

GENERAL NOTES

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) 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
Westar Energy/ Kansas Gas & Electric Company 1-888-482-4950
Southwestern Bell Telephone Company 1-571-2611
City of Wichita Water Department 268-4908
City of Wichita Sewer Department 268-4071
Aquila Natural Gas 942-8811

2. Exist. utilities and their locations, 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 which do not conflict with proposed construction.

3. The Contractor to verify utility locations prior to construction of this project.

4. Utility service and installation shall be coordinated with the respective utility owners. Contacts are:

Kansas Gas Service Jim Coe 832-3126
Westar Energy Miles Capps 261-6251
Aquila Networks Calvin Briggs 942-8811
Wichita Water Paul Bryant 268-4555
Southwestern Bell Jim Toben 268-2759
Cox Communications Mark Anaya 262-4270

5. All lawn/turf areas disturbed by construction of proposed improvements shall be restored with seed. All seeding 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 replacement following construction. All costs for this work shall be subsidiary to the lump sum price bid for "Site Restoration."

6. Traffic affected by the construction of this project shall be handled in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

8. Properties within the project may have underground irrigation systems (lawn sprinklers) which conflict with new construction. Contractor shall remove such components as needed during construction of the project. The irrigation system shall be reinstalled in like kind before project completion. Any irrigation system modifications required because of project improvements shall be coordinated with the property owner. Portions of underground irrigation systems not in conflict with new construction shall be protected from damage and shall remain in place. All work related to underground irrigations/sprinklers shall be subsidiary to Site Restoration.

9. Cuts made to paved surfaces on public property will be repaired by the City's contractor and charged against the owner / applicant. Unit repair Prices are available from the City at 268-4418. A surcharge may be applicable: Call 268-4418 for details. Repair costs to be paid prior to release of water Service if water service is affected.

10. 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.

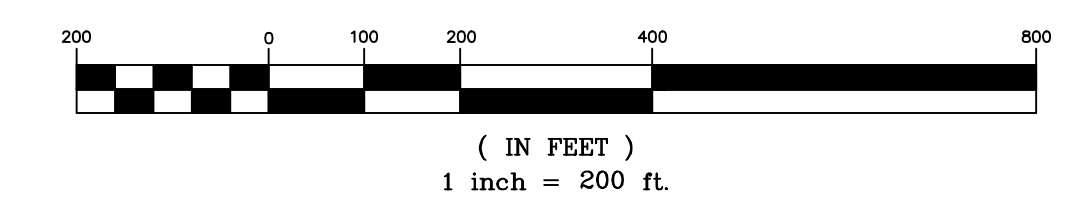
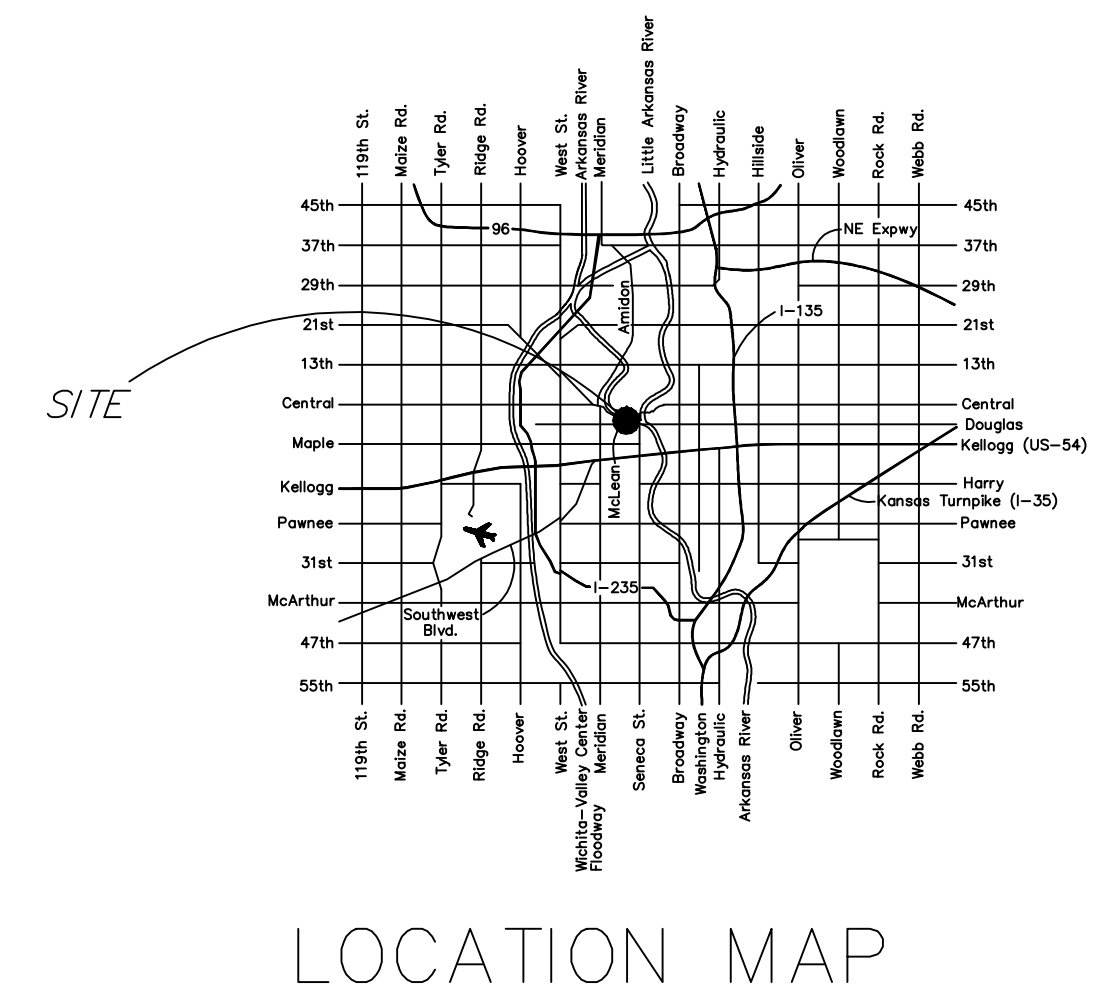
11. The maintenance and repair of the water facilities on site are the responsibility of the property owner after the two year maintenance period by the contractor.

12. Construction shall be in accordance with the City of Wichita standard construction practices.

**WATER LINE TO SERVE
ANDERSON FIRST ADDITION
OCA NO.: 636158
PROJECT NO.: 448-90211
CITY OF WICHITA, KANSAS
Jim Armour, P.E., City Engineer**



- INDEX OF SHEETS**
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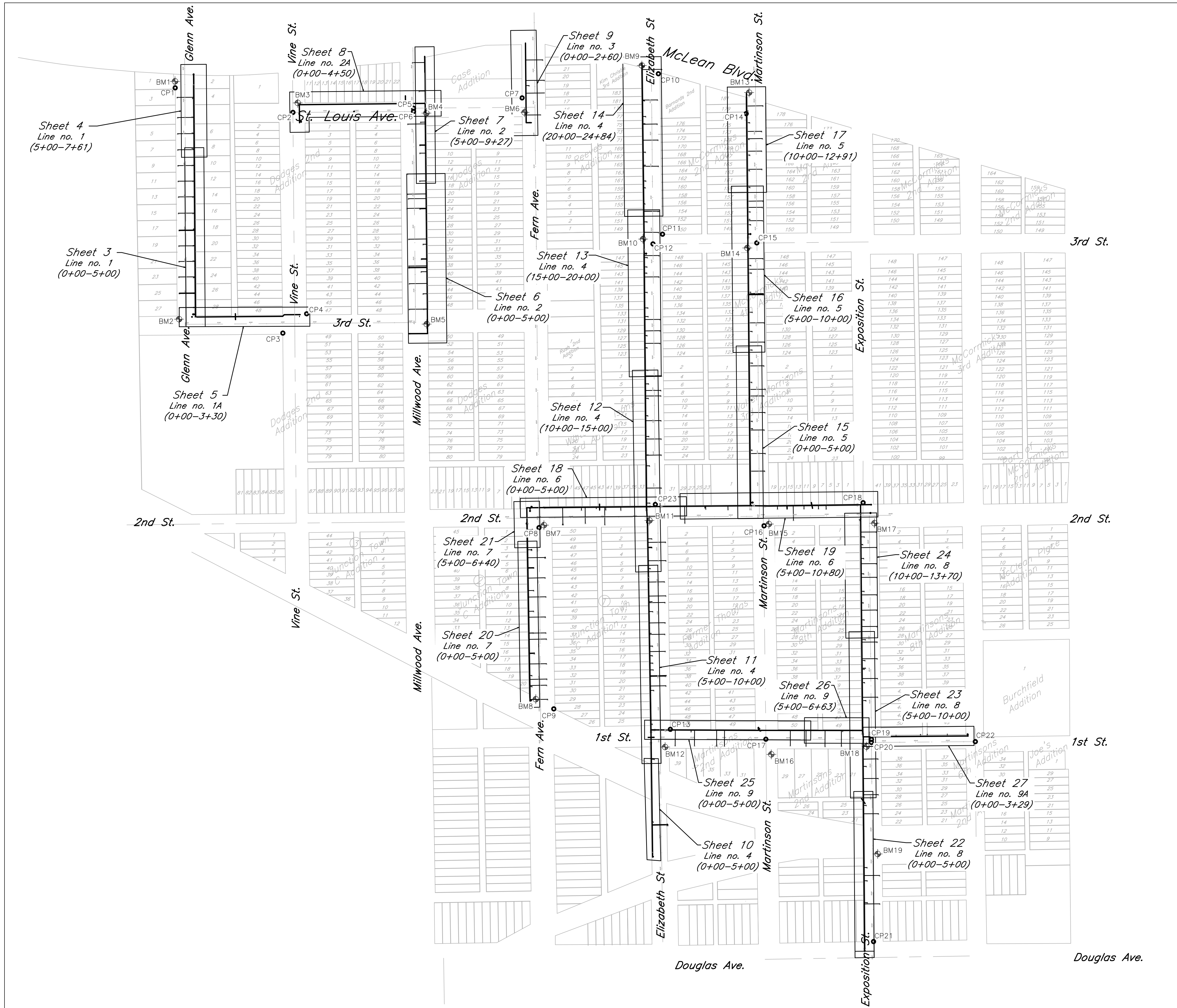


May 2007



516 S. Market,
Wichita, KS 67202

316/264-0242

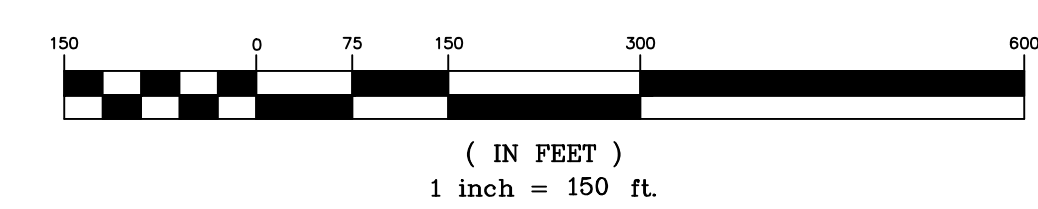


BENCHMARKS

Control Point	Discription	Elevation	B.L. Sta.
BM1	Square Cut	1303.12	7+38.12 58.36 L
BM2	Square Cut	1301.86	10+16.38 23.92 L
BM3	Square Cut	1301.89	40+15.44 29.67 L
BM4	Square Cut	1301.02	36+54.87 40.32 R
BM5	Square Cut	1300.75	29+94.70 34.62 R
BM6	Square Cut	1301.65	62+69.74 32.84 L
BM7	Square Cut	1300.57	49+77.67 15.74 R
BM8	Square Cut	1300.16	44+33.52 14.78 L
BM9	Square Cut	1300.50	91+13.07 29.85 L
BM10	Square Cut	1298.22	85+70.23 30.80 L
BM11	Square Cut	1300.71	113+46.06 10.38 R
BM12	Square Cut	1301.14	150+15.90 26.91 R
BM13	Square Cut	1301.04	103+28.86 20.21 L
BM14	Square Cut	1298.70	98+39.73 30.29 L
BM15	Square Cut	1299.90	117+19.66 24.32 R
BM16	Square Cut	1301.03	153+48.06 47.30 R
BM17	Square Cut	1299.39	143+58.62 15.81 R
BM18	Square Cut	1301.60	136+59.94 15.14 L
BM19	Square Cut	1301.05	133+23.93 15.83 R

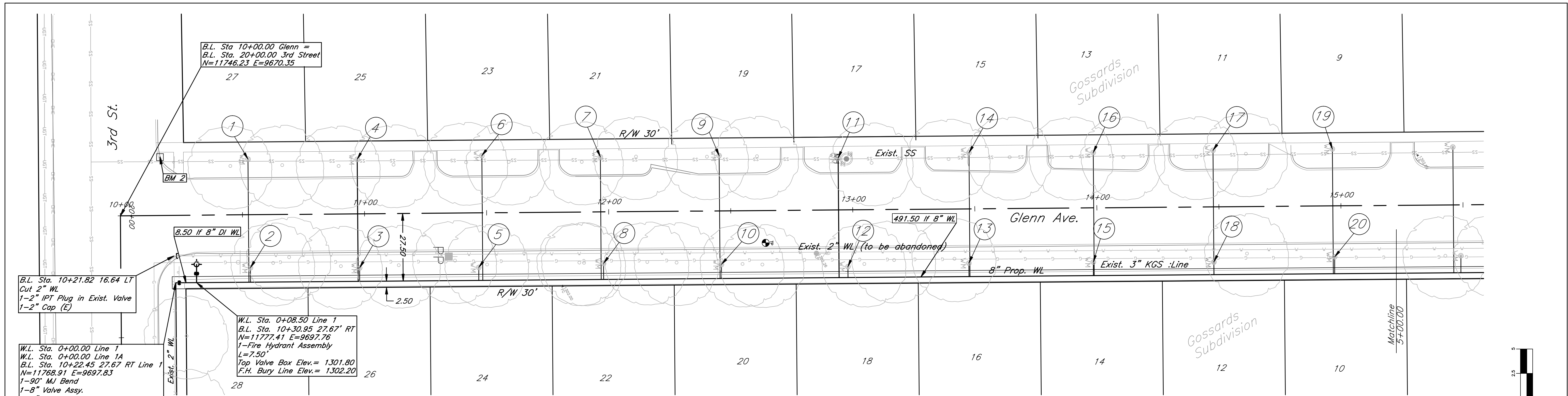
CONTROL POINTS

Control Point	Discription	Northing	Easting	B.L. Sta.
CP1	Prop. Iron	12485.96	9634.09	7+17.54 58.10 L
CP2	Thimble	12409.13	10022.53	0+32.33 20.39 L
CP3	Prop. Iron	11718.65	9971.04	23+00.47 29.82 R
CP4	Prop. Iron	11729.15	10045.53	23+75.43 30.10 L
CP5	Thimble	12422.17	10379.88	36+70.46 0.00
CP6	Thimble	12412.05	10379.88	36+60.35 0.00
CP7	Prop. Iron	12454.57	10719.63	63+15.00 40.13 L
CP8	Thimble	11109.90	10772.47	49+69.90 0.00
CP9	Prop. Iron	10543.15	10818.83	44+02.73 41.14 R
CP10	Prop. Iron	12530.04	11145.97	90+86.95 21.65 R
CP11	Prop. Iron	12028.12	11159.07	85+84.94 30.22 R
CP12	Thimble	11997.71	11129.07	85+54.80 0.00
CP13	Prop. Iron	10479.15	11183.54	150+32.00 29.44 L
CP14	Prop. Iron	12405.31	11420.78	102+60.07 30.01 L
CP15	Thimble	12000.82	11454.11	98+55.29 0.00
CP16	Thimble	11115.88	11476.64	117+04.34 29.80 R
CP17	Thimble	10448.18	11482.39	153+31.00 0.00
CP18	Thimble	11188.15	11786.63	120+14.90 39.97 L
CP19	Thimble	10447.97	11812.66	156+61.28 0.00
CP20	Thimble	10438.17	11812.67	156+61.35 0.00
CP21	Thimble	9815.19	11819.24	130+50.00 0.00
CP22	Thimble	10440.67	12137.81	159+86.51 0.00



**Anderson First Addition Water Line
Control Points / Key Map
Wichita, KS**

kemiller engineering		PROJECT NUMBER OCA 636158 Proj. NO. 448-90211	
DESIGN KM	DRAWN JO	DATE 04/07	SHEET 2 OF 29
516 S. Market, Wichita, KS 67202		316/264-0242	



B.L. Sta. 10+21.82 16.64 LT
Cut 2" WL
1-2" IPT Plug in Exist. Valve
1-2" Cap (E)

W.L. Sta. 0+00.00 Line 1
W.L. Sta. 0+00.00 Line 1A
B.L. Sta. 10+22.45 27.67 RT Line 1
N=11768.91 E=9697.83
1-90' M/I Bend
1-8" Valve Assy.
1-8" Valve Box
Valve Box Elev. = Exist.

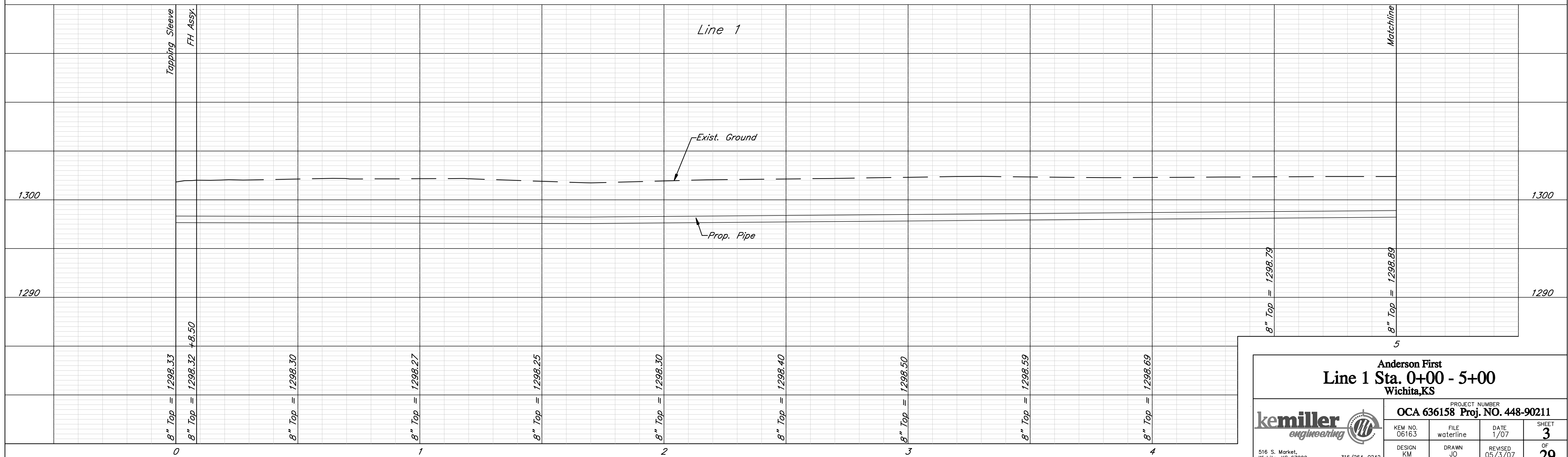
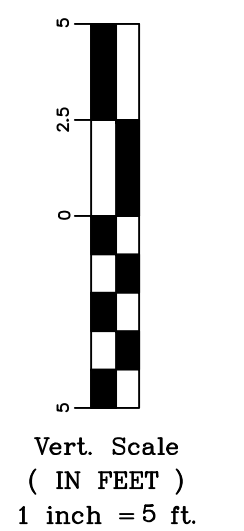
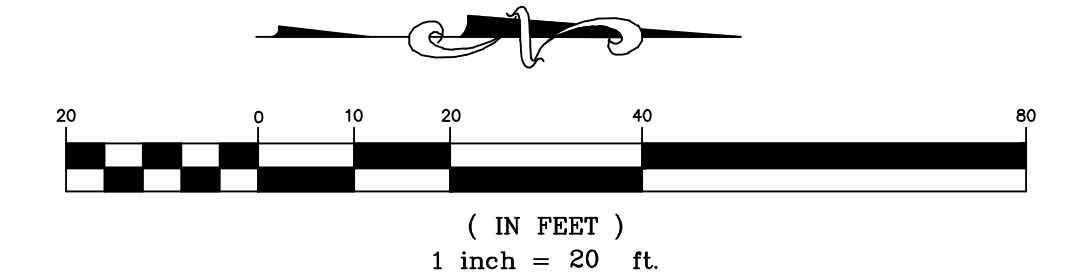
W.L. Sta. 0+08.50 Line 1
B.L. Sta. 10+30.95 27.67 RT
N=11777.41 E=9697.76
1-Fire Hydrant Assembly
L=7.50'
Top Valve Box Elev. = 1301.80
F.H. Bury Line Elev. = 1302.20

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	10+52.45	LT	Long	0.63	401 N. Glenn Ave.
2	10+53.11	RT	Short	0.63	402 N. Glenn Ave.
3	10+97.81	RT	Short	0.63	408 N. Glenn Ave.
4	10+97.19	LT	Long	0.63	407 N. Glenn Ave.
5	11+46.61	RT	Short	0.63	412 N. Glenn Ave.
6	11+48.23	LT	Long	0.63	411 N. Glenn Ave.
7	11+97.79	LT	Long	0.63	417 N. Glenn Ave.
8	11+97.75	RT	Short	0.63	418 N. Glenn Ave.
9	12+45.46	LT	Long	0.63	421 N. Glenn Ave.

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
10	12+46.01	RT	Short	0.63	422 N. Glenn Ave.
11	12+94.21	LT	Long	0.63	427 N. Glenn Ave.
12	12+97.84	RT	Short	0.63	428 N. Glenn Ave.
13	13+47.40	RT	Short	0.63	431 N. Glenn Ave.
14	13+47.83	LT	Long	0.63	432 N. Glenn Ave.
15	13+98.72	LT	Long	0.63	437 N. Glenn Ave.
16	13+98.37	RT	Short	0.63	438 N. Glenn Ave.
17	14+47.77	LT	Long	0.63	441 N. Glenn Ave.
18	14+47.76	RT	Short	0.63	442 N. Glenn Ave.

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
19	14+96.69	LT	Long	0.63	447 N. Glenn Ave.
20	14+97.24	RT	Short	0.63	448 N. Glenn Ave.

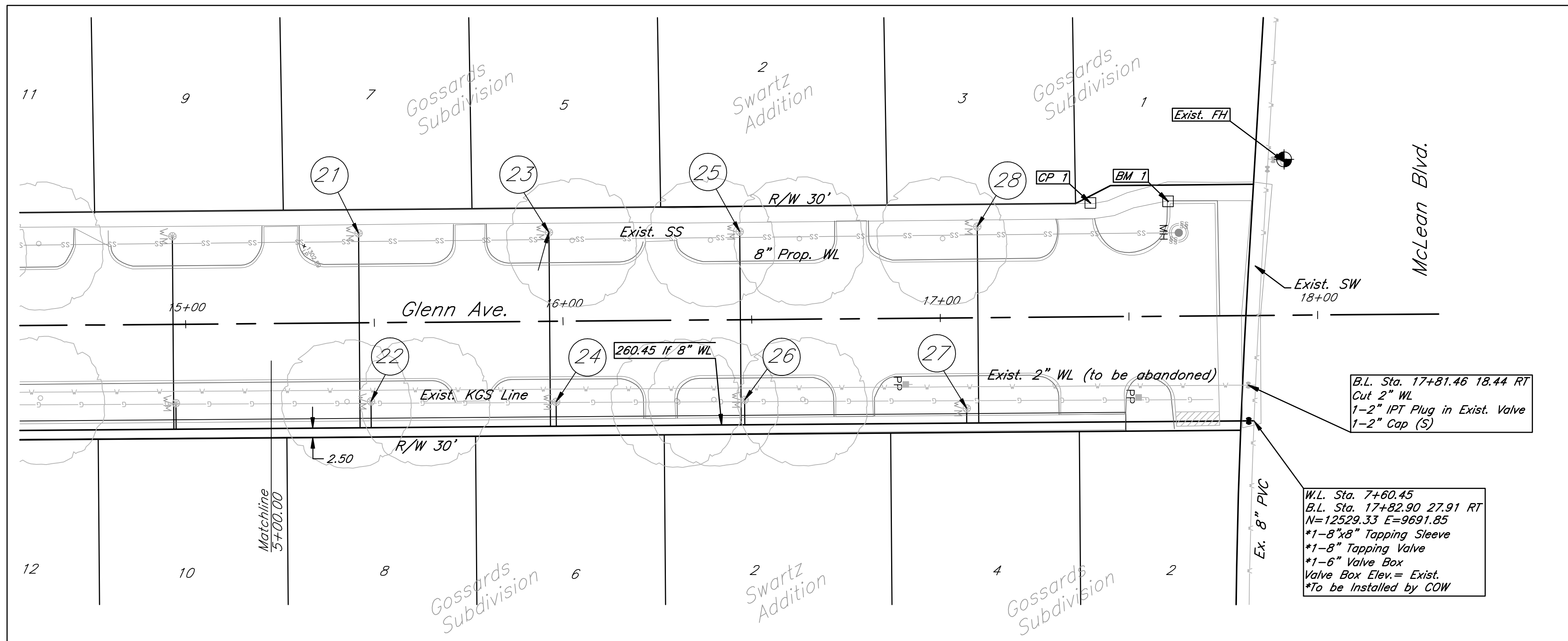
Baseline
10+00 at the
Intersections of
Glenn St. and 3rd St.



Anderson First
Line 1 Sta. 0+00 - 5+00
Wichita, KS

PROJECT NUMBER OCA 636158 Proj. NO. 448-90211			
KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 3
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242

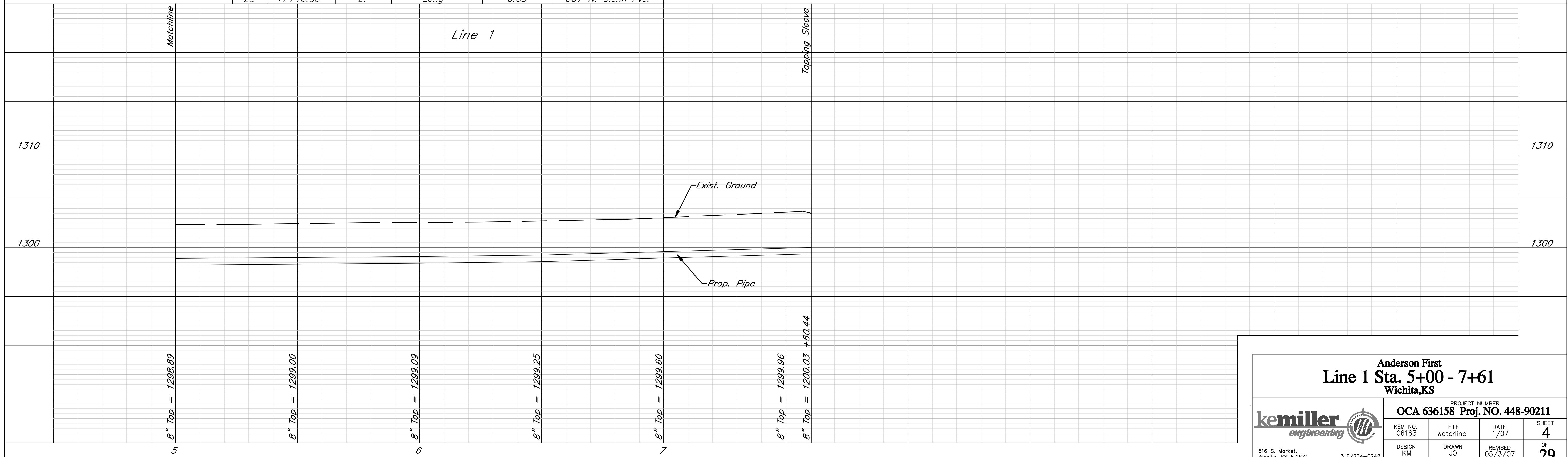
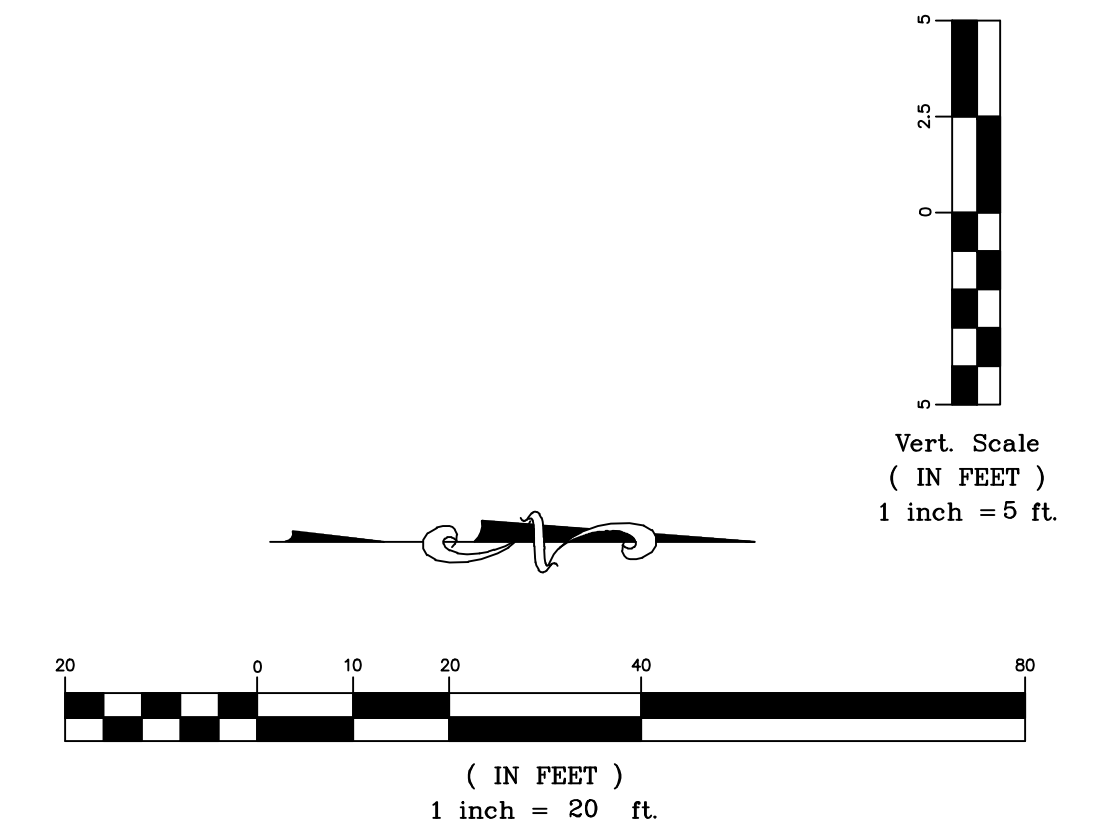


Baseline
10+00 at the
Intersections of
Glenn St. and 3rd St.

B.L. Sta. 17+81.46 18.44 RT
Cut 2" WL
1-2" IPT Plug in Exist. Valve
1-2" Cap (S)

W.L. Sta. 7+60.45
B.L. Sta. 17+82.90 27.91 RT
N=12529.33 E=9891.85
#1-8"x8" Tapping Sleeve
#1-8" Tapping Valve
#1-6" Valve Box
Valve Box Elev.= Exist.
*To be Installed by COW

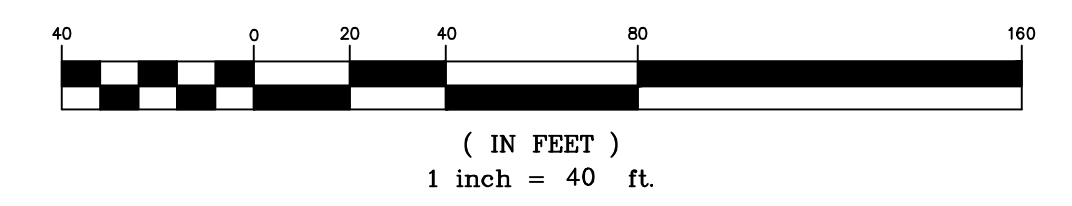
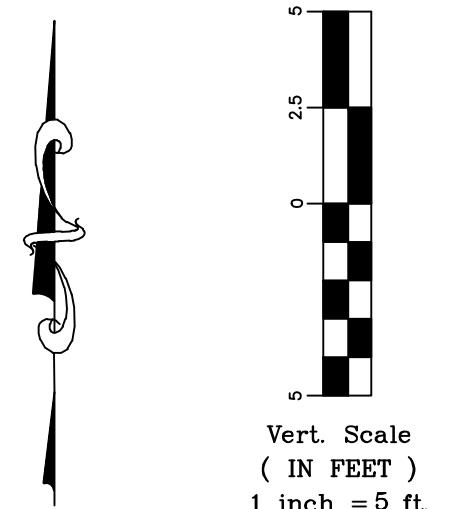
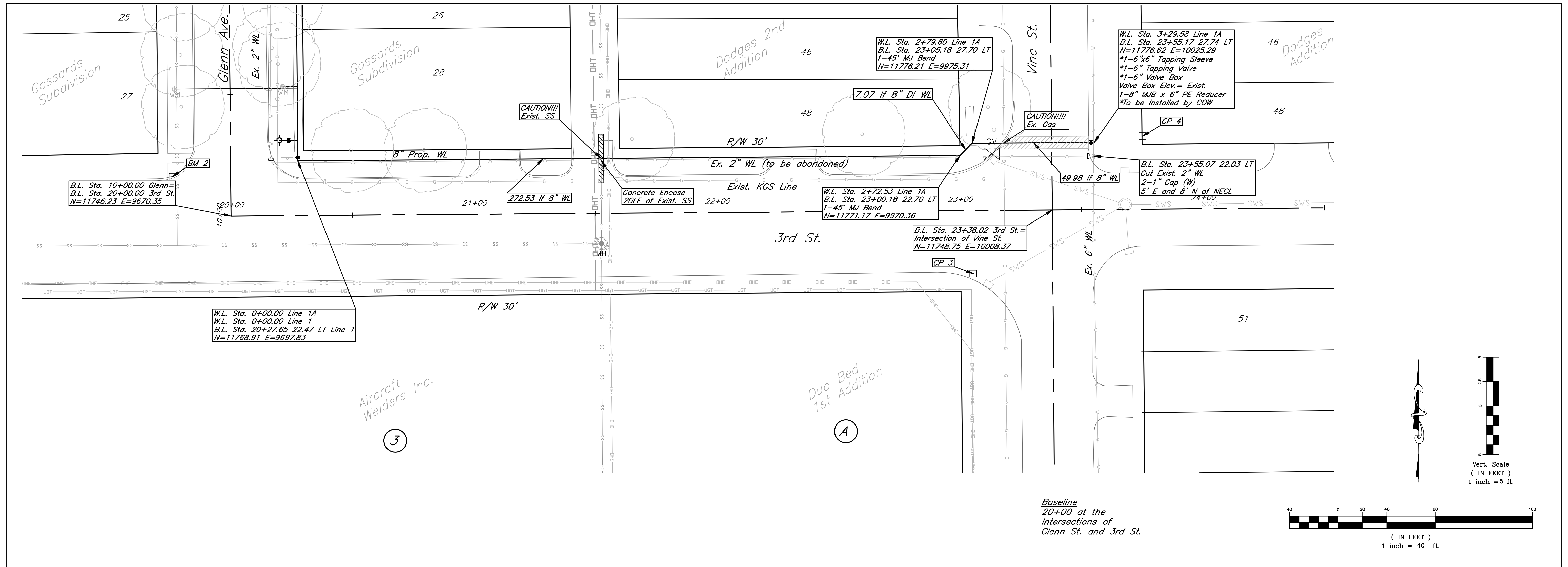
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
21	15+46.03	LT	Long	0.63	451 N. Glenn Ave.
22	15+48.94	RT	Short	0.63	452 N. Glenn Ave.
23	15+96.47	LT	Long	0.63	457 N. Glenn Ave.
24	15+98.10	RT	Short	0.63	458 N. Glenn Ave.
25	16+47.03	LT	Long	0.63	501 N. Glenn Ave.
26	16+47.95	RT	Short	0.63	502 N. Glenn Ave.
27	17+06.79	RT	Short	0.63	508 N. Glenn Ave.
28	17+10.00	LT	Long	0.63	507 N. Glenn Ave.



