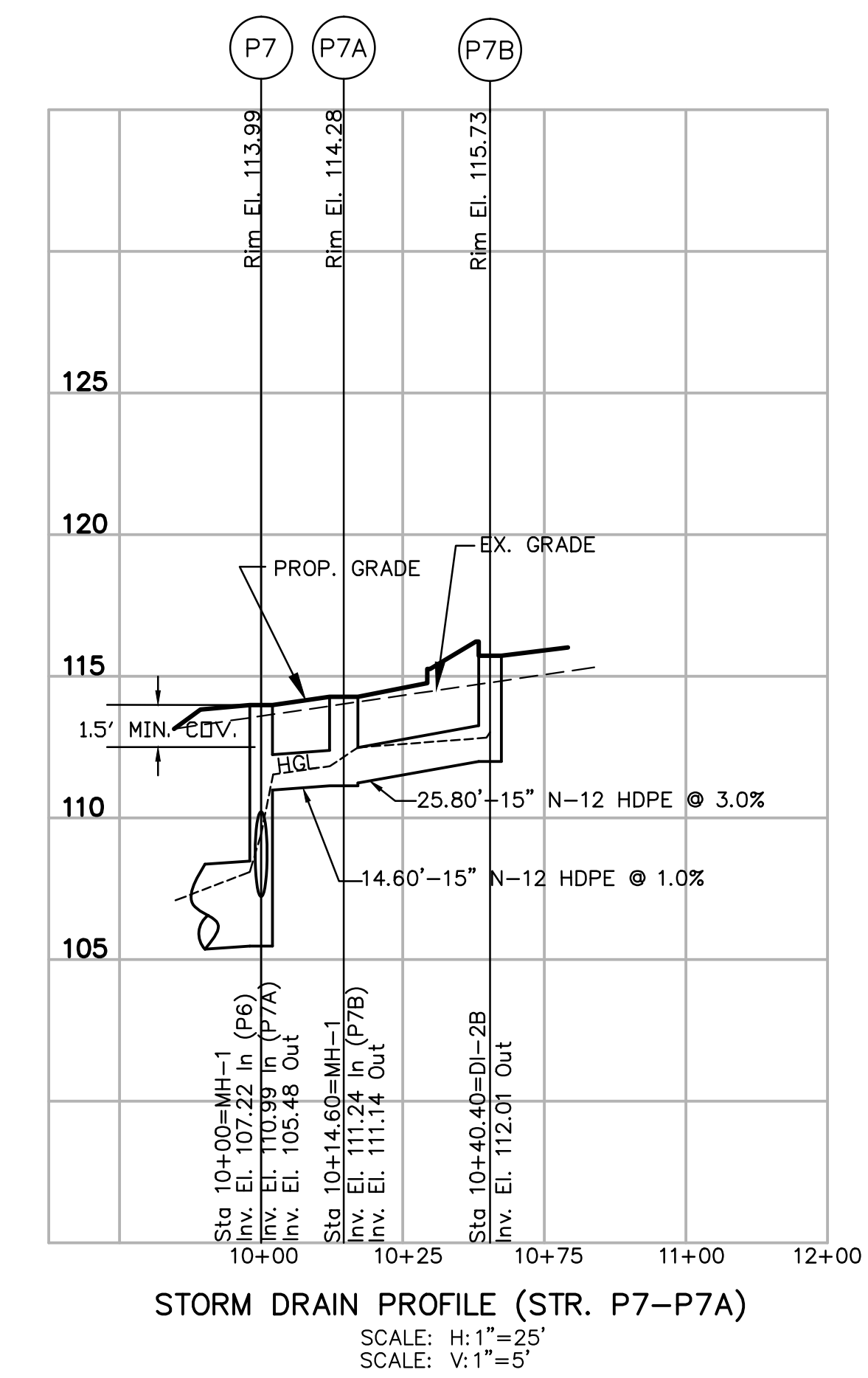


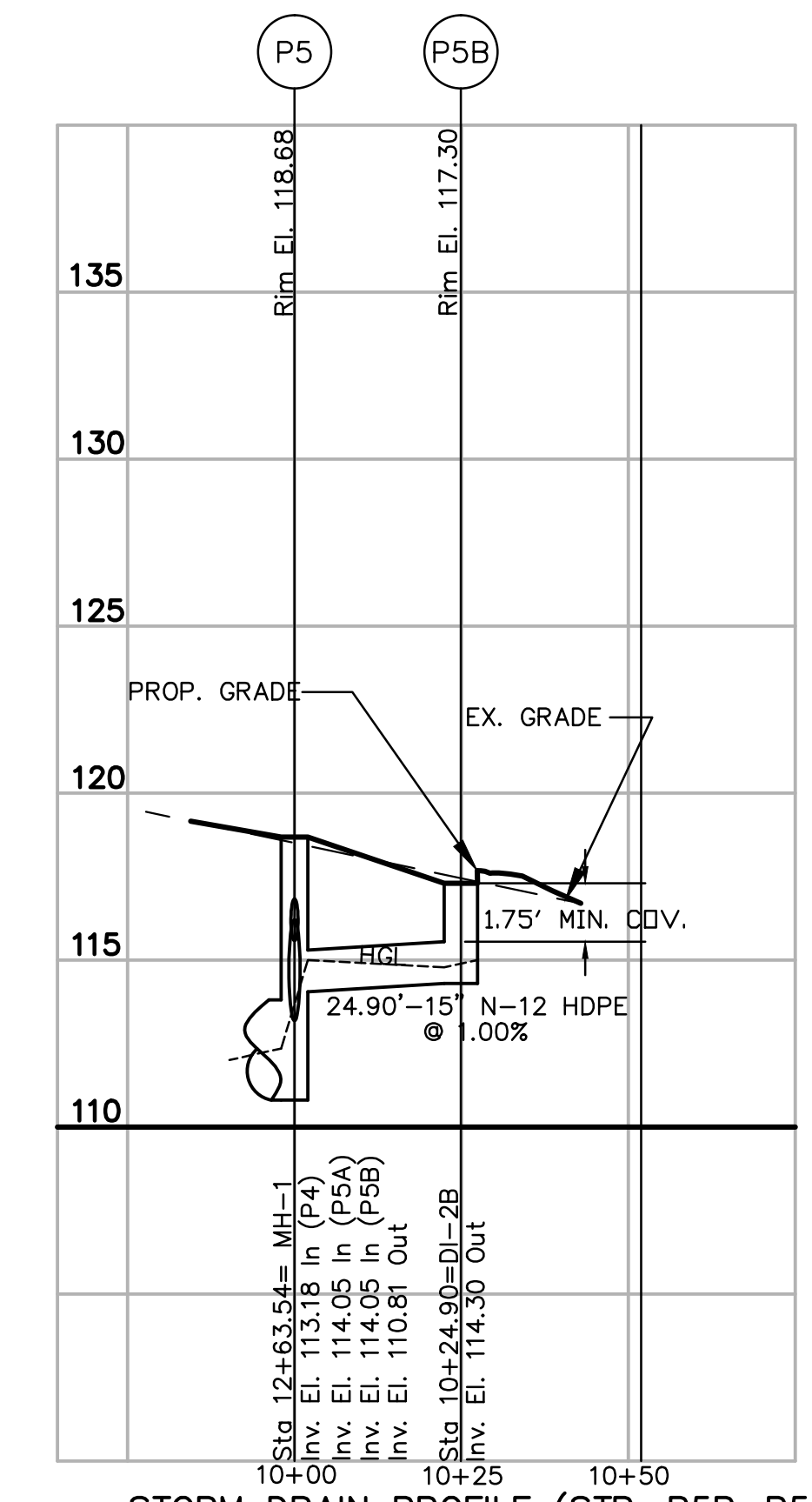
JUNCTION LOSS COMPUTATIONS																	INLET WATER SURFACE ELEV.		RIM ELEV.			
INLET NO.	OUTLET WS	Do	Qo	Lo	Sf %	Hf	Vo	Ho	Qi	Vi	QVI	Vi ² /2g	Hi	ANGLE	K	Hd	Ht	1.30 Ht	0.50 Ht	FINAL H	SURFACE ELEV.	RIM ELEV.
P1	SURFACE	18	9.49	0	9	0	5.37	0.11	9.49	5.37	50.96	0.45	0.16	90	0.70	0.31	0.58	---	0.29	0.29	131.37	148.00
P2	121.00	48	9.49	85.66	0.5	0.4283	0.76	0.00	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.00	---	0.00	0.43	121.43	126.86
P3	121.43	48	17.76	92	0.5	0.46	1.41	0.01	8.27	0.66	5.44	0.01	0.00	90	0.70	0.00	0.01	---	0.01	0.47	121.90	125.24
P4	115.60	36	22.61	100	0.5	0.5	3.20	0.04	4.85	0.39	1.87	0.00	0.00	90	0.70	0.00	0.04	---	0.02	0.52	116.12	121.52
P5	113.78	48	25.68	238	0.5	1.19	2.04	0.02	3.07	0.43	1.33	0.00	0.00	90	0.70	0.00	0.02	---	0.01	1.20	114.98	118.68
P6	111.93	36	25.68	72	0.5	0.36	3.63	0.05	0.00	0.00	0.00	0.00	0.00	45	0.43	0.00	0.05	---	0.03	0.39	112.32	116.83
P7	109.09	36	26.23	65	0.5	0.325	3.71	0.05	0.55	0.08	0.04	0.00	0.00	90	0.70	0.00	0.05	---	0.03	0.35	109.44	113.99
P8	106.83	36	27.41	75	0.5	0.375	3.88	0.06	1.18	0.17	0.20	0.00	0.00	90	0.70	0.00	0.06	---	0.03	0.40	107.23	111.73
