN A MANNER TO PROVIDE DIRECT ACCESS THROUGH ACCESS DOOR.

**SOUTHWEST PASSAGE ADDITION  
LIFT STATION DETAILS  
WICHITA, SEDGWICK COUNTY, KANSAS**



**Ruggles & Bohm, P.A.**  
Engineering, Surveying, Land Planning

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DRAWING FILE PROJECT NUMBER  
{Lift Station Details} 468-84227

DESIGN	KWL	SHEET	5
DRAWN	KWL		
REVIEW		OF	8
UTILITY		DATE	Feb. 23, 2010