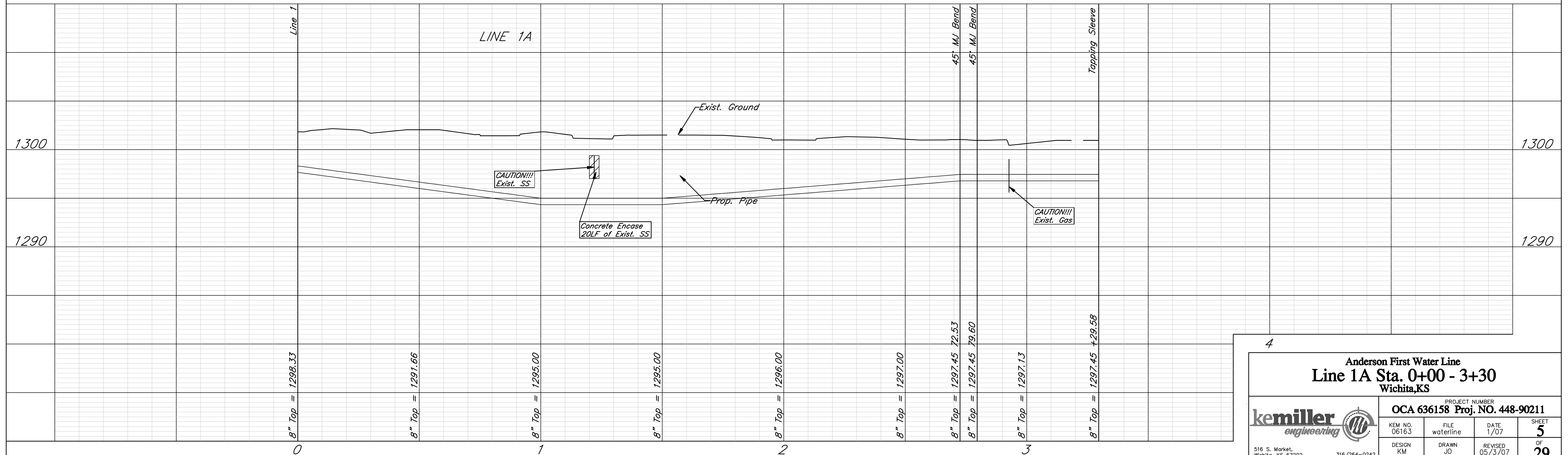
Anderson First
Line 1 Sta. 5+00 - 7+61
Wichita, KS

kemiller <i>engineering</i>		PROJECT NUMBER OCA 636158 Proj. NO. 448-90211	
KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 4
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



Baseline
20+00 at the
Intersections of
Glenn St. and 3rd St.

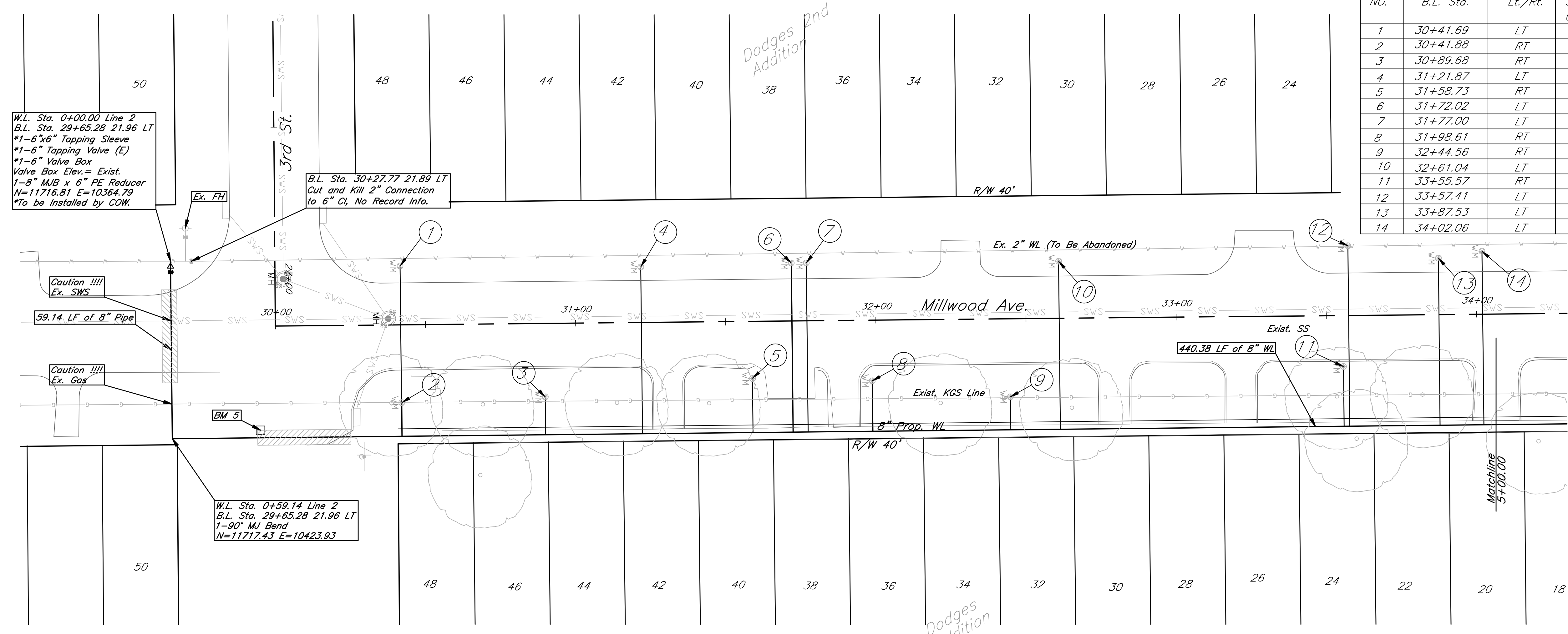


Anderson First Water Line
Line 1A Sta. 0+00 - 3+30
Wichita, KS

PROJECT NUMBER OCA 636158 Proj. NO. 448-90211		FILE waterline	DATE 1/07	SHEET 5
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29	

kemiller engineering
516 S. Market, Wichita, KS 67202 316/264-0242

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	30+41.69	LT	Long	.63	405 N. Millwood Ave.
2	30+41.88	RT	Short	.63	402 N. Millwood Ave.
3	30+89.68	RT	Short	.63	408 N. Millwood Ave.
4	31+21.87	LT	Long	.63	407 N. Millwood Ave.
5	31+58.73	RT	Short	.63	416 N. Millwood Ave.
6	31+72.02	LT	Long	.63	413 N. Millwood Ave.
7	31+77.00	LT	Long	.63	417 N. Millwood Ave.
8	31+98.61	RT	Short	.63	420 N. Millwood Ave.
9	32+44.56	RT	Short	.63	422 N. Millwood Ave.
10	32+61.04	LT	Long	.63	421 N. Millwood Ave.
11	33+55.57	RT	Short	.63	428 N. Millwood Ave.
12	33+57.41	LT	Long	.63	431 N. Millwood Ave.
13	33+87.53	LT	Long	.63	433 N. Millwood Ave.
14	34+02.06	LT	Long	.63	434 N. Millwood Ave.

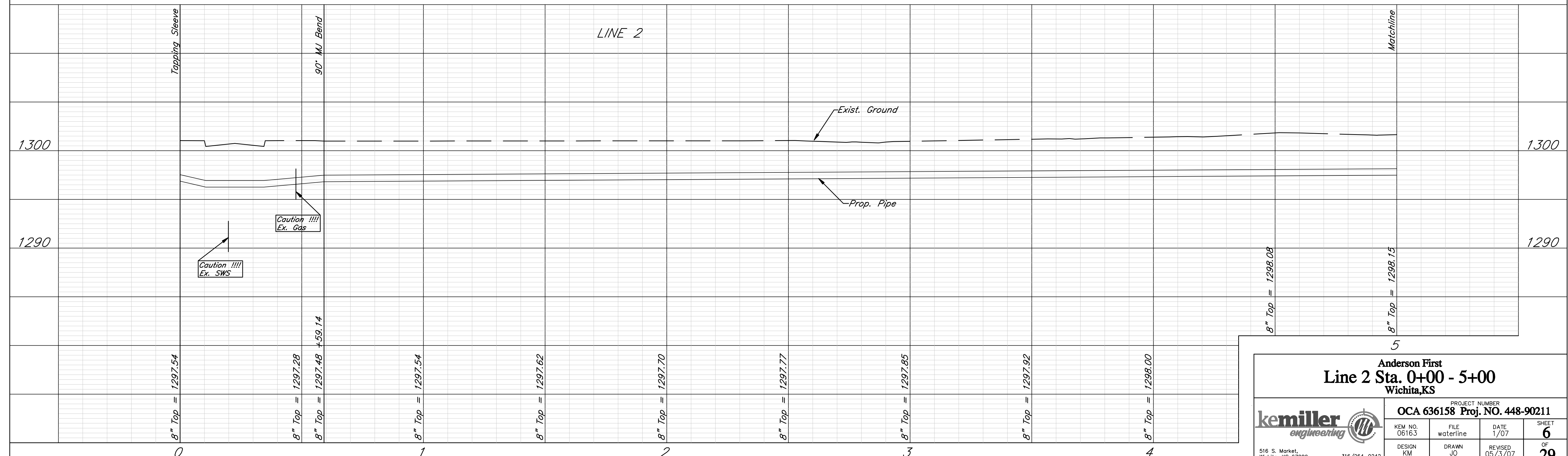
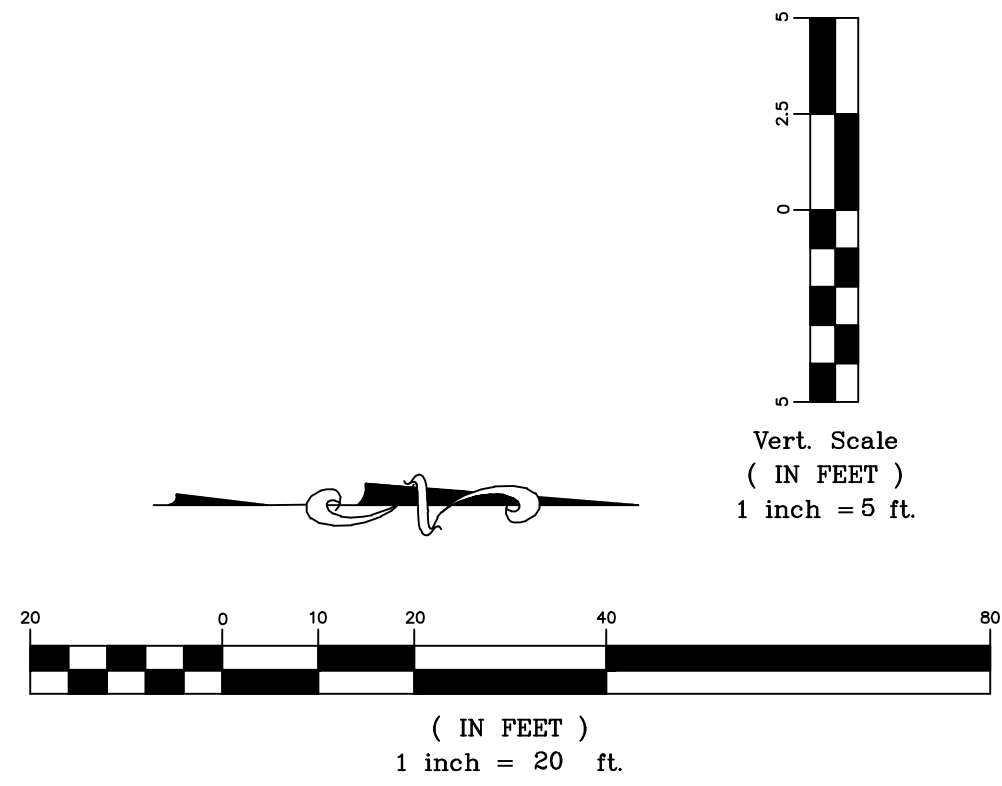


W.L. Sta. 0+00.00 Line 2
 B.L. Sta. 29+65.28 21.96 LT
 *1-6" Tapping Sleeve
 *1-6" Tapping Valve (E)
 *1-6" Valve Box
 Valve Box Elev. = Exist.
 1-8" MMB x 6" PE Reducer
 N=11716.81 E=10364.79
 *To be installed by COW.

B.L. Sta. 30+27.77 21.89 LT
 Cut and Kill 2" Connection
 to 6" CI, No Record Info.

W.L. Sta. 0+59.14 Line 2
 B.L. Sta. 29+65.28 21.96 LT
 1-90° MJ Bend
 N=11717.43 E=10423.93

Baseline
 30+00 at the
 Intersections of
 Millwood St. and 3rd St.

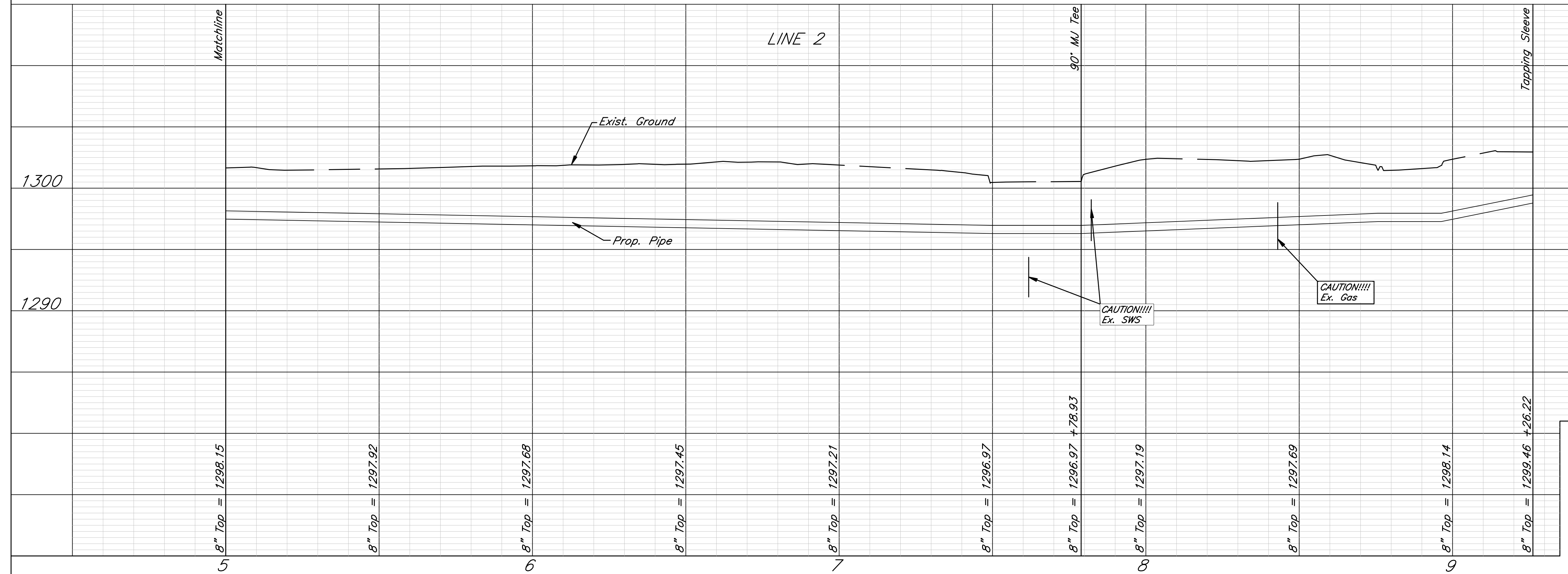
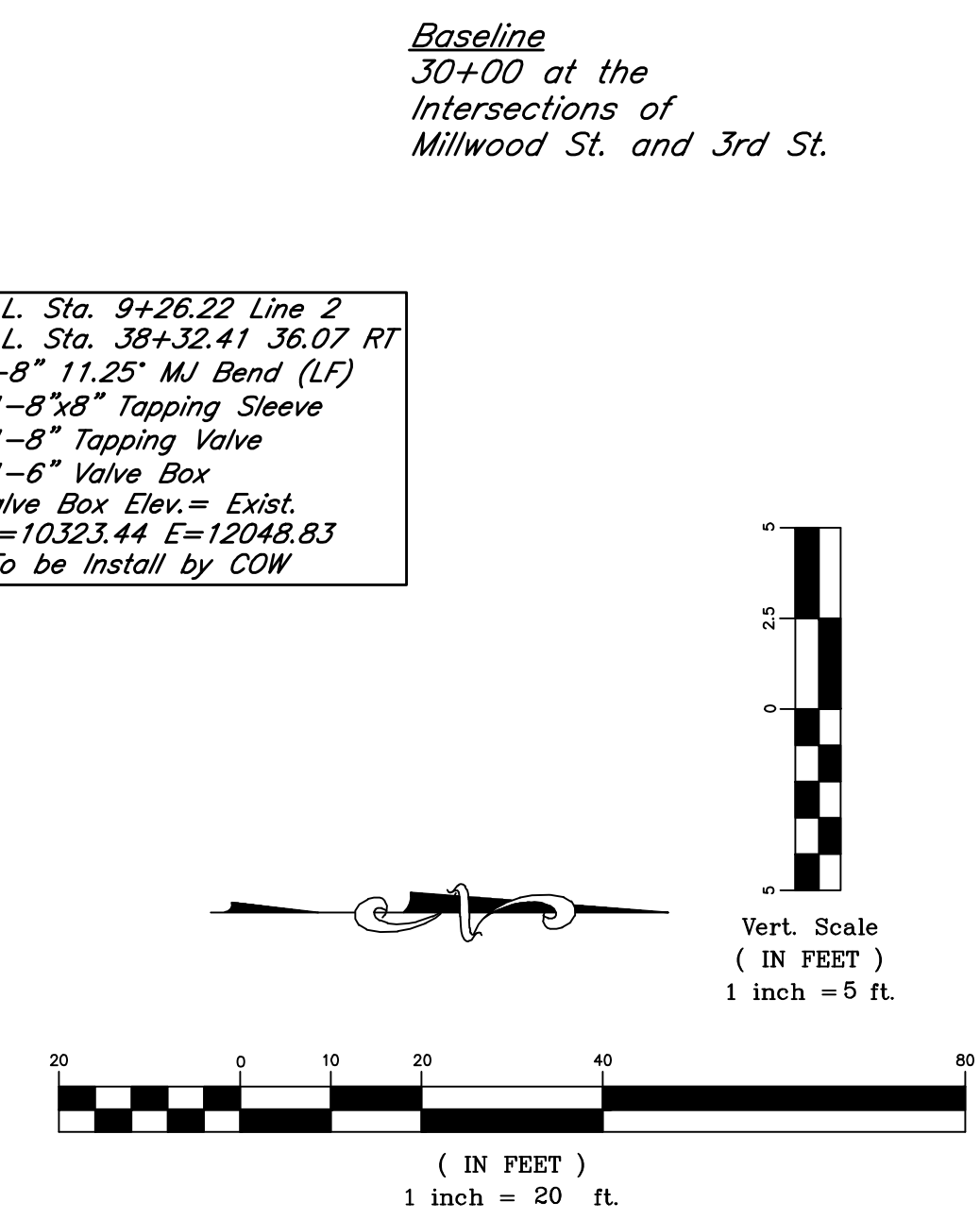
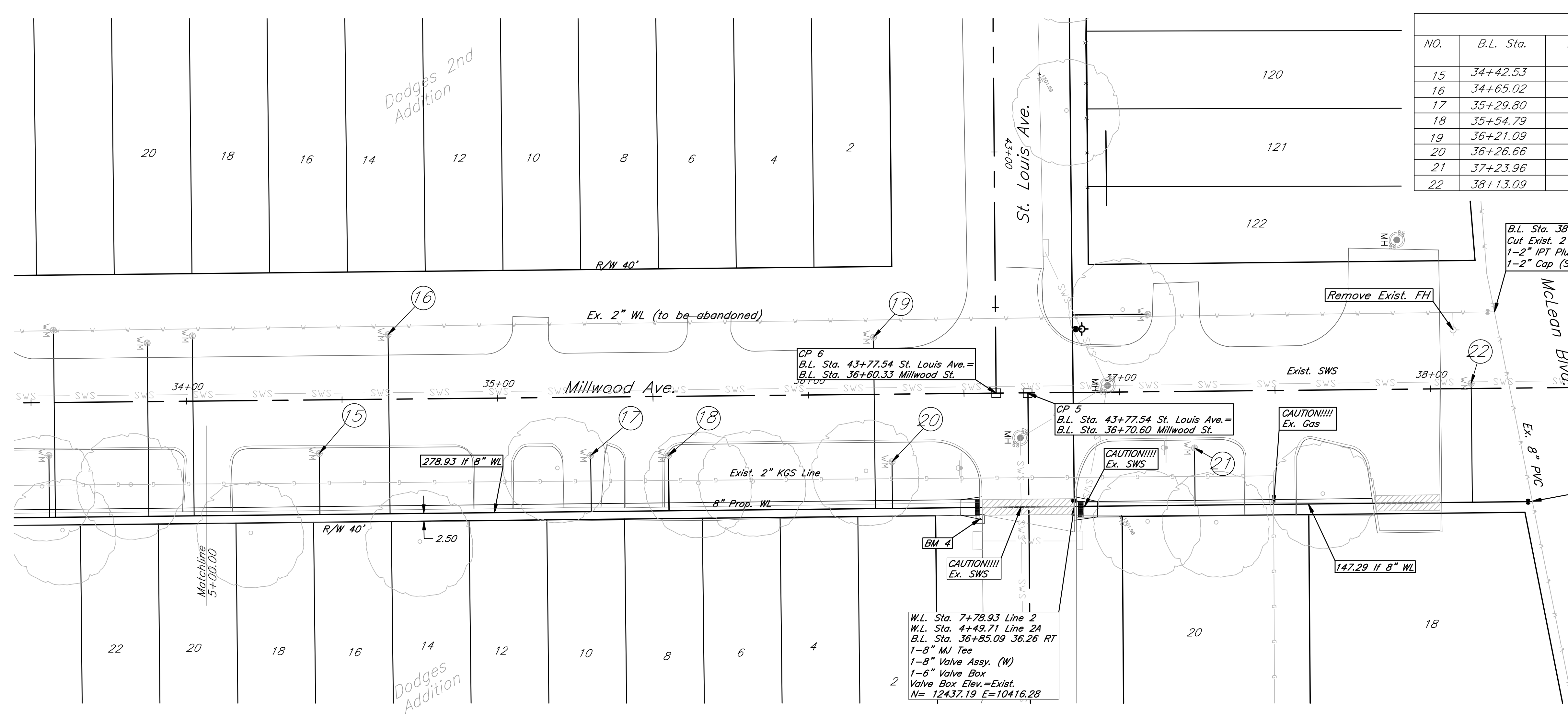


Anderson First
Line 2 Sta. 0+00 - 5+00
 Wichita, KS

	PROJECT NUMBER OCA 636158 Proj. NO. 448-90211		
	KEM NO. 06163	FILE waterline	DATE 1/07
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
15	34+42.53	RT	Short	0.63	434 N. Millwood Ave.
16	34+65.02	LT	Long	0.63	439 N. Millwood Ave.
17	35+29.80	RT	Short	0.63	440 N. Millwood Ave.
18	35+54.79	RT	Short	0.63	444 N. Millwood Ave.
19	36+21.09	LT	Long	0.63	447 N. Millwood Ave.
20	36+26.66	RT	Short	0.63	1625 W. St Louis St.
21	37+23.96	RT	Short	0.63	502 N. Millwood Ave.
22	38+13.09	LT	Long	0.63	521 N. Millwood Ave.

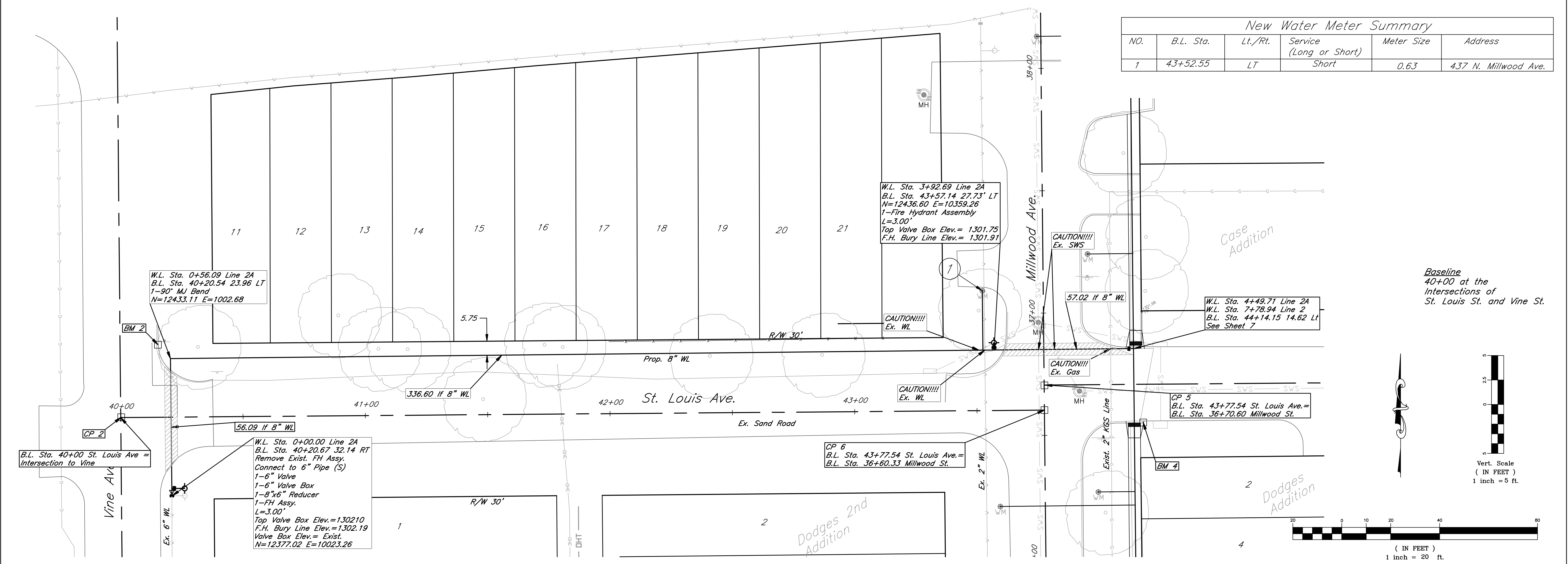


Anderson First Water Line
Line 2 Sta. 5+00-9+27
 Wichita, KS

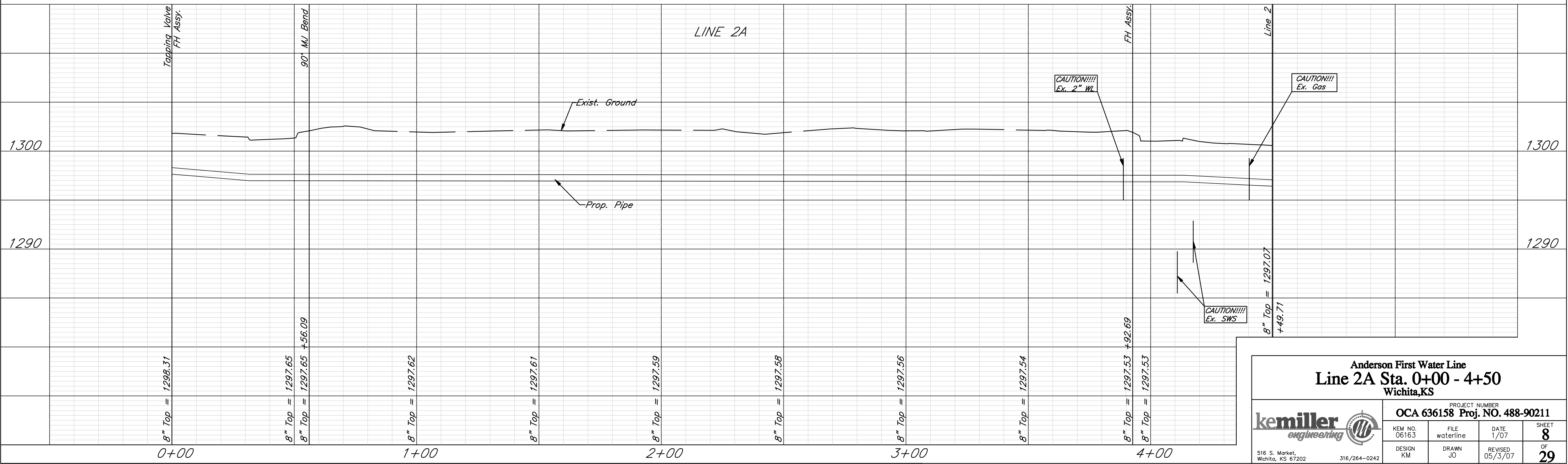
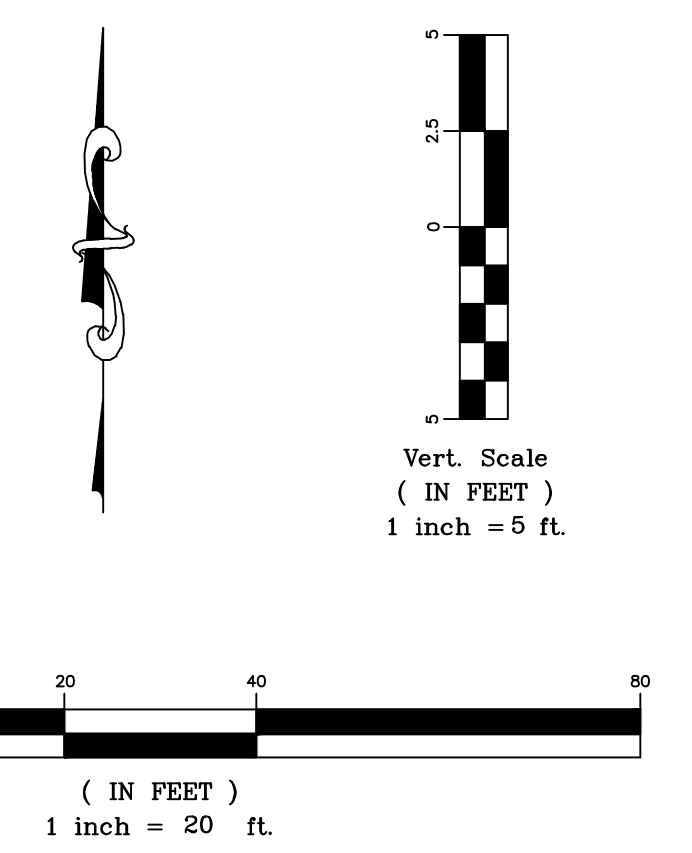
PROJECT NUMBER OCA 636158 Proj. NO. 448-90211	
KEMILLER engineering	SHEET 7
DESIGN KM	DATE 1/07
DRAWN JO	REVISED 05/3/07
OF 29	

516 S. Market, Wichita, KS 67202 316/264-0242

New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	43+52.55	LT	Short	0.63	437 N. Millwood Ave.



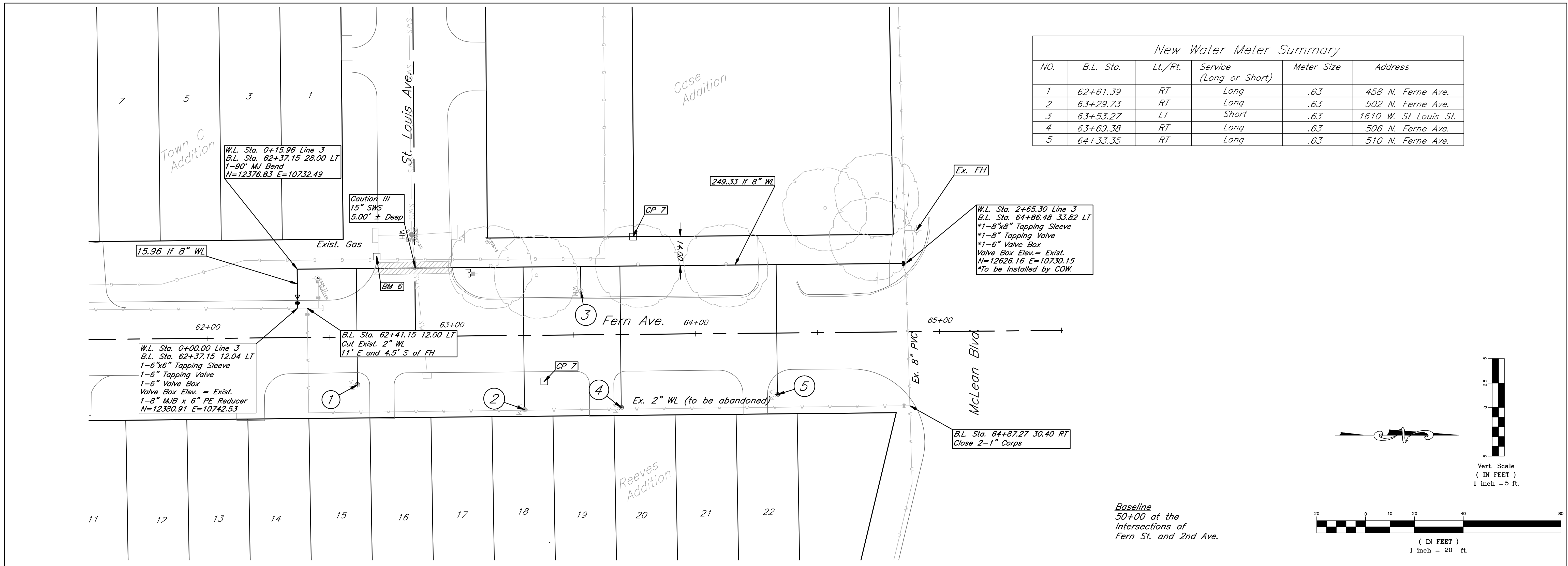
Baseline
40+00 at the
intersections of
St. Louis St. and Vine St.



