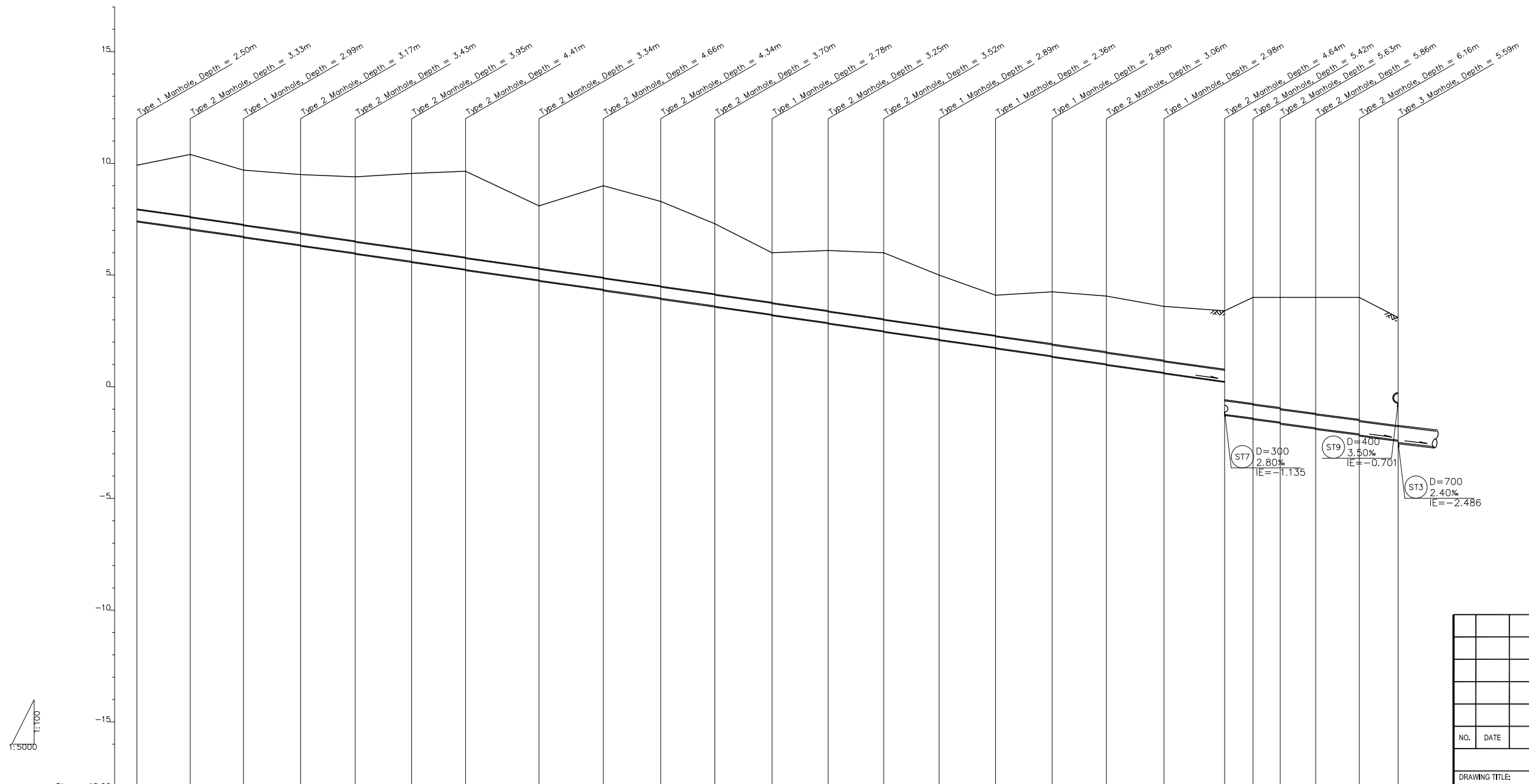


PROFILE

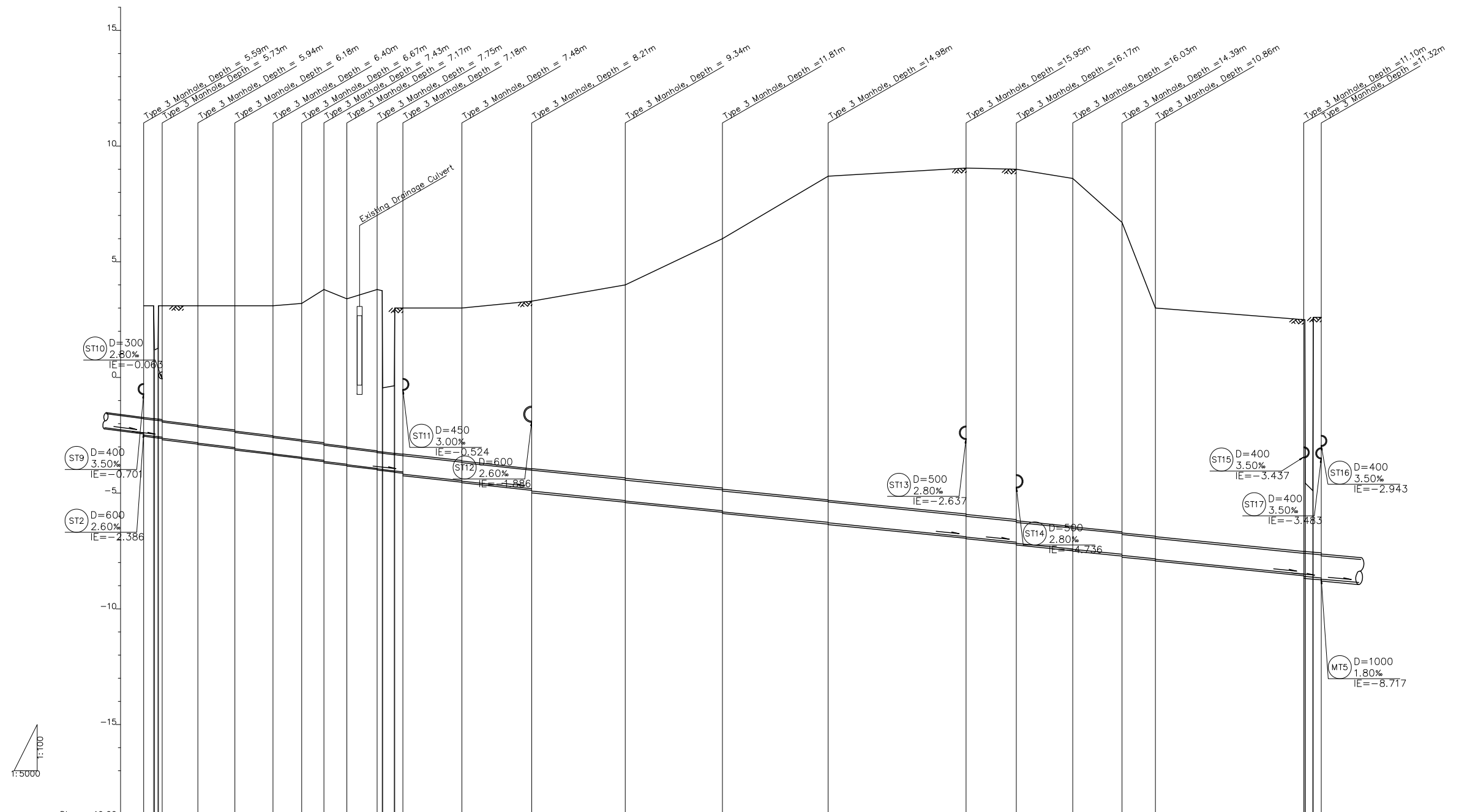
LONGITUDINAL PROFILE OF SEWER (1)



Line Number	(ST1)																								(ST2)	
Diameter (m)	φ500																								φ600	
Gradient (%)	2.80																								2.60	
Length (m)	2434.38																								388.86	
Ground Elevation (m)	9.92	10.40	9.70	9.90	9.40	9.55	9.65	8.10	9.00	8.30	7.30	6.00	6.10	6.00	5.00	4.10	4.25	4.06	3.60	3.40	4.00	4.00	4.00	4.00	3.10	
Earth Covering (m)	1.96	2.79	2.45	2.62	2.87	3.41	3.85	2.86	4.12	3.88	3.16	2.24	2.69	2.98	2.35	1.82	2.34	2.49	2.44	3.66	4.77	4.98	5.21	5.46	4.84	
Invert Elevation (m)	7.420	7.986	6.732	6.354	5.991	5.617	5.240	4.780	4.357	3.926	3.617	3.239	2.868	2.499	2.112	1.758	1.384	1.024	0.643	0.245	-1.421	-1.529	-1.856	-2.109	-2.386	
Total Length (m)	0.00	119.27	238.51	366.38	488.72	615.00	735.39	899.85	1043.80	1172.56	1293.64	1421.63	1546.94	1671.57	1795.62	1921.89	2048.41	2170.00	2298.81	2434.38	2498.15	2558.94	2638.44	2735.85	2823.24	

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (1) (ST1-ST2)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

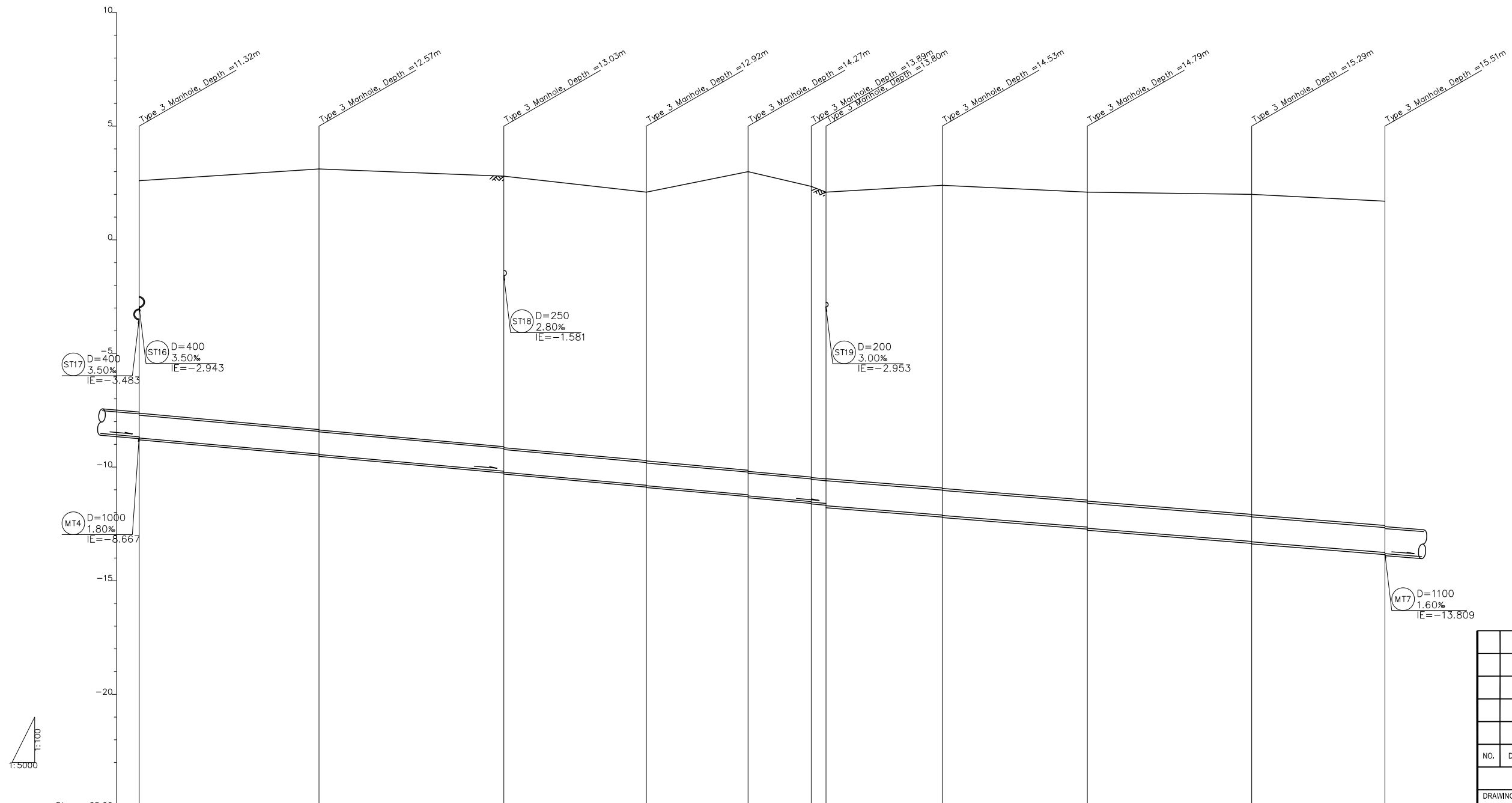
LONGITUDINAL PROFILE OF SEWER (2)



