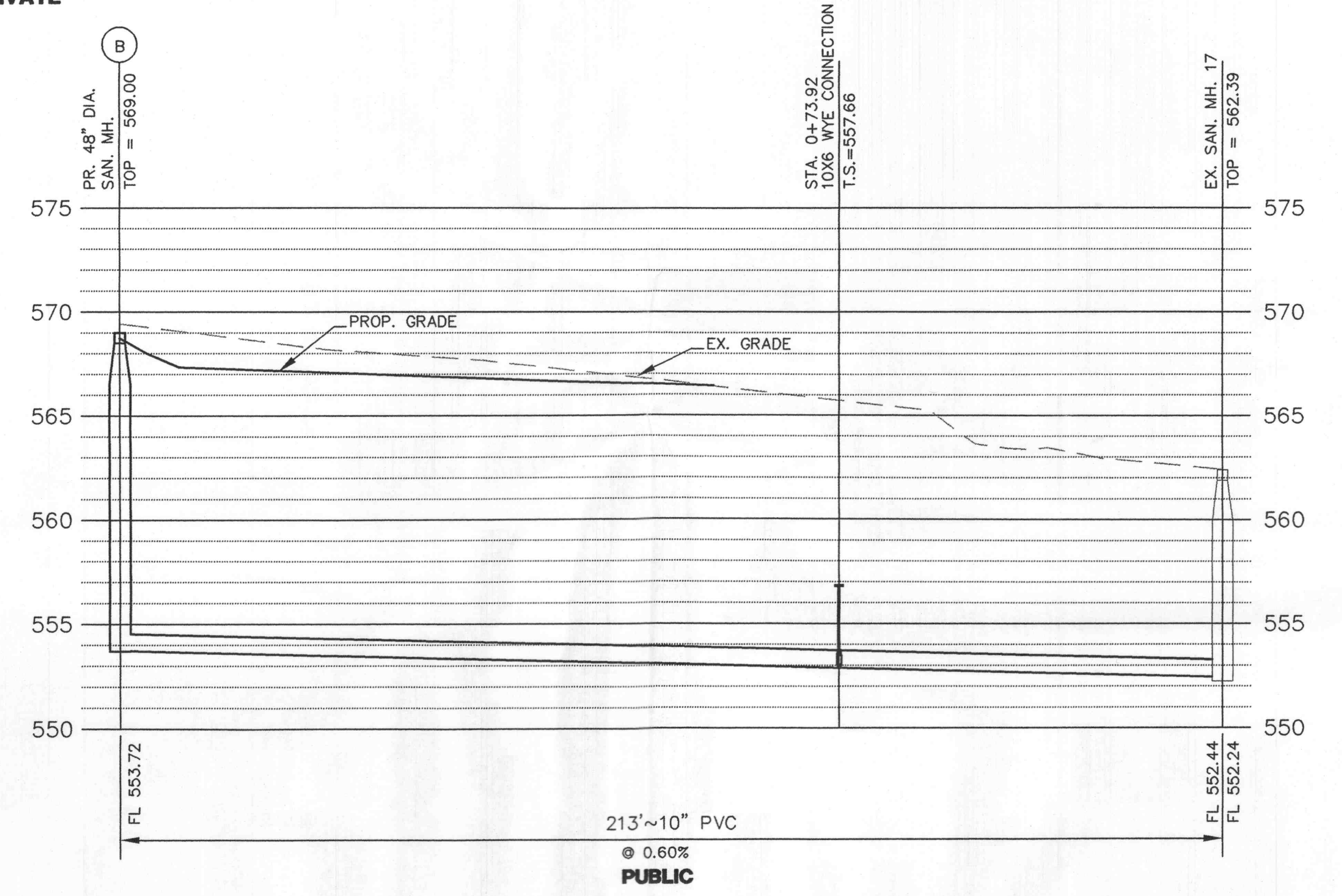