Anderson First Water Line
Line 2A Sta. 0+00 - 4+50
Wichita, KS

	PROJECT NUMBER OCA 636158 Proj. NO. 488-90211		
	KEM NO. 06163	FILE waterline	DATE 1/07
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	62+61.39	RT	Long	.63	458 N. Ferne Ave.
2	63+29.73	RT	Long	.63	502 N. Ferne Ave.
3	63+53.27	LT	Short	.63	1610 W. St Louis St.
4	63+69.38	RT	Long	.63	506 N. Ferne Ave.
5	64+33.35	RT	Long	.63	510 N. Ferne Ave.

W.L. Sta. 0+15.96 Line 3
 B.L. Sta. 62+37.15 28.00 LT
 1-90° MJ Bend
 N=12376.83 E=10732.49

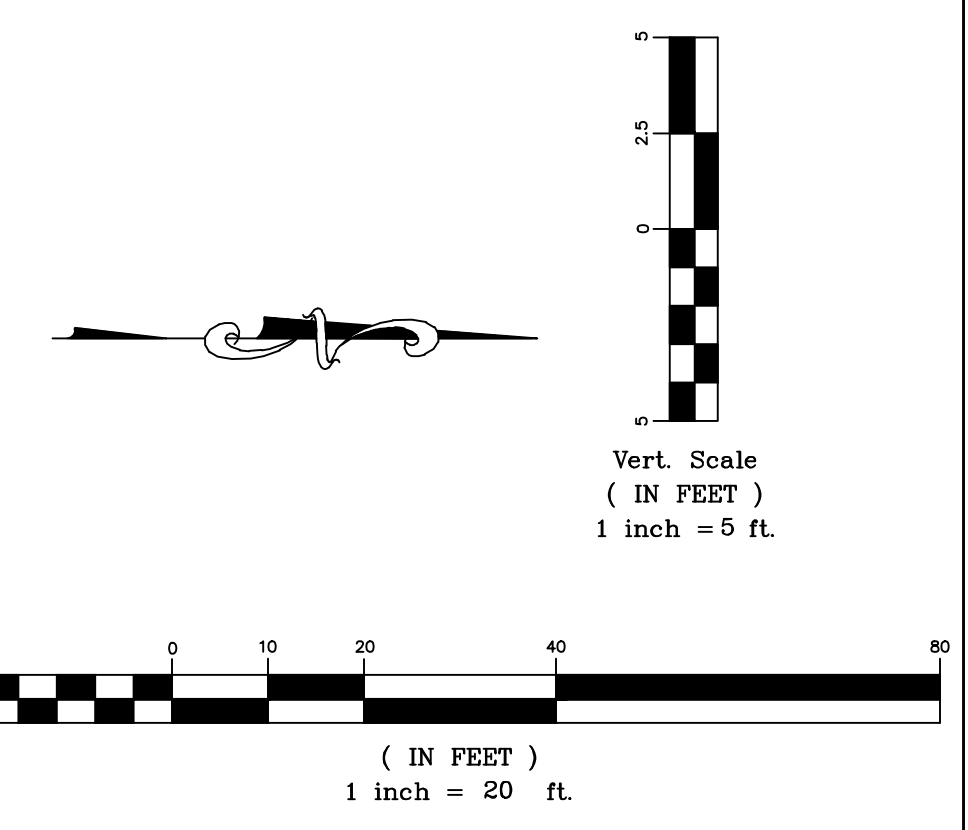
Caution !!!
 15" SWS
 5.00' ± Deep

W.L. Sta. 0+00.00 Line 3
 B.L. Sta. 62+37.15 12.04 LT
 1-6"x6" Tapping Sleeve
 1-6" Tapping Valve
 1-6" Valve Box
 Valve Box Elev. = Exist.
 1-8" MJR x 6" PE Reducer
 N=12380.91 E=10742.53

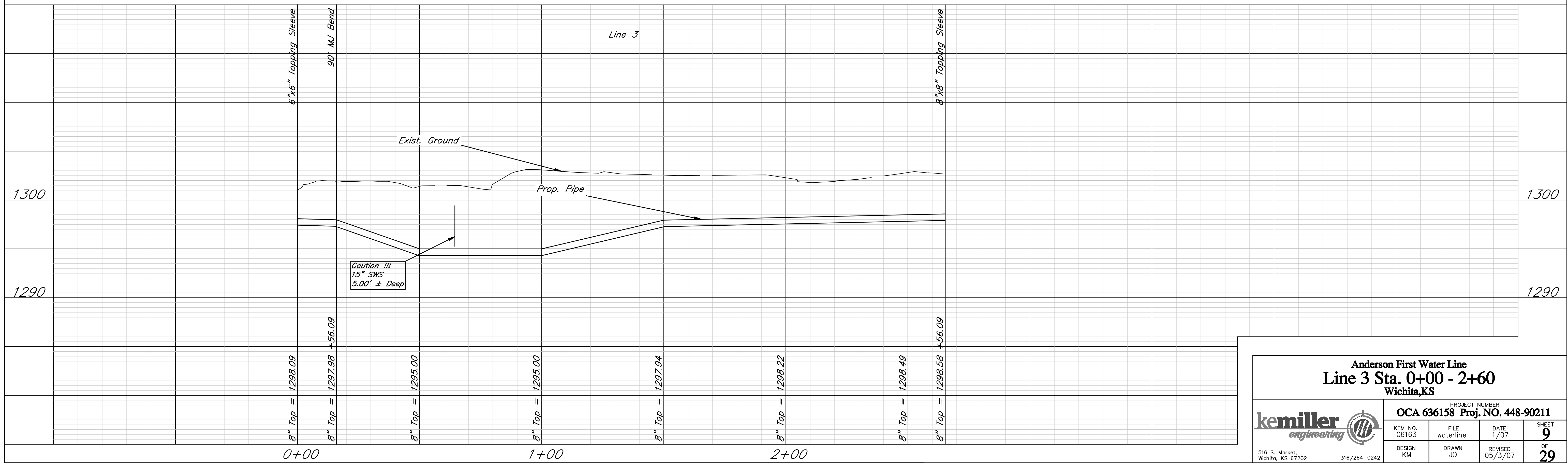
B.L. Sta. 62+41.15 12.00 LT
 Cut Exist. 2" WL
 11' E and 4.5' S of FH

W.L. Sta. 2+65.30 Line 3
 B.L. Sta. 64+86.48 33.82 LT
 *1-8"x8" Tapping Sleeve
 *1-8" Tapping Valve
 *1-6" Valve Box
 Valve Box Elev. = Exist.
 N=12626.16 E=10730.15
 *To be installed by COW.

B.L. Sta. 64+87.27 30.40 RT
 Close 2-1" Corps



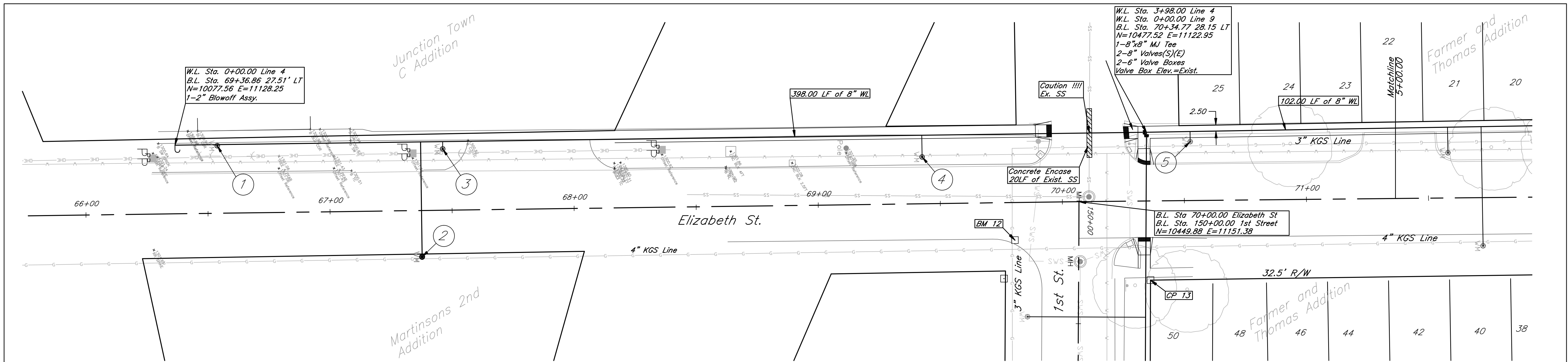
Baseline
 50+00 at the
 Intersections of
 Fern St. and 2nd Ave.



Anderson First Water Line
Line 3 Sta. 0+00 - 2+60
 Wichita, KS

kemiller engineering	PROJECT NUMBER OCA 636158 Proj. NO. 448-90211			SHEET 9 OF 29
	KEM NO. 06163	FILE waterline	DATE 1/07	
DESIGN KM	DRAWN JO	REVISED 05/3/07		

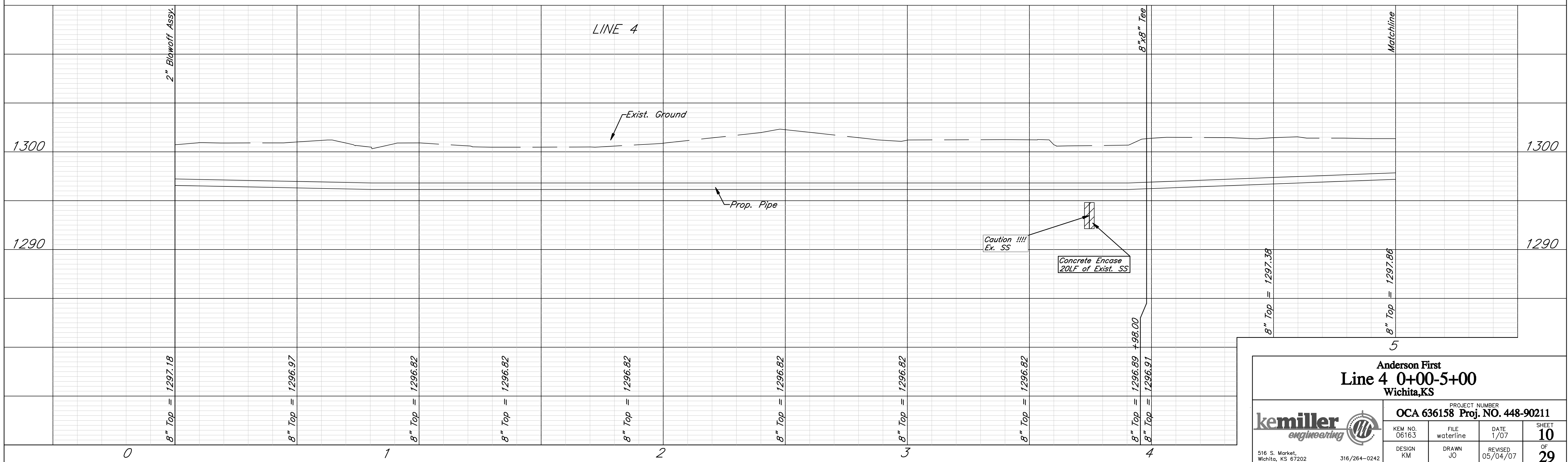
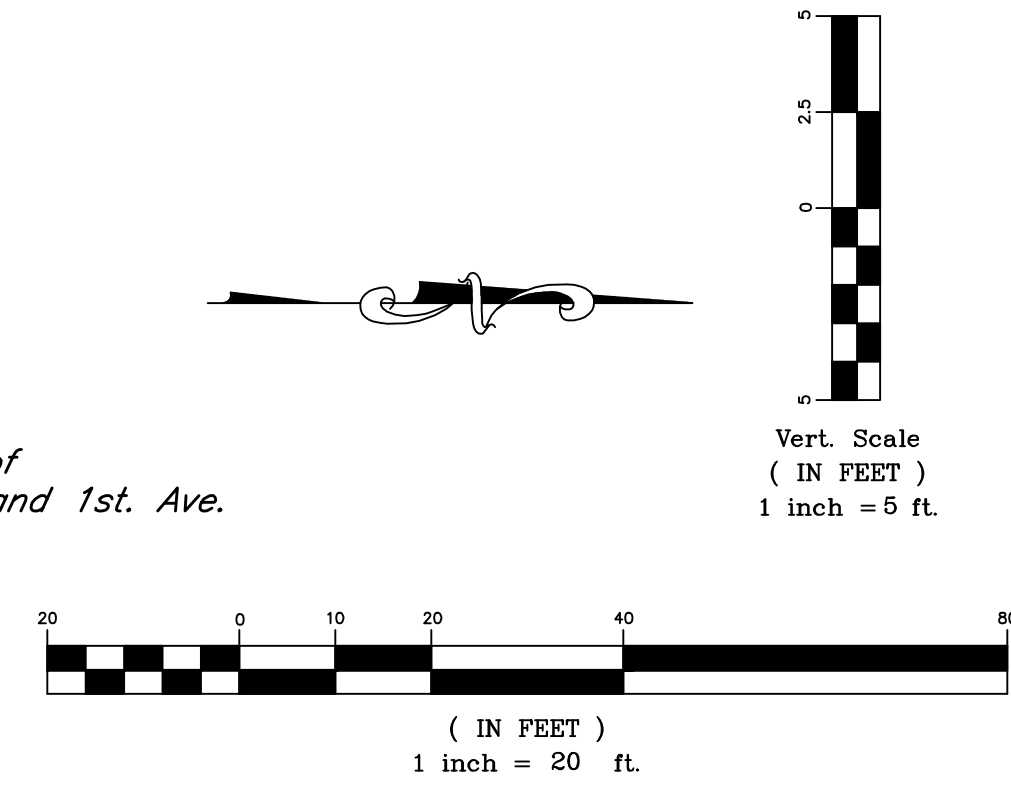
516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	66+54.18	LT	Short	0.63	135 N. Elizabeth St.
2	67+37.46	RT	Long	0.63	134 N. Elizabeth St.
3	67+46.49	LT	Short	0.63	135 N. Elizabeth St.
4	69+42.82	LT	Short	0.63	135 N. Elizabeth St.
5	70+52.62	LT	Short	0.63	201 N. Elizabeth St.

Baseline
70+00 at the
Intersections of
Elizabeth St. and 1st. Ave.

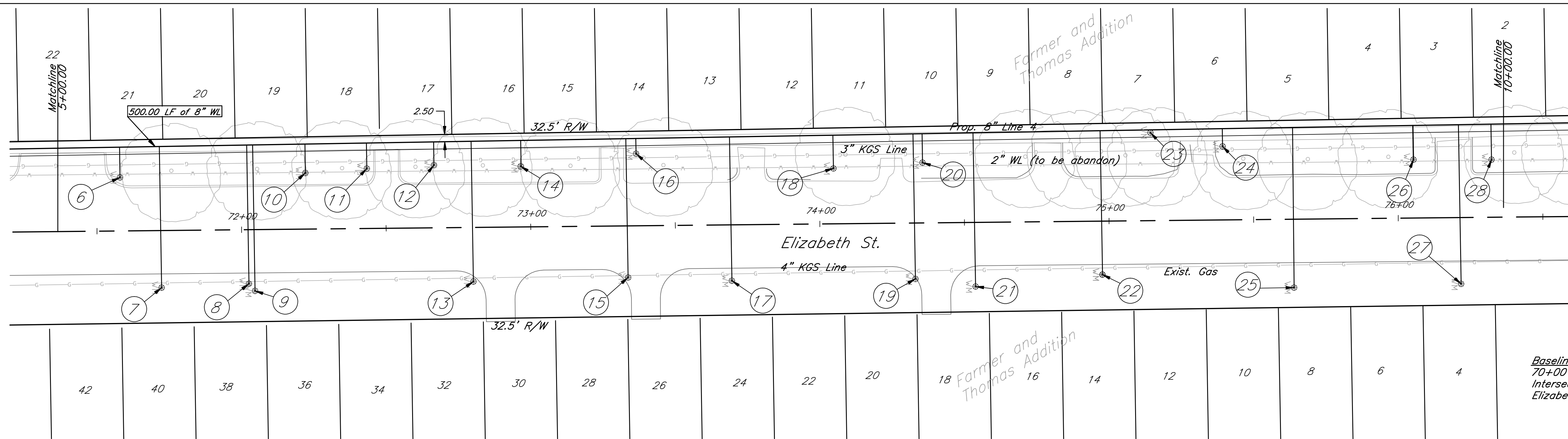


Anderson First
Line 4 0+00-5+00
Wichita, KS

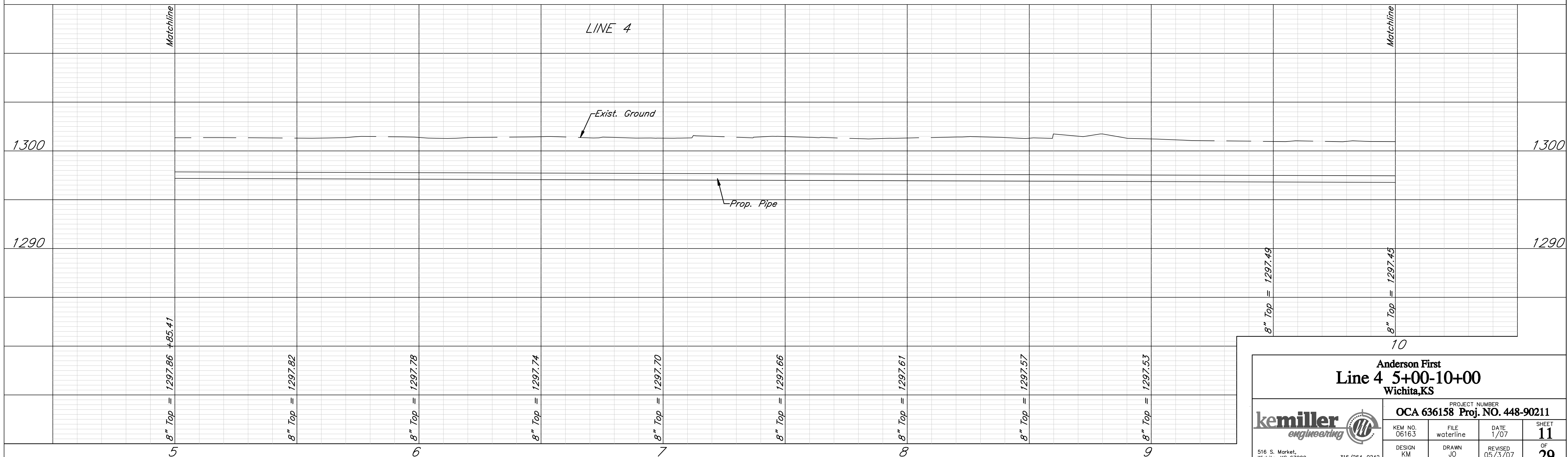
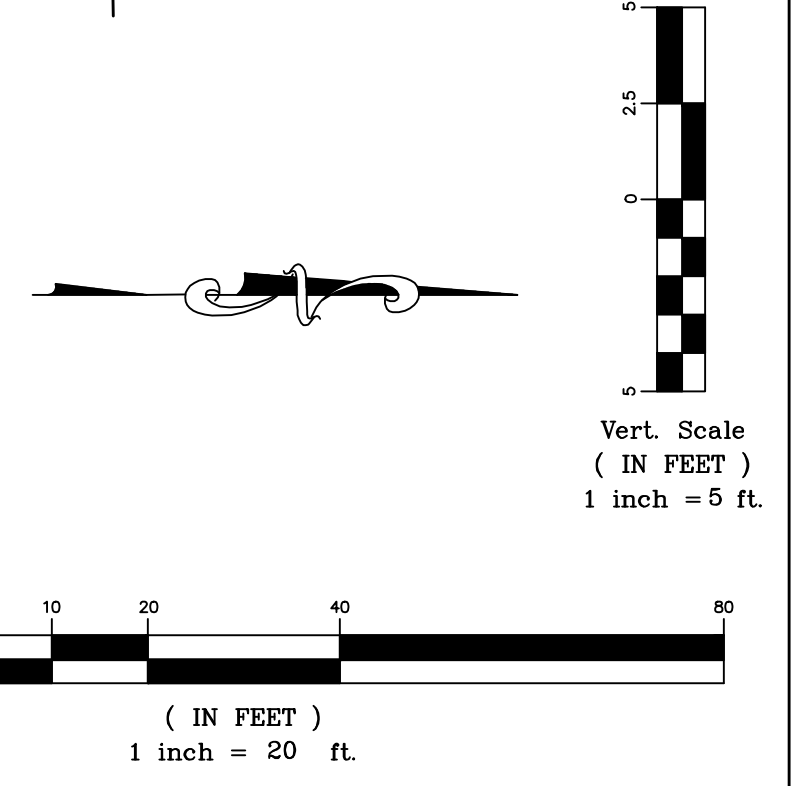
PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 10
	DESIGN KM	DRAWN JO	REVISED 05/04/07	OF 29

516 S. Market
Wichita, KS 67202 316/264-0242



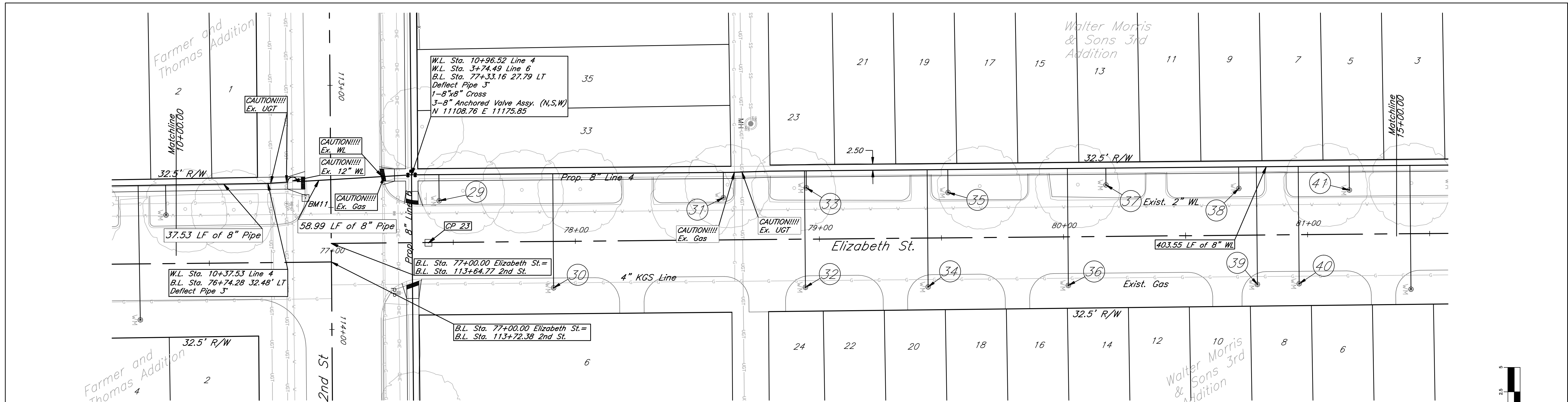
New Water Meter Summary					New Water Meter Summary					New Water Meter Summary							
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
6	71+58.16	LT	Short	0.63	205 N. Elizabeth St.	14	72+96.87	LT	Short	0.63	219 N. Elizabeth St.	22	74+97.54	RT	Long	0.63	248 N. Elizabeth St.
7	71+72.17	RT	Long	0.63	212 N. Elizabeth St.	15	73+33.51	RT	Long	0.63	226 N. Elizabeth St.	23	75+14.59	LT	Short	0.63	247 N. Elizabeth St.
8	72+02.36	RT	Long	0.63	220 N. Elizabeth St.	16	73+36.67	LT	Short	0.63	221 N. Elizabeth St.	24	75+39.51	LT	Short	0.63	249 N. Elizabeth St.
9	72+04.46	RT	Long	0.63	220 N. Elizabeth St.	17	73+69.37	RT	Long	0.63	228 N. Elizabeth St.	25	75+63.75	RT	Long	0.63	250 N. Elizabeth St.
10	72+22.26	LT	Short	0.63	213 N. Elizabeth St.	18	74+04.89	LT	Short	0.63	235 N. Elizabeth St.	26	76+05.46	LT	Short	0.63	255 N. Elizabeth St.
11	72+43.54	LT	Short	0.63	215 N. Elizabeth St.	19	74+32.85	RT	Long	0.63	232 N. Elizabeth St.	27	76+21.52	RT	Long	0.63	252 N. Elizabeth St.
12	72+66.76	LT	Short	0.63	217 N. Elizabeth St.	20	74+35.69	LT	Short	0.63	245 N. Elizabeth St.	28	76+32.46	LT	Short	0.63	257 N. Elizabeth St.
13	72+80.00	RT	Long	0.63	224 N. Elizabeth St.	21	74+53.62	RT	Long	0.63	236 N. Elizabeth St.						



Anderson First
Line 4 5+00-10+00
Wichita, KS

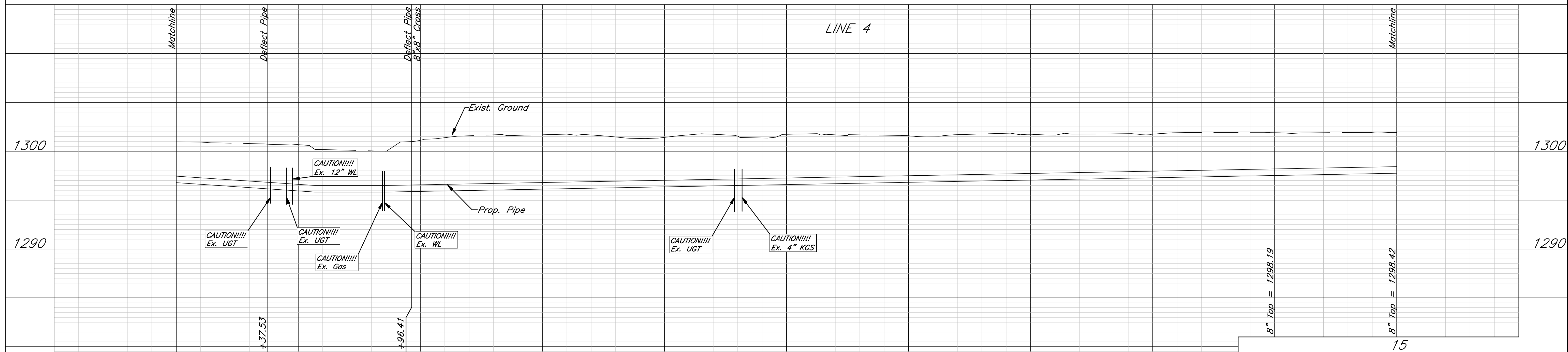
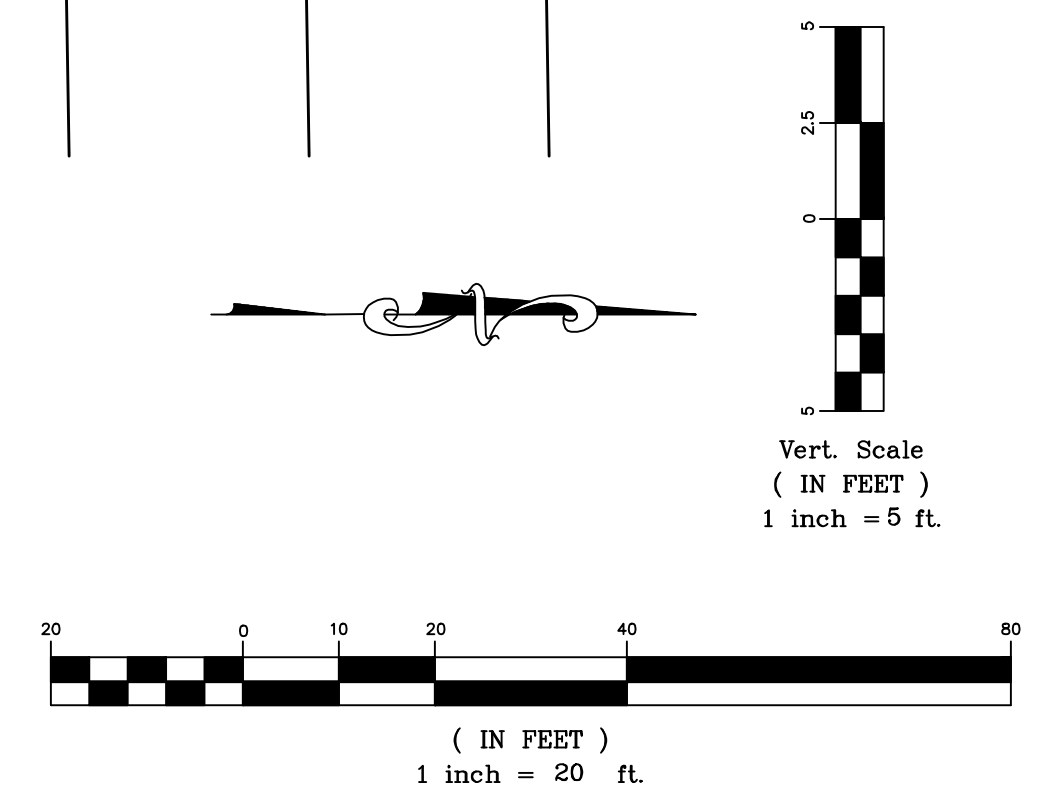
kemiller <i>engineering</i>	PROJECT NUMBER OCA 636158 Proj. NO. 448-90211		
	KEM NO. 06163	FILE waterline	DATE 1/07
DESIGN KM	DRAWN JO	REVISED 05/3/07	SHEET 11 OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
29	77+44.36	LT	Short	0.63	1502 2nd St.	36	80+01.81	RT	Long	0.63	326 N. Elizabeth St.
30	77+90.94	RT	Long	0.63	1426 2nd St.	37	80+17.58	LT	Short	0.63	325 N. Elizabeth St.
31	78+60.83	LT	Short	0.63	1502 2nd St.	38	80+72.00	LT	Short	0.63	335 N. Elizabeth St.
32	78+94.10	RT	Long	0.63	322 N. Elizabeth St.	39	80+79.23	RT	Long	0.63	334 N. Elizabeth St.
33	78+94.81	LT	Short	0.63	311 N. Elizabeth St.	40	80+96.37	RT	Long	0.63	336 N. Elizabeth St.
34	79+44.36	RT	Long	0.63	324 N. Elizabeth St.	41	81+17.25	LT	Short	0.63	339 N. Elizabeth St.
35	79+52.84	LT	Short	0.63	323 N. Elizabeth St.						

Baseline
70+00 at the
Intersections of
Elizabeth St. and 1st. Ave.