Line Number	(ST3)	(ST4)	(ST5)	(MT1)	(MT2)	(MT3)	(MT4)
Diameter (m)	φ700		φ800	φ900			φ1000
Gradient (%)	2.40	2.40	2.20	2.00	2.00	2.00	1.80
Length (m)	40.04	520.01	278.45	938.52	108.33	621.07	38.29
Ground Elevation (m)	3.10 3.10 3.10	3.10 3.10 3.10	3.20 3.80 3.40	3.30 4.00 6.00 8.70	9.05 9.00 8.60 6.70	3.00	4.80 4.80
Earth Covering (m)	4.83 4.83 4.83	5.16 5.32 5.62	5.99 6.62 6.79	6.97 8.36 10.83	14.98 15.19 15.06 13.42	9.88	10.08 10.19
Invert Elevation (m)	-2.486 -2.486 -2.486	-2.817 -3.079 -3.276	-3.446 -3.581 -3.770	-3.926 -5.317 -5.268	-7.117 -7.431 -7.431 -7.694	-7.837	-8.683 -8.683
Total Length (m)	2823.21 2823.21 2823.21	2940.37 2940.37 2940.37	3020.29 3020.29 3020.29	3102.53 3164.93 3212.86 3262.41 3327.51 3366.65 3366.65 3383.29	3510.57 3661.74 3863.67	4073.97 4302.18 4600.26	4708.59 4830.82 4937.36 5009.04

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (2) (ST3-ST-5, MT1-MT4)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (3)



Line Number	MT5	MT6	MT7
Diameter (m)	ø1000		
Gradient (%)	1.80		
Length (m)	802.80	709.56	1231.06
Ground Elevation (m)	2.80	3.12	2.80
Earth Covering (m)	10.24	11.47	11.95
Invert Elevation (m)	-8.717	-8.429	-10.331
Total Length (m)	5367.95	6484.84	6708.74

NO.	DATE	DESCRIPTIONS	APPD. BY

REVISIONS

DRAWING TITLE:
**LONGITUDINAL PROFILE OF SEWER (3)
(MT5-MT7)**

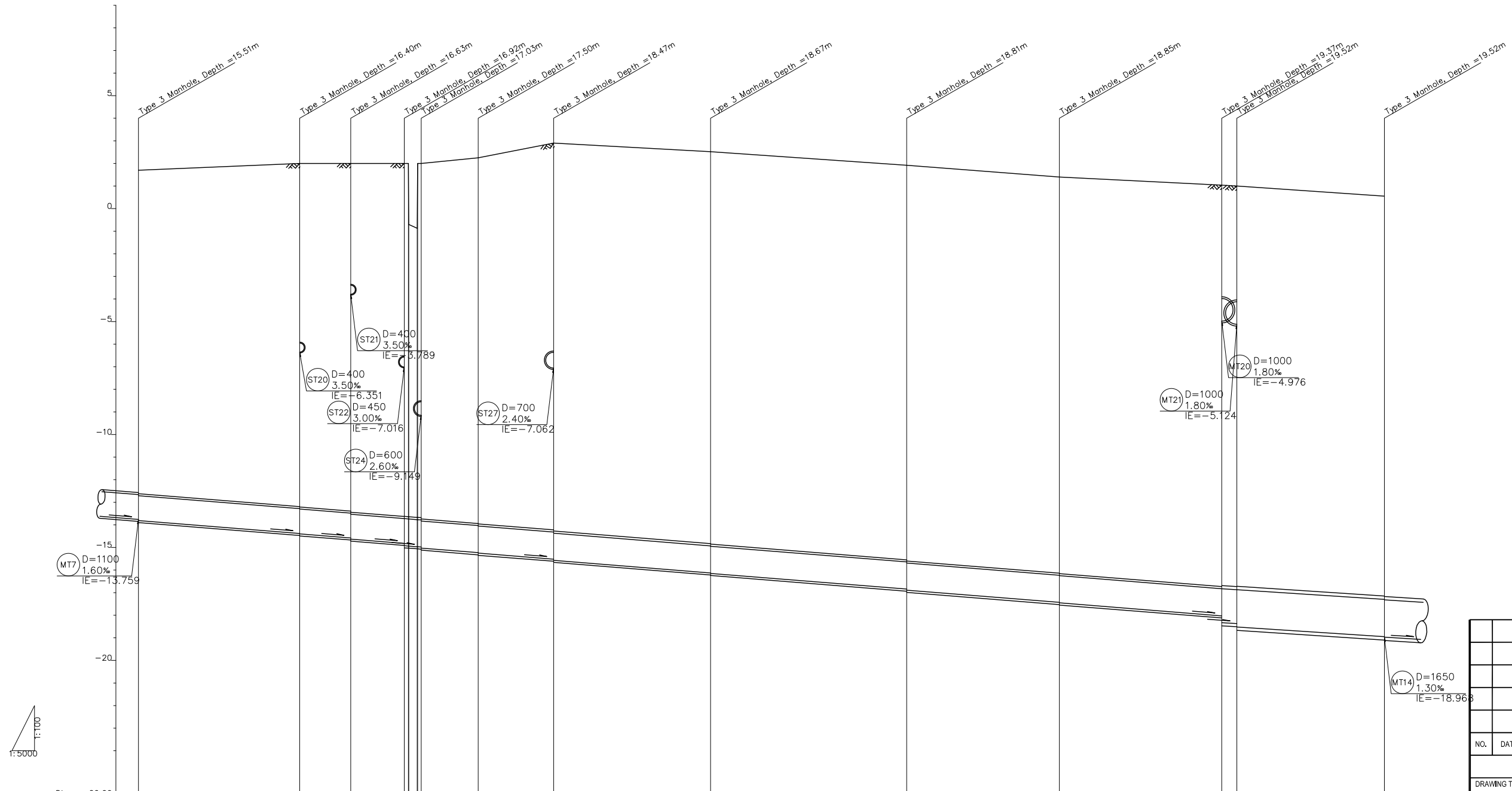
SCALE:	A1	H=1/5000, V=1/1100	UNITS:
	A3	H=1/10000, V=1/200	

PROJECT:
PREPARATORY SURVEY FOR
PPP INFRASTRUCTURE PROJECT
SEWAGE TREATMENT PLANT PROJECT
IN DKI JAKARTA

DESIGNED BY	DATE	SIGNATURE
DRAWN BY		
CHECKED BY		
APPROVED BY:		

DRAWING NO.:	REV.

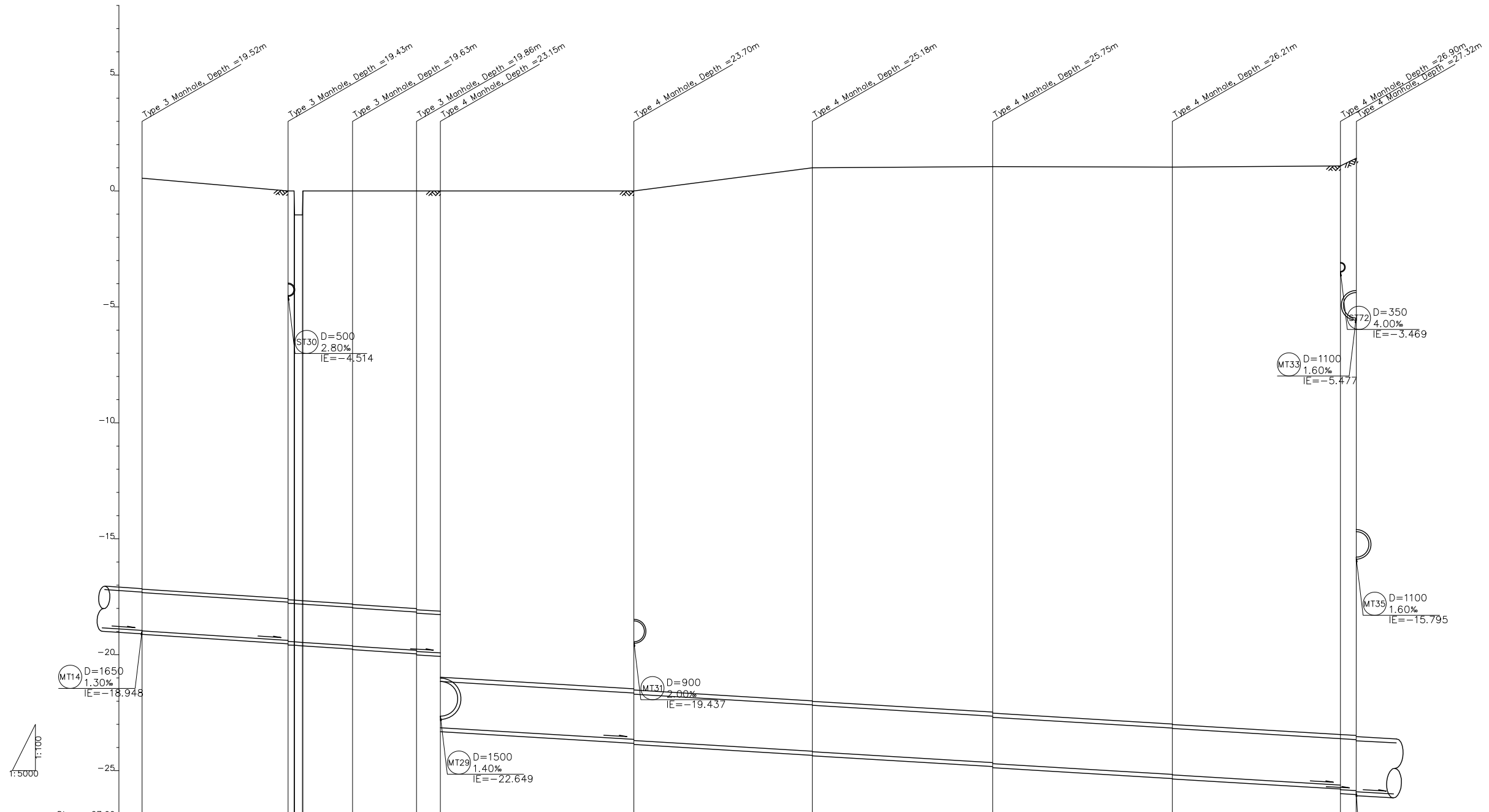
LONGITUDINAL PROFILE OF SEWER (4)



Line Number	MT7	MT8	MT9	MT10	MT11	MT12	MT13	MT14						
Diameter (m)	φ1100				φ1200		φ1500	φ1650						
Gradient (%)	1.60	1.60	1.60	1.60	1.60	1.60	1.40	1.30						
Length (m)	357.10	113.04	118.29	37.32	293.45	1478.74	33.47	326.66						
Ground Elevation (m)	1.70	2.00	2.00	2.00	2.25	2.90	2.52	1.92	1.40	1.04	1.00	0.55		
Earth Covering (m)	14.32	15.21	15.32	15.67	16.21	17.18	17.35	17.52	17.54	17.73	17.72	17.70		
Invert Elevation (m)	-13.809	-14.380	-14.591	-14.822	-15.232	-15.570	-16.126	-16.841	-17.431	-18.026	-18.523	-18.948		
Total Length (m)	8111.37	8468.47	8681.51	8898.89	9292.34	9585.79	8863.19	9030.57	9377.80	9811.99	10149.64	10508.31	10542.78	10669.44

