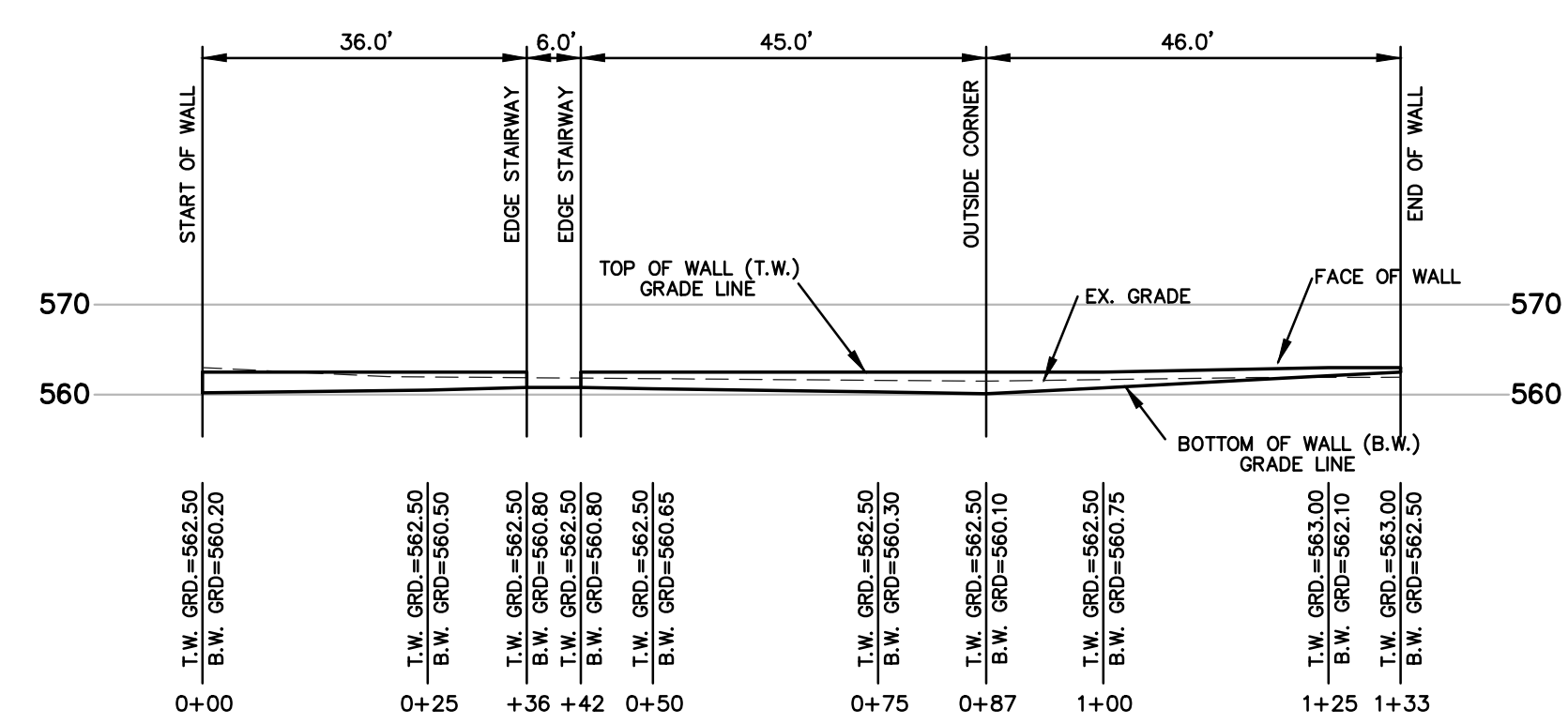


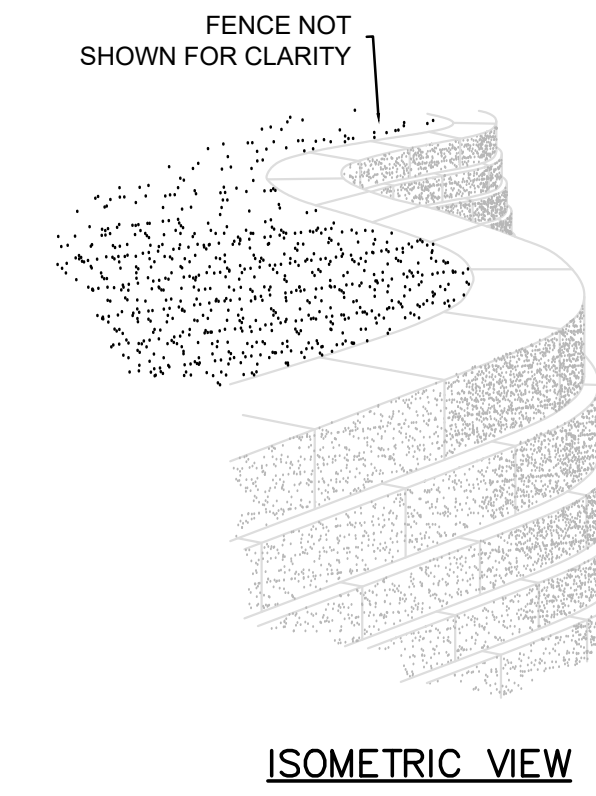