EX6	106.15	36	51.7	16.7	1.1	0.1837	7.31	0.21	27.41	0.00	0.00	0.00	0.00	90	0.70	0.00	0.21	---	0.10	0.29	106.44	111.05
EX5	103.94	36	51.7	83.8	1.1	0.9218	7.31	0.21	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.21	---	0.10	1.03	104.97	106.34
EX4	102.60	36	54.86	19.66	3.46	0.68024	7.76	0.23	3.16	0.00	0.00	0.00	0.00	90	0.70	0.00	0.23	---	0.12	0.80	103.40	106.03
EX3	101.92	36	54.86	30.6	0.05	0.0153	7.76	0.23	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.23	---	0.12	0.13	102.05	104.32
P3E	119.00	15	4.31	44.5	0.75	0.33375	3.51	0.05	4.31	0.00	0.00	0.00	0.00	45	0.43	0.00	0.05	---	0.02	0.36	119.36	122.00
P3C	119.36	15	6.83	15.4	0.75	0.1155	5.57	0.12	2.53	0.00	0.00	0.00	0.00	90	0.70	0.00	0.12	---	0.06	0.18	119.54	123.79
P3D	119.54	15	6.83	26.6	1.5	0.399	5.57	0.12	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.12	---	0.06	0.46	119.99	124.16
P3A	119.99	15	1.44	15.1	0.5	0.0755	1.17	0.01	1.44	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.08	120.07	129.02
P3B	120.07	15	1.44	99.6	0.5	0.498	1.17	0.01	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.50	120.57	128.38
P4A	122.33	15	1.24	63	0.5	0.315	1.01	0.00	1.24	0.00	0.00	0.00	0.00	90	0.70	0.00	0.00	---	0.00	0.32	122.65	125.33