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (4) (MT7-MT14)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (5)



Line Number	MT14	MT15	MT16	MT17	MT18	MT19
Diameter (m)	φ1650			φ2000		φ2200
Gradient (%)	1.30	1.30	1.20	1.20	1.10	1.10
Length (m)	314.96	328.75	417.25	1524.15	34.14	34.14
Ground Elevation (m)	0.55	0.00	0.00	0.00	1.00	1.05
Earth Covering (m)	17.72	17.69	17.65	21.55	23.52	24.02
Invert Elevation (m)	-18.966	-18.772	-18.807	-23.560	-24.182	-25.164
Total Length (m)	10869.44	11184.40	11461.58	11930.40	12315.22	12704.29

NO.	DATE	DESCRIPTIONS	APPD. BY

REVISIONS

DRAWING TITLE:
**LONGITUDINAL PROFILE OF SEWER (5)
 (MT14-MT18)**

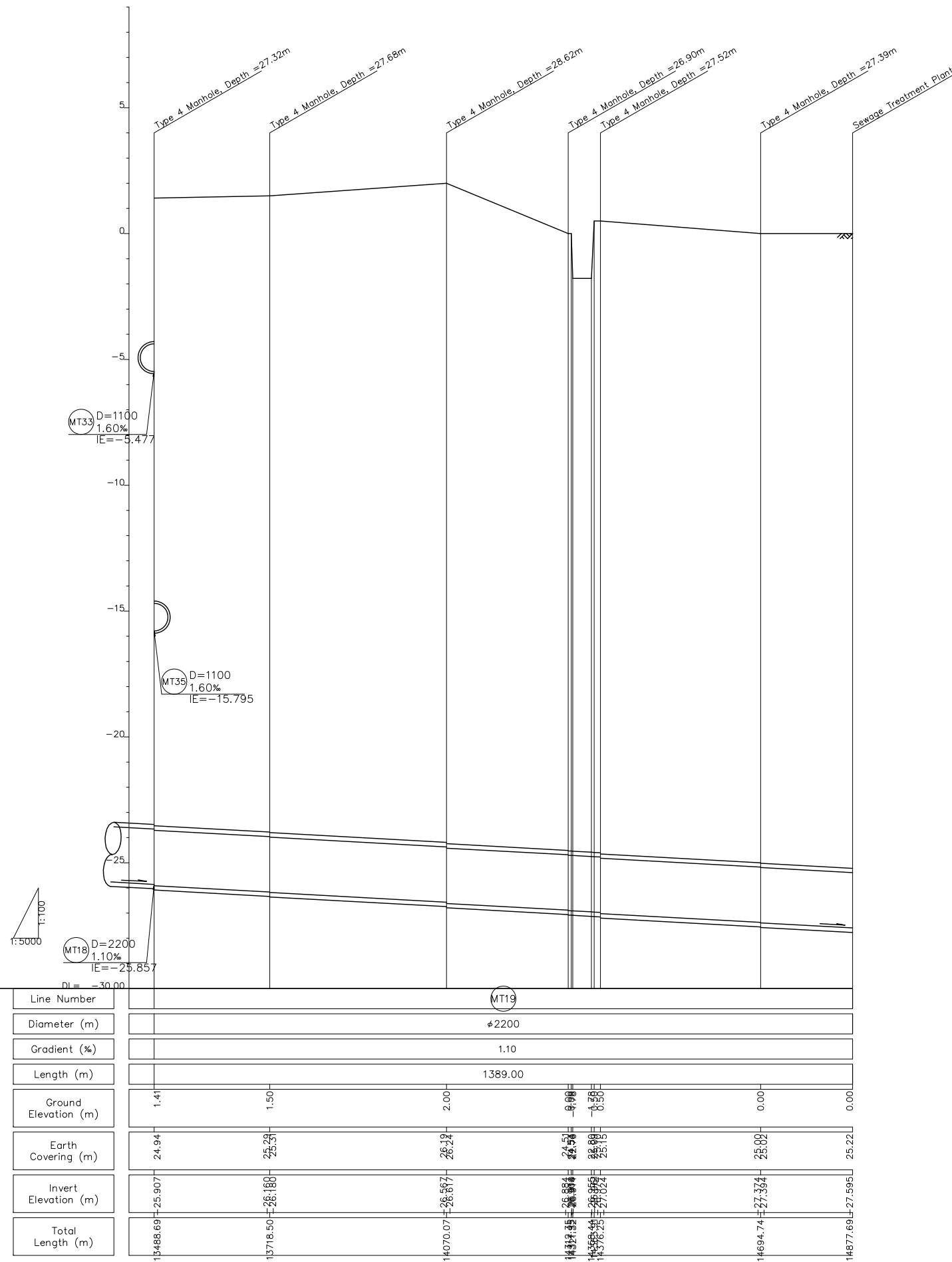
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PROJECT:
 PREPARATORY SURVEY FOR
 PPP INFRASTRUCTURE PROJECT
 SEWAGE TREATMENT PLANT PROJECT
 IN DKI JAKARTA

DESIGNED BY	DATE	SIGNATURE
DRAWN BY		
CHECKED BY		
APPROVED BY:		

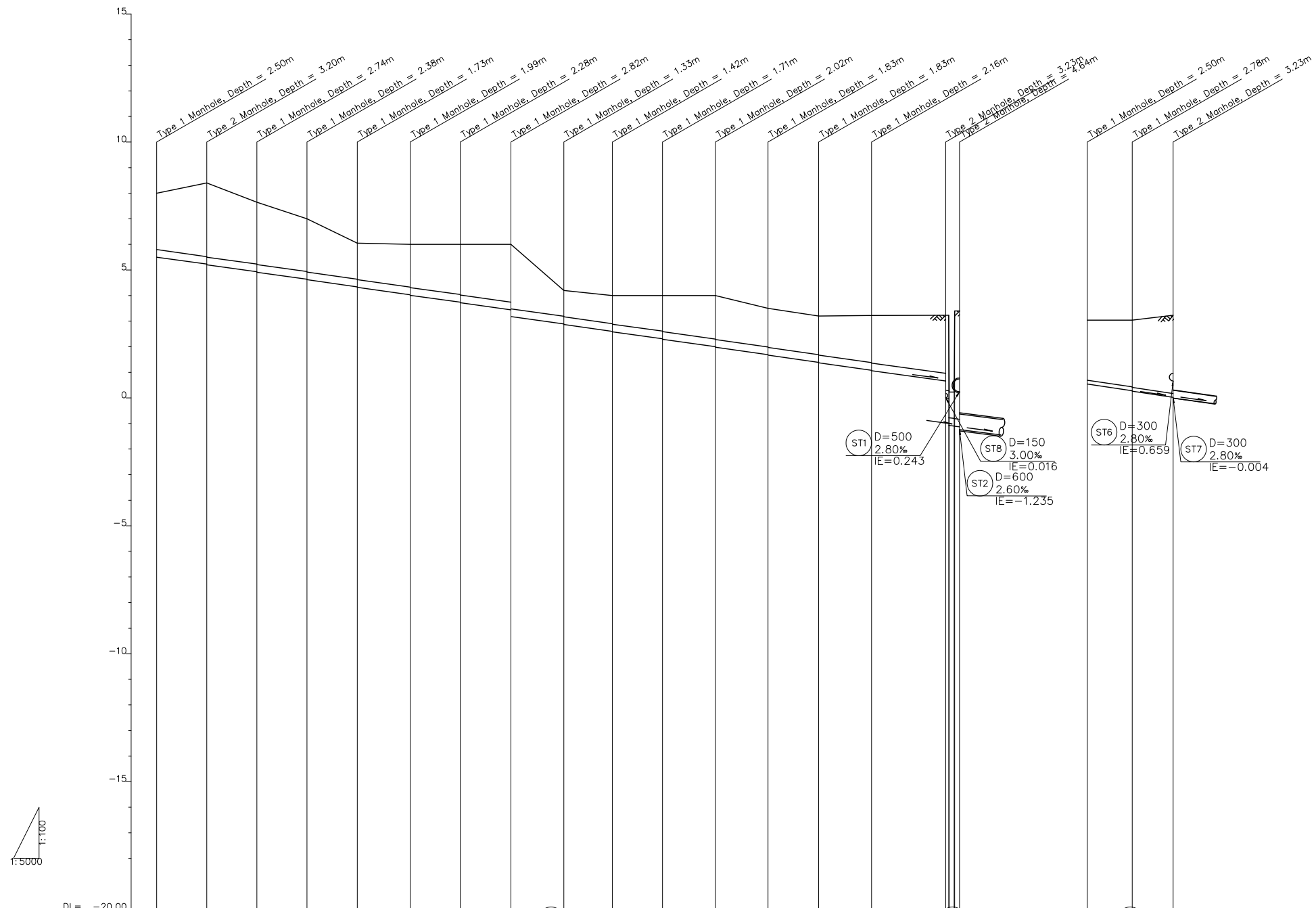
DRAWING NO.: _____ REV. _____

LONGITUDINAL PROFILE OF SEWER (6)



NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (6) (MT19)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

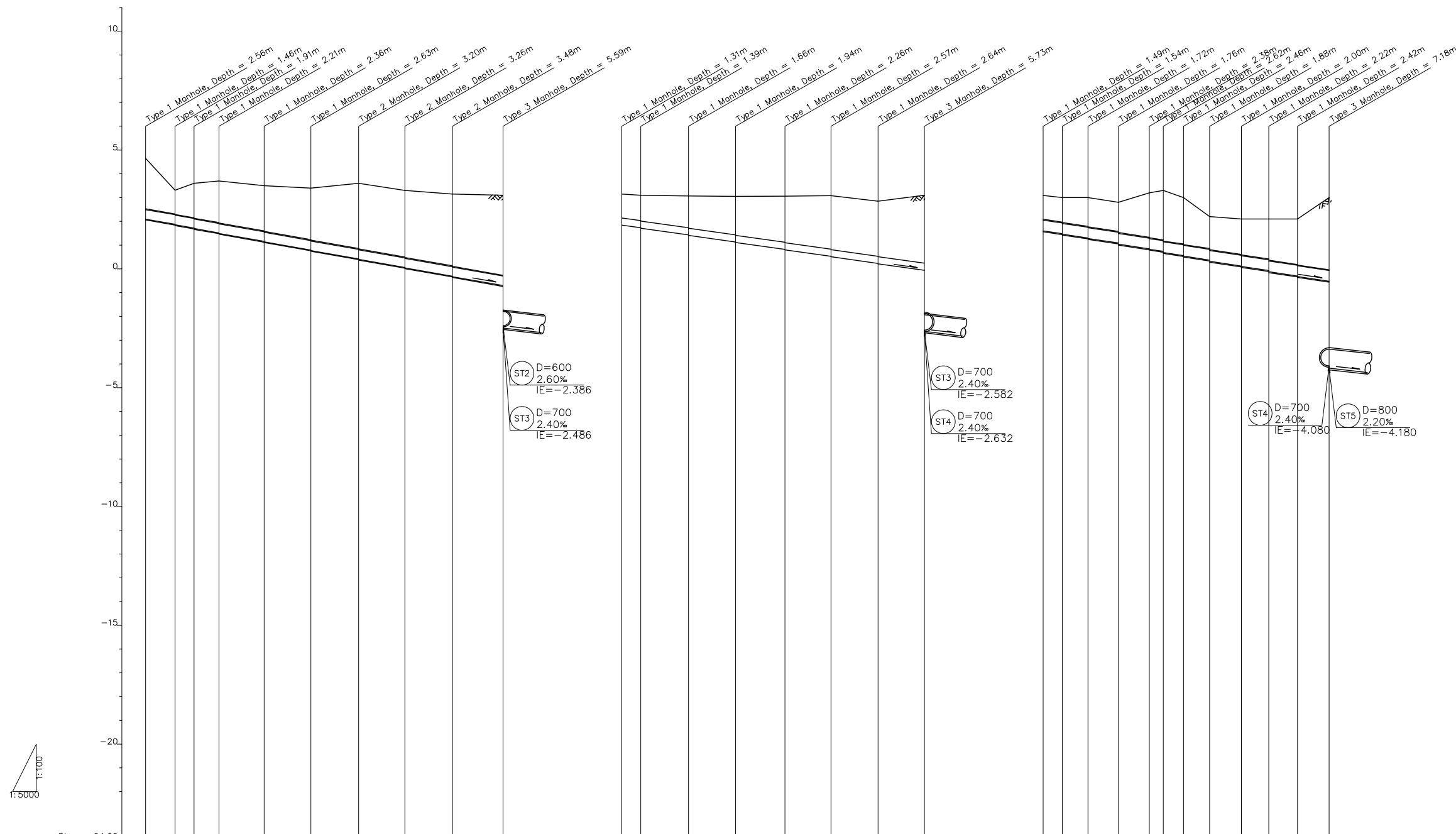
LONGITUDINAL PROFILE OF SEWER (7)