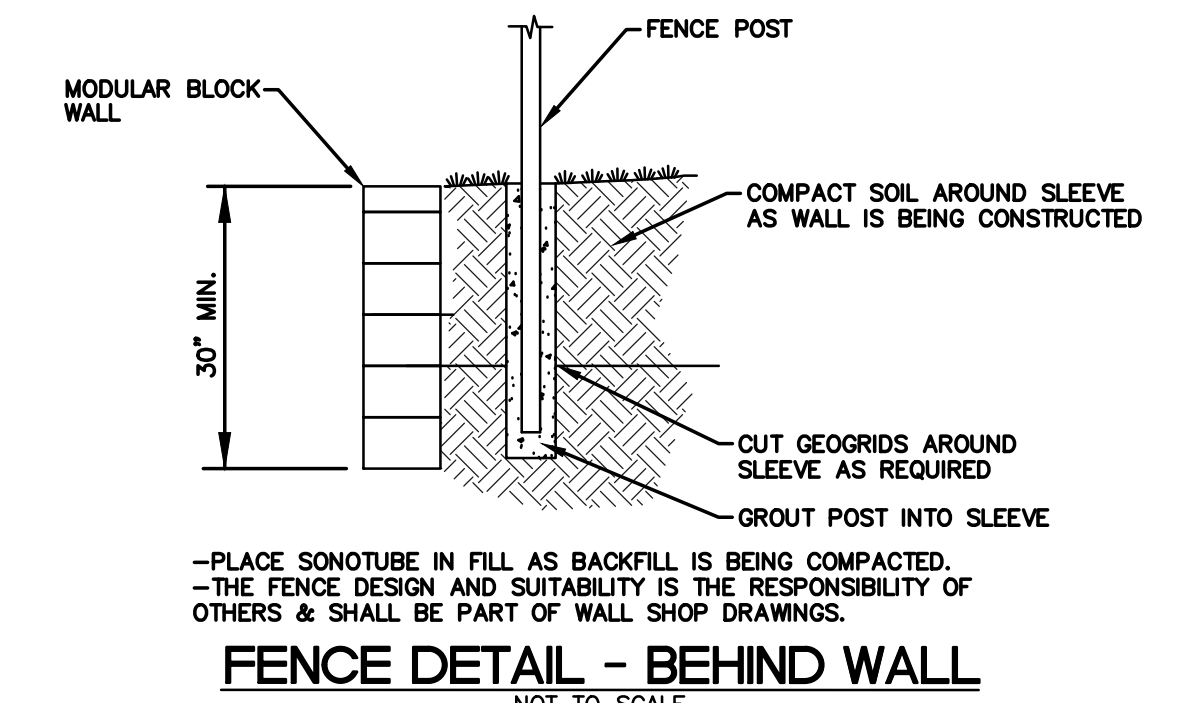
RETAINING WALL 'A'
SCALE: 1"=20'