P4C	113.07	15	1.78	43	2	0.86	1.45	0.01	1.78	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.86	113.93	119.07
P4B	113.93	15	5.39	32.2	1	0.322	4.39	0.07	3.61	0.00	0.00	0.00	0.00	90	0.70	0.00	0.07	---	0.04	0.36	114.29	121.11
P5A	114.50	15	1.41	32	3.41	1.0912	1.15	0.01	1.41	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	1.09	115.59	120.25
P5B	114.55	15	1.65	44	1	0.44	1.34	0.01	1.65	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.44	114.99	117.30
P7B	112.26	15	0.55	25.8	3	0.774	0.45	0.00	0.55	0.00	0.00	0.00	0.00	90	0.70	0.00	0.00	---	0.00	0.77	113.03	115.73
P7A	113.03	15	0.55	13.1	1	0.131	0.45	0.00	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.00	---	0.00	0.13	113.17	114.28
P8A	110.24	15	1.18	33	1.98	0.6534	0.96	0.00	1.18	0.00	0.00	0.00	0.00	90	0.70	0.00	0.00	---	0.00	0.66	110.90	112.99
EX12	110.61	18	7.71	36.4	3.27	1.19028	4.36	0.07	2.29	0.00	0.00	0.00	0.00	90	0.70	0.00	0.07	---	0.04	1.23	111.84	113.36
EX11	111.84	18	7.71	84.9	1.59	1.34991	4.36	0.07	0.00	0.00	0.00	0.00	0.00	90	0.70	0.00	0.07	---	0.04	1.39	113.23	115.53
EX10	110.08	24	9.61	159	1.17	1.8603	3.06	0.04	1.90	0.00	0.00	0.00	0.00	90	0.70	0.00	0.04	---	0.02	1.88	111.96	113.28
EX8	105.86	30	22.7	43.2	1.79	0.77328	4.62	0.08	13.09	0.00	0.00	0.00	0.00	90	0.70	0.00	0.08	---	0.04	0.81	106.67	109.36