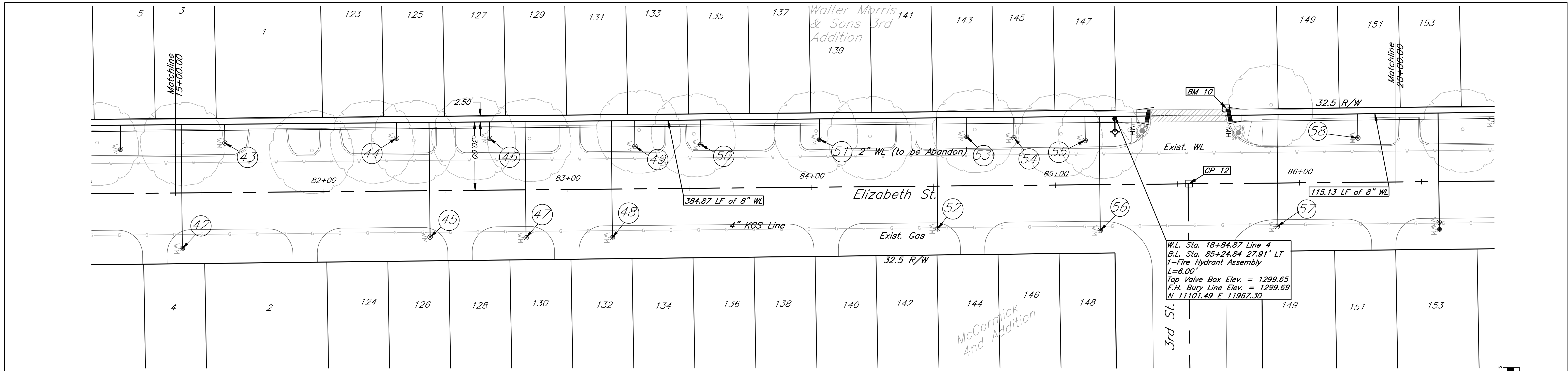


Anderson First
Line 4 Sta. 10+00-15+00
Wichita, KS

PROJECT NUMBER
OCA 636158 Proj. NO. 488-90211

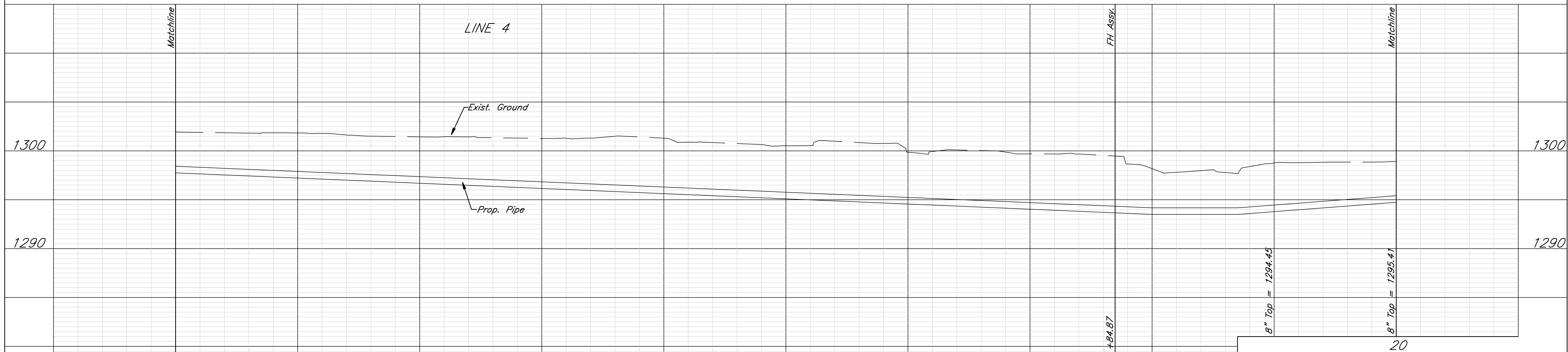
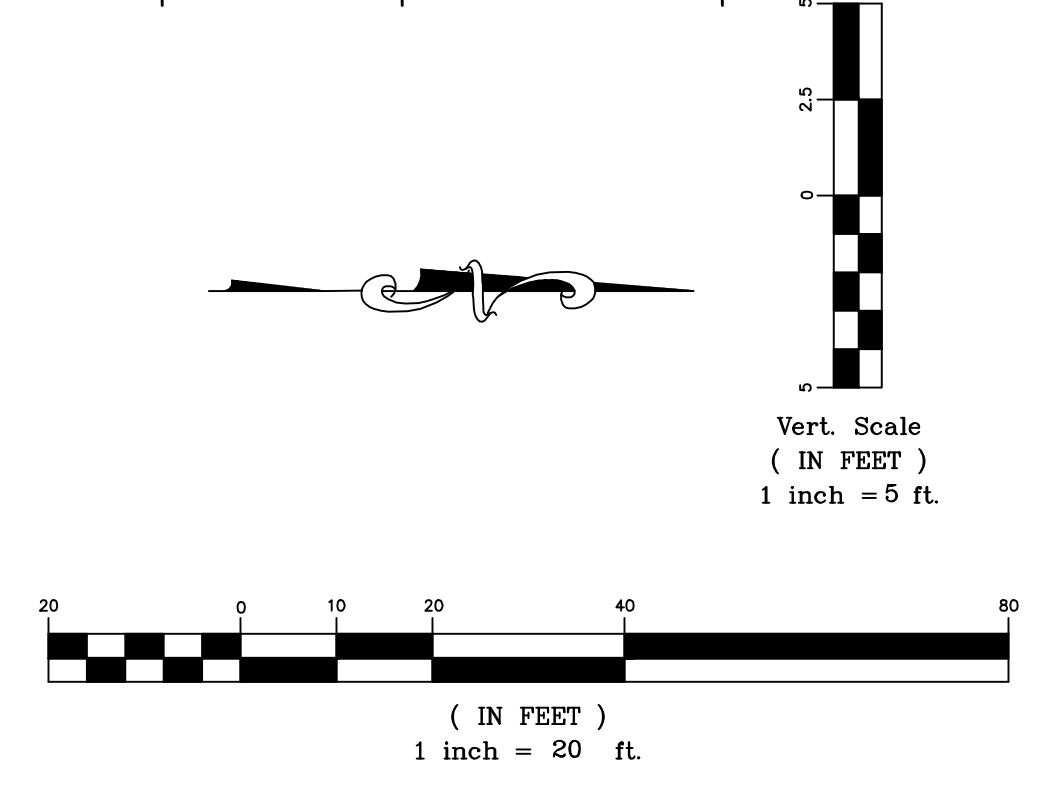
	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 12
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
42	81+42.15	RT	Long	0.63	348 N. Elizabeth St.	50	83+54.92	LT	Short	0.63	361 N. Elizabeth St.
43	81+59.98	LT	Short	0.63	341 N. Elizabeth St.	51	84+03.61	LT	Short	0.63	363 N. Elizabeth St.
44	82+30.34	LT	Short	0.63	353 N. Elizabeth St.	52	84+51.63	RT	Long	0.63	366 N. Elizabeth St.
45	82+43.68	RT	Long	0.63	350 N. Elizabeth St.	53	84+63.75	LT	Short	0.63	367 N. Elizabeth St.
46	82+68.45	LT	Short	0.63	357 N. Elizabeth St.	54	84+83.23	LT	Short	0.63	371 N. Elizabeth St.
47	82+83.02	RT	Long	0.63	356 N. Elizabeth St.	55	85+12.39	LT	Short	0.63	371 N. Elizabeth St.
48	83+18.36	RT	Long	0.63	356 N. Elizabeth St.	56	85+18.21	RT	Long	0.63	376 N. Elizabeth St.
49	83+27.94	LT	Short	0.63	357 N. Elizabeth St.	57	85+90.70	RT	Long	0.63	400 N. Elizabeth St.
						58	86+24.10	LT	Short	0.63	401 N. Elizabeth St.

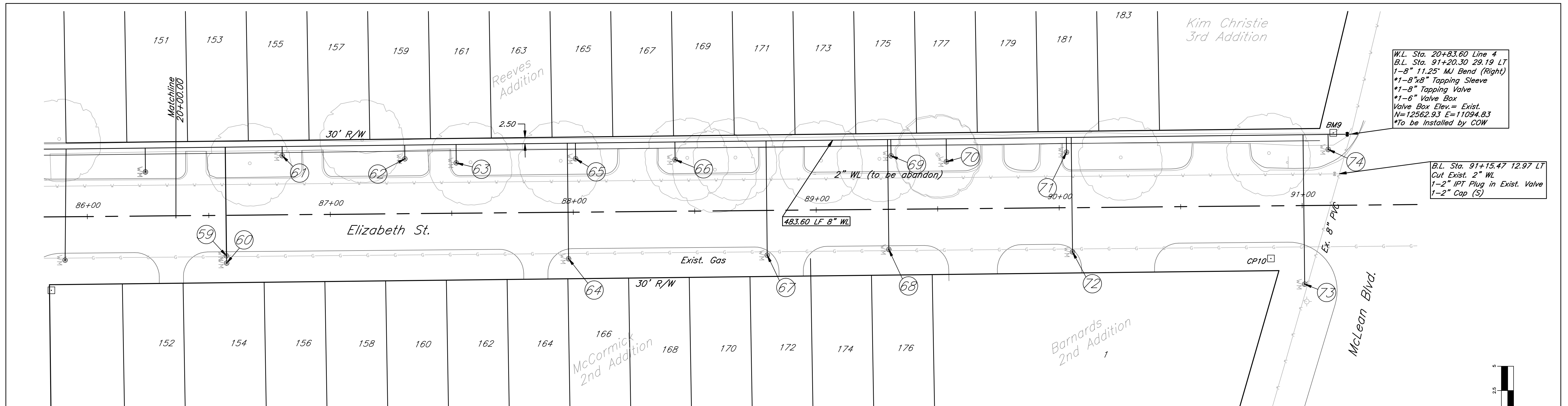
Baseline
70+00 at the
Intersections of
Elizabeth St. and 1st. Ave.



Anderson First
Line 4 Sta. 15+00-20+00
Wichita, KS

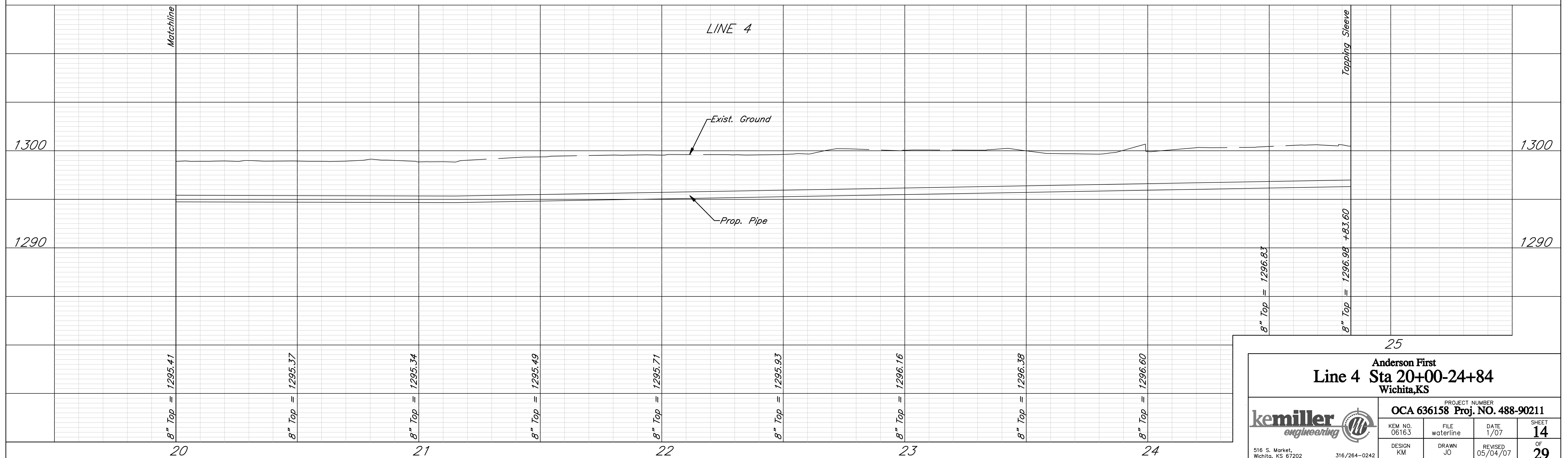
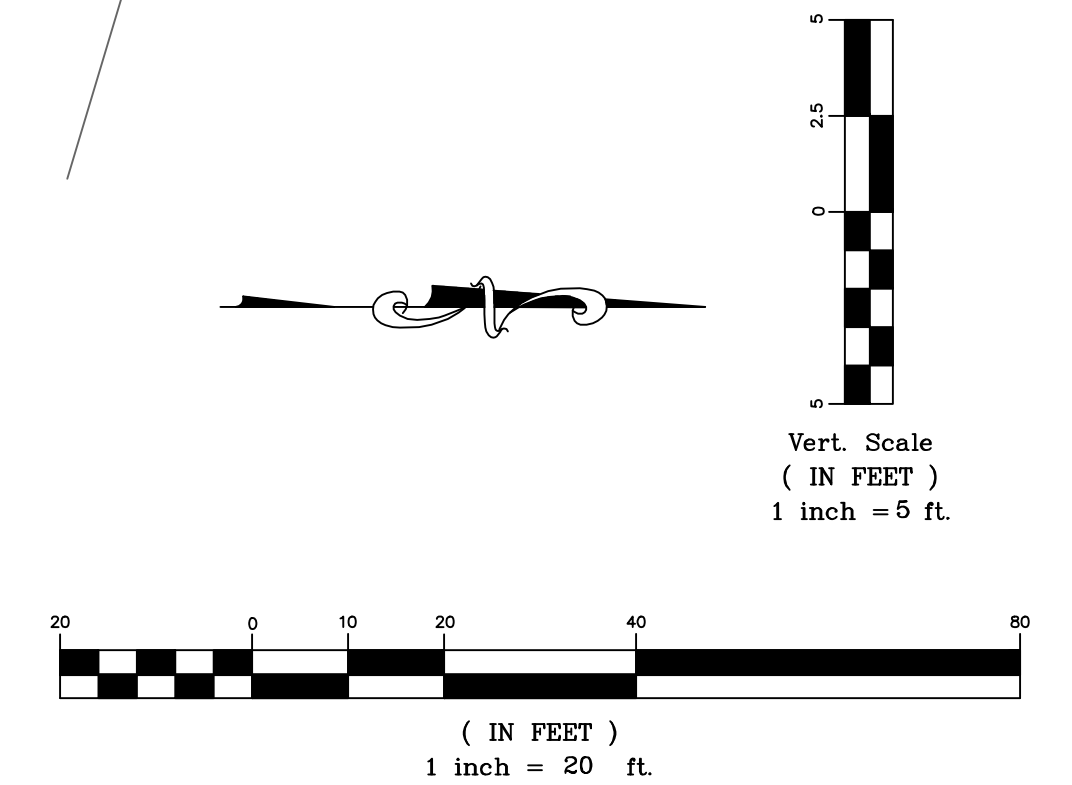
kemiller <small>engineering</small>	PROJECT NUMBER OCA 636158 Proj. NO. 448-90211		
	KEM NO. 06163	FILE waterline	DATE 1/07
DESIGN KM	DRAWN JO	REVISED 05/04/07	SHEET 13 OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary					New Water Meter Summary						
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
59	86+57.09	RT	Long	.63	402 N. Elizabeth St.	67	88+79.70	RT	Long	.63	426 N. Elizabeth St.
60	86+57.17	RT	Long	.63	402 N. Elizabeth St.	68	89+29.73	RT	Long	.63	432 N. Elizabeth St.
61	86+80.43	LT	Short	.63	403 N. Elizabeth St.	69	89+30.99	LT	Short	.63	433 N. Elizabeth St.
62	87+30.90	LT	Short	.63	405 N. Elizabeth St.	70	89+53.76	LT	Short	.63	435 N. Elizabeth St.
63	87+52.03	LT	Short	.63	413 N. Elizabeth St.	71	90+03.20	LT	Short	.63	441 N. Elizabeth St.
64	87+97.91	RT	Long	.63	408 N. Elizabeth St.	72	90+05.33	RT	Long	.63	439 N. Elizabeth St.
65	88+01.17	LT	Short	.63	425 N. Elizabeth St.	73	91+00.75	RT	Long	.63	439 N. Elizabeth St.
66	88+42.11	LT	Short	.63	431 N. Elizabeth St.	74	91+20.30	LT	Short	.63	449 N. Elizabeth St.

Baseline
70+00 at the
Intersections of
Elizabeth St. and 1st. Ave.

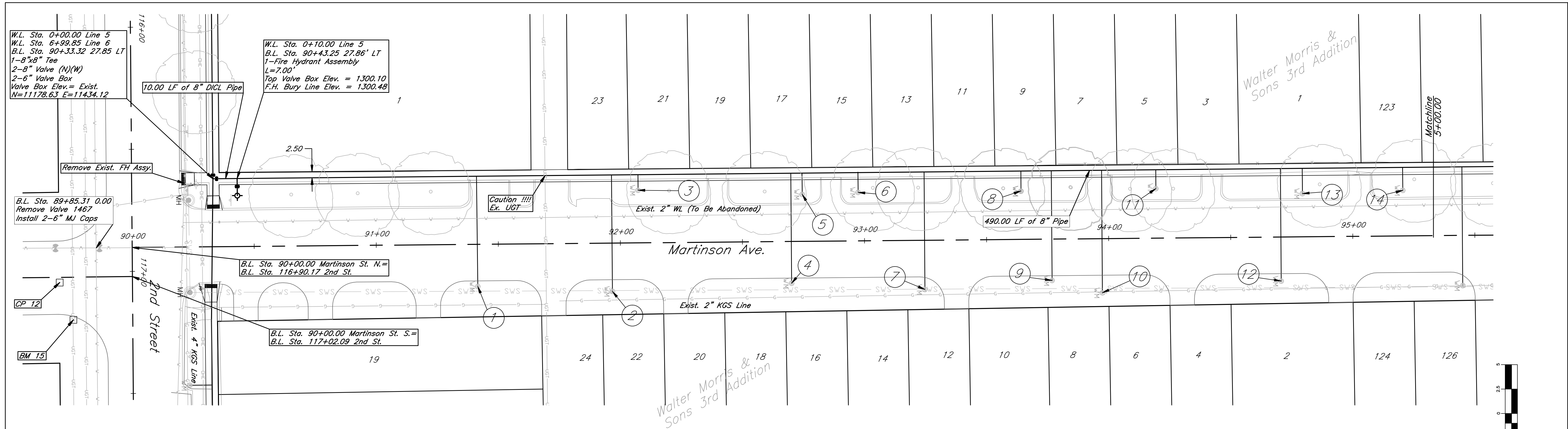


25

Anderson First
Line 4 Sta 20+00-24+84
Wichita, KS

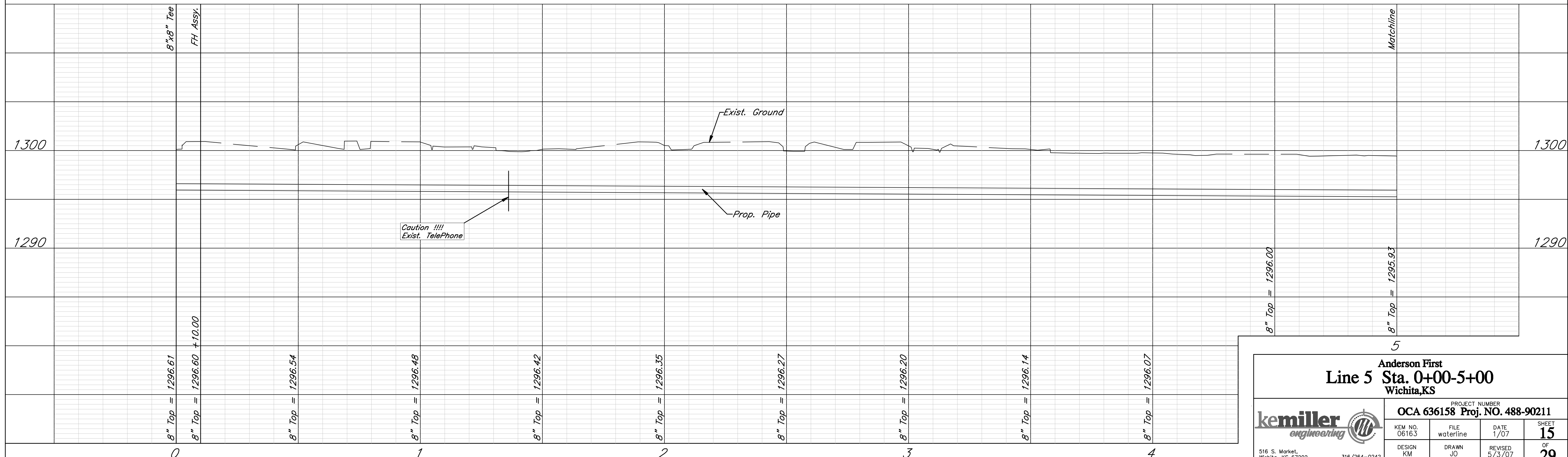
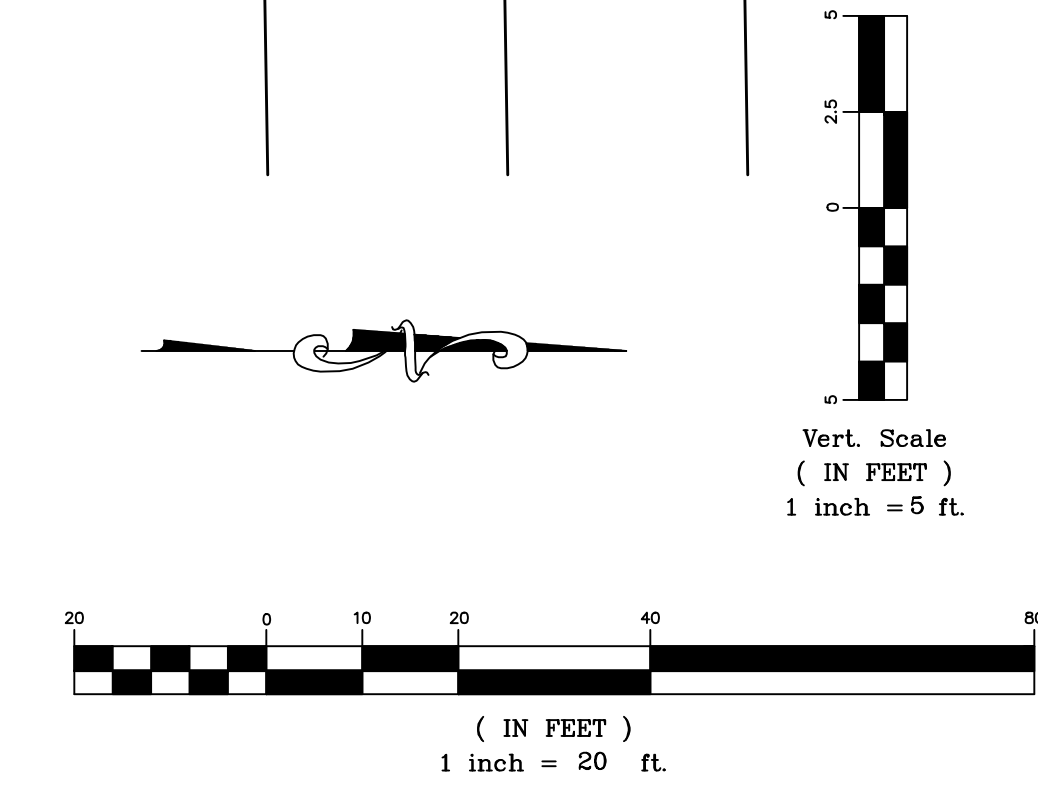
kemiller <i>engineering</i>	PROJECT NUMBER OCA 636158 Proj. NO. 488-90211		
	KEM NO. 06163	FILE waterline	DATE 1/07
DESIGN KM	DRAWN JO	REVISED 05/04/07	SHEET 14 OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	91+41.43	RT	Long	.63	314 N. Martinson Ave.	8	93+64.28	LT	Short	.63	331 N. Martinson Ave.
2	91+96.54	RT	Long	.63	316 N. Martinson Ave.	9	93+76.68	RT	Long	.63	336 N. Martinson Ave.
3	92+07.43	LT	Short	.63	317 N. Martinson Ave.	10	93+97.27	RT	Long	.63	338 N. Martinson Ave.
4	92+70.00	RT	Long	.63	324 N. Martinson Ave.	11	94+19.53	LT	Short	.63	337 N. Martinson Ave.
5	92+74.66	LT	Short	.63	321 N. Martinson Ave.	12	94+70.52	RT	Long	.63	340 N. Martinson Ave.
6	92+97.56	LT	Short	.63	327 N. Martinson Ave.	13	94+79.55	LT	Short	.63	341 N. Martinson Ave.
7	93+64.28	RT	Short	.63	326 N. Martinson Ave.	14	95+20.66	LT	Short	.63	345 N. Martinson Ave.

Baseline 90+00 at the Intersections of Martinson St. and 2nd Ave.

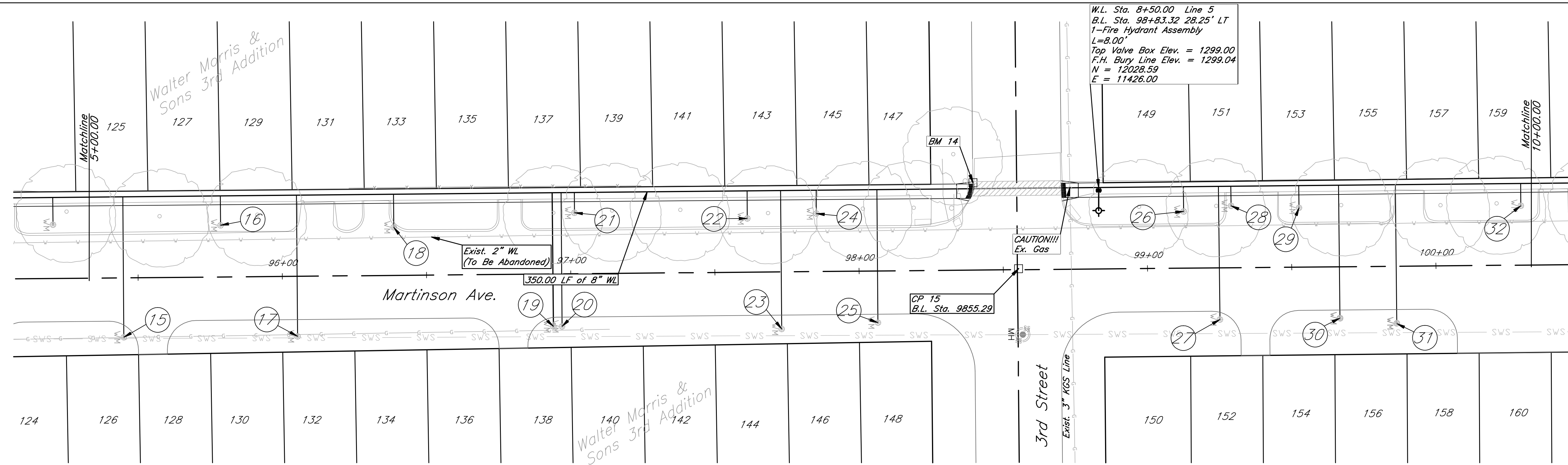


Anderson First
Line 5 Sta. 0+00-5+00
Wichita, KS

PROJECT NUMBER
OCA 636158 Proj. NO. 488-90211

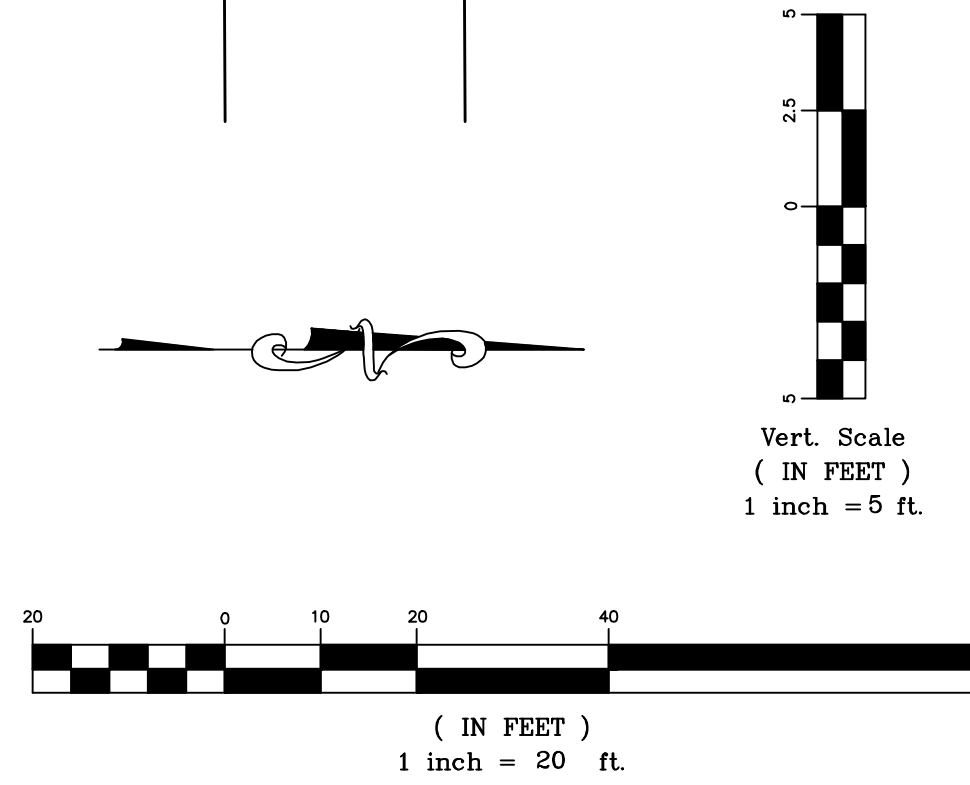
	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 15
	DESIGN KM	DRAWN JO	REVISED 5/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242

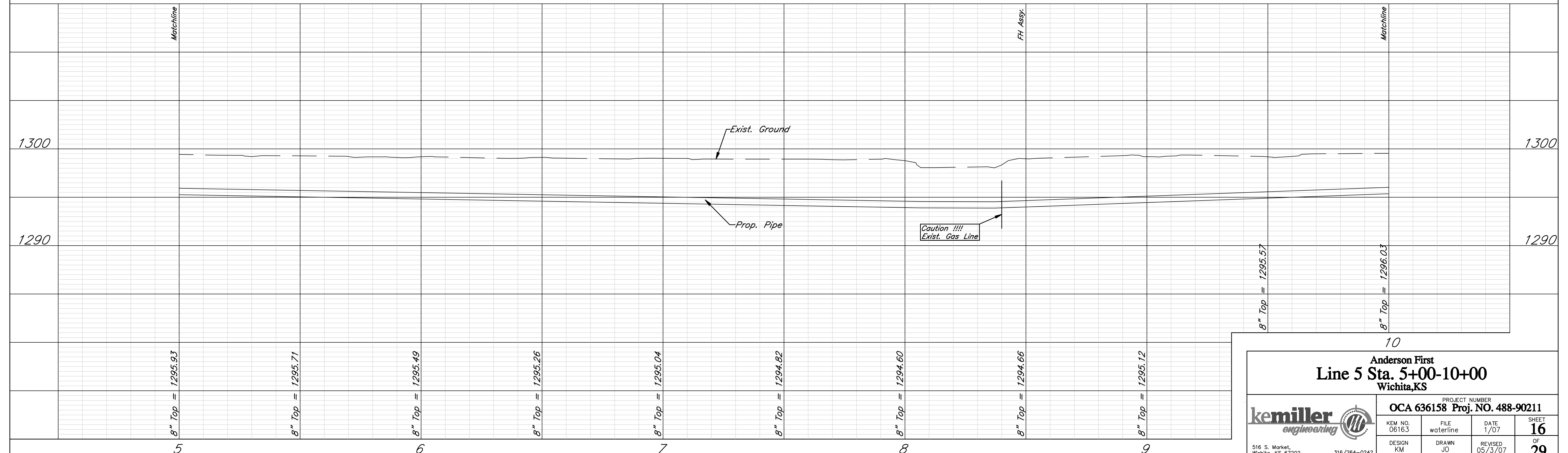


W.L. Sta. 8+50.00 Line 5
 B.L. Sta. 98+83.32 28.25' LT
 1"-Fire Hydrant Assembly
 L=8.00'
 Top Valve Box Elev. = 1299.00
 F.H. Bury Line Elev. = 1299.04
 N = 12028.59
 E = 11426.00

New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
15	95+44.87	RT	Long	.63	452 N. Martinson Ave.	24	97+85.36	LT	Short	.63	357 N. Martinson Ave.
16	95+78.76	LT	Short	.63	455 N. Martinson Ave.	25	98+06.37	RT	Long	.63	358 N. Martinson Ave.
17	96+05.11	RT	Long	.63	444 N. Martinson Ave.	26	99+12.71	LT	Short	.63	501 N. Martinson Ave.
18	96+38.80	LT	Short	.63	459 N. Martinson Ave.	27	99+24.95	LT	Long	.63	502 N. Martinson Ave.
19	96+93.83	RT	Long	.63	448 N. Martinson Ave.	28	99+29.17	LT	Short	.63	505 N. Martinson Ave.
20	96+96.83	RT	Long	.63	450 N. Martinson Ave.	29	99+52.72	LT	Short	.63	509 N. Martinson Ave.
21	97+01.50	LT	Short	.63	339 N. Martinson Ave.	30	99+66.57	RT	Long	.63	504 N. Martinson Ave.
22	97+61.40	LT	Short	.63	445 N. Martinson Ave.	31	99+86.27	RT	Long	.63	510 N. Martinson Ave.
23	97+72.98	RT	Long	.63	354 N. Martinson Ave.	32	100+29.64	LT	Short	.63	517 N. Martinson Ave.



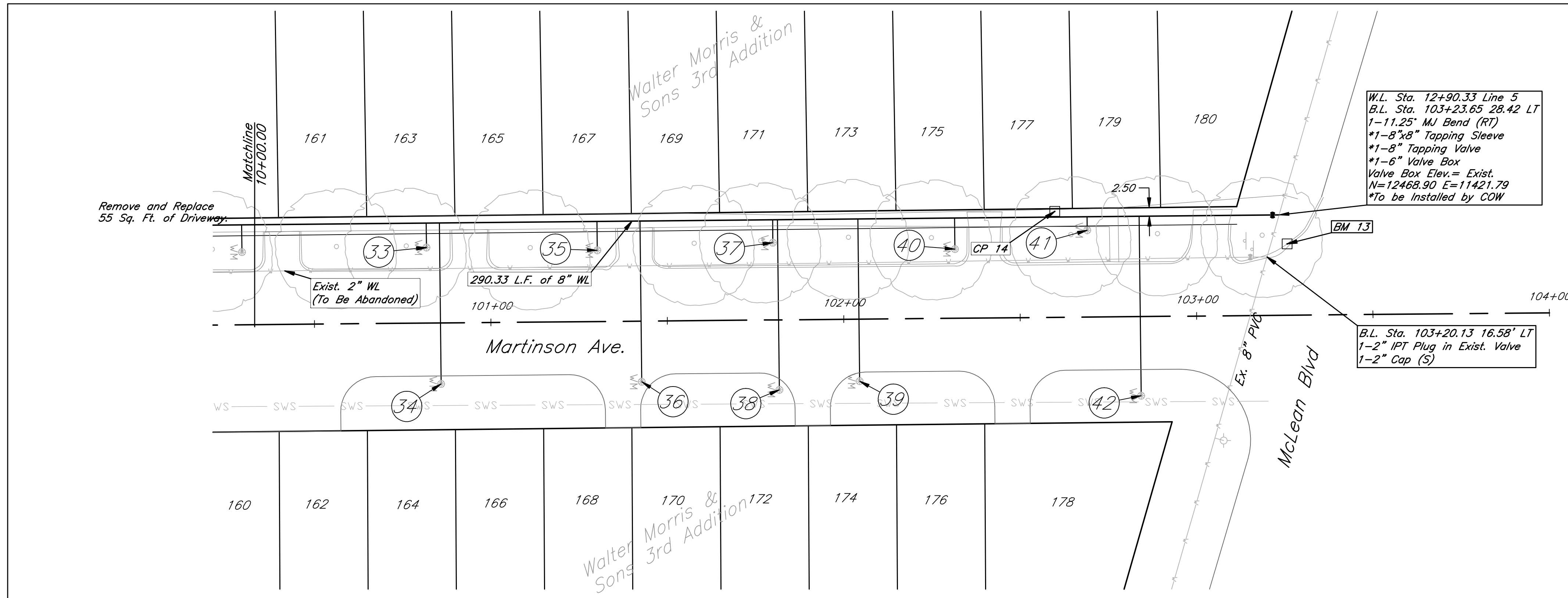
Baseline
 90+00 at the
 Intersections of
 Martinson St. and 2nd Ave.