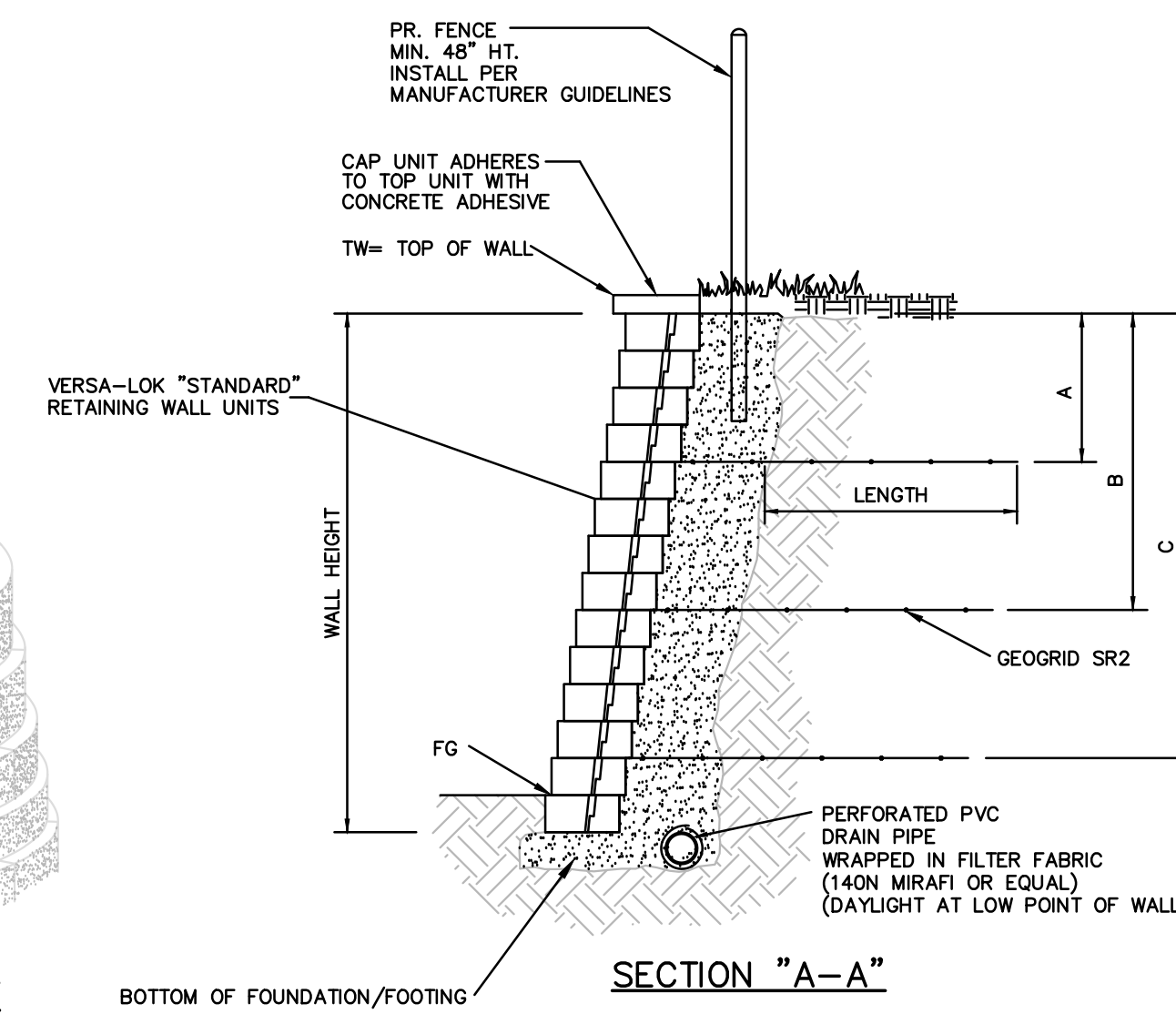
RETAINING WALL 'B'
SCALE: 1"=20'

RETAINING WALL NOTES:

- ALL CONSTRUCTION SHALL BE PER THE MANUFACTURERS RECOMMENDATION. GLOBAL & FOUNDATION STABILITY SHALL BE VERIFIED BY PROJECT GEOTECHNICAL ENGINEER & SUBMITTED TO STOCK & ASSOCIATES PRIOR TO INSTALLATION. FOOTING & COMPACTION TESTING SHALL BE PERFORMED BY PROJECT GEOTECHNICAL ENGINEER.
- THE WALL PROFILE INFORMATION IS FOR CONCEPT ONLY. DETAILED SHOP DRAWINGS FOR THE PROPOSED RETAINING WALL SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI SPECIALIZING IN RETAINING WALL DESIGN. DRAWINGS SHALL BE SUBMITTED TO STOCK & ASSOCIATES FOR GENERAL COMPLIANCE WITH GRADING PLAN PRIOR TO WALL CONSTRUCTION.
- VERIFY ALTERNATE WALL SYSTEMS WITH OWNER.
- SHOP DRAWINGS & STABILITY ANALYSES (IF REQUIRED) SHALL BE SUBMITTED BY WALL DESIGNER TO CITY OF O'FALLON AND/OR ST. CHARLES COUNTY PRIOR TO WALL CONSTRUCTION.
- GEOTECHNICAL ENGINEER SHALL DESIGN RETAINING WALL IN RELATION TO LOADS AND FOOTINGS OF BUILDINGS. DEPTH OF RETAINING WALL FOOTINGS SHALL BE DESIGNED TO EXCESS NO STEEPER THAN 1:1 ZONE OF INFLUENCE TO BOTTOM OF ADJACENT SEWERS AND WATERLINES (UTILITIES).
- WALL IN EXCESS OF SIX (6) FEET IN HEIGHT (30" WHEN SUPPORTING A WALKING SURFACE THAT IS WITHIN TWO (2) FEET OF THE WALL) SHALL HAVE A FOUR (4) FOOT HIGH FENCE OR HANDRAIL ON TOP.