EX7	104.51	36	24.29	42.5	1.03	0.43775	3.44	0.05	1.59	0.00	0.00	0.00	0.00	90	0.70	0.00	0.05	---	0.02	0.46	104.97	108.91
EX6	103.94	36	51.7	83.8	1.1	0.9218	7.31	0.21	27.41	0.00	0.00	0.00	0.00	90	0.70	0.00	0.21	---	0.10	1.03	104.97	111.05
EX16	107.60	15	3.56	17.1	0.29	0.04959	2.90	0.03	3.56	0.00	0.00	0.00	0.00	90	0.70	0.00	0.03	---	0.02	0.07	107.67	108.95
P9	107.67	15	3.56	63.5	0.28	0.1778	2.90	0.03	3.56	0.00	0.00	0.00	0.00	90	0.70	0.00	0.03	---	0.02	0.19	107.86	110.79
P10	107.86	15	3.56	185.8	0.27	0.50166	2.90	0.03	3.56	0.00	0.00	0.00	0.00	90	0.70	0.00	0.03	---	0.02	0.52	108.38	111.86
P11	108.38	15	3.56	90.1	0.34	0.30634	2.90	0.03	3.56	0.00	0.00	0.00	0.00	90	0.70	0.00	0.03	---	0.02	0.32	108.70	112.33
P12	108.38	15	3.56	35.1	1.2	0.4212	2.90	0.03	3.56	0.00	0.00	0.00	0.00	90	0.70	0.00	0.03	---	0.02	0.44	108.82	111.46
EX9	106.22	24	5.21	38.12	1.2	0.45744	1.66	0.01	5.21	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.01	0.46	106.68	109.36
P13	110.92	15	1.65	18.3	0.5	0.0915	1.34	0.01	1.65	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.10	111.02	112.82
P14	107.43	15	1.65	9.2	1.09	0.10028	1.34	0.01	1.65	0.00	0.00	0.00	0.00	90	0.70	0.00	0.01	---	0.00	0.10	107.53	114.27