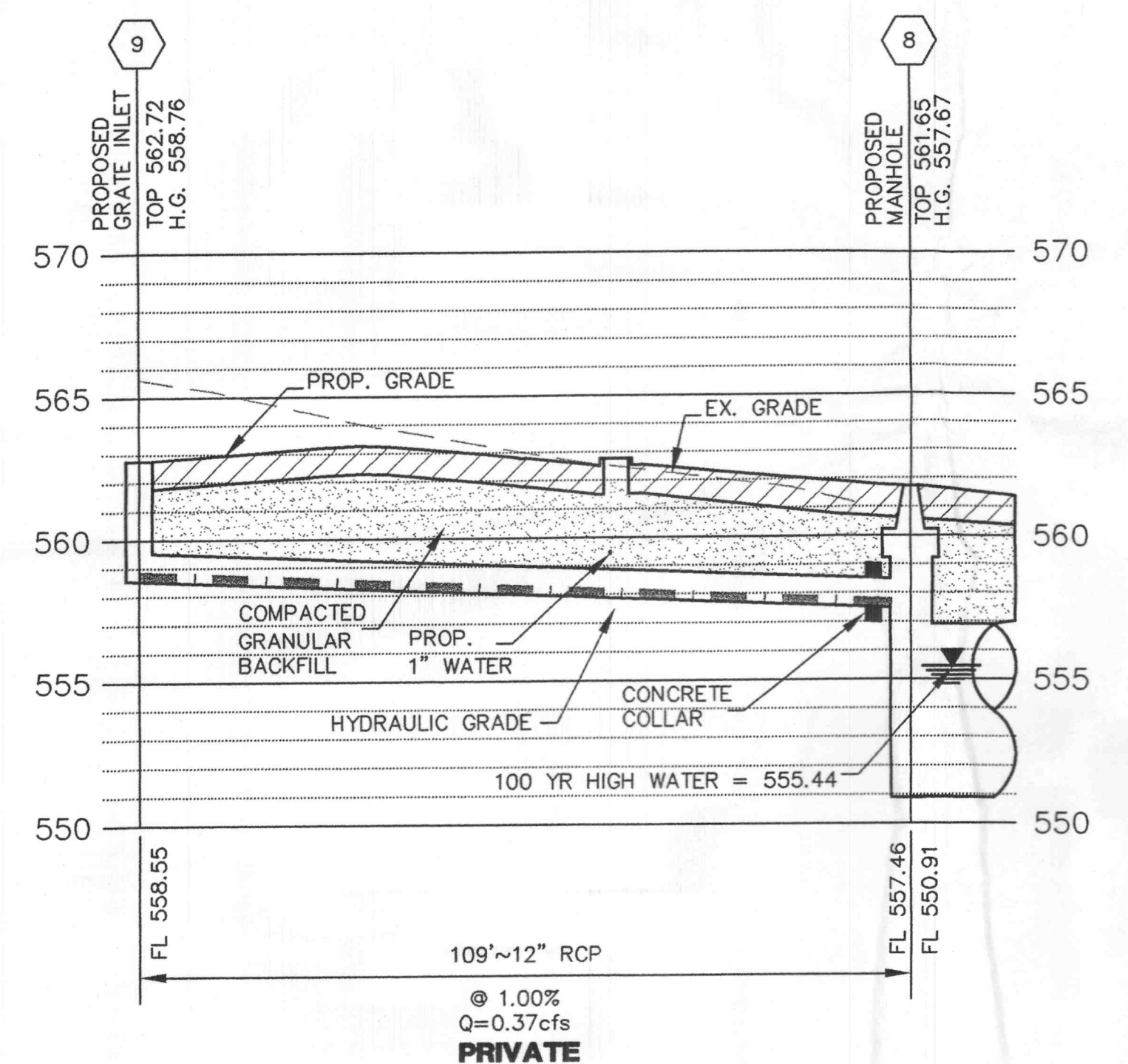