Line Number	ST6															ST7	ST8			
Diameter (m)	ø 300																ø 150			
Gradient (%)	2.80															2.80	3.00			
Length (m)	1543.39															27.34	167.90			
Ground Elevation (m)	8.00	8.40	7.65	7.00	6.05	6.00	6.00	6.00	6.00	4.20	4.00	4.00	4.00	3.50	3.20	3.22	3.23	3.04	3.04	3.23
Earth Covering (m)	2.19	2.87	2.73	2.05	1.42	1.68	1.95	2.25	1.02	1.19	1.38	1.59	1.52	1.52	1.83	0.06	2.35	2.63	3.06	
Invert Elevation (m)	5.500	5.225	4.972	4.637	4.341	4.071	3.778	3.180	2.891	2.605	2.231	2.980	1.692	1.394	1.084	0.659	0.540	0.256	0.016	
Total Length (m)	0.00	98.24	195.86	294.13	392.70	496.20	593.77	693.19	796.34	891.39	989.30	1093.15	1195.95	1295.20	1398.60	1543.39	1641.73	1809.63	1877.90	

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (7) (ST6-ST7, ST8)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

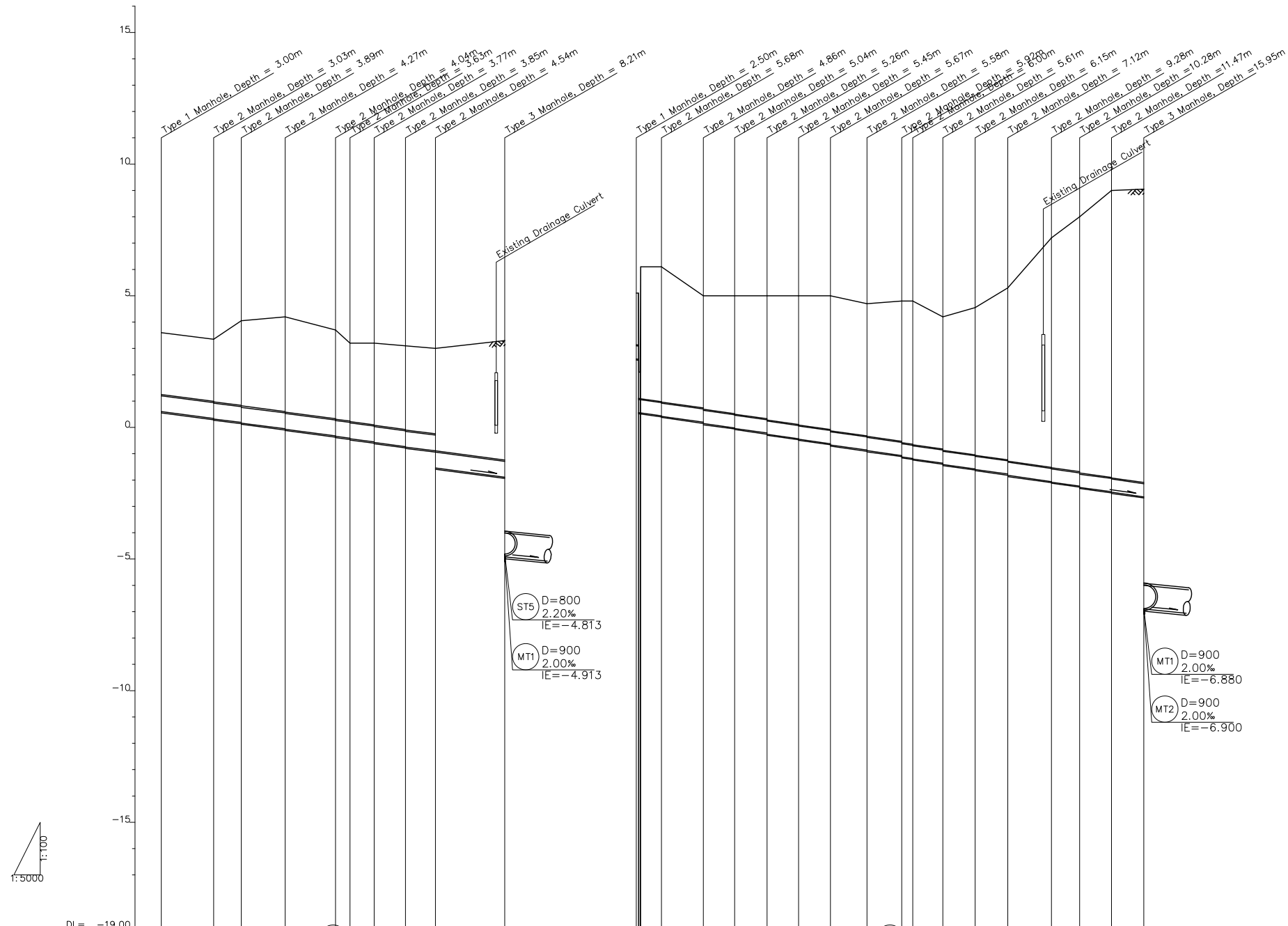
LONGITUDINAL PROFILE OF SEWER (8)



Line Number	Diameter (m)	Gradient (%)	Length (m)	Ground Elevation (m)	Earth Covering (m)	Invert Elevation (m)	Total Length (m)	
				(ST9)				
	φ400	3.50	752.49	4.85	2.12	2.093	0.00	
				3.31	1.90	1.865	62.17	
				3.60	1.47	1.695	102.04	
				3.70	1.77	1.581	154.63	
				3.50	1.97	1.180	249.33	
				3.40	2.19	0.794	348.18	
				3.60	2.76	0.463	448.47	
				3.30	2.82	0.062	545.86	
				3.15	3.04	-0.329	646.14	
				3.10	3.37	-0.701	752.49	
				(ST10)				
	φ300	2.80	637.23	3.15	1.00	1.841	0.00	
				3.10	1.08	1.729	39.99	
				3.07	1.35	1.467	140.72	
				3.05	1.67	1.131	239.38	
				3.06	1.95	0.860	343.45	
				3.08	2.26	0.568	440.42	
				2.85	2.33	0.230	539.72	
				3.10	2.85	-0.063	637.23	
				(ST11)				
	φ450	3.00	601.87	3.09	1.00	1.602	0.00	
				3.00	1.95	1.481	40.43	
				3.00	1.23	1.280	94.20	
				2.80	1.27	1.038	158.12	
				3.20	1.87	0.843	223.19	
				3.30	2.09	0.686	252.62	
				3.00	1.98	0.537	295.19	
				2.20	1.34	0.321	350.40	
				2.10	1.49	0.161	417.06	
				2.10	1.74	-0.023	475.00	
				2.10	1.92	-0.304	535.20	
				3.00	3.04	-0.524	601.87	

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (8) (ST9, ST10, ST11)			
SCALE:	A1 A3	H=1/5000, V=1/1100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY:	DATE:	SIGNATURE:	
DRAWN BY:			
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APPROVED BY:			
DRAWING NO.:		REV.	

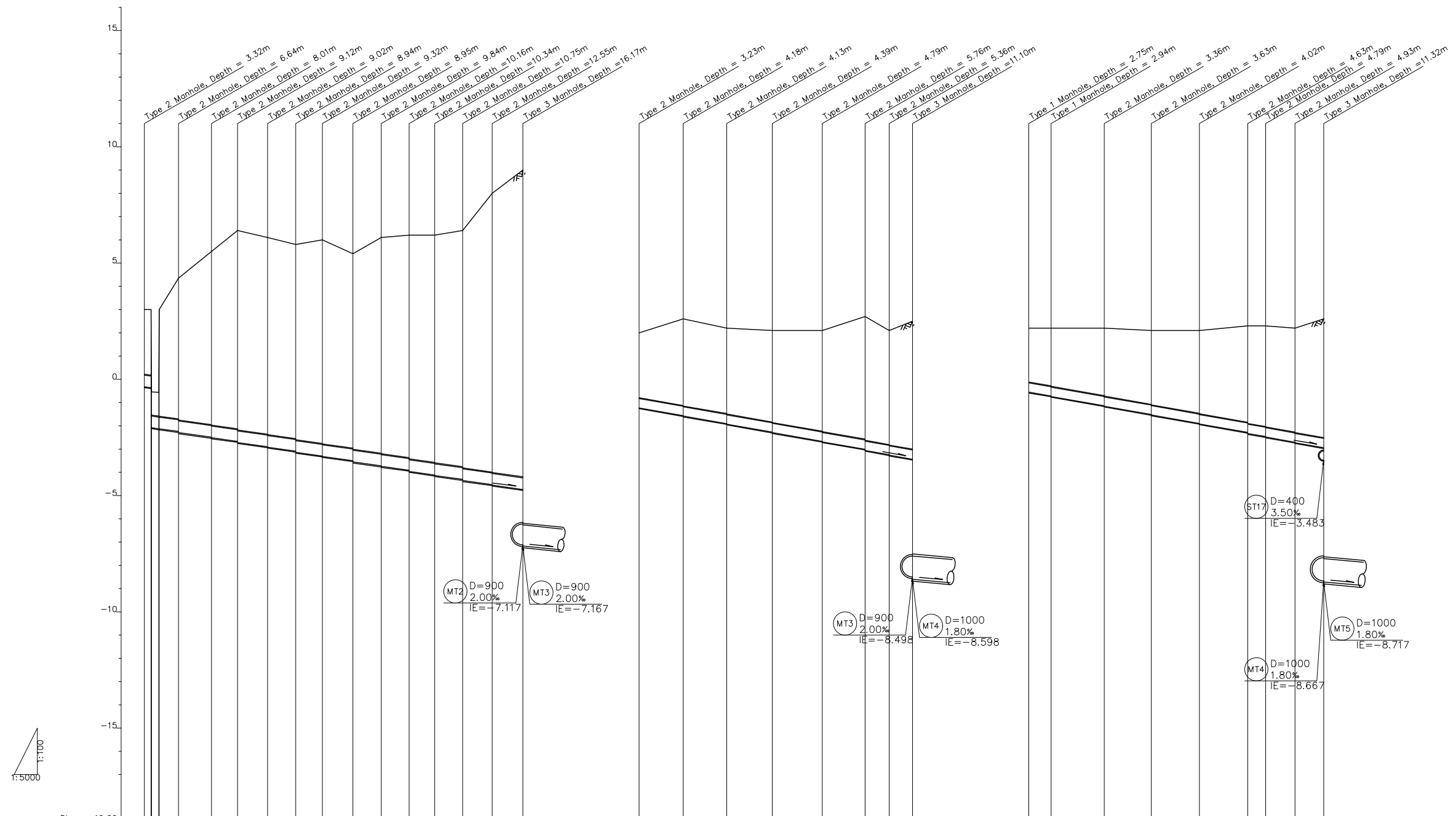
LONGITUDINAL PROFILE OF SEWER (9)