Anderson First
Line 5 Sta. 5+00-10+00
 Wichita, KS

PROJECT NUMBER
OCA 636158 Proj. NO. 488-90211

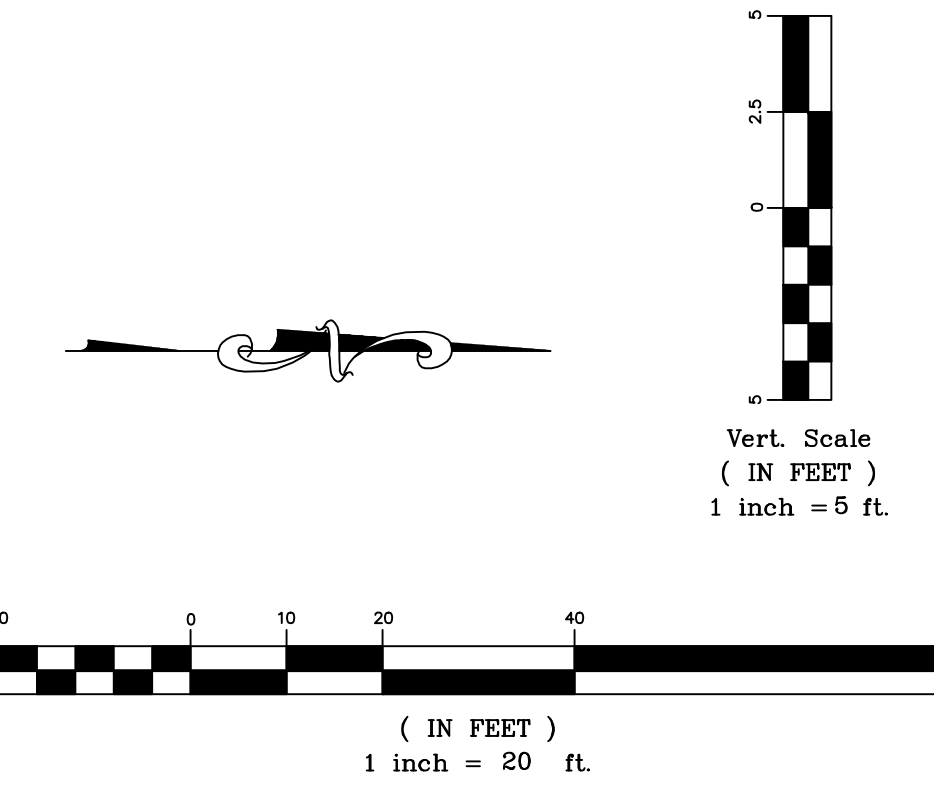
 516 S. Market, Wichita, KS 67202 316/264-0242	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 16
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29



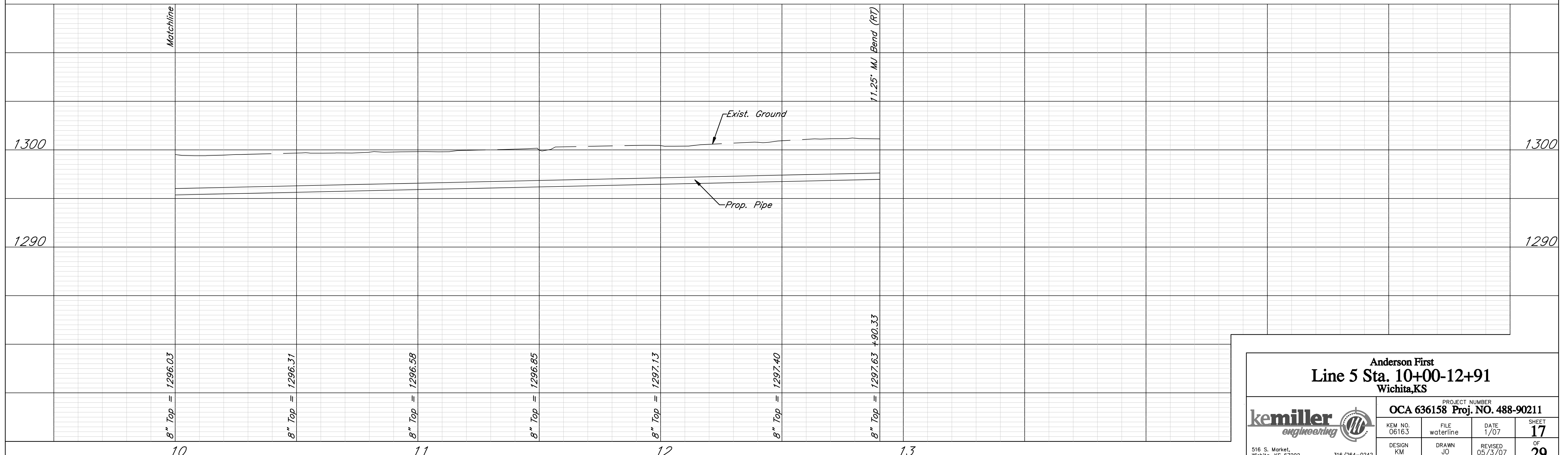
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
33	100+81.94	RT	Long	.63	521 N. Martinson Ave.
34	100+85.74	LT	Short	.63	516 N. Martinson Ave.
35	101+30.34	LT	Short	.63	525 N. Martinson Ave.
36	101+42.59	RT	Long	.63	524 N. Martinson Ave.
37	101+80.11	RT	Long	.63	529 N. Martinson Ave.
38	101+80.59	LT	Short	.63	526 N. Martinson Ave.
39	102+04.34	RT	Long	.63	528 N. Martinson Ave.
40	102+31.70	LT	Short	.63	531 N. Martinson Ave.
41	102+69.25	RT	Long	.63	531 N. Martinson Ave.
42	102+84.09	LT	Short	.63	532 N. Martinson Ave.

W.L. Sta. 12+90.33 Line 5
 B.L. Sta. 103+23.65 28.42 LT
 1-11.25' MJ Bend (RT)
 *1-8"x8" Tapping Sleeve
 *1-8" Tapping Valve
 *1-6" Valve Box
 Valve Box Elev. = Exist.
 N=12468.90 E=11421.79
 *To be installed by COW

B.L. Sta. 103+20.13 16.58' LT
 1-2" IPT Plug in Exist. Valve
 1-2" Cap (S)



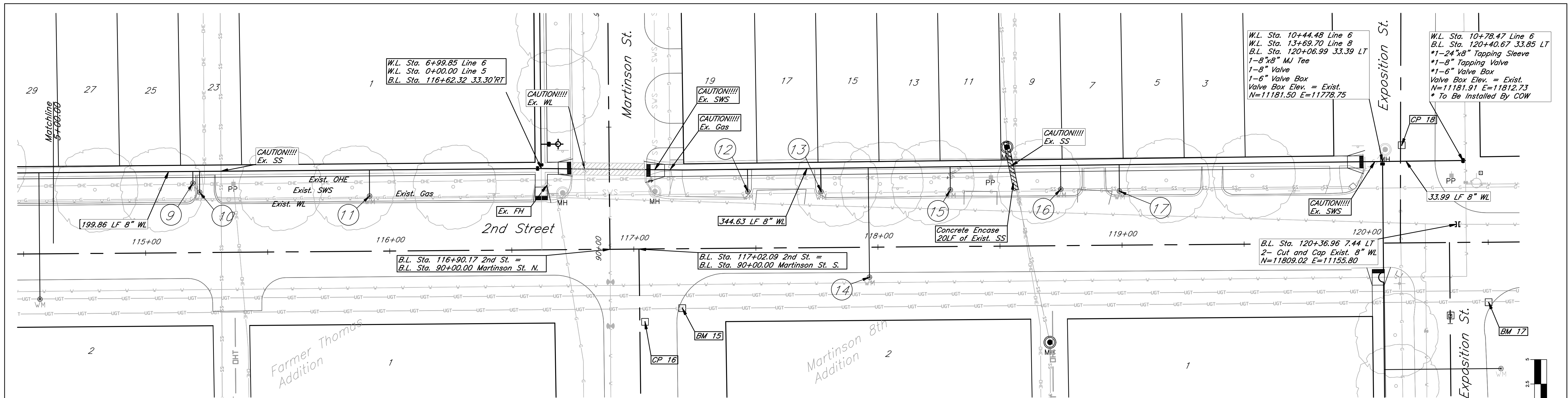
Baseline
 90+00 at the
 Intersections of
 Martinson St. and 2nd Ave.



Anderson First
Line 5 Sta. 10+00-12+91
 Wichita, KS

PROJECT NUMBER OCA 636158 Proj. NO. 488-90211			
KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 17
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

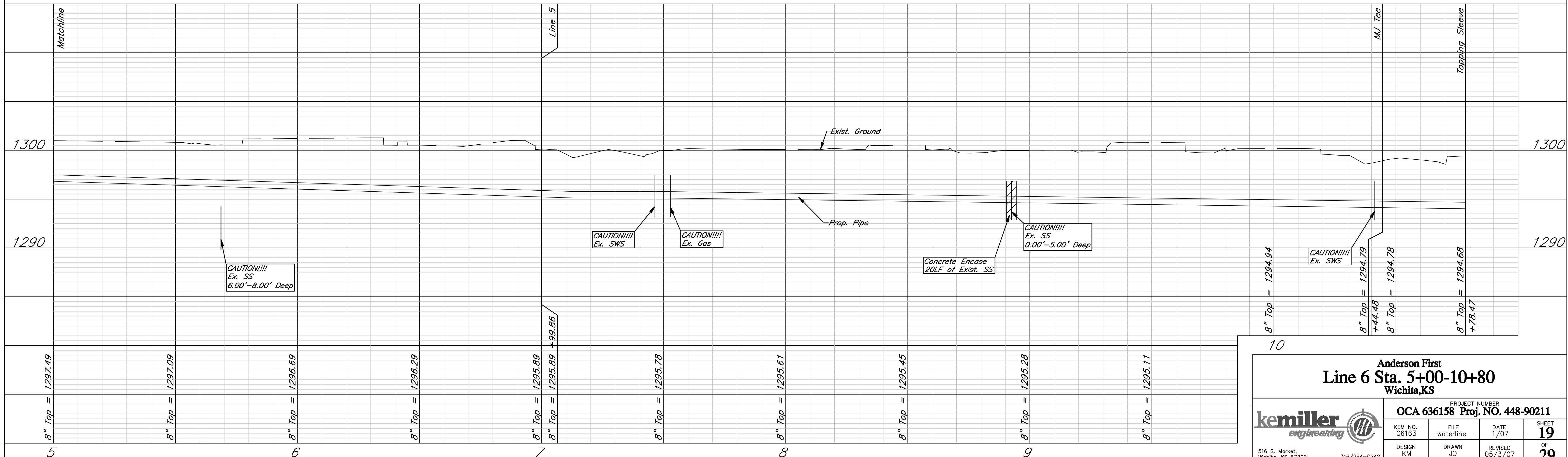
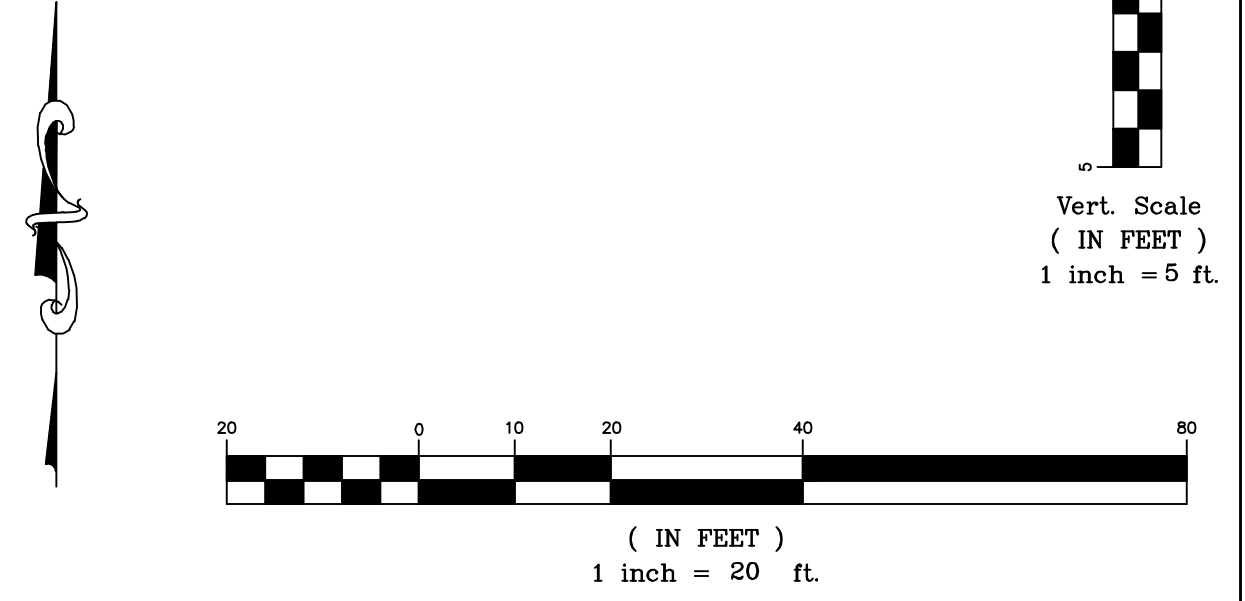
516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
9	115+19.26	LT	Short	.63	1414 2nd Street
10	115+22.01	LT	Short	.63	1414 2nd Street
11	116+91.60	LT	Short	.63	1406 2nd Street
12	117+46.58	LT	Short	.63	1326 2nd Street
13	117+76.86	LT	Short	.63	1318 2nd Street
14	117+96.01	RT	Long	.63	260 N. Martinson St.
15	118+29.57	LT	Short	.63	1316 2nd Street
16	118+74.81	LT	Short	.63	1310 2nd Street
17	119+98.82	LT	Short	.63	1302 2nd Street

Baseline
110+00 at the
Intersections of
Fern St. and 2nd Ave.



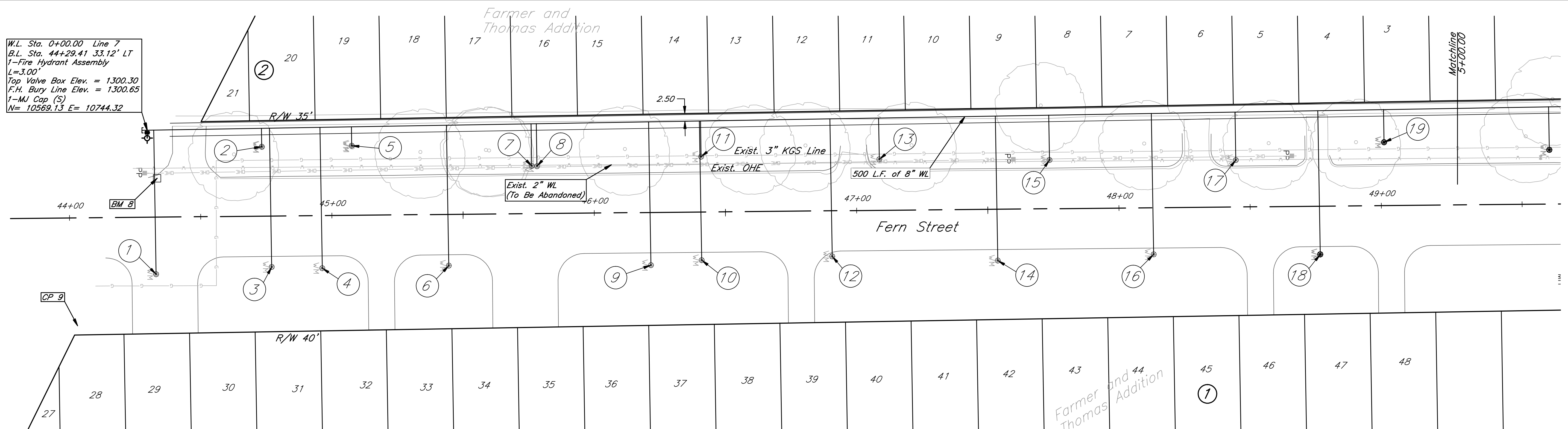
**Anderson First
Line 6 Sta. 5+00-10+80
Wichita, KS**

PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

kemiller engineering	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 19
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242

W.L. Sta. 0+00.00 Line 7
 B.L. Sta. 44+29.41 33.12' LT
 1-Fire Hydrant Assembly
 L=3.00'
 Top Valve Box Elev. = 1300.30
 F.H. Bury Line Elev. = 1300.65
 1-MJ Cap (S)
 N= 10569.13 E= 10744.32

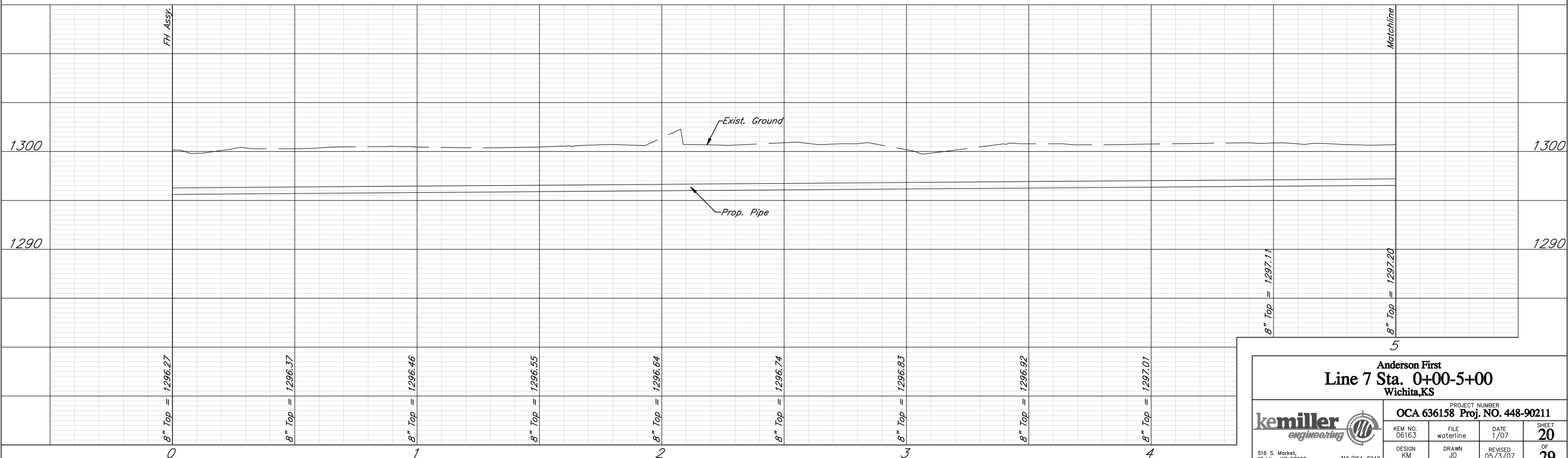
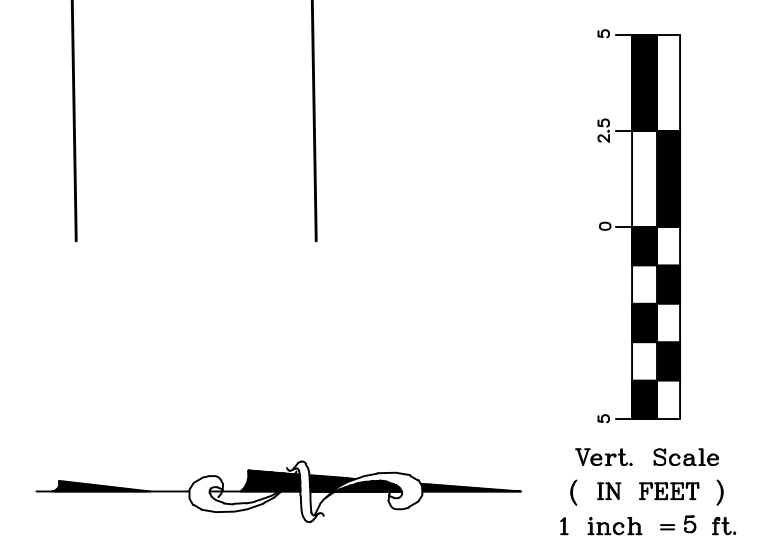
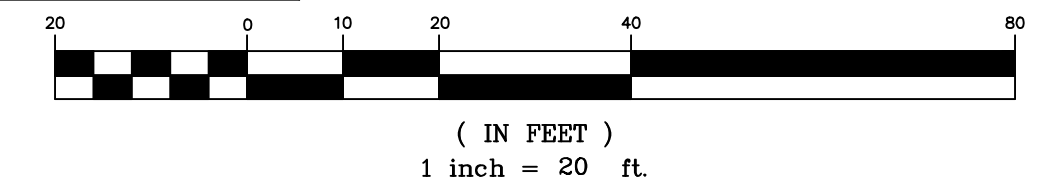


NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	44+32.81	RT	Long	.63	224 N. Fern Street
2	44+73.50	LT	Short	.63	224 N. Fern Street
3	44+76.89	RT	Long	.63	232 N. Fern Street
4	44+96.14	RT	Long	.63	231 N. Fern Street
5	45+07.81	LT	Short	.63	236 N. Fern Street
6	45+44.37	RT	Long	.63	222 N. Fern Street
7	45+76.34	LT	Short	.63	221 N. Fern Street

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
8	45+78.34	LT	Short	.63	223 N. Fern Street
9	46+21.43	RT	Long	.63	224 N. Fern Street
10	46+40.78	RT	Long	.63	232 N. Fern Street
11	46+40.92	LT	Short	.63	231 N. Fern Street
12	46+90.53	RT	Long	.63	236 N. Fern Street
13	47+08.82	LT	Short	.63	241 N. Fern Street
14	47+53.63	RT	Long	.63	242 N. Fern Street

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
15	47+73.70	LT	Short	.63	245 N. Fern Street
16	48+13.07	RT	Long	.63	248 N. Fern Street
17	48+44.69	LT	Short	.63	253 N. Fern Street
18	48+76.53	RT	Long	.63	252 N. Fern Street
19	49+01.26	LT	Short	.63	253 N. Fern Street

Baseline
 50+00 at the
 Intersections of
 Fern St. and 2nd Ave.

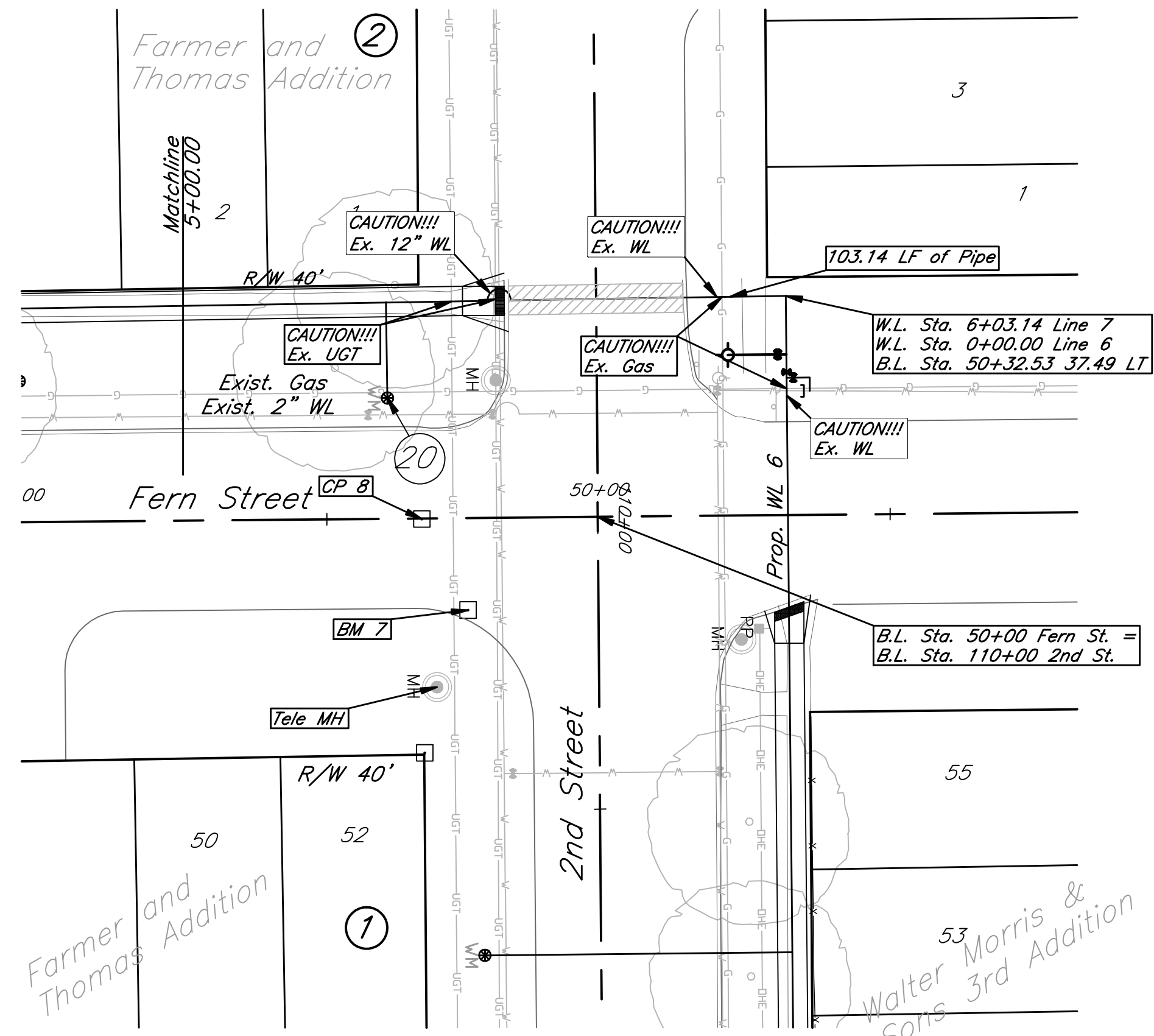


Anderson First
Line 7 Sta. 0+00-5+00
 Wichita, KS

PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

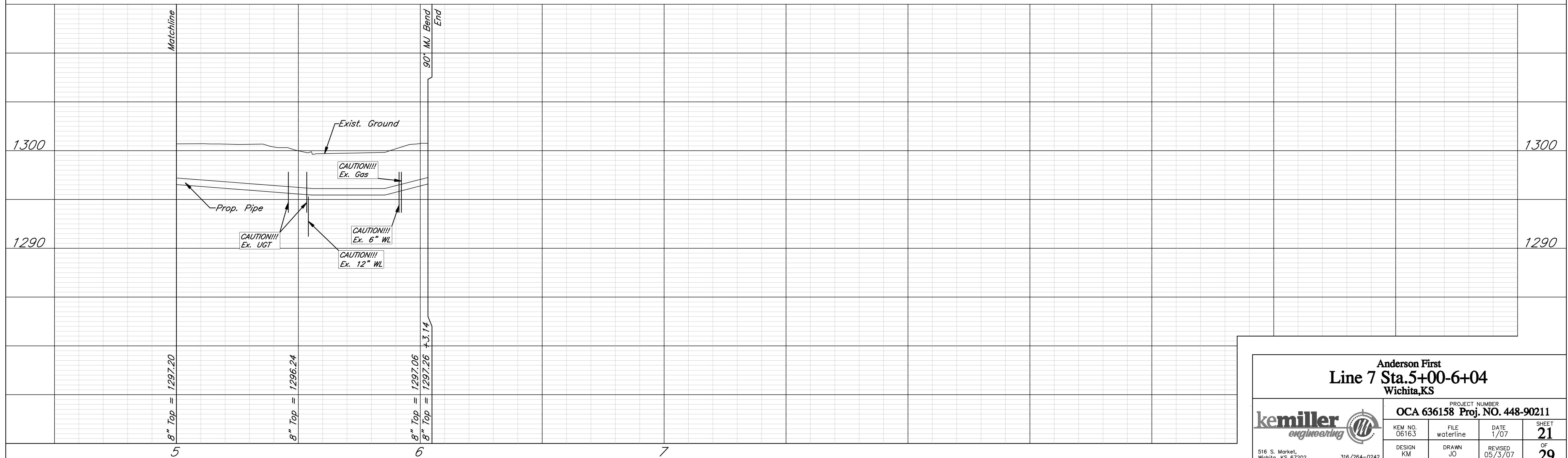
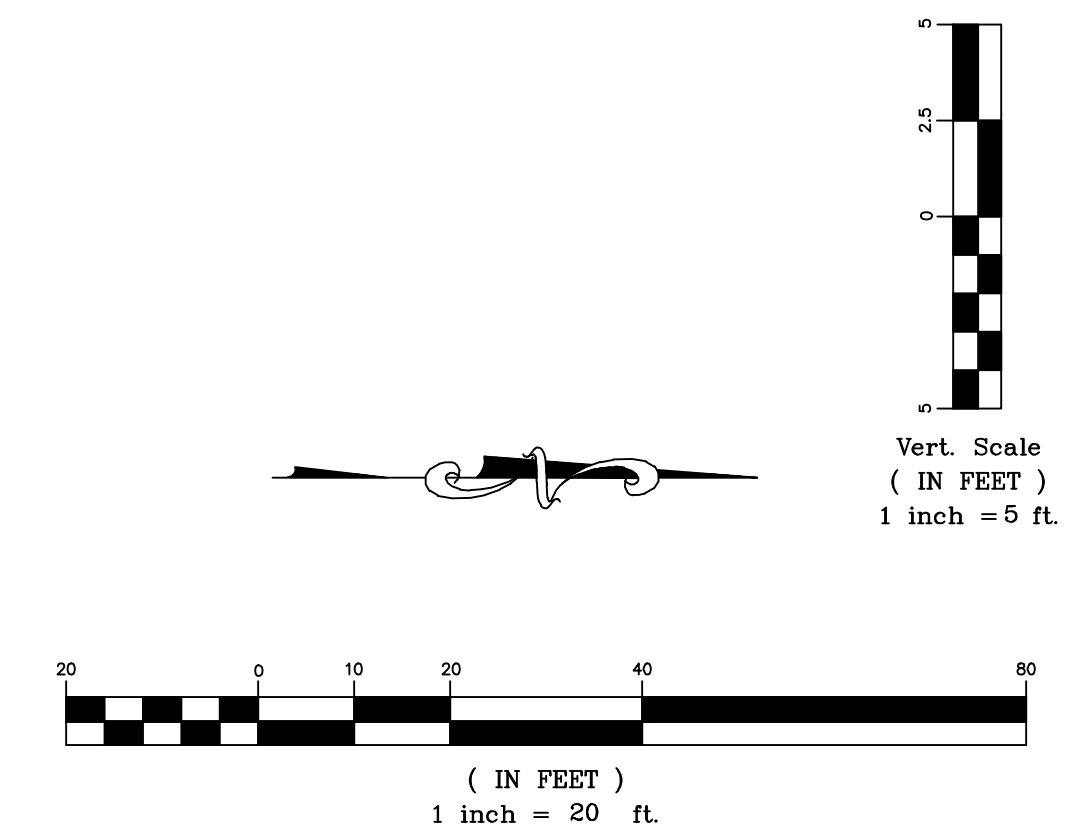
kemiller engineering	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 20
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
20	49+64.22	LT	Short	.63	259 N. Fern Street

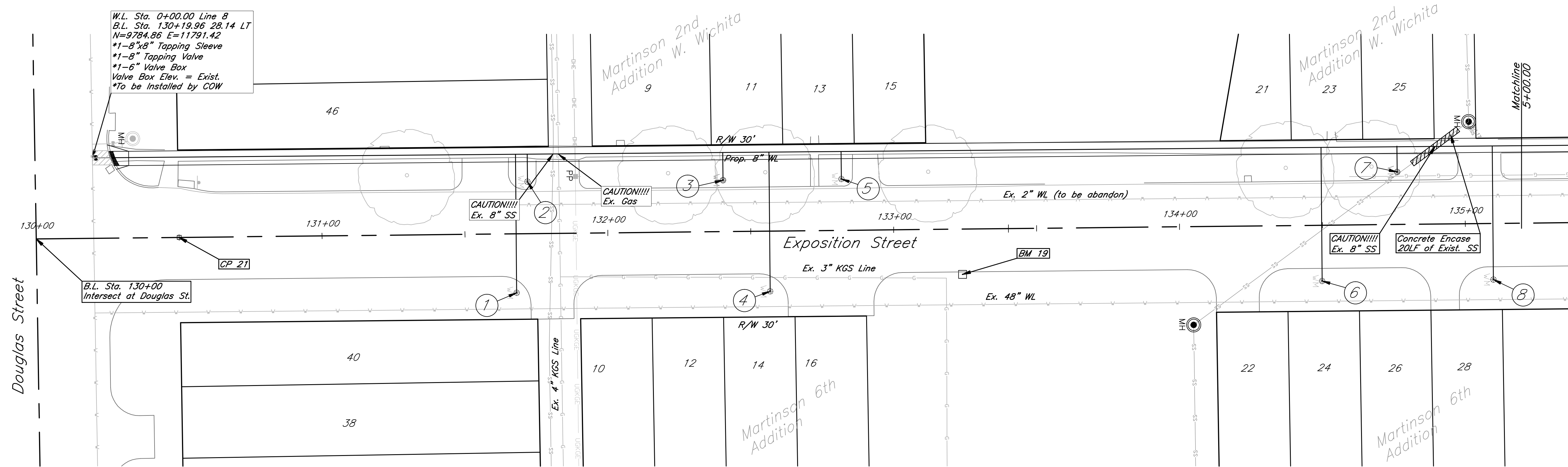
Baseline
50+00 at the
Intersections of
Fern St. and 2nd Ave.