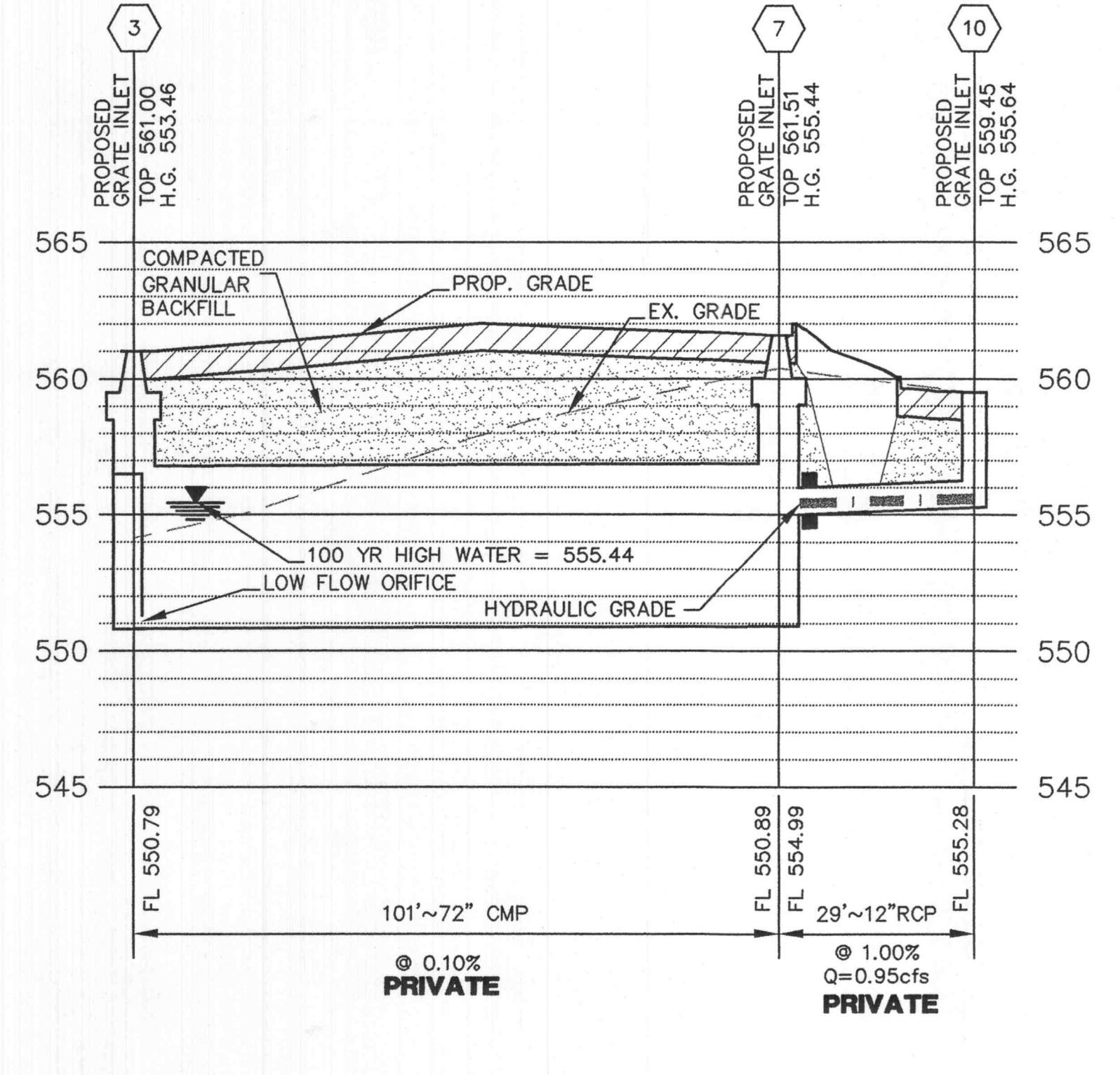