$VI^2 = 0.35$ $Vo^2 = 0.25$ $VI^2 = 0.35$
 $2g$ $2g$ $2g$
 $60 K=0.55$ $25 K=0.22$

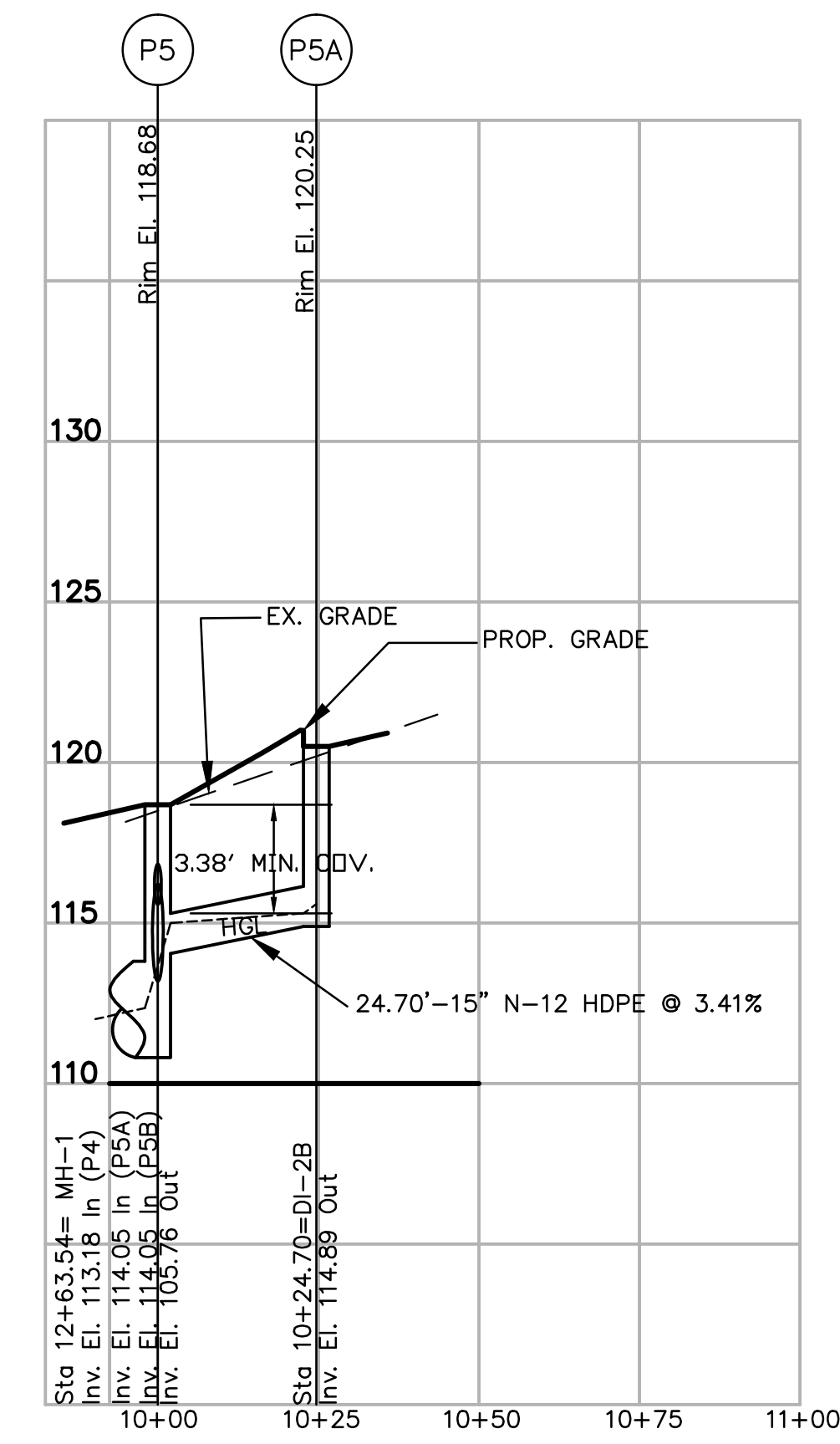
$H = K \cdot V^2$ $Ht = Ho + Hi + H$ $80 K=0.66$ $40 K=0.38$ $15 K=0.10$ $50 K=0.47$ $20 K=0.16$ $70 K=0.61$ $30 K=0.28$



STORM DRAIN PROFILE (STR. P7-P7A)
SCALE: H: 1"=25'
SCALE: V: 1"=5'



STORM DRAIN PROFILE (STR. P5B-P5)
SCALE: H: 1"=25'
SCALE: V: 1"=5'



STORM DRAIN PROFILE (STR. P5A-P5)
SCALE: H: 1"=25'
SCALE: V: 1"=5'

PA PHELPS

ENGINEERS - PLANNERS - CONSULTANTS

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STORM HYDRAULIC GRADE COMPUTATIONS

ST. FRANCIS OF ASSISI PARISH PARKING ADDITION

DUMPHRIES MAGISTERIAL DISTRICT PRINCE WILLIAM COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA

ANTHONY MORSE
No. 12316

PROFESSIONAL ENGINEER

PLAN STATUS		
5/30/10	1st Final Subm.	
DATE	DESCRIPTION	
PAP DESIGN	PAP DRAWN	ACM CHKD
SCALE	NA	NA
JOB No. 2010-00-PWC01		
DATE : OCTOBER, 2010		
FILE No. PPI2010-01249		
SHEET C-4.06A		

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