Anderson First
Line 7 Sta. 5+00-6+04
Wichita, KS

kemiller <i>engineering</i>	PROJECT NUMBER OCA 636158 Proj. NO. 448-90211			
	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 21
516 S. Market, Wichita, KS 67202	316/264-0242	DESIGN KM	DRAWN JO	REVISED 05/3/07

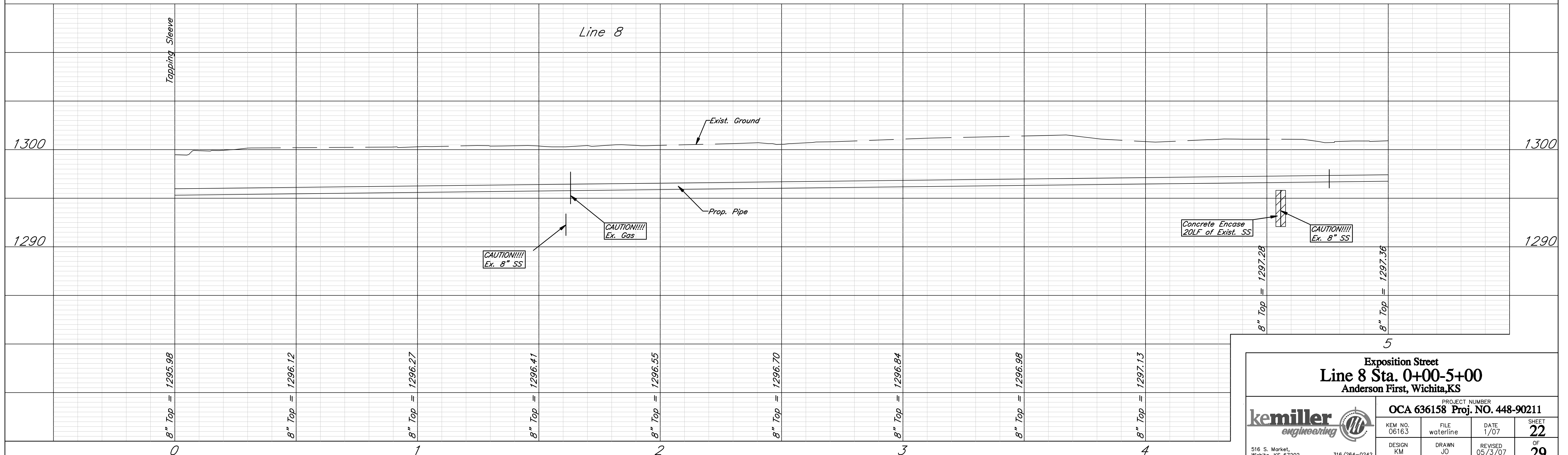
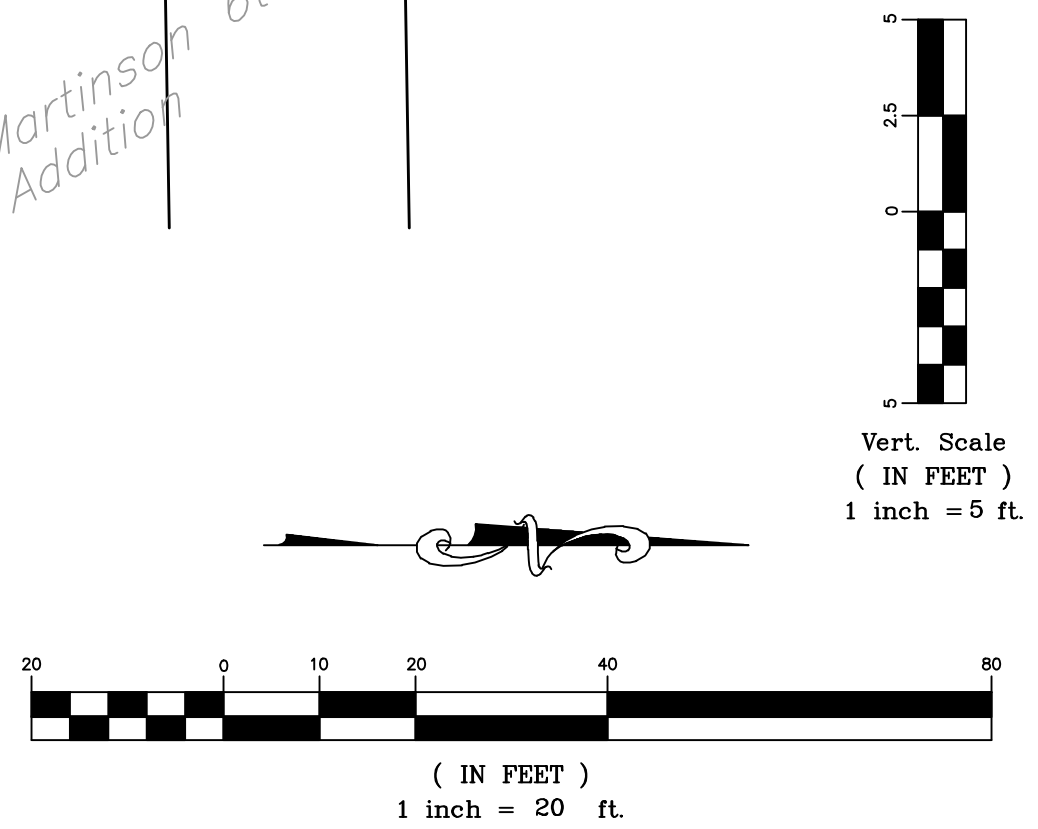
OF
29



New Water Meter Summary

NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	131+67.88	RT	Long	.63	1220 W. Douglas Ave.
2	131+72.06	LT	Short	.63	1302 W. Douglas Ave.
3	132+40.47	LT	Short	.63	117 N. Exposition
4	132+56.59	RT	Long	.63	116 N. Exposition
5	132+81.87	LT	Short	.63	119 N. Exposition
6	134+49.71	RT	Long	.63	142 N. Exposition
7	134+76.36	LT	Short	.63	135 N. Exposition
8	135+09.64	RT	Long	.63	144 N. Exposition

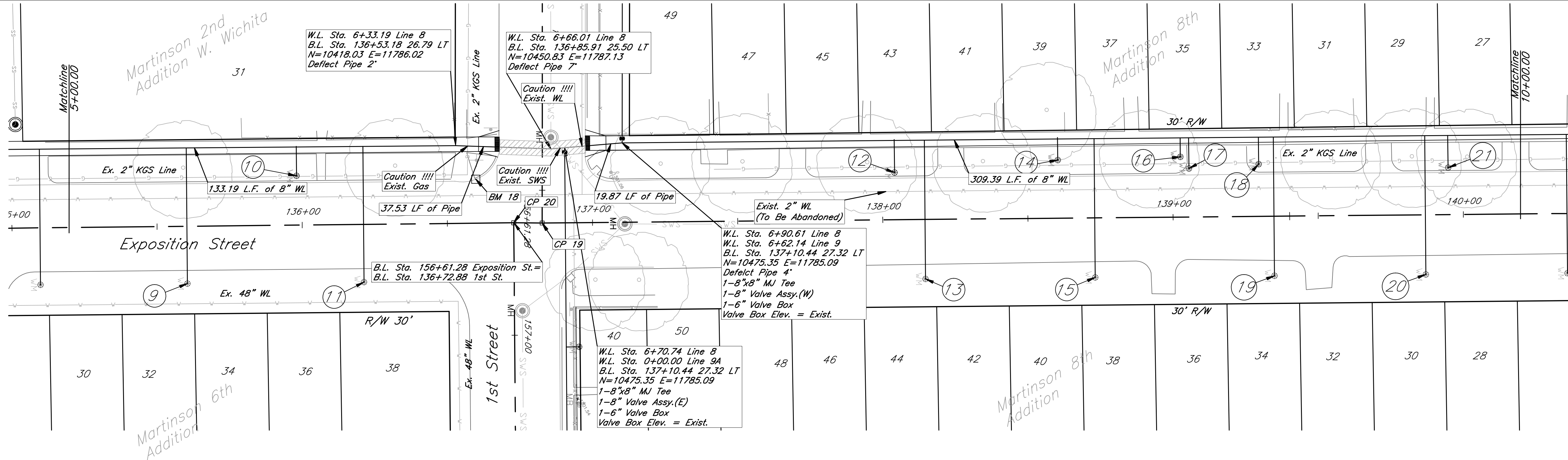
Baseline
130+00 at the
Intersections of
Douglas Ave. and Exposition St.



**Exposition Street
Line 8 Sta. 0+00-5+00
Anderson First, Wichita, KS**

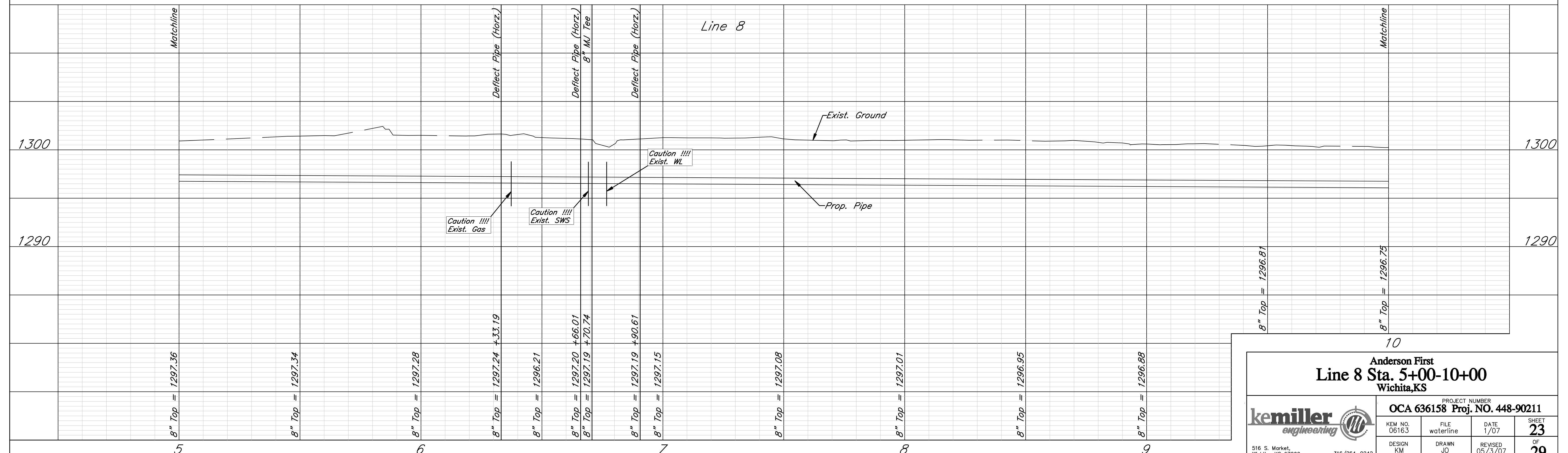
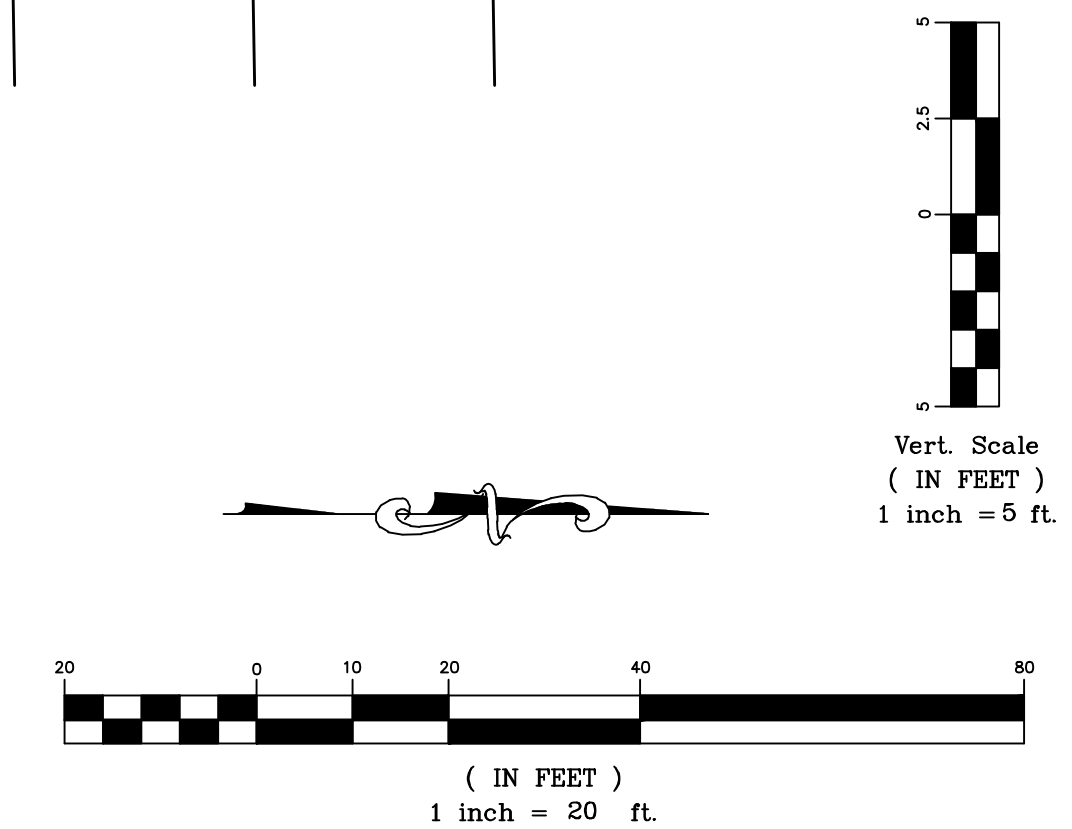
		PROJECT NUMBER	
		OCA 636158 Proj. NO. 448-90211	
DESIGN	FILE	DATE	SHEET
KM	waterline	1/07	22
DRAWN	REVISED	OF	
JO	05/3/07	29	

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
9	135+60.23	RT	Long	.63	148 N. Exposition St.	15	138+73.00	RT	Long	.63	214 N. Exposition St.
10	135+98.20	LT	Short	.63	155 N. Exposition St.	16	139+02.70	LT	Short	.63	215 N. Exposition St.
11	136+21.07	RT	Long	.63	152 N. Exposition St.	17	139+05.63	LT	Short	.63	215 N. Exposition St.
12	138+04.20	LT	Short	.63	207 N. Exposition St.	18	139+29.66	LT	Short	.63	221 N. Exposition St.
13	138+14.54	RT	Long	.63	212 N. Exposition St.	19	139+34.75	RT	Long	.63	216 N. Exposition St.
14	138+60.48	LT	Short	.63	211 N. Exposition St.	20	139+86.90	RT	Long	.63	224 N. Exposition St.
						21	139+94.90	LT	Short	.63	225 N. Exposition St.

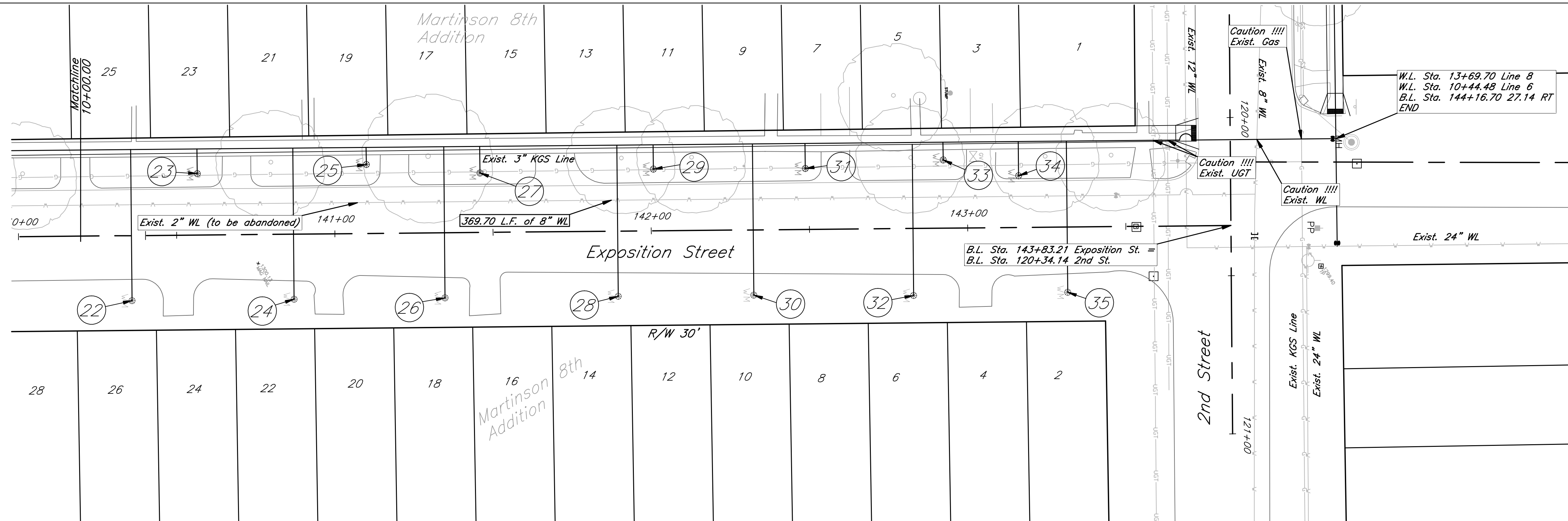
Baseline
 130+00 at the
 Intersections of
 Douglas Ave. and Exposition St.



Anderson First
Line 8 Sta. 5+00-10+00
 Wichita, KS

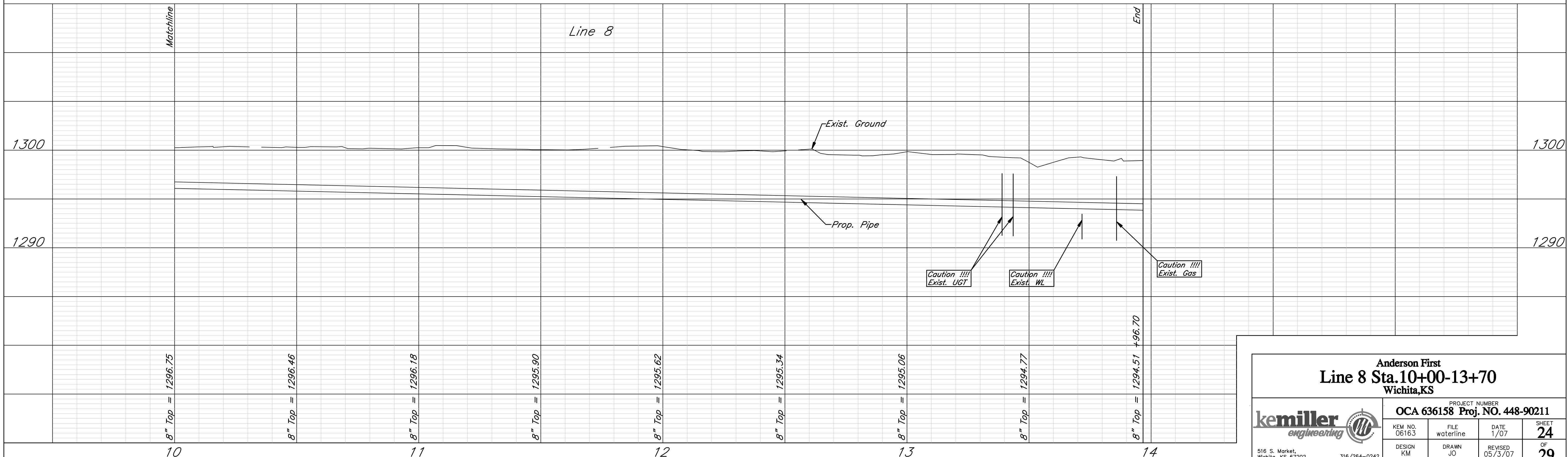
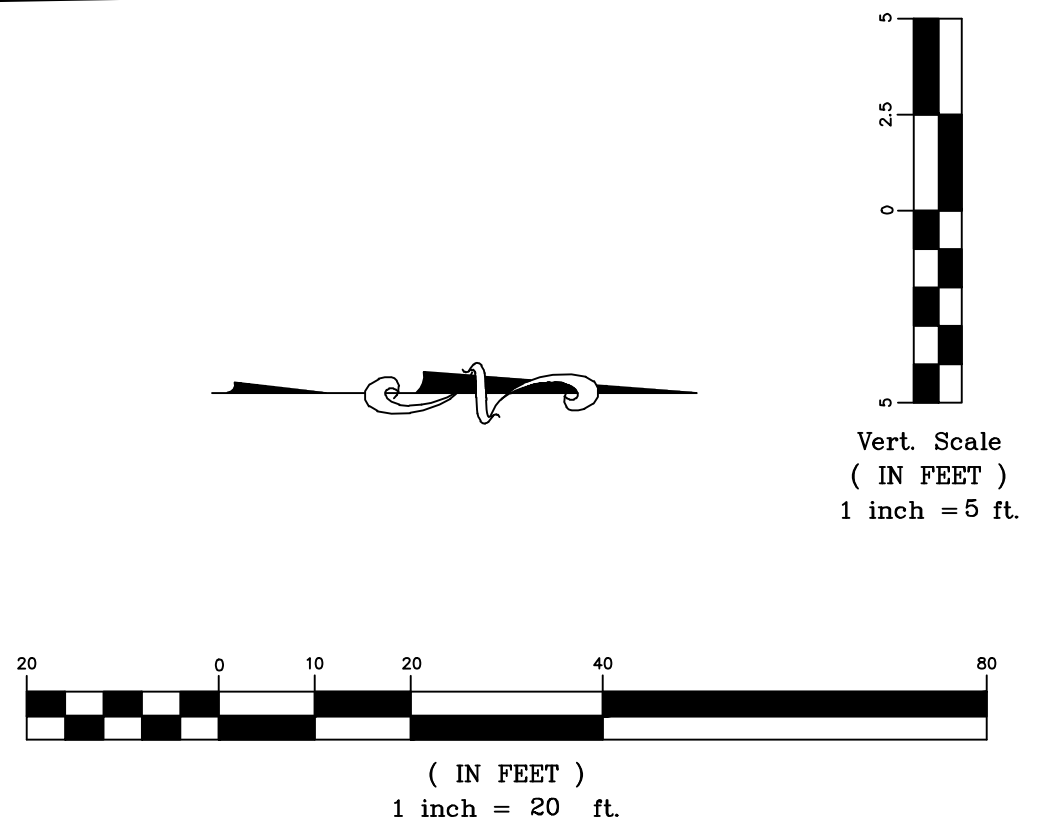
	PROJECT NUMBER			SHEET
	OCA 636158 Proj. NO. 448-90211			
KEM NO. 06163	FILE waterline	DATE 1/07	OF 29	
DESIGN KM	DRAWN JO	REVISED 05/3/07		

516 S. Market, Wichita, KS 67202 316/264-0242



New Water Meter Summary						New Water Meter Summary					
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address	NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
22	140+35.70	RT	Long	.63	232 N. Exposition St.	29	142+00.85	LT	Short	.63	251 N. Exposition St.
23	140+56.96	LT	Short	.63	231 N. Exposition St.	30	142+32.23	RT	Long	.63	250 N. Exposition St.
24	140+86.93	RT	Long	.63	236 N. Exposition St.	31	142+48.86	LT	Short	.63	253 N. Exposition St.
25	141+10.16	LT	Short	.63	237 N. Exposition St.	32	142+82.72	RT	Long	.63	254 N. Exposition St.
26	141+34.64	RT	Long	.63	240 N. Exposition St.	33	142+92.48	LT	Short	.63	255 N. Exposition St.
27	141+46.05	LT	Short	.63	241 N. Exposition St.	34	143+16.25	LT	Short	.63	263 N. Exposition St.
28	141+89.37	RT	Long	.63	242 N. Exposition St.	35	143+31.43	RT	Long	.63	260 N. Exposition St.

Baseline 130+00 at the Intersections of Douglas Ave. and Exposition St.

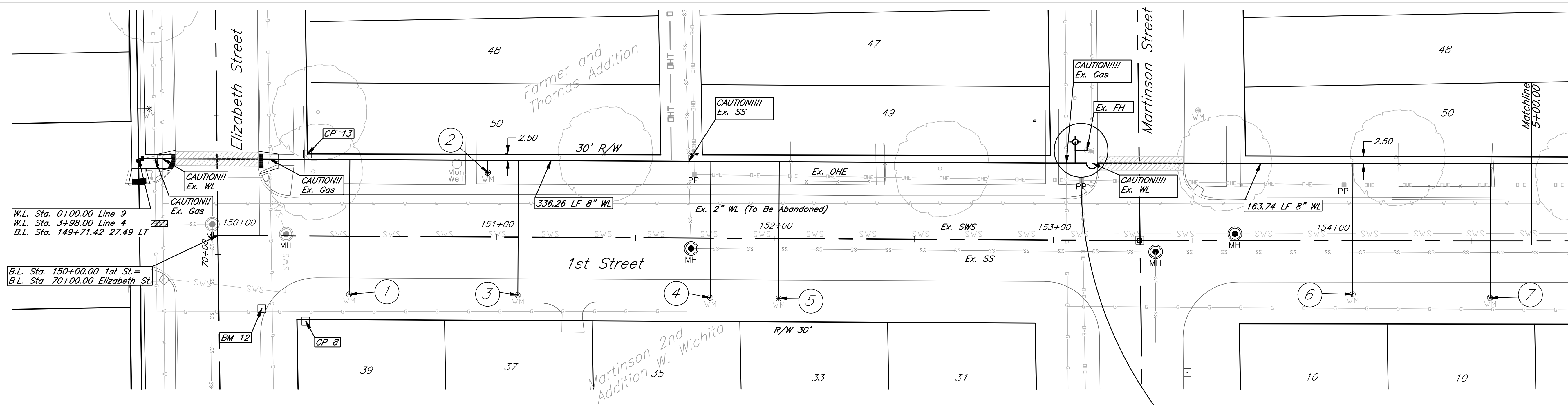


Anderson First
Line 8 Sta. 10+00-13+70
 Wichita, KS

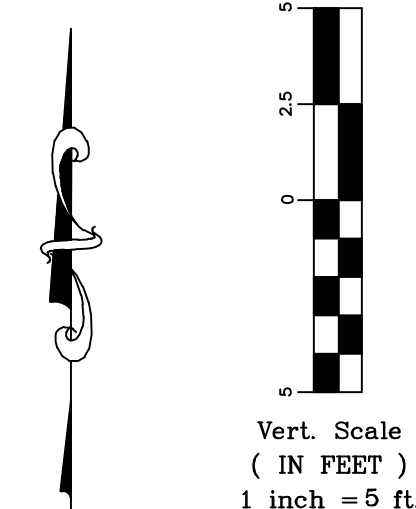
PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

kemiller engineering	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 24
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market, Wichita, KS 67202 316/264-0242



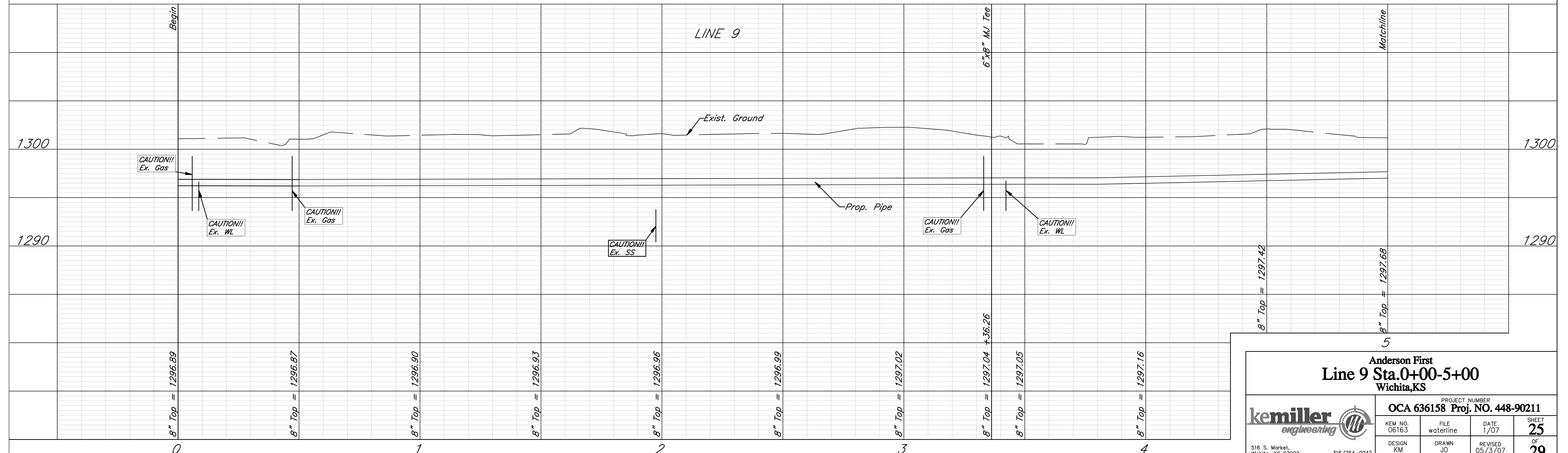
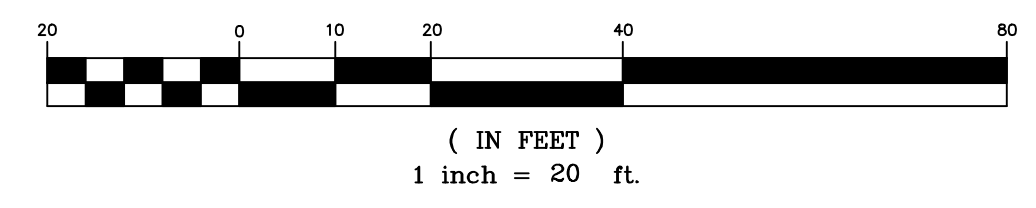
Baseline
150+00 at the
Intersections of
1st St. and Elizabeth



NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	150+47.24	RT	Long	.63	1423 W. 1st St.
2	150+96.80	LT	Short	.63	204 N. Elizabeth St.
3	151+07.83	RT	Long	.63	1421 W. 1st St.
4	151+76.88	RT	Long	.63	1411 W. 1st St.
5	152+02.44	RT	Long	.63	1403 W. 1st St.
6	154+07.45	RT	Long	.63	1323 W. 1st St.
7	154+56.79	RT	Long	.63	1317 W. 1st St.

W.L. Sta. 3+36.26 Line 9
B.L. Sta. 153+07.68 27.67' RT
1-8" x 6" Tee
1-6" Anchored Valve (N)
4.60 LF of DI CL (N)
1-6" MJ Tee
Remove Exist. FH, Connect
to 6" Valve.
4.20 LF 6" DI CL (E)
3.00 LF 6" DI CL (N)
1-FH (N)
Valve Box Elev.=1301.84
Bury Line Elev.=1301.84
N= 11459.21 E=10475.86

2-6" MJ Caps
Not More Than 2'
South of Exist. 6" Tee

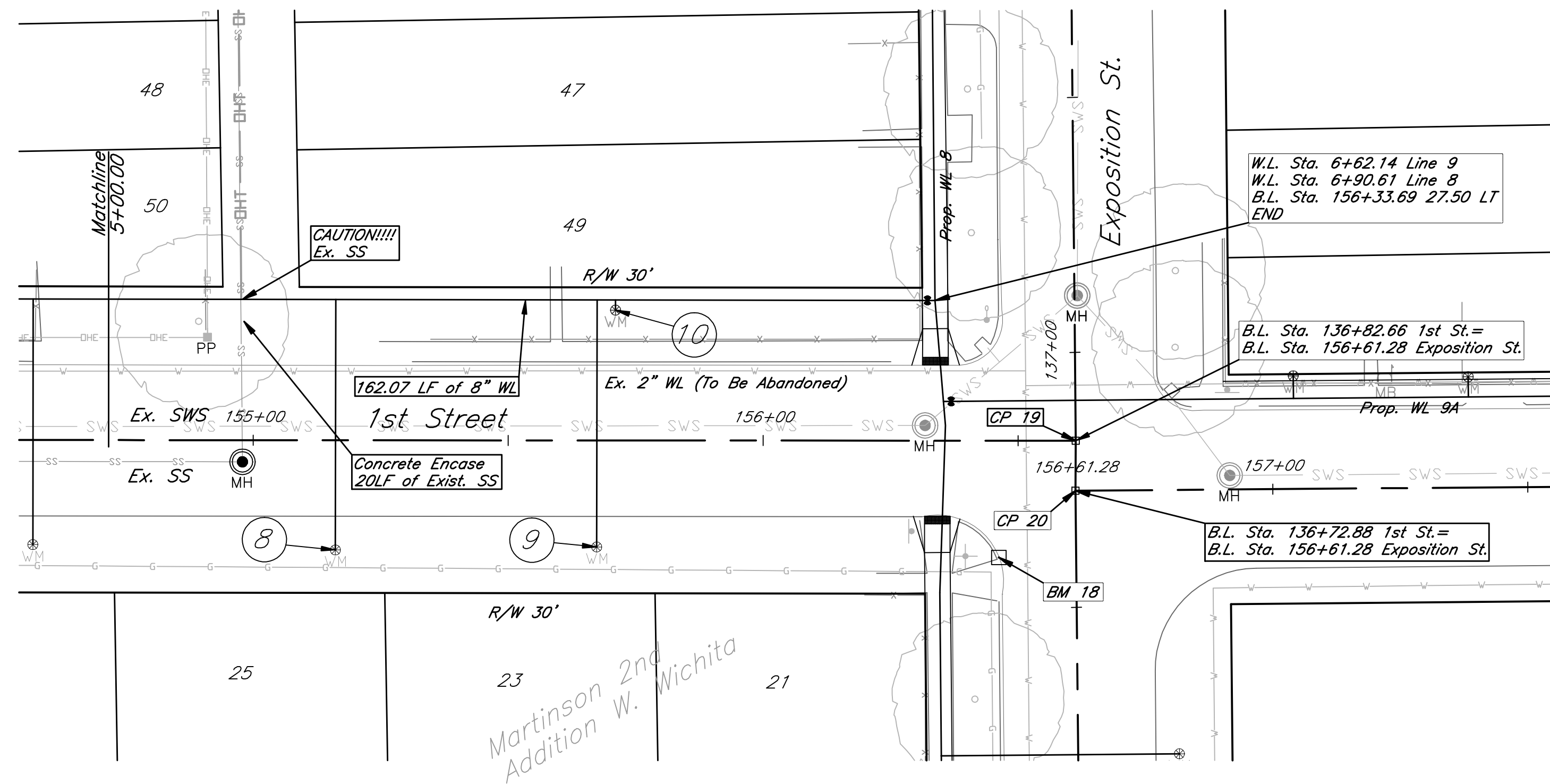


Anderson First
Line 9 Sta. 0+00-5+00
Wichita, KS

PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

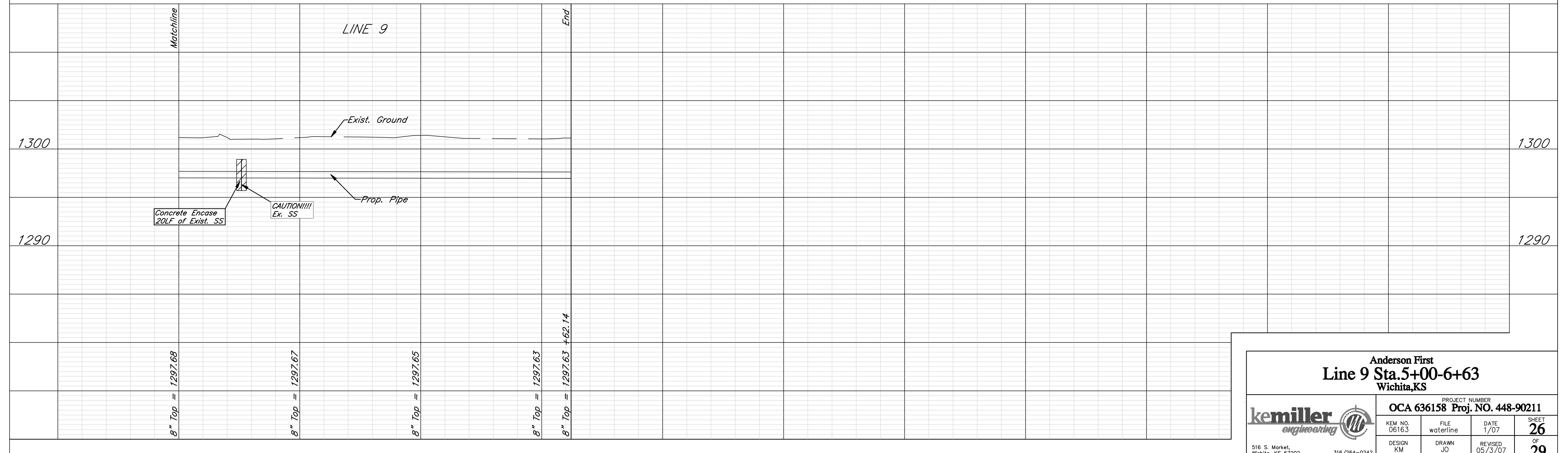
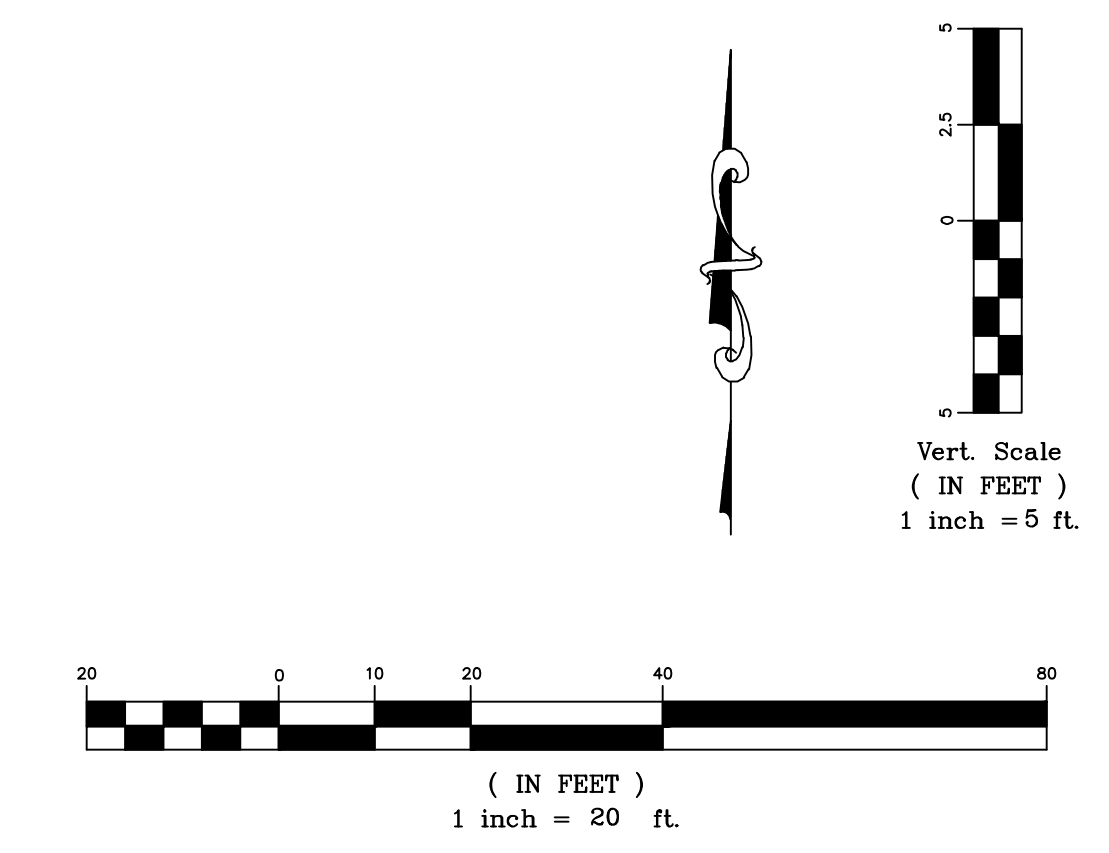
kemiller <i>engineering</i>	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 25
	DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

516 S. Market
Wichita, KS 67202 316/264-0242



NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
8	155+16.12	RT	Long	.63	1315 W. 1st St.
9	155+67.37	RT	Long	.63	1305 W. 1st St.
10	155+71.02	LT	Short	.63	203 N. Elizabeth St.