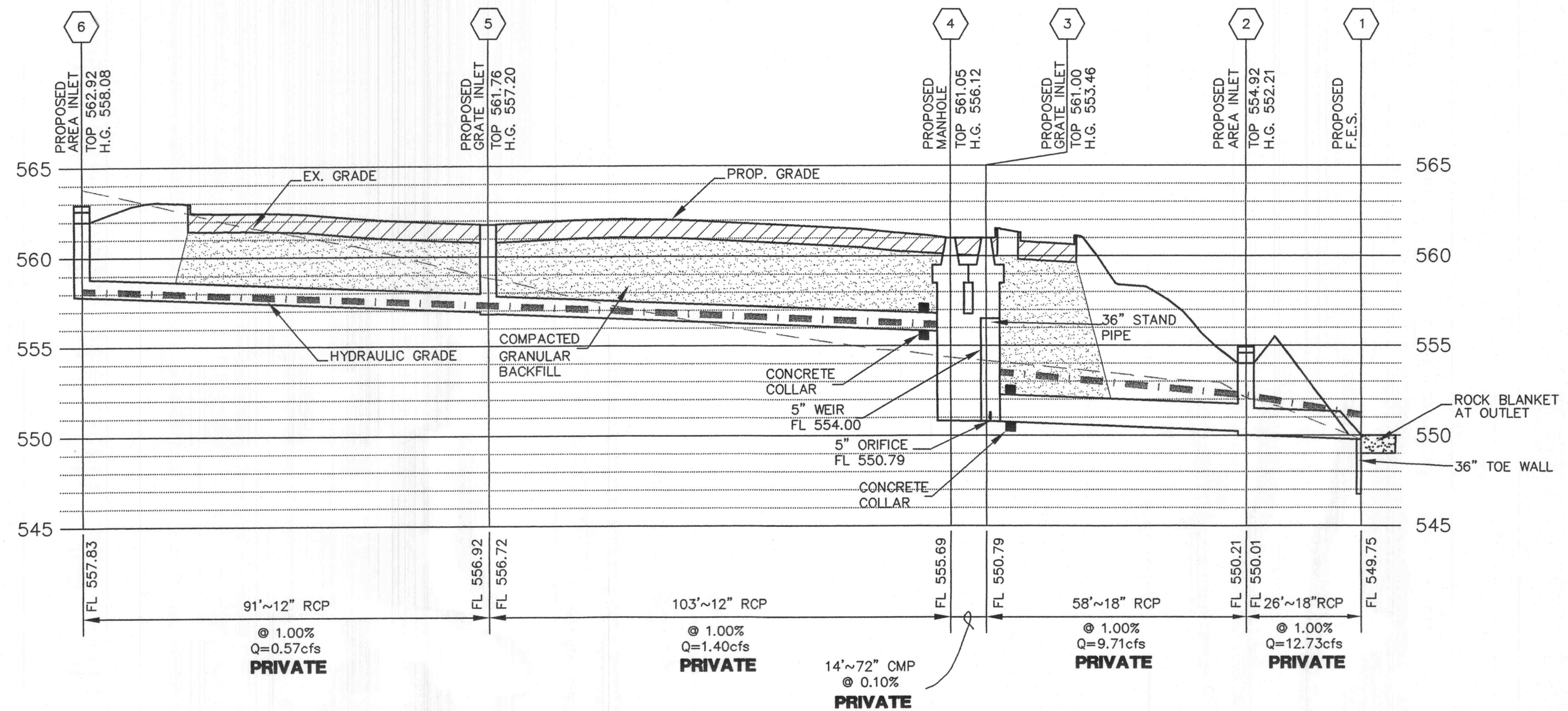