ISOMETRIC VIEW



SECTION "A-A"

THE ABOVE INFORMATION IS A CONCEPT ONLY. ACTUAL DESIGN OF RETAINING WALL SHALL BE BY A LICENSED PROFESSIONAL ENGINEER & SUBMITTED TO STOCK AND ASSOCIATES FOR GENERAL COMPLIANCE W/ GRADING PLAN.

WALL CONTRACTOR RESPONSIBLE FOR FINAL DESIGN OF THE WALL(S) INCLUDING FOUNDATION & GLOBAL STABILITY ANALYSIS BY A LICENSED GEOTECHNICAL ENGINEER.

ST. LOUIS COUNTY PROJ. 2008

NEW REVISIONS
7-1987 11-22-93 10-4-04 7-31-07 10-1-09

GENERAL NOTES

- Railings and posts may be either round or square, steel of good commercial weldable quality, or aluminum alloy 6061-T6 or 6063-T6.
- Castings shall conform to ASTM A27-70 for steel and ASTM B-26 or B-108 aluminum.
- Materials and fabrications shall conform to the requirements of the Saint Louis County Standard Specifications and Special Provisions.
- Steel railings, posts and castings shall be galvanized after fabrication in accordance with ASTM 123-71.
- Pipe collars shall match slope of steps.
- All joints shall be continuous weld.
- RAILING AND POST SPECIFICATIONS:
Dia. Weight Lbs. per Foot
Aluminum Steel
Round 1-1/2" 0.9400 2.72
Square 2" x 2" 1.3094 4.31
- The details shown are adapted from the Missouri Department of Transportation (MoDOT) Standard Drawings.

RAILING DETAILS (WHEN SPECIFIED ON PLANS)

STEP DIMENSIONS

SLOPE	TREAD	RISE	X	Y
1:1.2	11"	6"	11-1/16"	6"
2:1	12"	6"	10-3/8"	5-9/16"
3:1	14-1/4"	4-3/4"	9-1/2"	5-1/4"

CONCRETE QUANTITIES FOR CONCRETE STEPS

Conc. = C.Y. Steel = LB.

W	No. Steps	12" Tread 1.5:1 Slope 8" Rise													
		3	4	5	6	7	8	9	10	11	12	13	14		
2'	Conc.	0.22	0.32	0.42	0.52	0.62	0.72	0.82	0.92	1.02	1.12	1.22	1.32	1.42	
2'	Steel	10	13	16	20	24	28	30	34	38	42	46	48	52	
3'	Conc.	0.29	0.42	0.55	0.68	0.81	0.95	1.08	1.21	1.34	1.46	1.60	1.73	1.87	
3'	Steel	13	18	21	27	32	38	41	46	52	57	63	66	71	
4'	Conc.	0.38	0.52	0.68	0.85	1.01	1.17	1.33	1.49	1.66	1.82	1.98	2.14	2.31	
4'	Steel	17	27	33	41	48	52	59	66	73	80	83	90	90	
5'	Conc.	0.43	0.62	0.82	1.01	1.20	1.40	1.59	1.78	1.98	2.17	2.36	2.55	2.75	
5'	Steel	21	29	33	42	50	55	63	71	80	88	97	101	109	
6'	Conc.	0.50	0.73	0.95	1.17	1.40	1.62	1.85	2.07	2.29	2.52	2.74	2.97	3.19	
6'	Steel	24	33	39	49	59	68	74	84	94	104	114	119	128	

MANHOLE PLAN VIEW

MANHOLE SECTION VIEW

UTILITY ON EMBANKMENT SLOPE DETAIL (SEE PLAN FOR LOCATIONS) (n.t.s.)