Line Number	ST12										ST13																
Diameter (m)	ø600										ø500																
Gradient (%)	2.60										2.80																
Length (m)	652.57										964.33																
Ground Elevation (m)	3.60	3.35	4.05	4.20	3.70	3.20	3.20	3.10	3.00	3.30	8.10	6.10	5.00	5.00	5.00	5.00	5.00	4.70	4.80	4.80	4.20	4.55	5.30	7.20	8.00	9.00	9.05
Earth Covering (m)	2.35	2.36	3.24	3.62	3.37	2.98	3.12	3.28	3.68	4.54	4.88	5.14	4.31	4.58	4.62	4.91	5.03	5.02	5.33	5.38	5.07	5.67	6.58	8.74	9.68	10.92	11.15
Invert Elevation (m)	0.600	0.342	0.185	-0.052	-0.340	-0.432	-0.551	-0.746	-0.892	-1.886	0.888	0.439	0.145	-0.021	-0.213	-0.431	-0.671	-0.864	-1.069	-1.199	-1.368	-1.581	-1.824	-2.077	-2.276	-2.465	-2.637
Total Length (m)	0.00	99.34	152.13	235.58	330.84	386.62	404.58	464.16	521.10	652.57	652.57	47.74	127.61	186.88	248.24	308.39	369.09	438.18	504.31	525.65	582.49	644.12	705.74	786.98	842.32	902.80	964.33

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (9) (ST12, ST13)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

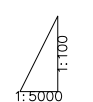
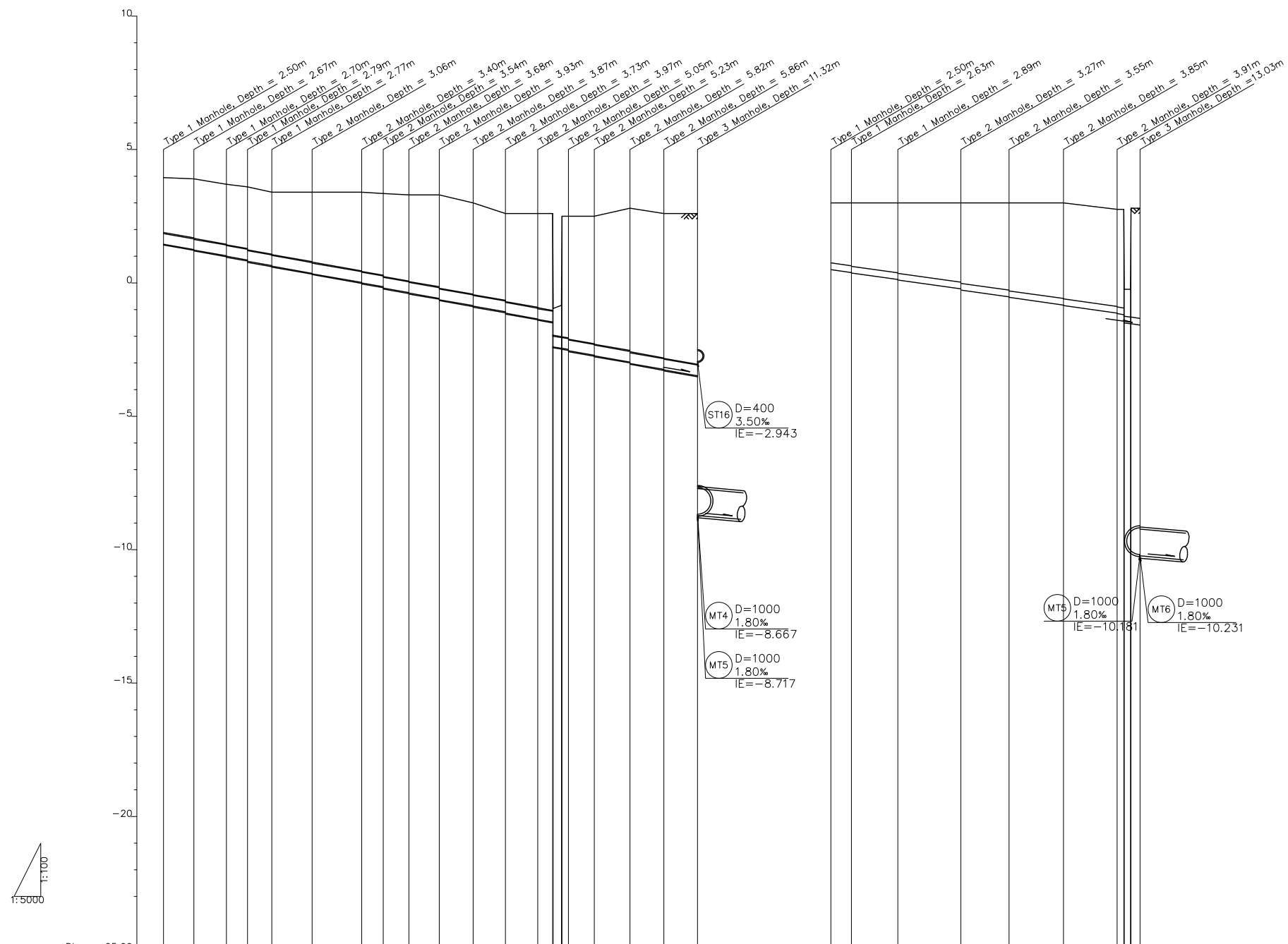
LONGITUDINAL PROFILE OF SEWER (10)



Line Number	ST14													ST15							ST16											
Diameter (m)	φ500													φ400							φ400											
Gradient (%)	2.80													3.50							3.50											
Length (m)	814.11													588.06							634.35											
Ground Elevation (m)	3.00	3.00	4.35	5.50	6.40	6.10	5.80	6.00	5.40	6.10	6.20	6.20	6.40	8.00	9.00	2.00	2.60	2.20	2.10	2.10	2.70	2.10	2.50	2.20	2.20	2.20	2.10	2.10	2.30	2.30	2.20	2.60
Earth Covering (m)	2.88	2.88	6.10	7.45	8.58	8.48	8.35	8.78	8.36	9.38	9.62	9.79	10.21	11.98	13.19	2.79	3.73	3.67	3.86	4.33	5.33	4.93	5.50	2.32	2.48	2.93	3.38	3.58	4.15	4.35	4.49	5.11
Invert Elevation (m)	0.20	0.20	-2.124	-2.813	-2.720	-2.920	-3.020	-3.320	-3.520	-3.724	-3.912	-4.116	-4.324	-4.531	-4.736	-1.229	-1.582	-1.928	-2.229	-2.687	-3.080	-3.262	-3.437	-0.552	-0.739	-1.160	-1.534	-1.896	-2.331	-2.485	-2.726	-2.943
Total Length (m)	16.41	32.16	73.33	144.37	200.57	265.20	325.68	382.98	448.41	509.65	569.72	624.60	684.61	747.99	814.11	0.00	95.13	188.61	286.23	393.77	486.03	537.98	588.06	0.00	47.60	162.18	263.41	366.73	470.89	509.21	572.46	634.35

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (10) (ST14, ST15, ST16)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
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APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (11)

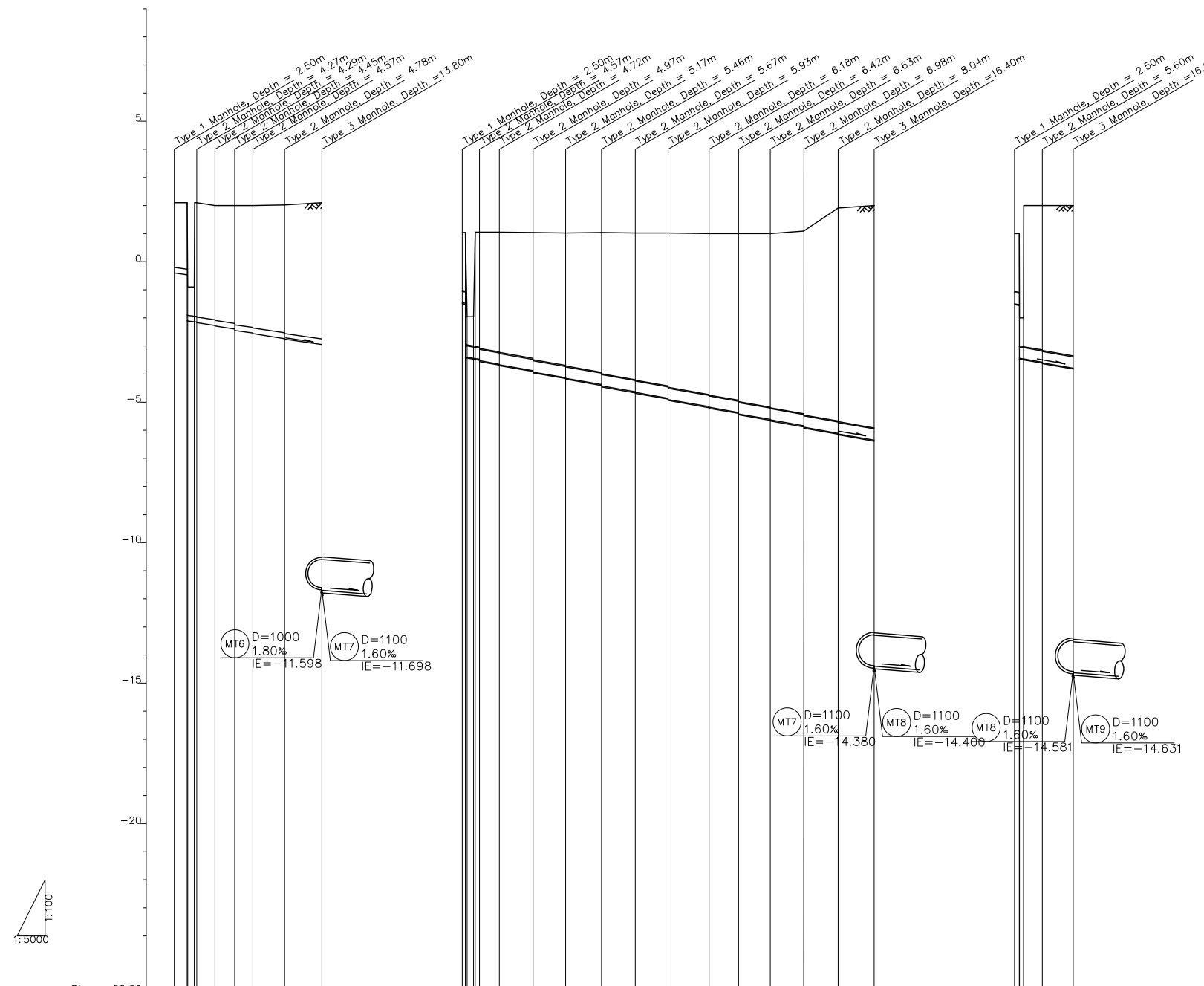


DL = -25.00

Line Number	ST17															ST18																
Diameter (m)	ø400															ø250																
Gradient (%)	3.50															2.80																
Length (m)	1001.24															579.43																
Ground Elevation (m)	3.95	3.90	3.70	3.60	3.40	3.40	3.40	3.40	3.35	3.30	3.30	3.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	3.00	3.00	3.00	3.00	3.00	3.00	2.76	2.80				
Earth Covering (m)	2.07	2.23	2.27	2.38	2.34	2.62	2.97	3.06	3.23	3.46	3.44	3.44	3.35	3.51	3.68	3.88	4.06	4.21	4.36	4.48	4.88	5.38	5.43	5.65	2.24	2.37	2.67	2.96	3.29	3.57	3.60	3.71
Invert Elevation (m)	1.450	1.251	1.417	1.227	1.060	0.788	0.418	0.342	0.071	-0.188	-0.188	-0.892	-1.084	-1.345	-1.606	-1.867	-2.128	-2.389	-2.650	-2.911	-3.172	-3.433	-3.694	-3.955	-4.216	-4.477	-4.738	-4.999	-5.260	-5.521	-5.782	
Total Length (m)	0.00	56.95	118.03	157.34	203.05	278.52	371.59	411.85	460.24	517.07	580.55	641.17	701.74	760.69	798.79	807.46	874.51	938.09	1001.24	0.00	38.13	125.35	243.15	333.73	435.90	536.08	579.43					