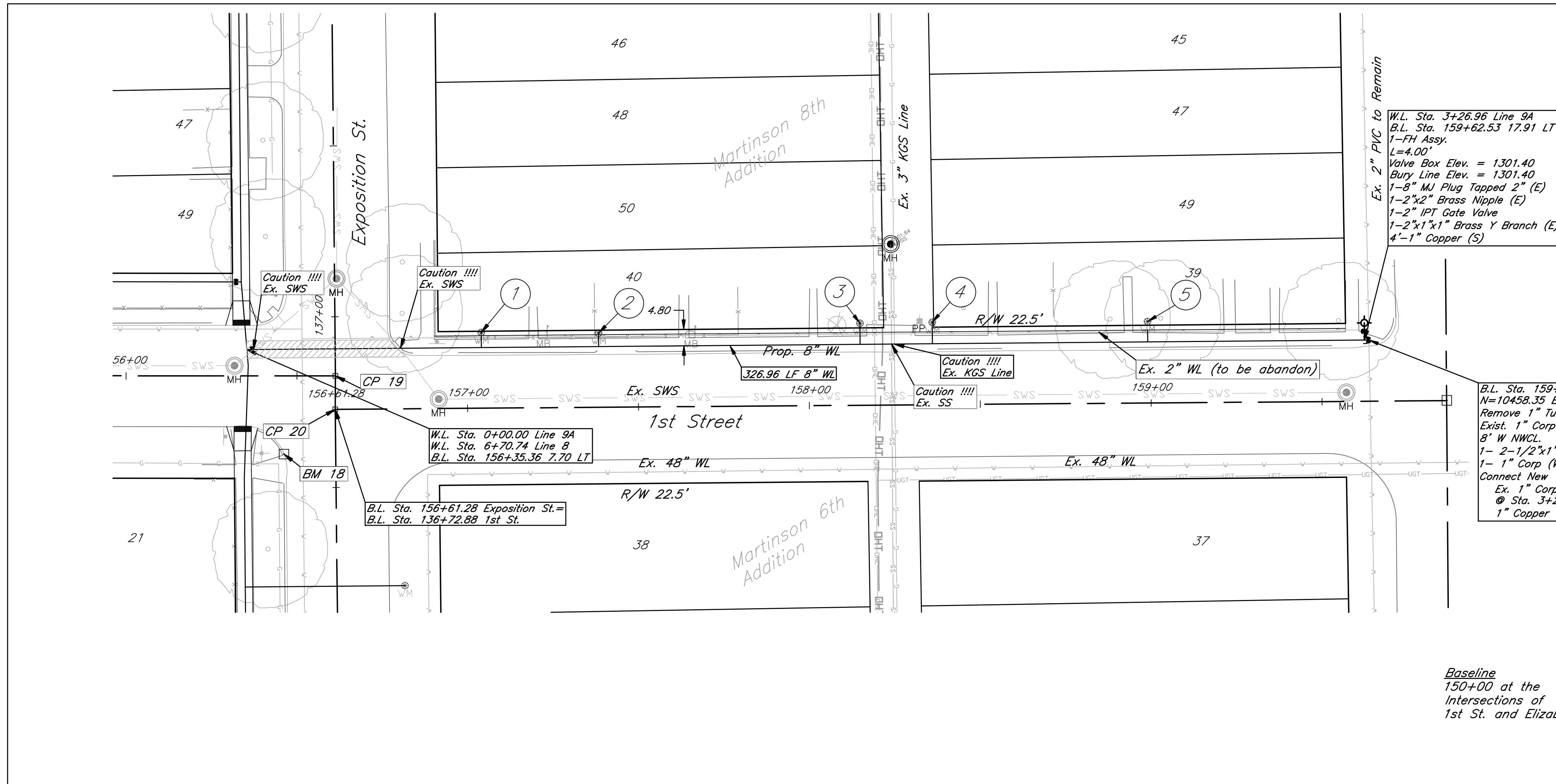
Baseline
150+00 at the
Intersections of
1st St. and Elizabeth



Anderson First
Line 9 Sta. 5+00-6+63
Wichita, KS

		PROJECT NUMBER OCA 636158 Proj. NO. 448-90211	
		KEM NO. 06163	FILE waterline
DESIGN KM	DRAWN JO	REVISED 05/3/07	OF 29

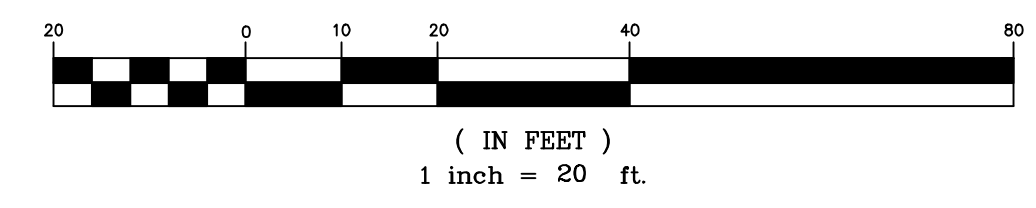
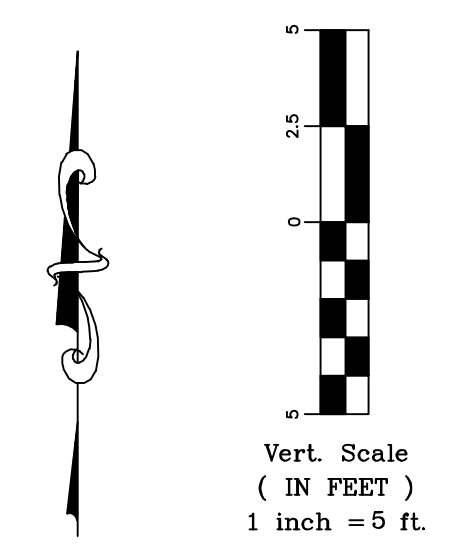
516 S. Market, Wichita, KS 67202 316/264-0242



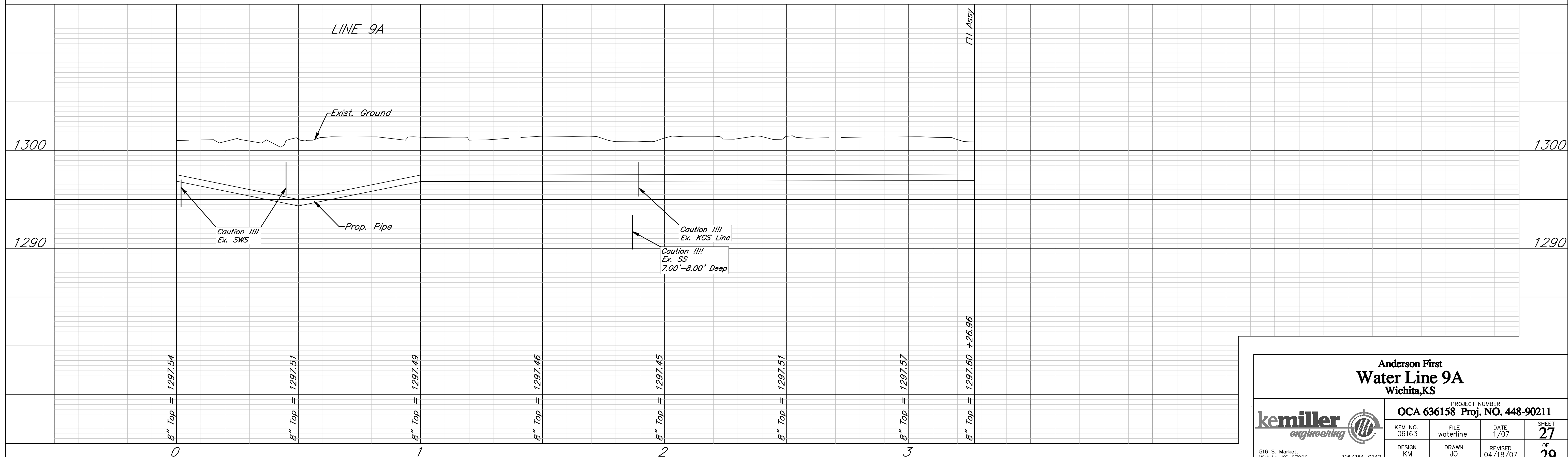
NO.	B.L. Sta.	Lt./Rt.	Service (Long or Short)	Meter Size	Address
1	157+04.18	LT	Short	.63	1222 W. 1st St.
2	157+38.48	LT	Short	.63	1218 W. 1st St.
3	158+14.98	LT	Short	.63	1214 W. 1st St.
4	158+36.13	LT	Short	.63	1210 W. 1st St.
5	158+99.12	LT	Short	.63	1206 W. 1st St.

W.L. Sta. 3+26.96 Line 9A
 B.L. Sta. 159+62.53 17.91 LT
 1-FH Assy.
 L=4.00'
 Valve Box Elev. = 1301.40
 Bury Line Elev. = 1301.40
 1-8" MJ Plug Tapped 2" (E)
 1-2"x2" Brass Nipple (E)
 1-2" IPT Gate Valve
 1-2"x1" Brass Y Branch (E)
 4'-1" Copper (S)

B.L. Sta. 159+66.53 17.91 LT
 N=10458.35 E=12117.70
 Remove 1" Tubing from
 Exist. 1" Corp 4.5' N and
 8' W NWCL.
 1- 2-1/2"x1" Saddle
 1- 1" Corp (W)
 Connect New 1" Corp and
 Ex. 1" Corp to Brass Y
 @ Sta. 3+26.96 With New
 1" Copper



Baseline
 150+00 at the
 Intersections of
 1st St. and Elizabeth

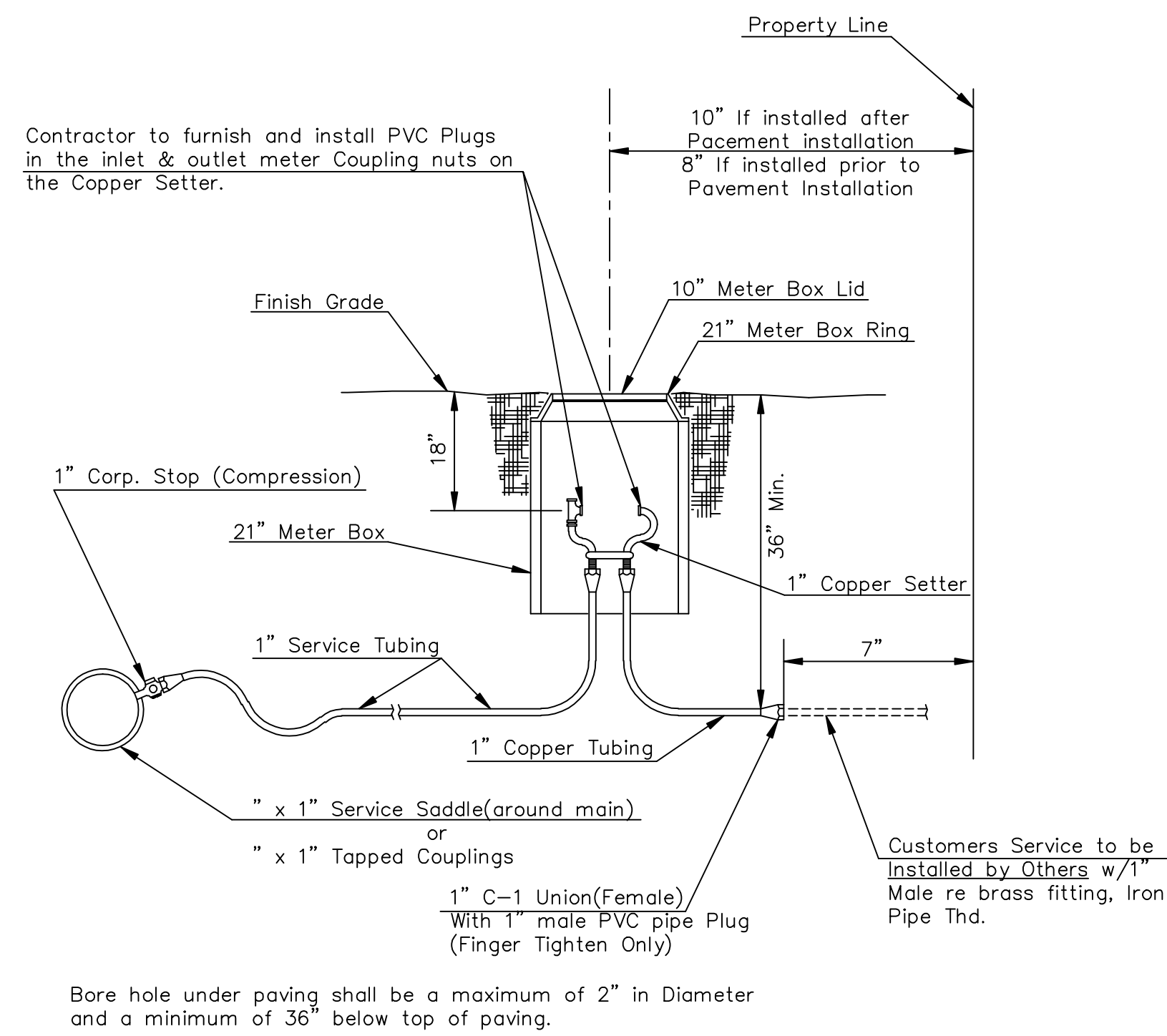


**Anderson First
Water Line 9A
Wichita, KS**

PROJECT NUMBER
OCA 636158 Proj. NO. 448-90211

	KEM NO. 06163	FILE waterline	DATE 1/07	SHEET 27
	DESIGN KM	DRAWN JO	REVISED 04/18/07	OF 29

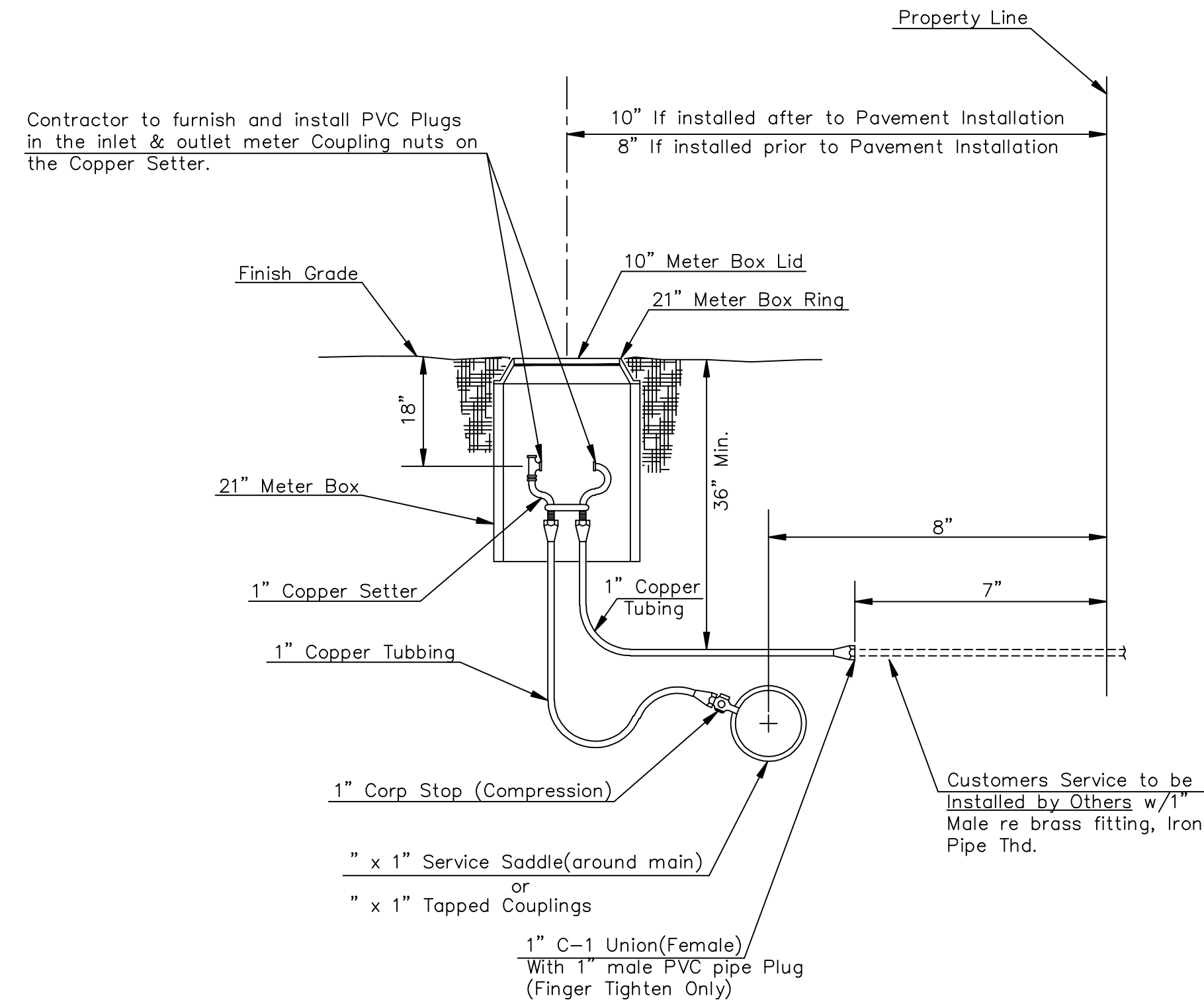
516 S. Market, Wichita, KS 67202 316/264-0242



Note: Service Saddles are not required on top of 8" mains or larger

Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

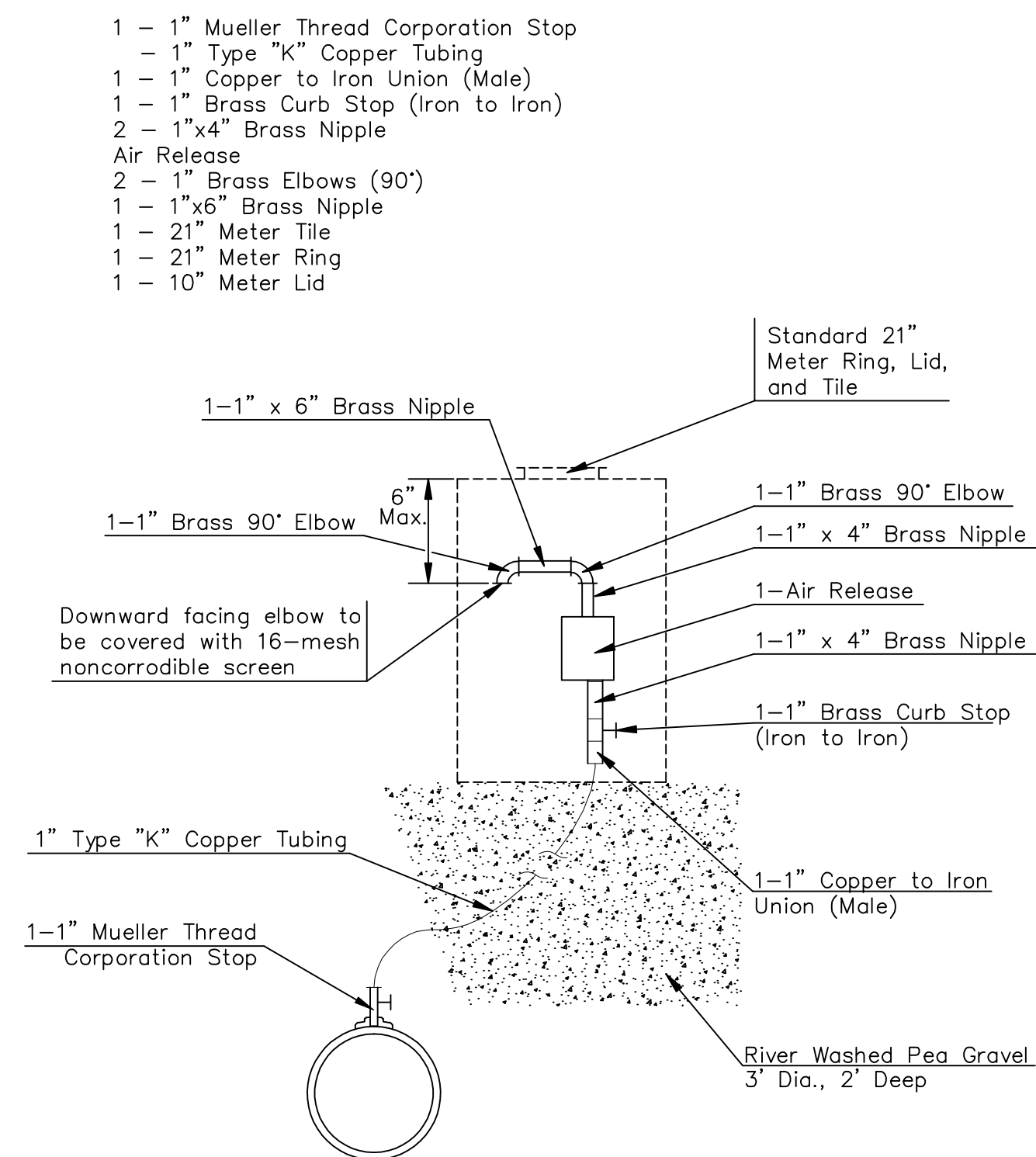
TYPICAL METER SETTING LONG SERVICE 1"



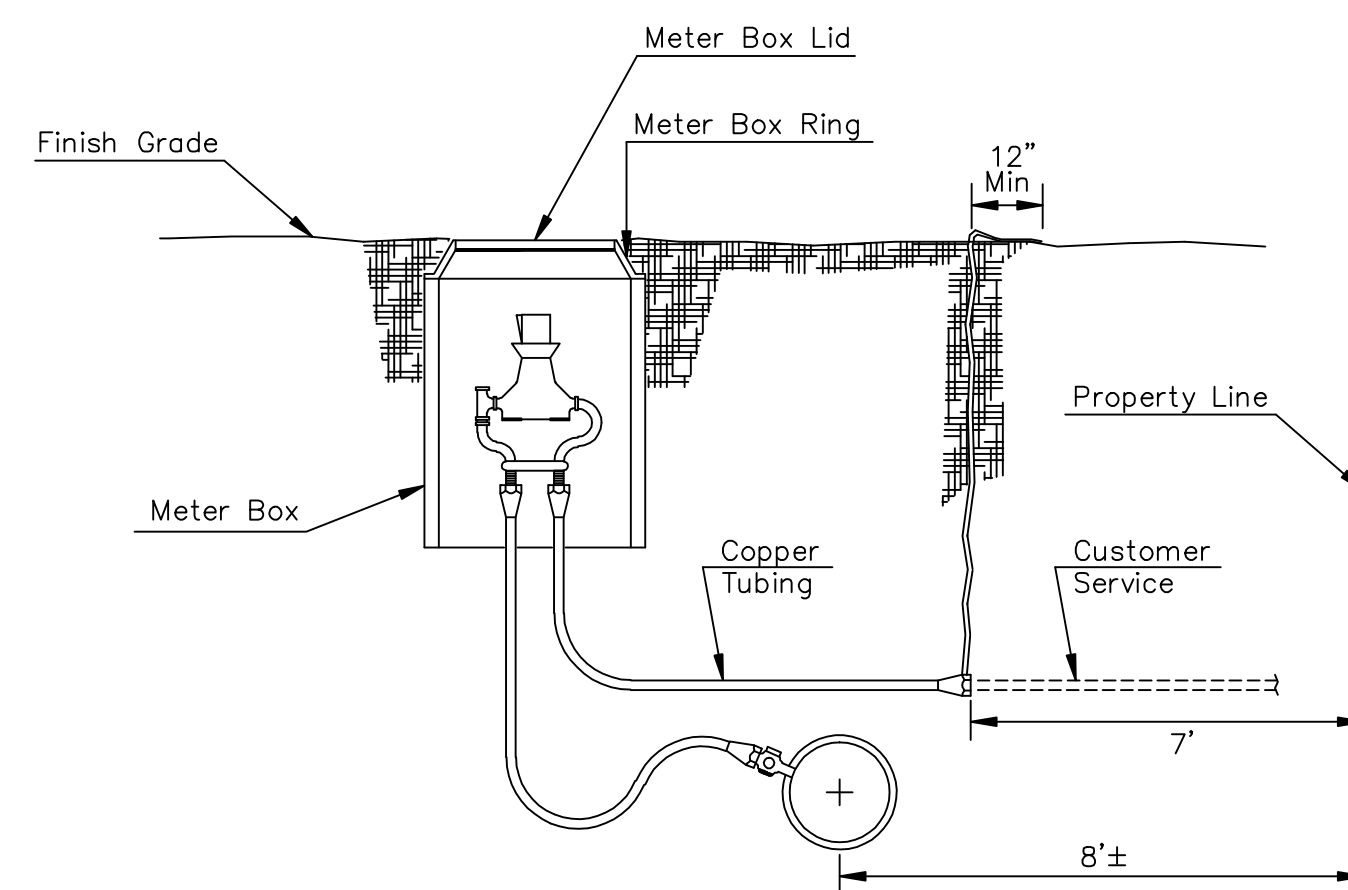
Note: Service Saddles are not required on top of 8" mains or larger

Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

TYPICAL METER SETTING SHORT SERVICE 1"

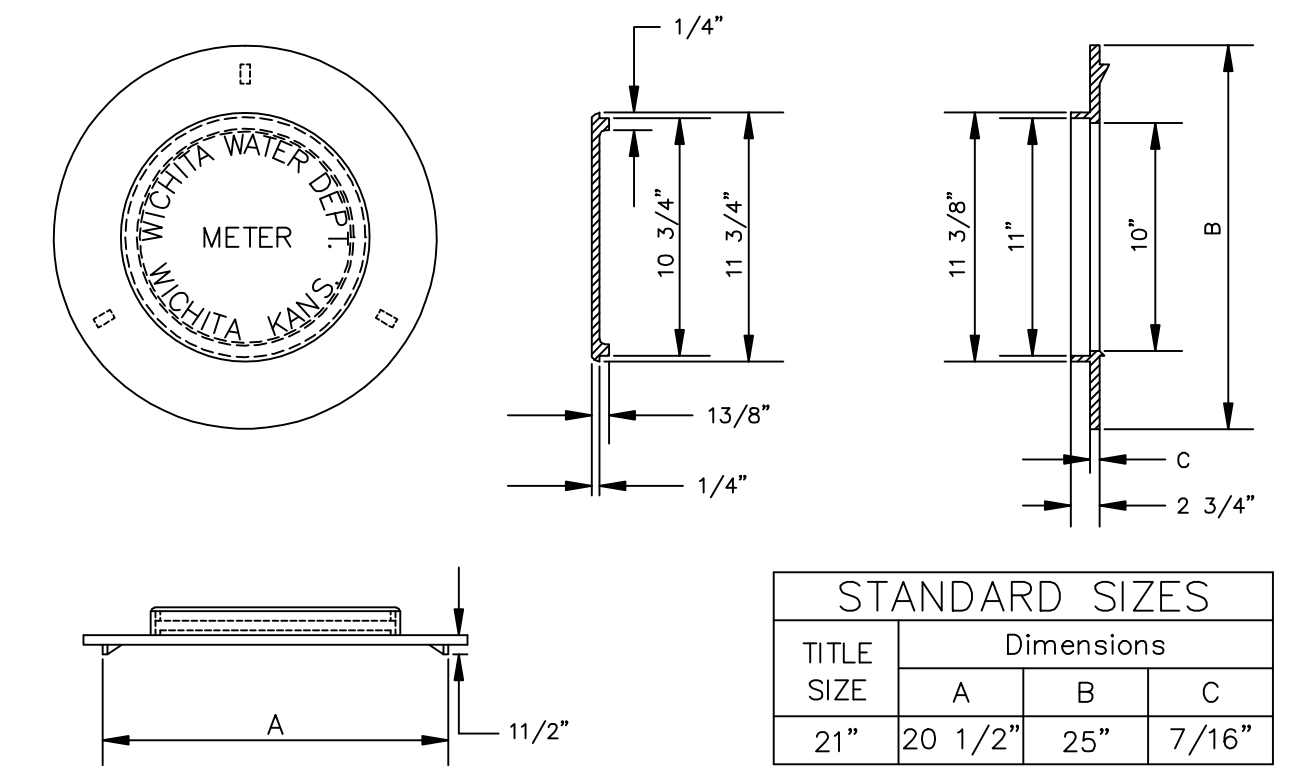


MATERIALS FOR AIR RELEASE ASSEMBLY



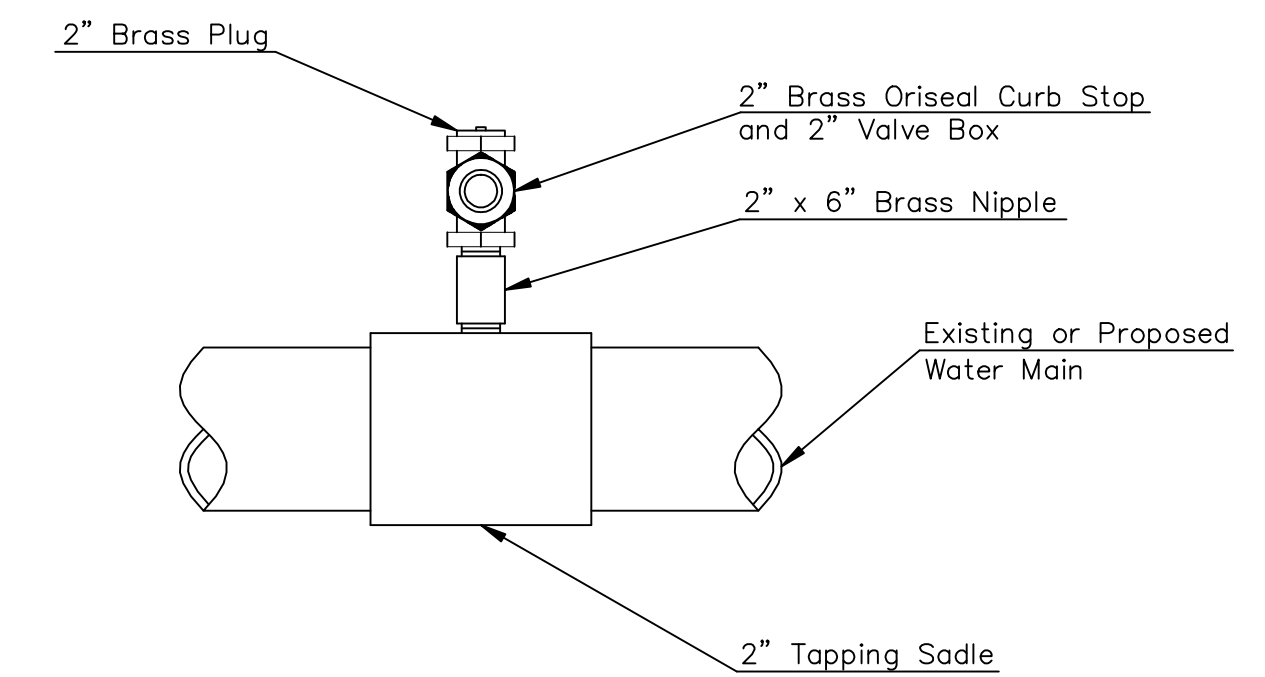
If customers service line is not installed at the time Meter Box and Setter are installed, Plastic Flagging is to be tied to the end of copper tubing & brought straight up to top of ground and be exposed a minimum of 12" on top of ground. (Plastic Flagging to be Furnished by Contractor)

TYPICAL METER SETTING PLASTIC FLAGGING



Other Approved Ring And Lids: Ford Meter Box Co. Inc. 21" Ring & Lid Catalog No. C-4

RING & LID FOR METER VAULTS



Note: Where the 2" service outlet assembly is to be used to connect a 2" main to another main, the 2" valve shall be a 2" IPT Gate Valve. 2" Ball or Globe valve shall not be approved for this use.