J:\1132\1132\ANS\017-PROFILES.dwg Thu Nov 20 13:21:53 2003 GRELS



J.R. GRIMES CONSULTING ENGINEERS, INC.

BANK MIDWEST

CALC. BY: G. GOLLAHER
DATE: 10/28/2003
REVISIONS:

STRUCTURE	UPR	LOWER	UPR	LENGTH FT.	GRADE ft./ft.	PIPE SIZE	"n"	Q c.f.s.	TOTAL Q	V f.p.s.	Vh ft.	PIPE LOSSES (ft.)				STRUCTURE LOSSES (ft.)				HYD. ELEV.		FREEBOARD	PIPE CAPACITY	Q/CAP.	DEPTH IN PIPE	FULL FLOW VELOCITY f.p.s.	GIVEN LOWER HYD. ELEV.
												FRICT. LOSS	CURVE LOSS	TOTAL PIPE LOSSES	JUNC. LOSS	BEND LOSS	TOTAL STRUC. LOSSES	UPPER	LOWER	ft./ft.	OPENING						
HYDRAULIC DATA 15 YEAR STORM																											
2	1	550.01	549.75	26	0.0100	18	0.013	3.02	12.73	7.20	0.81	0.38	0.00	0.38	0.67	0.00	0.67	552.21	551.16	0.01469	554.00	1.79	10.50	1.21	1.41	7.20	FES
3	2	550.79	550.21	58	0.0100	18	0.013	6.99*	9.71	6.26	0.61	0.64	0.00	0.64	0.61	0.00	0.61	553.46	552.21	0.01110	561.00	7.54	10.50	0.92	1.13	5.49	
5	4	556.72	555.69	103	0.0100	12	0.013	0.83	1.40	1.66	0.04	0.14	0.00	0.14	0.04	0.01	0.05	557.20	556.12	0.00134	561.76	4.56	3.56	0.39	0.43	1.78	555.44
6	5	557.83	556.92	91	0.0100	12	0.013	0.57	0.57	0.50	0.00	0.01	0.00	0.01	0.00	0.00	0.00	558.08	557.20	0.00012	562.00	3.92	3.56	0.16	0.25	0.73	
10	7	555.28	554.99	29	0.0100	12	0.013	0.95	0.95	1.02	0.02	0.01	0.00	0.01	0.02	0.00	0.02	555.64	555.44	0.00050	559.45	3.81	3.56	0.27	0.35	1.21	555.44
9	8	558.55	557.46	109	0.0100	12	0.013	0.37	0.37	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	558.76	557.67	0.00004	562.72	3.96	3.56	0.10	0.21	0.47	555.44

* = Q FROM 100 YR STORM

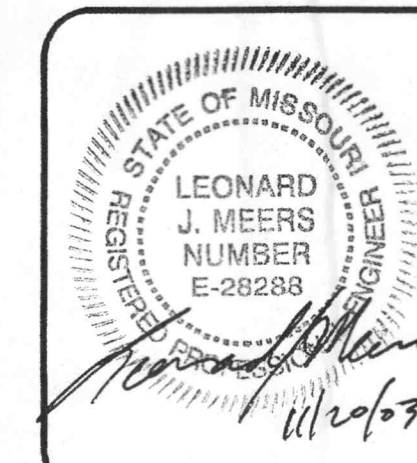
PREPARED FOR:
AEDIS, INC.
6317 CLAYTON ROAD
CLAYTON, MO 63117
PH: (314) 862-1101
FAX: (314) 862-8001

5 VERT.
20 HORIZ.
SCALE:

PLANNING & ZONING #: 4703

11/20/03 PER CITY COMMENTS

J. R. GRIMES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. J. R. GRIMES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.



BANK MIDWEST SEWER PROFILES

J. R. GRIMES CONSULTING ENGINEERS, INC.

12300 OLD TESSON ROAD
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FAX (314) 849-6010
E-MAIL: jrgeng@attlink.com

DRAWN BY: GJG DATE: 10/28/03 CHECKED BY: LJM DATE: 10/28/03 JOB NUMBER: 1132 SHEET: C7