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (11) (ST17, ST18)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

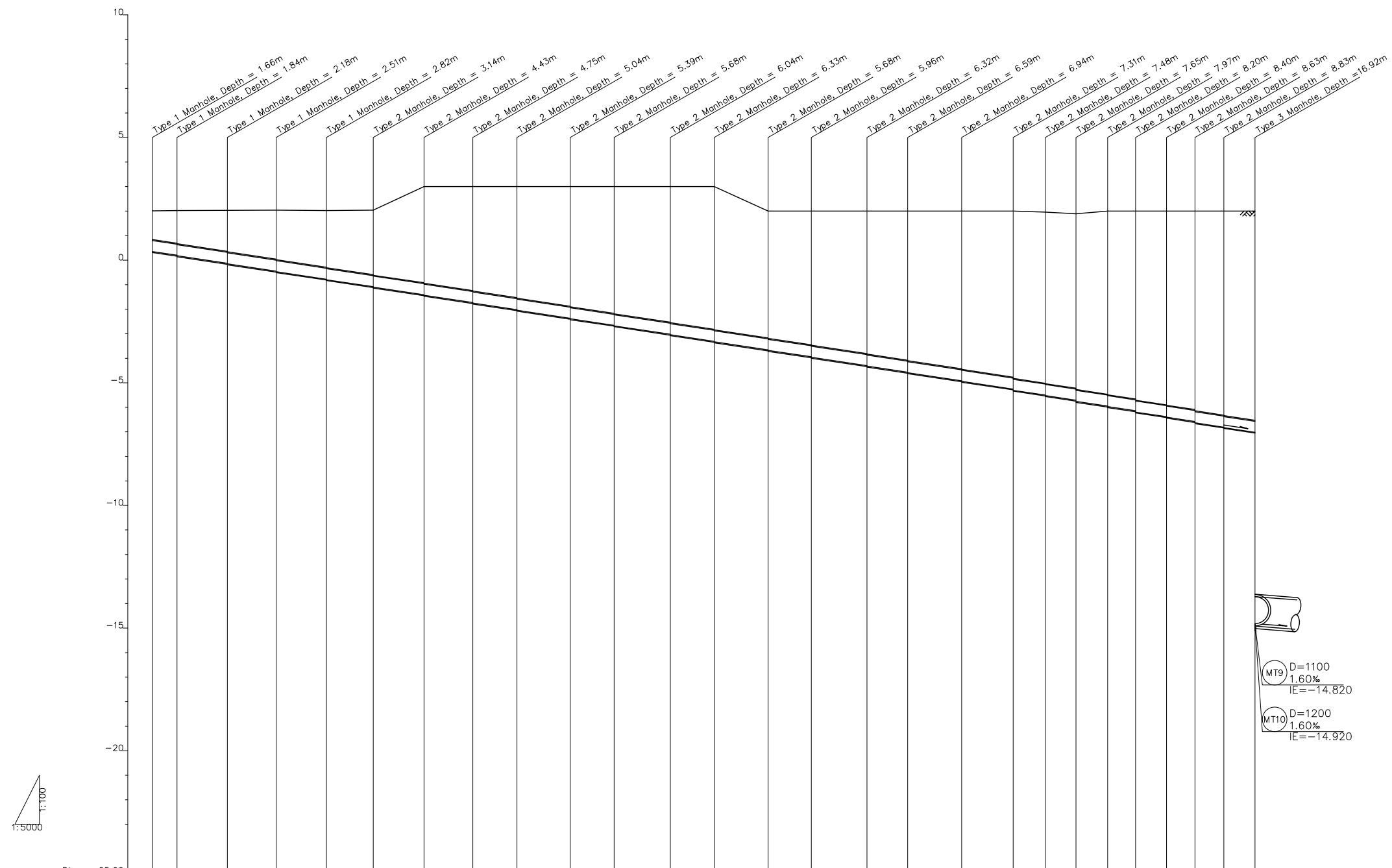
LONGITUDINAL PROFILE OF SEWER (12)



Line Number	ST19	ST20	ST21
Diameter (m)	φ200	φ400	φ400
Gradient (%)	3.00	3.50	3.50
Length (m)	262.78	733.59	104.66
Ground Elevation (m)	2.10 2.00 2.00 2.00 2.02 2.10	1.04 1.04 1.02 1.00 1.00 1.00 1.09 1.91 2.00	2.00 2.00 2.00
Earth Covering (m)	2.98 2.98 4.02 4.32 4.36 4.57 4.85	3.08 3.22 3.56 4.28 4.58 4.73 5.03 5.22 5.44 5.73 5.98 6.28 6.55 7.60 7.92	3.08 3.22 3.56 4.28 4.58 4.73 5.03 5.22 5.44 5.73 5.98 6.28 6.55 7.60 7.92
Invert Elevation (m)	-0.00 -1.19 -2.22 -2.37 -2.565 -2.755 -2.953	-1.04 -1.04 -1.02 -1.00 -1.00 -1.00 -1.09 -1.91 -2.00	-2.00 -2.00 -2.00
Total Length (m)	0.00 262.78	0.00 733.59	0.00 104.66

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (12) (ST19, ST20, ST21)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (13)



Line Number	ST22																											
Diameter (m)	φ450																											
Gradient (%)	3.00																											
Length (m)	2248.16																											
Ground Elevation (m)	2.01	2.02	2.03	2.04	2.02	2.04	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	2.00	1.96	1.89	2.00	2.00	2.00	2.00	2.00	2.00
Earth Covering (m)	1.17	1.33	1.56	2.02	2.33	2.66	3.93	4.26	4.55	4.88	5.16	5.55	5.84	5.19	5.45	5.83	6.10	6.43	6.82	6.82	9.88	7.16	7.47	7.96	7.92	8.09	8.34	8.53
Invert Elevation (m)	0.349	0.198	-0.129	-0.468	-0.766	-1.083	-1.433	-1.732	-2.042	-2.388	-2.656	-3.040	-3.329	-3.678	-3.942	-4.322	-4.592	-4.941	-5.367	-5.524	-5.711	-5.974	-6.185	-6.384	-6.529	-6.826	-7.016	
Total Length (m)	0.00	50.44	152.86	252.43	354.95	450.71	553.98	653.57	743.65	852.24	941.55	1056.19	1145.74	1255.52	1343.68	1456.89	1540.12	1649.75	1755.15	1820.73	1882.96	1947.29	2004.28	2067.34	2125.57	2184.69	2248.16	

NO.	DATE	DESCRIPTIONS	APPD. BY

REVISIONS

DRAWING TITLE:
**LONGITUDINAL PROFILE OF SEWER (13)
(ST22)**

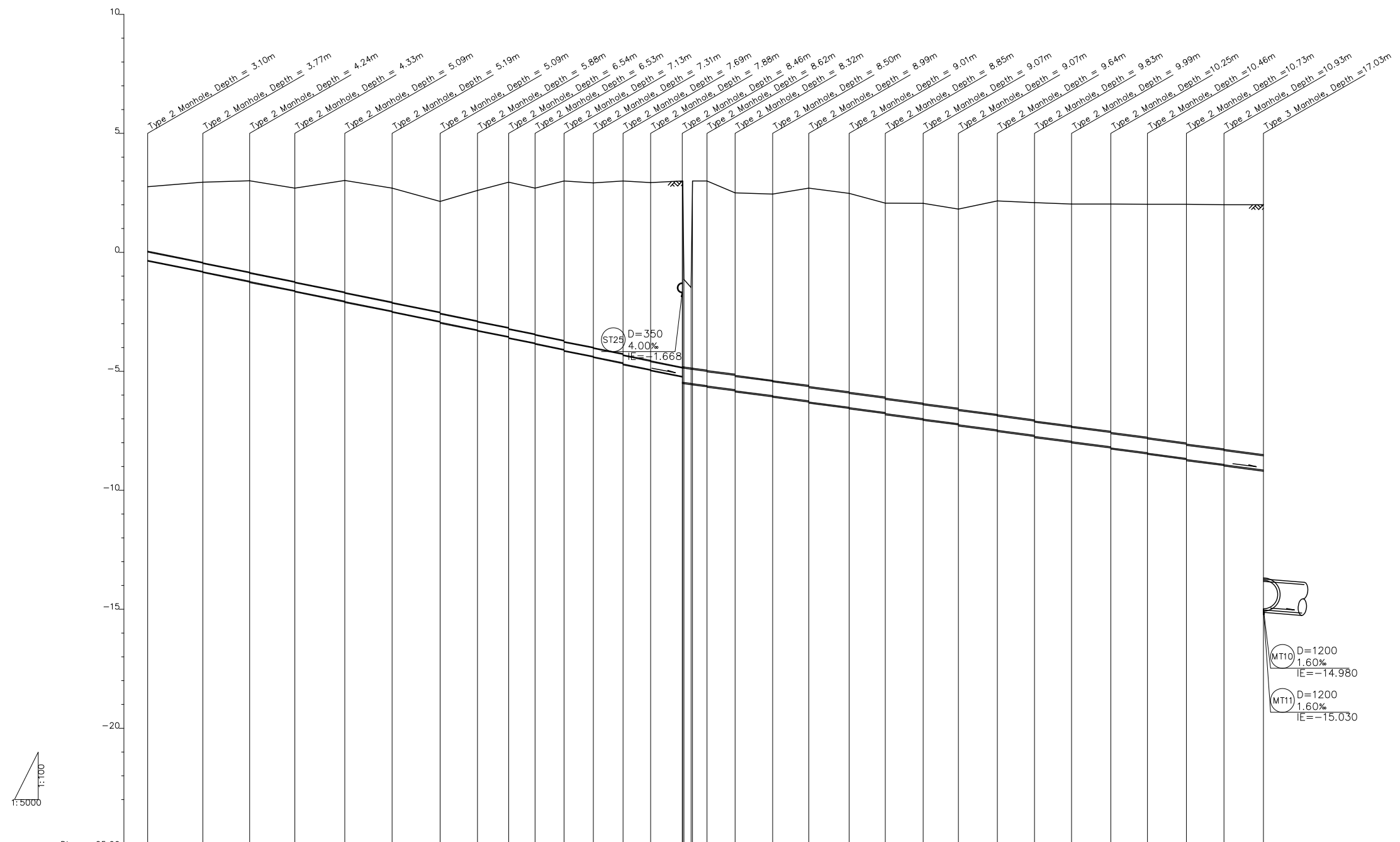
SCALE:	A1 H=1/5000, V=1/100	UNITS:
	A3 H=1/10000, V=1/200	

PROJECT:
PREPARATORY SURVEY FOR
PPP INFRASTRUCTURE PROJECT
SEWAGE TREATMENT PLANT PROJECT
IN DKI JAKARTA

DESIGNED BY	DATE	SIGNATURE
DRAWN BY		
CHECKED BY		
APPROVED BY:		