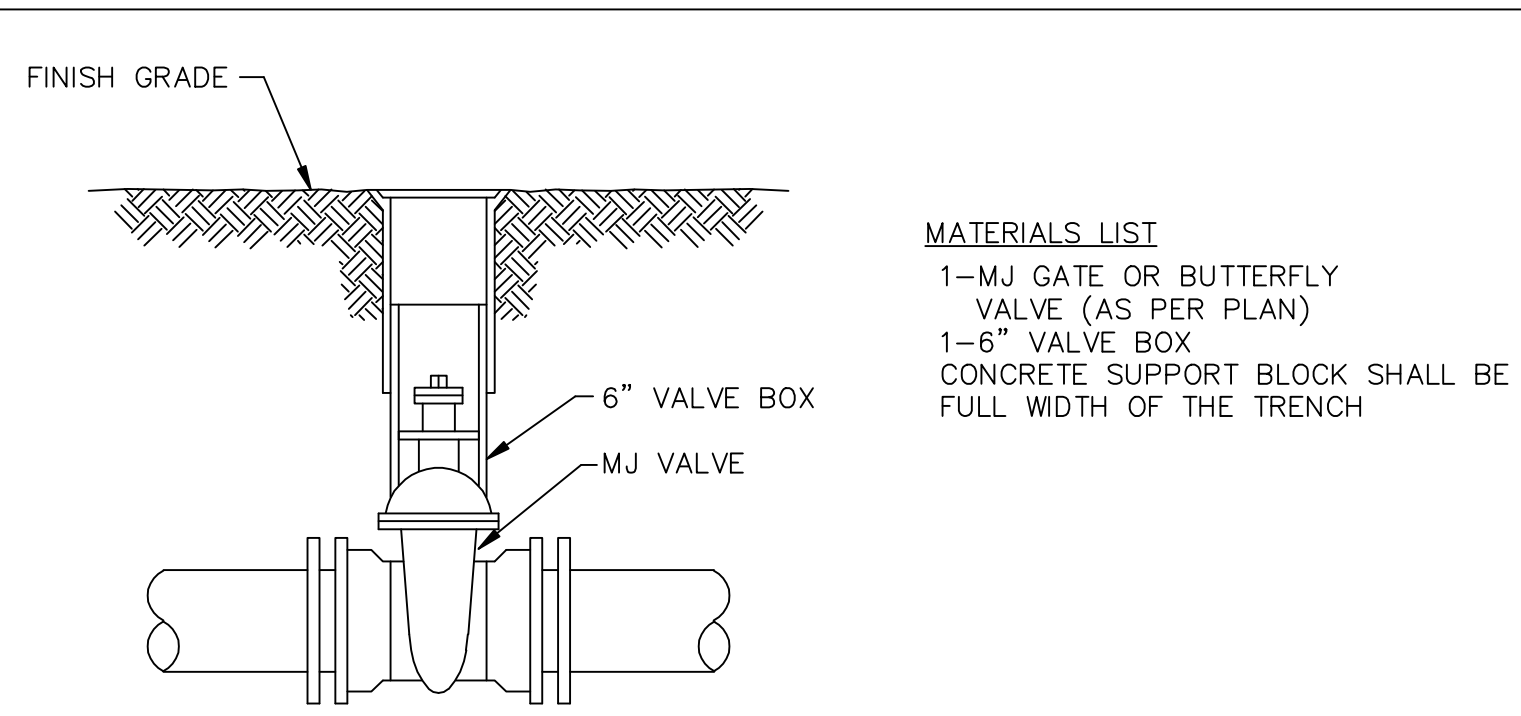
2" SERVICE OUTLET ASSEMBLY

REVISED APR 97

STANDARD WATER SERVICE DETAILS

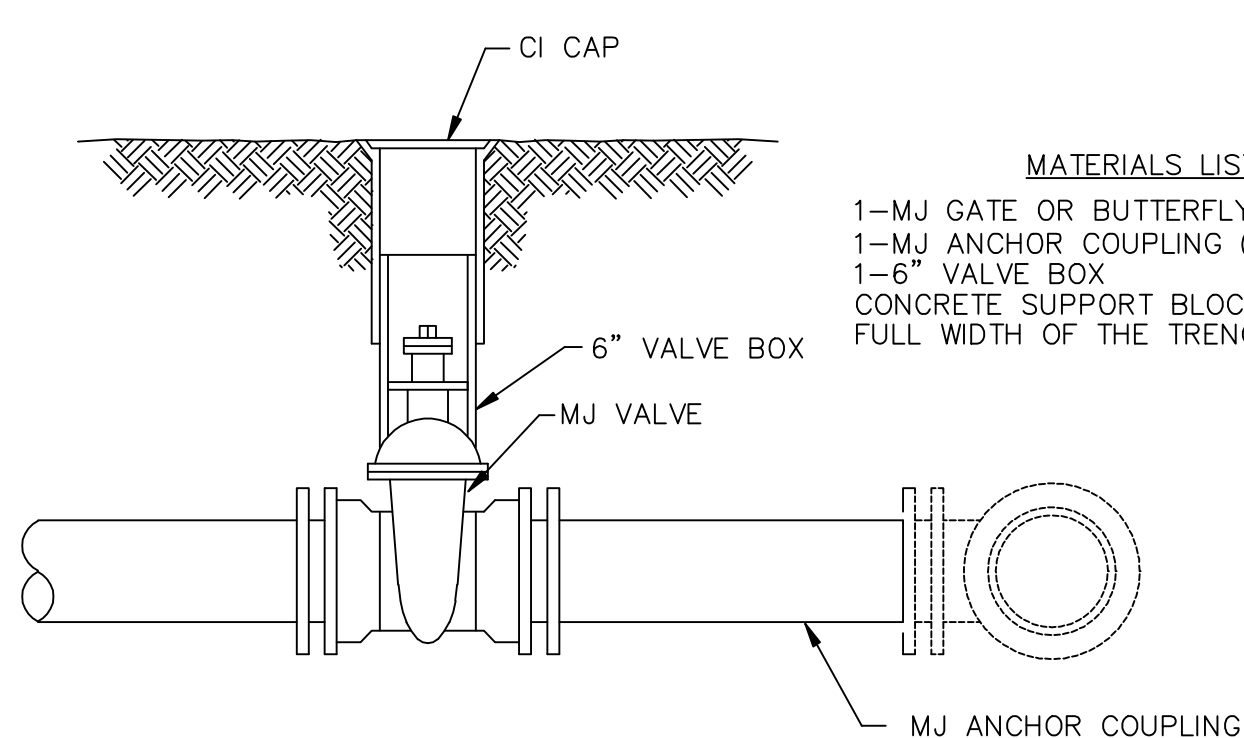
CITY ENGINEER
JAMES L. ARMOUR, P.E., L.S.

PROJECT NUMBER 448-90211	OCA NUMBER 636158	DATE 9/2006
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 (316) 268-4114 FAX		DESIGN COW
		DRAWN COW
		SHEET 28 OF 29



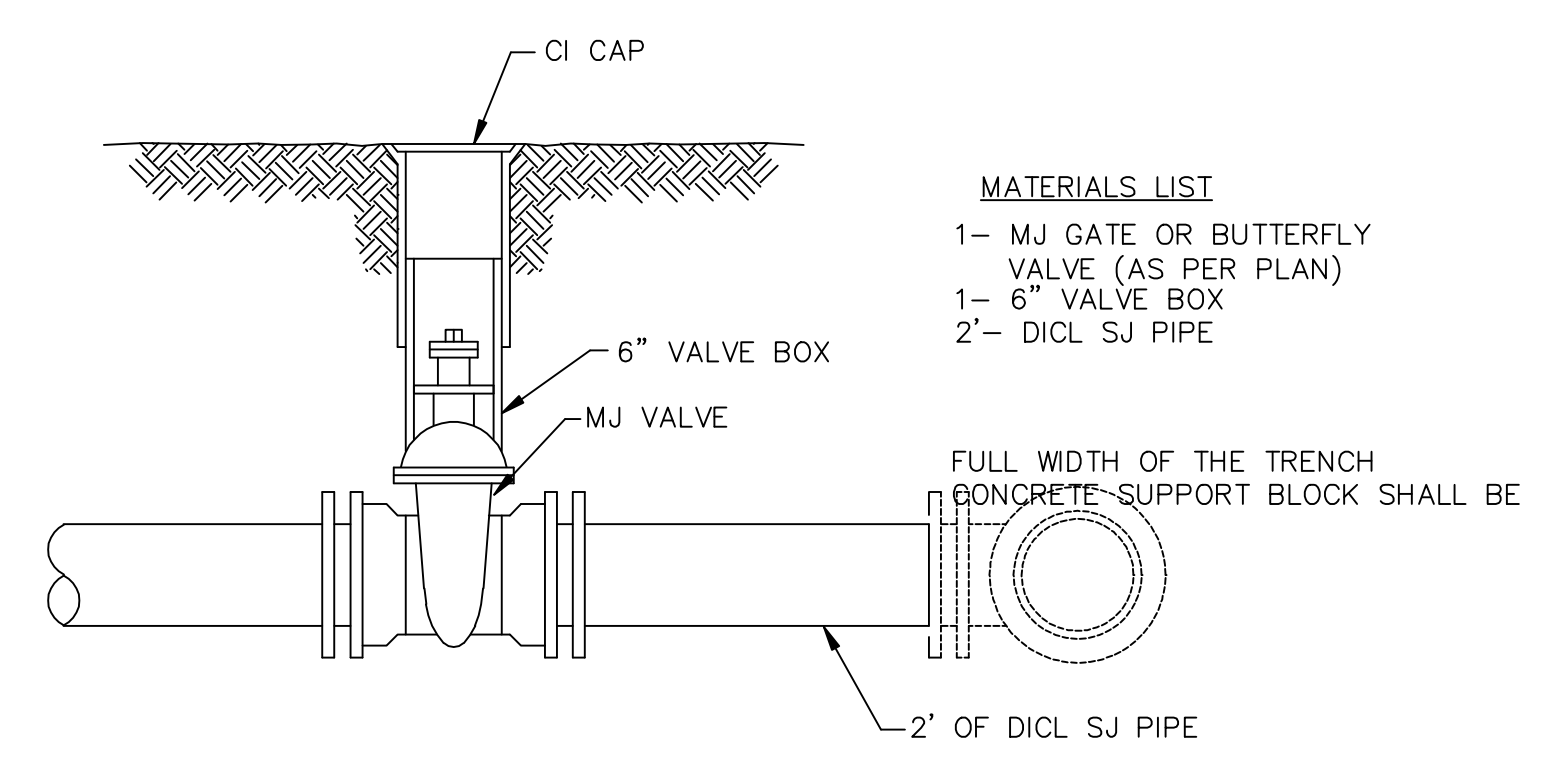
LINE VALVE ASSEMBLY

- MATERIALS LIST**
 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 1-6" VALVE BOX
 CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



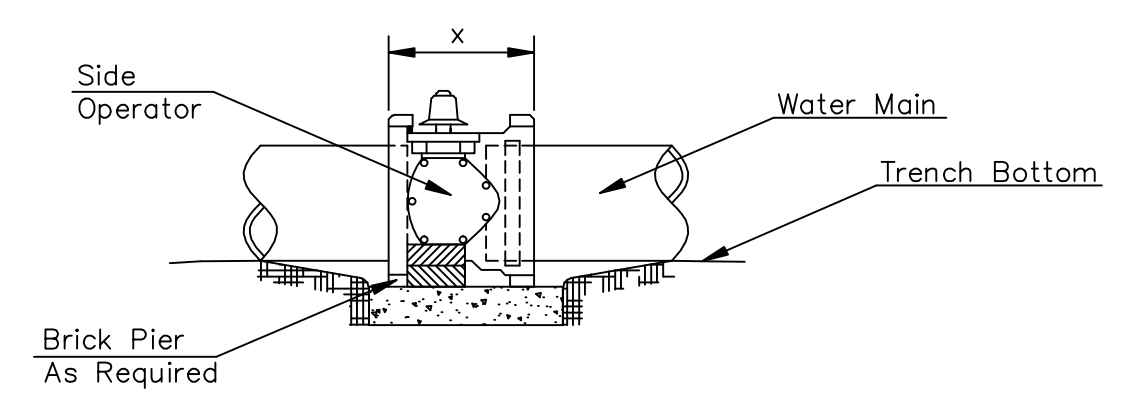
ANCHORED VALVE ASSEMBLY

- MATERIALS LIST**
 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 1-MJ ANCHOR COUPLING (12" OR SMALLER)
 1-6" VALVE BOX
 CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



VALVE ASSEMBLY

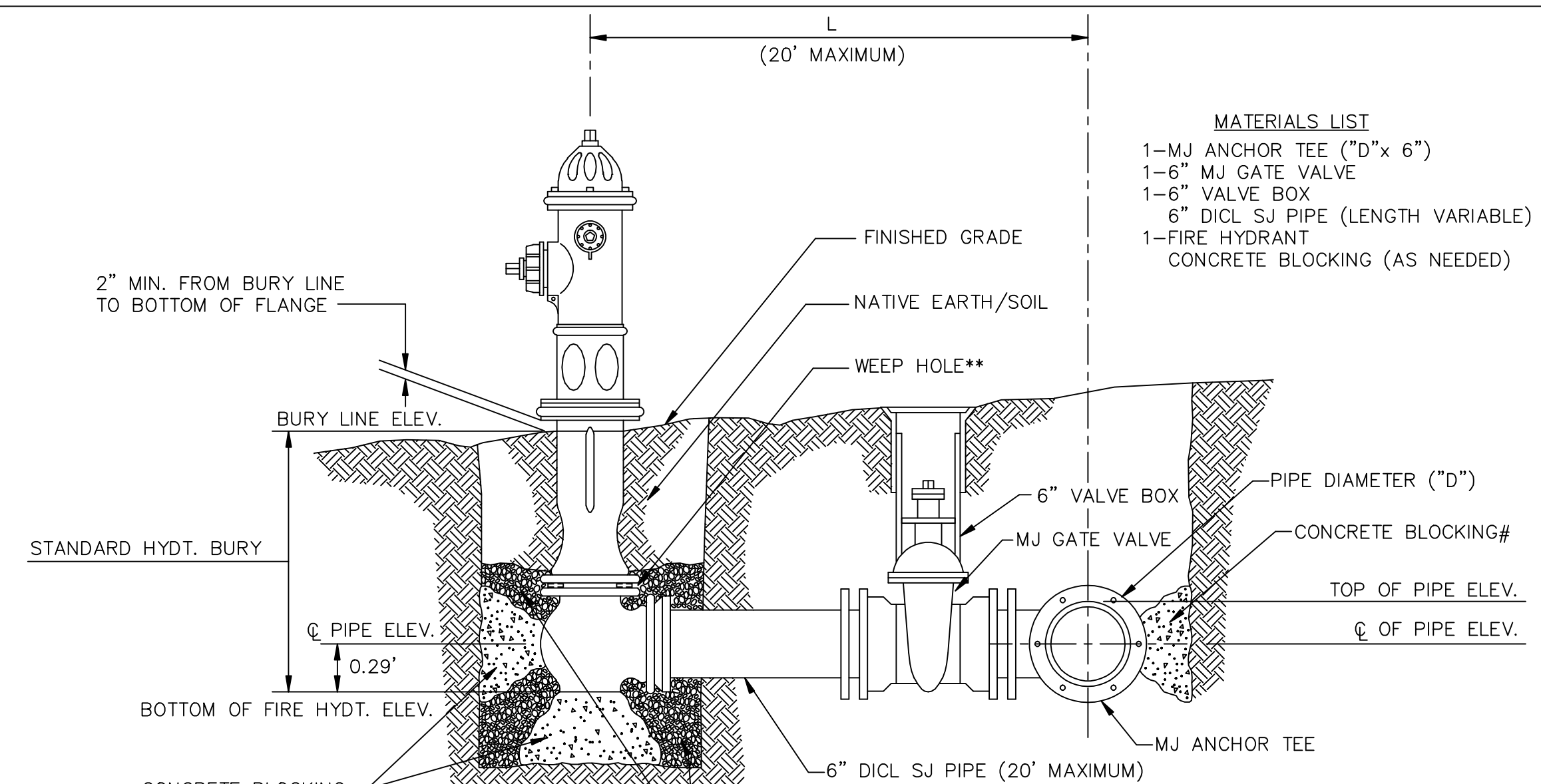
- MATERIALS LIST**
 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 1- 6" VALVE BOX
 2"- D.I. SJ PIPE
 FULL WIDTH OF THE TRENCH CONCRETE SUPPORT BLOCK SHALL BE



NOTES

- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. Larger lines to be detailed on plans.
- 6" Valve Box and Cover required per City of Wichita Std. Specifications.
- Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



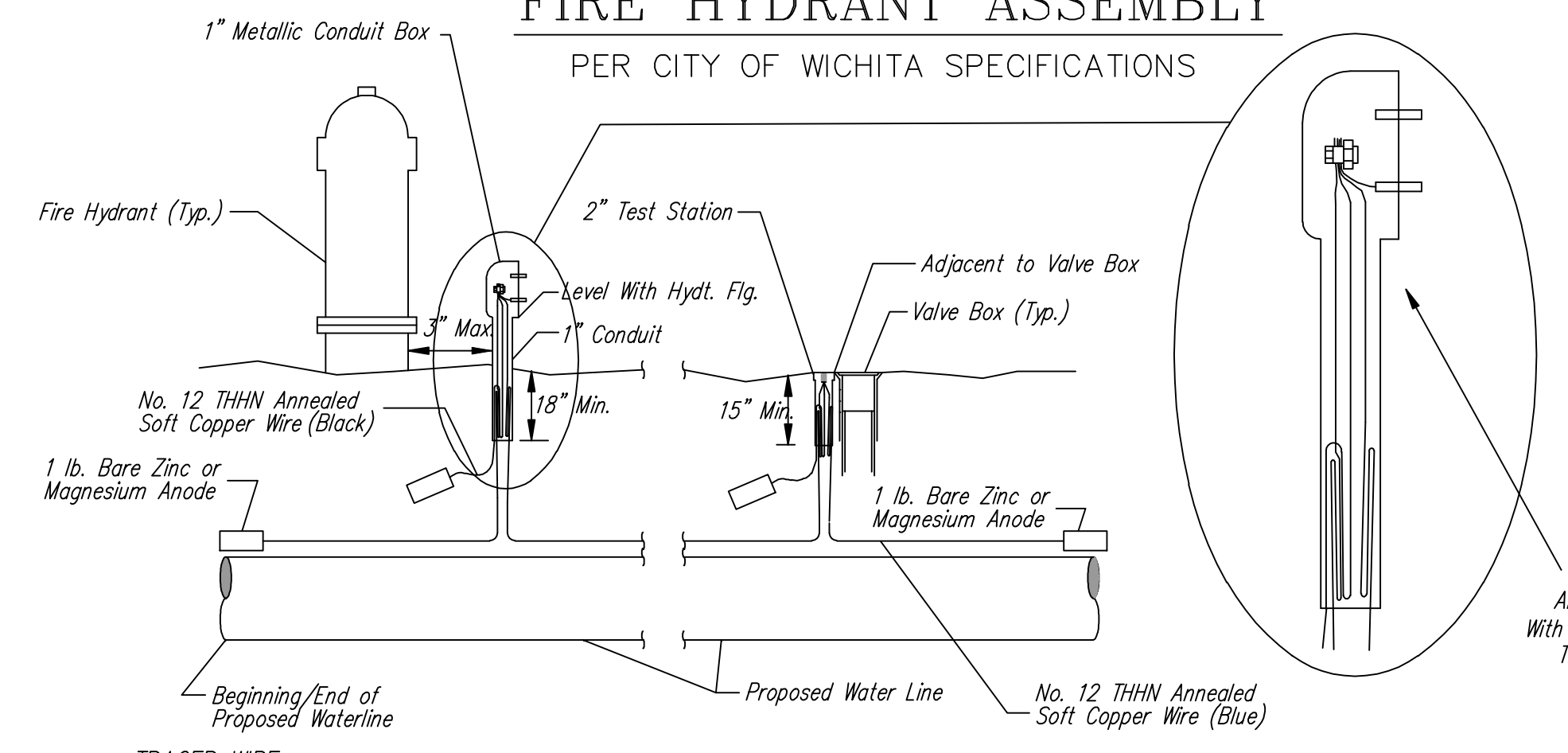
- ** CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.
 # CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.
 * IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5" HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY.

FIRE HYDRANTS REQUIRED

STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*
0+08.50 Line 1	1302.29	1298.32	4.5'
0+00.00 Line 2A	1302.19	1298.31	4.5'
3+92.67 Line 2A	1301.91	1297.53	5'
18+84.87 Line 4	1298.69	1294.31	5'
0+10.00 Line 5	1300.48	1296.60	4.5'
8+50.00 Line 5	1299.04	1294.66	5.0'
0+10.00 Line 6	1300.92	1297.04	4.5'
0+00.00 Line 7	1300.65	1296.27	5'
3+36.26 Line 9	1301.84	1297.04	5.5'
3+26.96 Line 9A	1301.40	1297.60	4.5'

FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS



TRACER WIRE
 Conductive type pipe locator/tracer wire shall be installed to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

WIRE
 The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

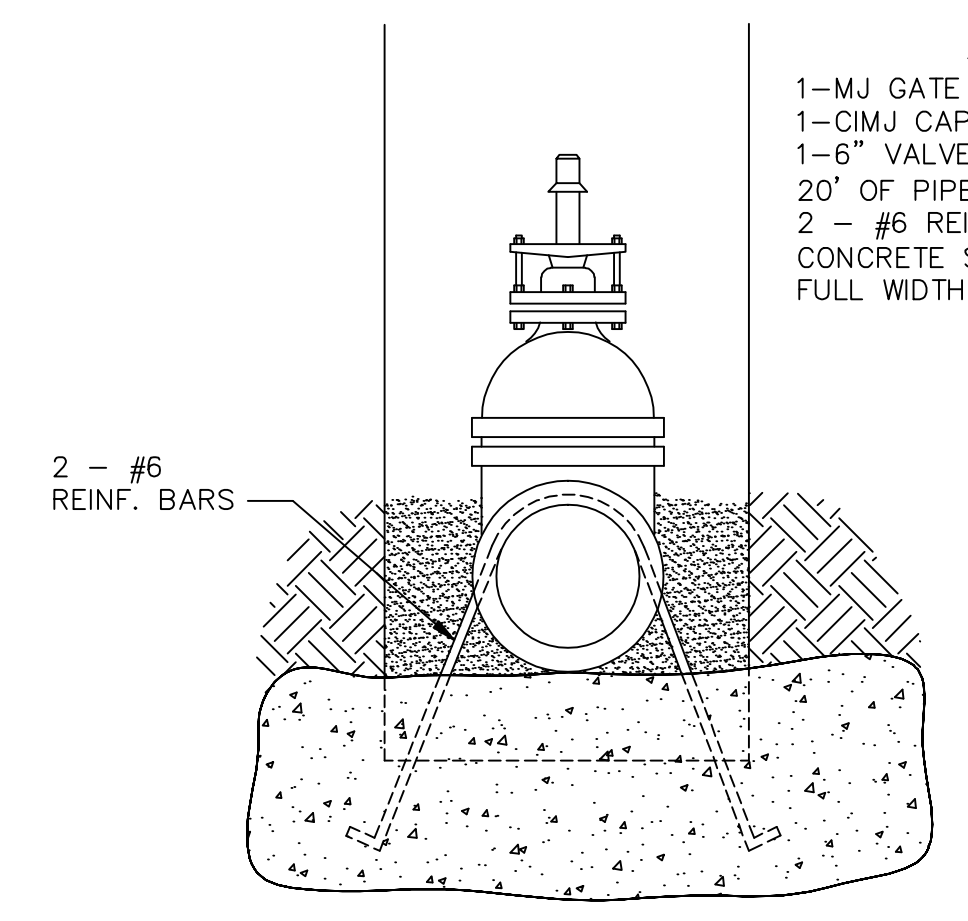
TEST STATIONS
 The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PS39 as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

ANODES
 The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL

COST IS SUBSIDIARY TO PIPE INSTALLATION

- MATERIALS LIST**
 1-MJ ANCHOR TEE ("D"x 6")
 1-6" MJ GATE VALVE
 1-6" VALVE BOX
 6" D.I. SJ PIPE (LENGTH VARIABLE)
 1-FIRE HYDRANT
 CONCRETE BLOCKING (AS NEEDED)

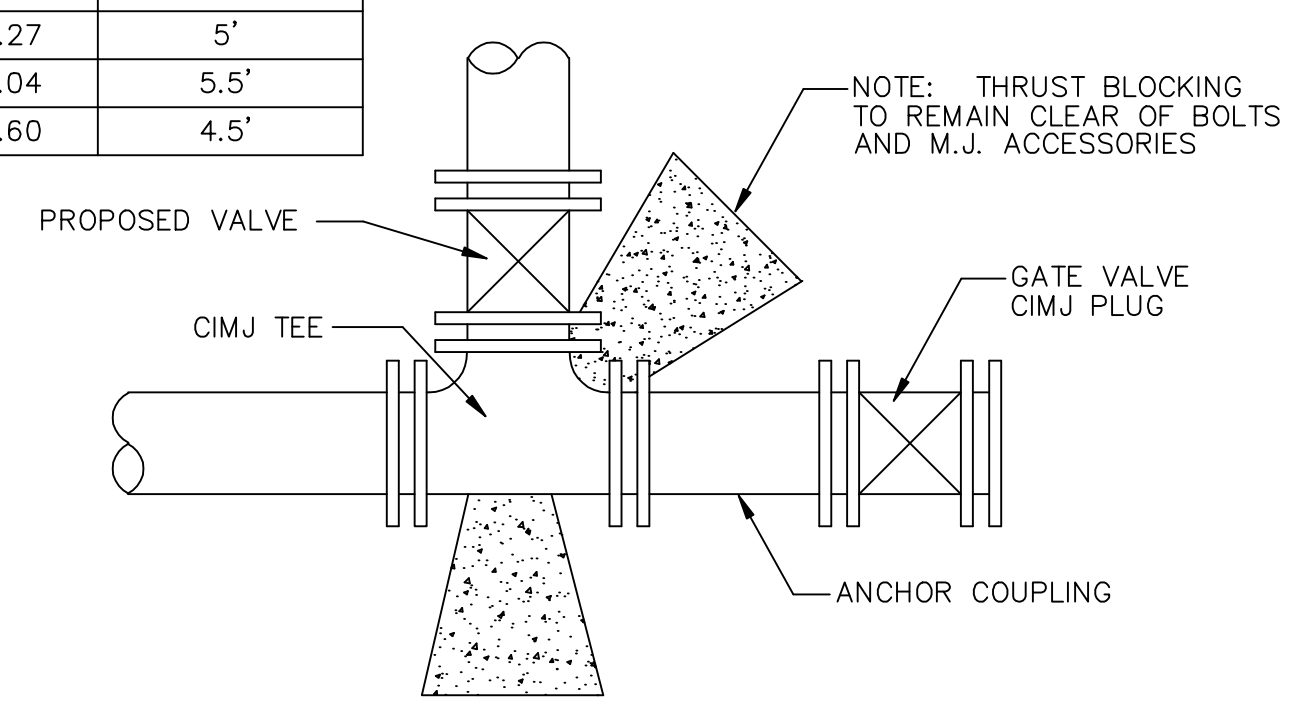


- Notes:
 1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 2. The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
 3. All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

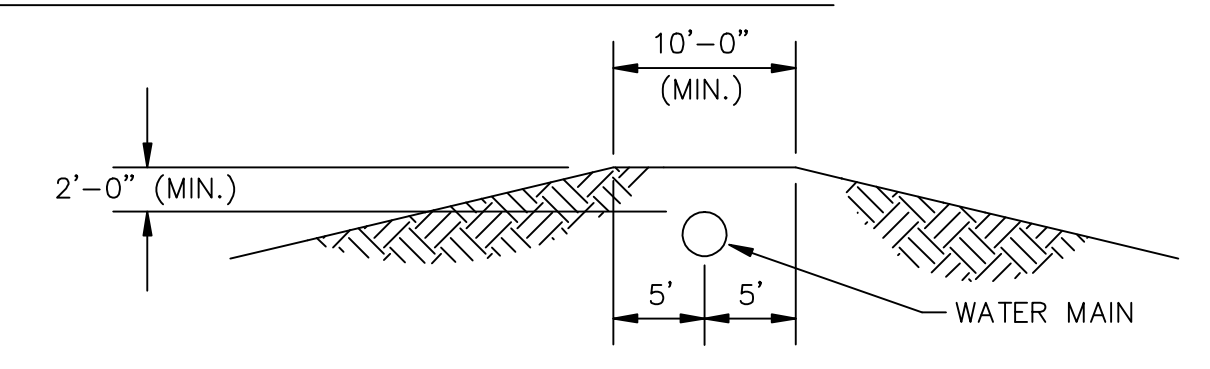
THRUST AT VALVES

VALVE	THRUST AT 150 #/in ²
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL

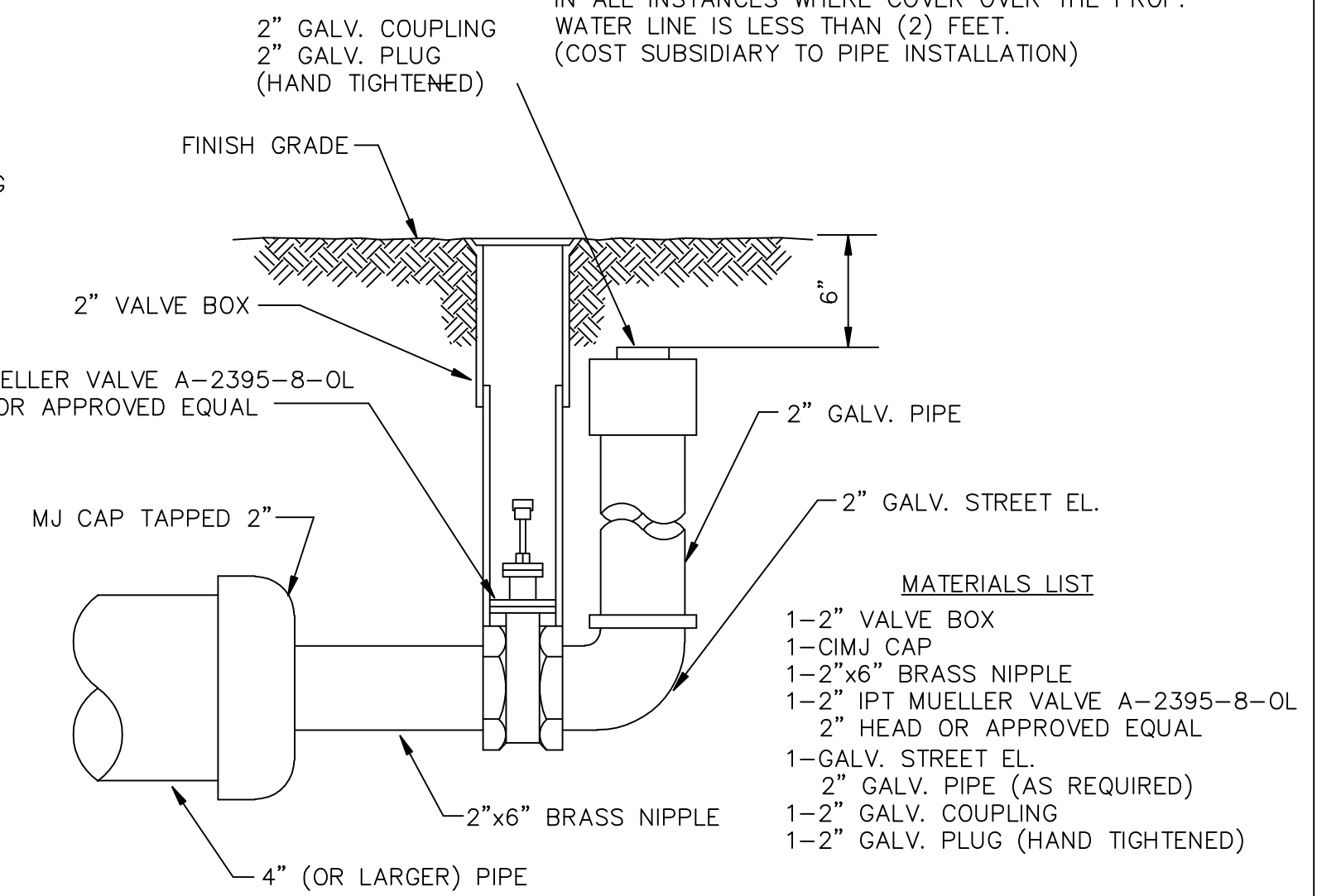


KEY BLOCK DETAIL



PROTECTIVE FILL DETAIL

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN (2) FEET. (COST SUBSIDIARY TO PIPE INSTALLATION)



2" BLOWOFF ASSEMBLY

- MATERIALS LIST**
 1-2" VALVE BOX
 1-CIMJ CAP
 1-2"x6" BRASS NIPPLE
 1-2" IPT MUELLER VALVE A-2395-8-OL
 2" HEAD OR APPROVED EQUAL
 1-GALV. STREET EL.
 2" GALV. PIPE (AS REQUIRED)
 1-2" GALV. COUPLING
 1-2" GALV. PLUG (HAND TIGHTENED)



STANDARD WATER ASSEMBLY DETAILS

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

PROJECT NUMBER 448-90211	OGA NUMBER 636158	DATE 04/18
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 255 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 (316) 268-4114 FAX	DESIGN COW	DRAWN COW

SHEET
29 OF 29

REV: 8-14-01, MCG