DRAWING NO.: _____ REV. _____

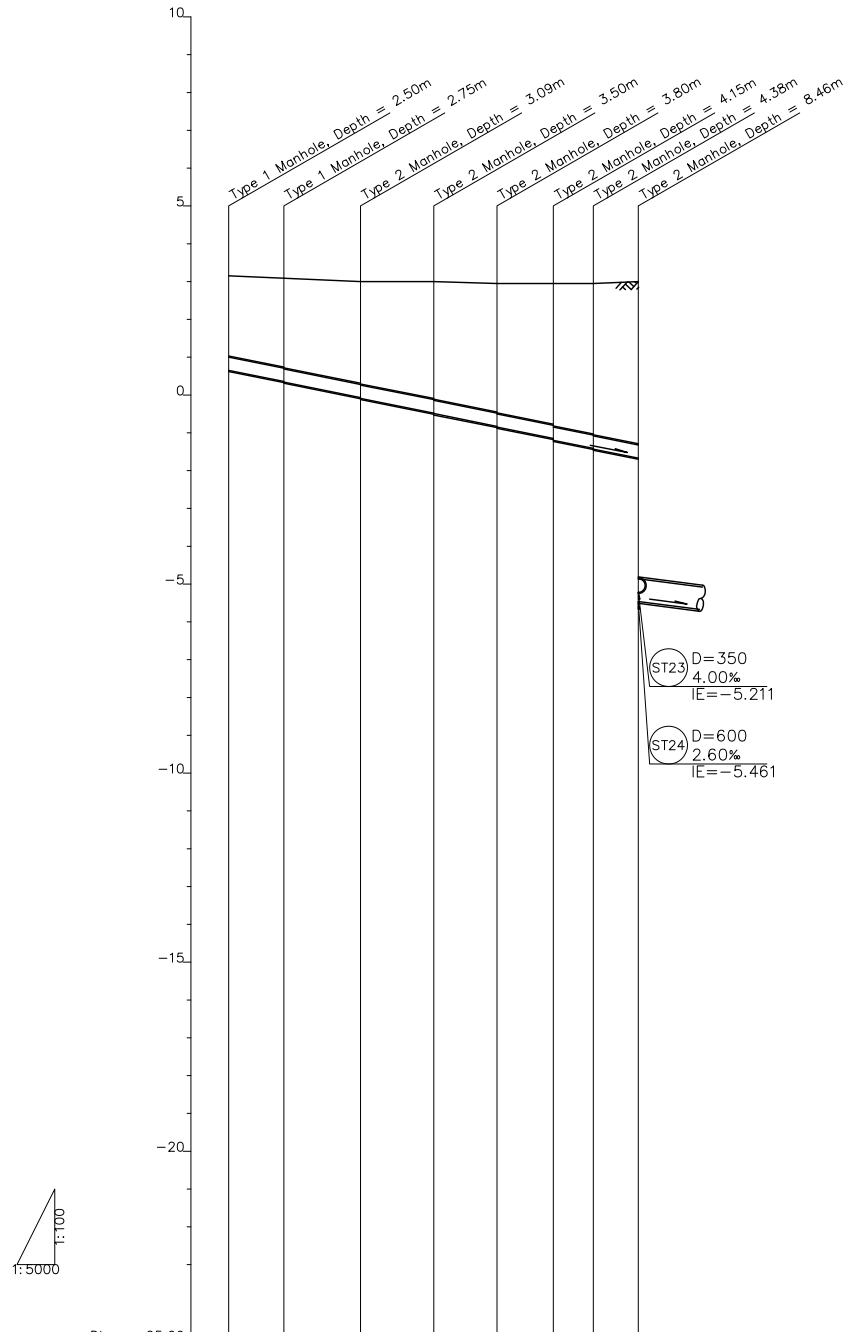
LONGITUDINAL PROFILE OF SEWER (14)



Line Number	ST23																				ST24										
Diameter (m)	φ350																				φ600										
Gradient (%)	4.00																				2.60										2.60
Length (m)	1123.98																				1222.05										
Ground Elevation (m)	2.76	2.95	3.01	2.70	3.02	2.70	2.14	2.60	2.95	2.70	3.00	2.92	3.00	2.53	3.00	2.45	2.70	2.48	2.07	2.06	1.82	2.16	2.09	2.03	2.03	2.02	2.02	2.00	2.00		
Earth Covering (m)	2.71	3.37	3.86	3.95	4.69	4.81	4.65	5.86	6.11	6.13	6.75	6.91	7.36	7.45	7.81	8.34	8.36	8.56	8.42	8.97	9.18	9.34	9.50	9.55	9.79	10.08	10.28	10.50			
Invert Elevation (m)	-0.336	-0.820	-1.234	-1.633	-2.054	-2.467	-2.895	-3.279	-3.591	-3.633	-4.128	-4.393	-4.644	-4.846	-5.065	-5.488	-5.513	-5.771	-6.025	-6.243	-6.427	-6.756	-7.060	-7.224	-7.424	-7.557	-8.013	-8.449			
Total Length (m)	0.00	115.89	214.47	309.30	414.52	513.84	614.95	693.41	758.81	814.33	875.52	936.78	999.49	1057.61	1122.99	1175.99	1234.99	1314.08	1390.07	1474.81	1550.98	1630.54	1704.27	1786.29	1864.27	1942.73	2025.20	2102.11	2183.86	2263.03	2346.03

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (14) (ST23-ST24)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

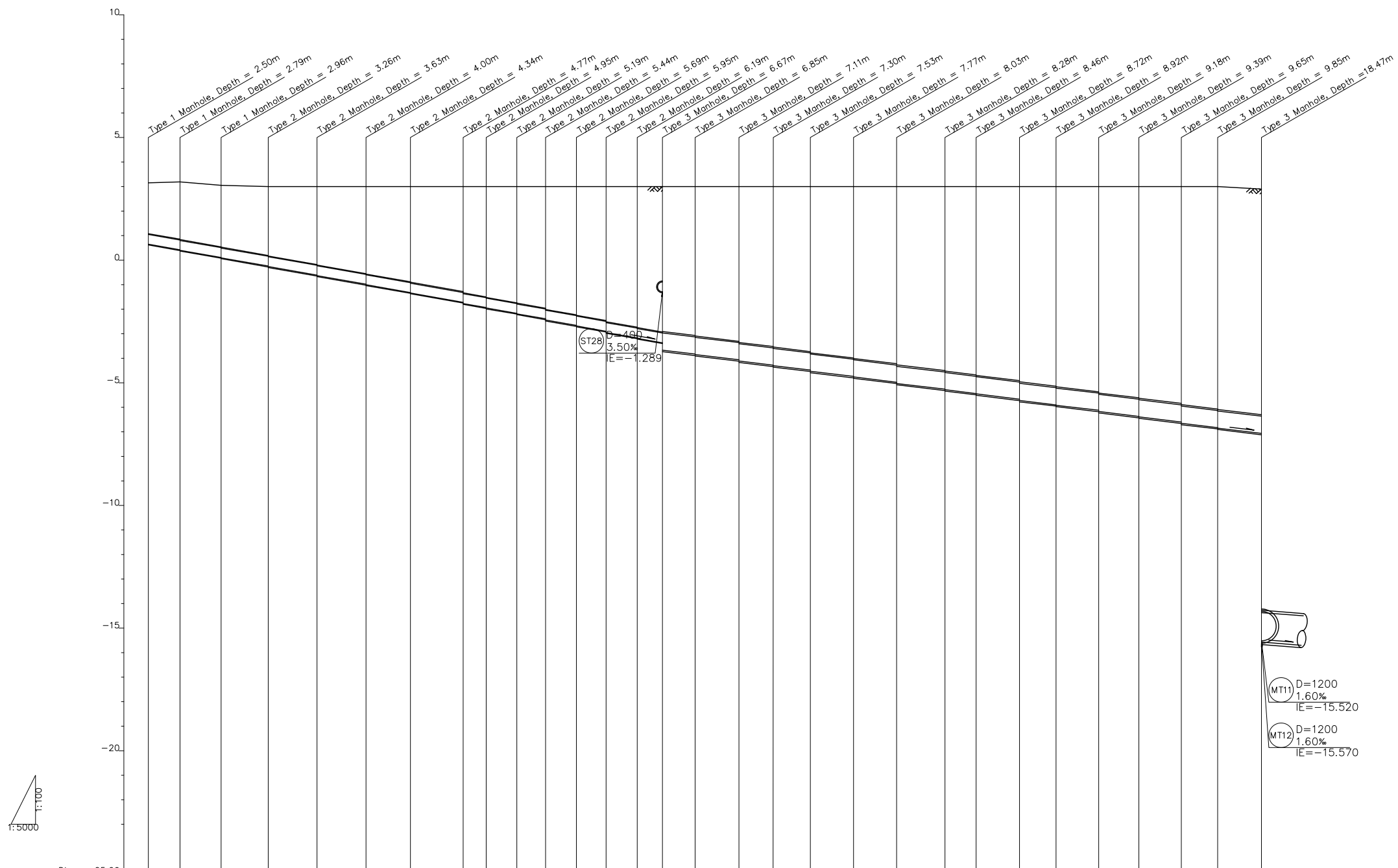
LONGITUDINAL PROFILE OF SEWER (15)



Line Number	ST25						
Diameter (m)	φ350						
Gradient (%)	4.00						
Length (m)	542.21						
Ground Elevation (m)	3.15	3.09	3.00	3.00	2.95	2.95	3.00
Earth Covering (m)	2.12	2.35	2.99	3.09	3.42	3.77	4.29
Invert Elevation (m)	0.650	0.358	0.088	-0.265	-0.849	-1.169	-1.429
Total Length (m)	0.00	72.91	174.44	271.30	354.79	429.74	542.21

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (15) (ST25)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (16)



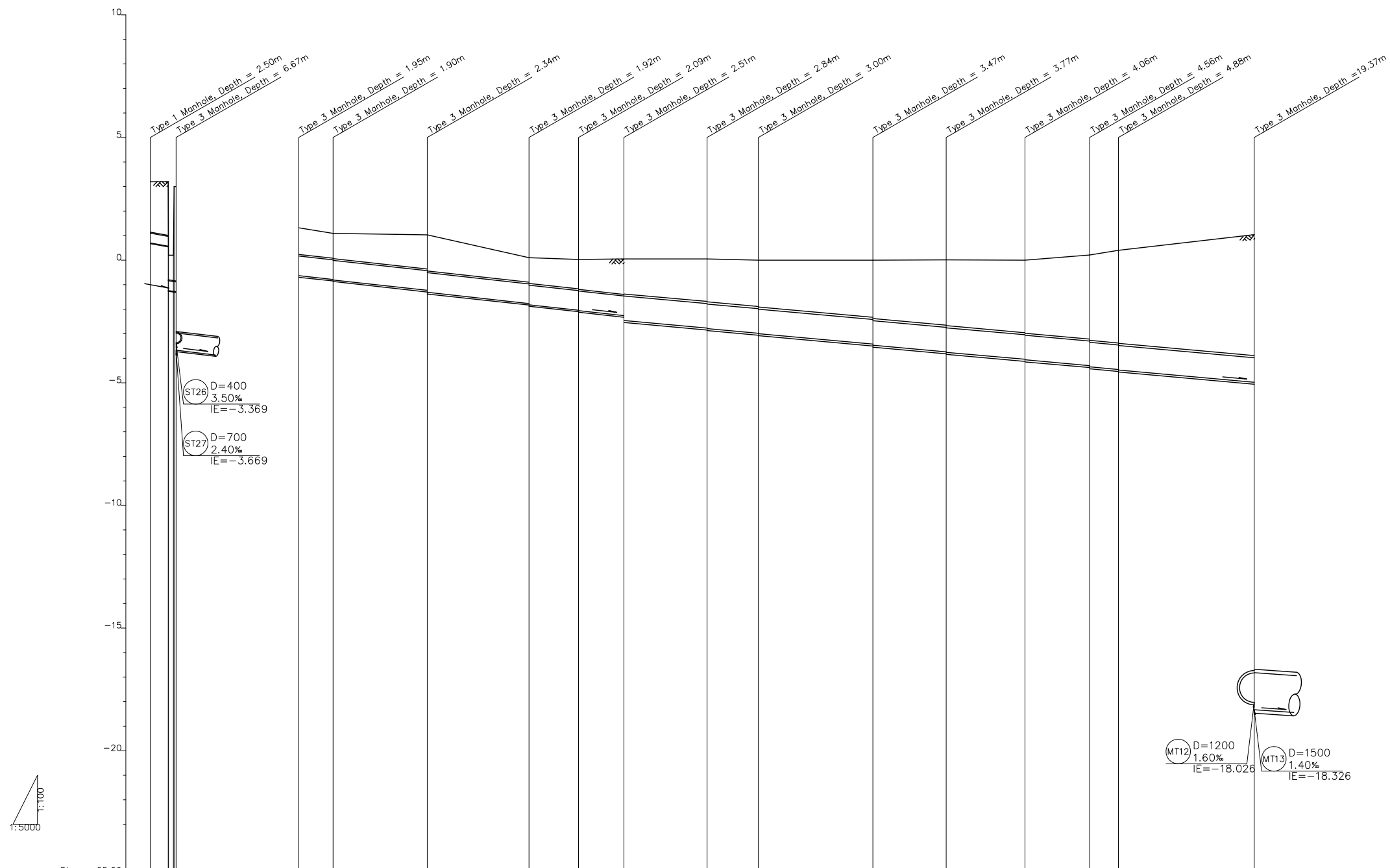
MT11 D=1200
1.60%
E=-15.520

MT12 D=1200
1.60%
E=-15.570

Line Number	Diameter (m)	Gradient (%)	Length (m)	Ground Elevation (m)	Earth Covering (m)	Invert Elevation (m)	Total Length (m)
0.00				3.15	2.07	0.650	0.00
64.37	400	3.50	2.33	3.19	2.33	0.465	64.37
148.71	400	3.50	2.53	3.05	2.51	0.190	148.71
244.27	400	3.00	2.80	3.00	2.80	-0.264	244.27
343.84	400	3.00	3.20	3.00	3.18	-0.632	343.84
443.84	400	3.00	3.55	3.00	3.55	-0.882	443.84
534.33	400	3.00	3.88	3.00	3.88	-1.319	534.33
642.00	400	3.00	4.33	3.00	4.33	-1.766	642.00
688.24	400	3.00	4.52	3.00	4.52	-1.931	688.24
751.69	400	3.00	4.74	3.00	4.74	-2.170	751.69
810.00	400	3.00	4.96	3.00	4.96	-2.374	810.00
873.19	400	3.00	5.25	3.00	5.25	-2.685	873.19
933.43	400	3.00	5.46	3.00	5.46	-2.896	933.43
996.77	400	3.00	5.73	3.00	5.73	-3.188	996.77
1048.42	400	3.00	5.93	3.00	5.93	-3.368	1048.42
1114.93	400	3.00	6.07	3.00	6.07	-3.523	1114.93
1204.31	700	2.40	6.36	3.00	6.36	-4.064	1204.31
1274.25	700	2.40	6.52	3.00	6.52	-4.382	1274.25
1349.99	700	2.40	6.78	3.00	6.78	-4.634	1349.99
1437.80	700	2.40	6.98	3.00	6.98	-4.765	1437.80
1525.87	700	2.40	7.22	3.00	7.22	-5.026	1525.87
1624.46	700	2.40	7.53	3.00	7.53	-5.283	1624.46
1687.82	700	2.40	7.98	3.00	7.98	-5.745	1687.82
1776.72	700	2.40	7.96	3.00	7.96	-5.568	1776.72
1851.08	700	2.40	8.16	3.00	8.16	-5.896	1851.08
1938.02	700	2.40	8.32	3.00	8.32	-6.175	1938.02
2020.00	700	2.40	8.63	3.00	8.63	-6.392	2020.00
2106.65	700	2.40	8.84	3.00	8.84	-6.650	2106.65
2180.30	700	2.40	9.07	3.00	9.07	-6.847	2180.30
2270.08	700	2.40	9.20	2.90	9.20	-7.062	2270.08

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (16) (ST26-ST27)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

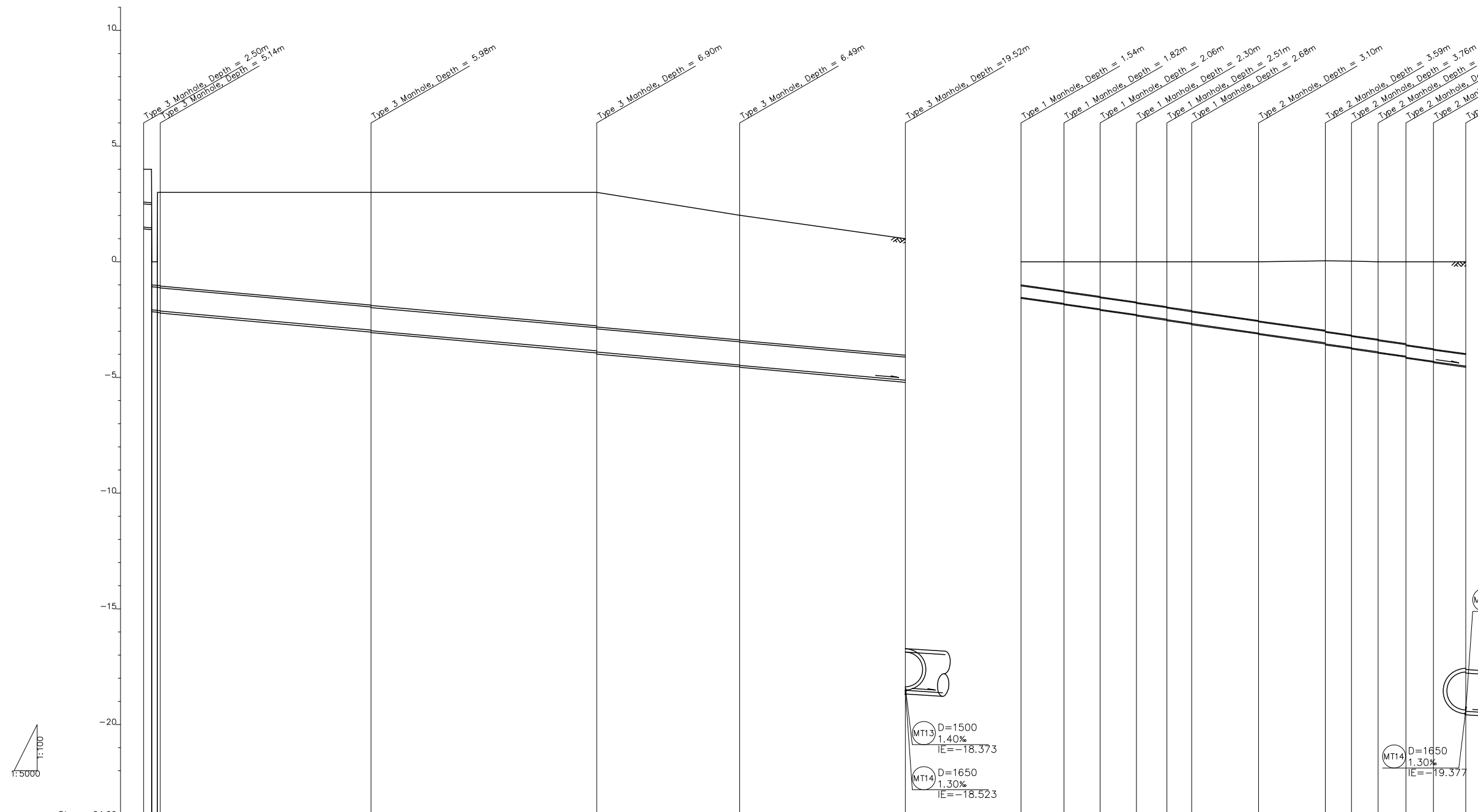
LONGITUDINAL PROFILE OF SEWER (17)



Line Number	ST28	ST29	MT20
Diameter (m)	φ400	φ800	φ1000
Gradient (%)	3.50	2.20	1.80
Length (m)	52.55	663.17	1284.93
Ground Elevation (m)	3.20	1.32	1.04
Earth Covering (m)	2.07	1.09	4.93
Invert Elevation (m)	0.700	-0.633	-4.975
Total Length (m)	0.00	663.17	1948.10

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (17) (ST28, ST29-MT20)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

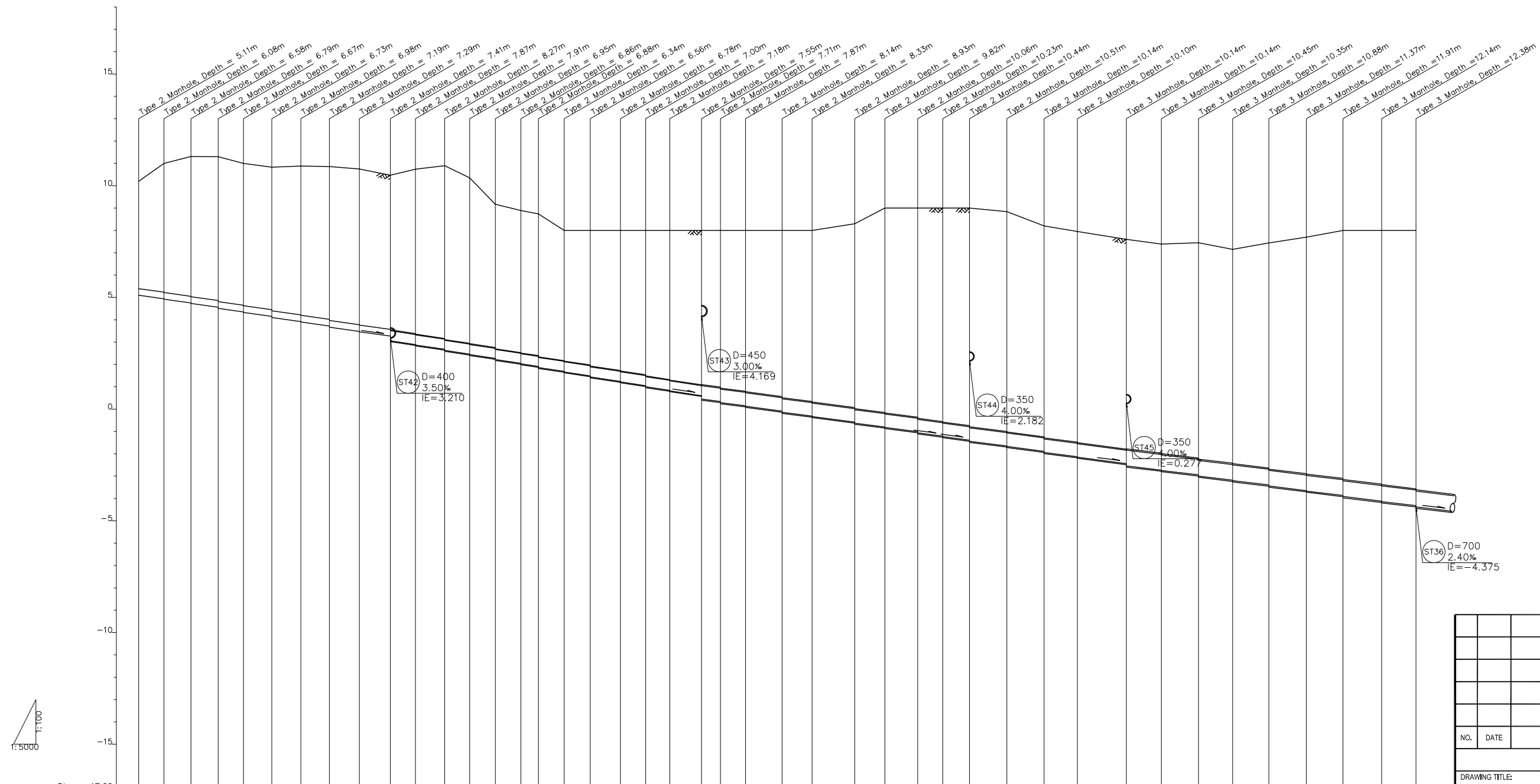
LONGITUDINAL PROFILE OF SEWER (18)



Line Number	Diameter (m)	Gradient (%)	Length (m)	Ground Elevation (m)	Earth Covering (m)	Invert Elevation (m)	Total Length (m)
MT2	1000	1.80	1646.73	4.00	1.80	4.00	1646.73
ST30	500	2.80	961.12	0.00	0.00	0.00	961.12

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (18) (MT21, ST30)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

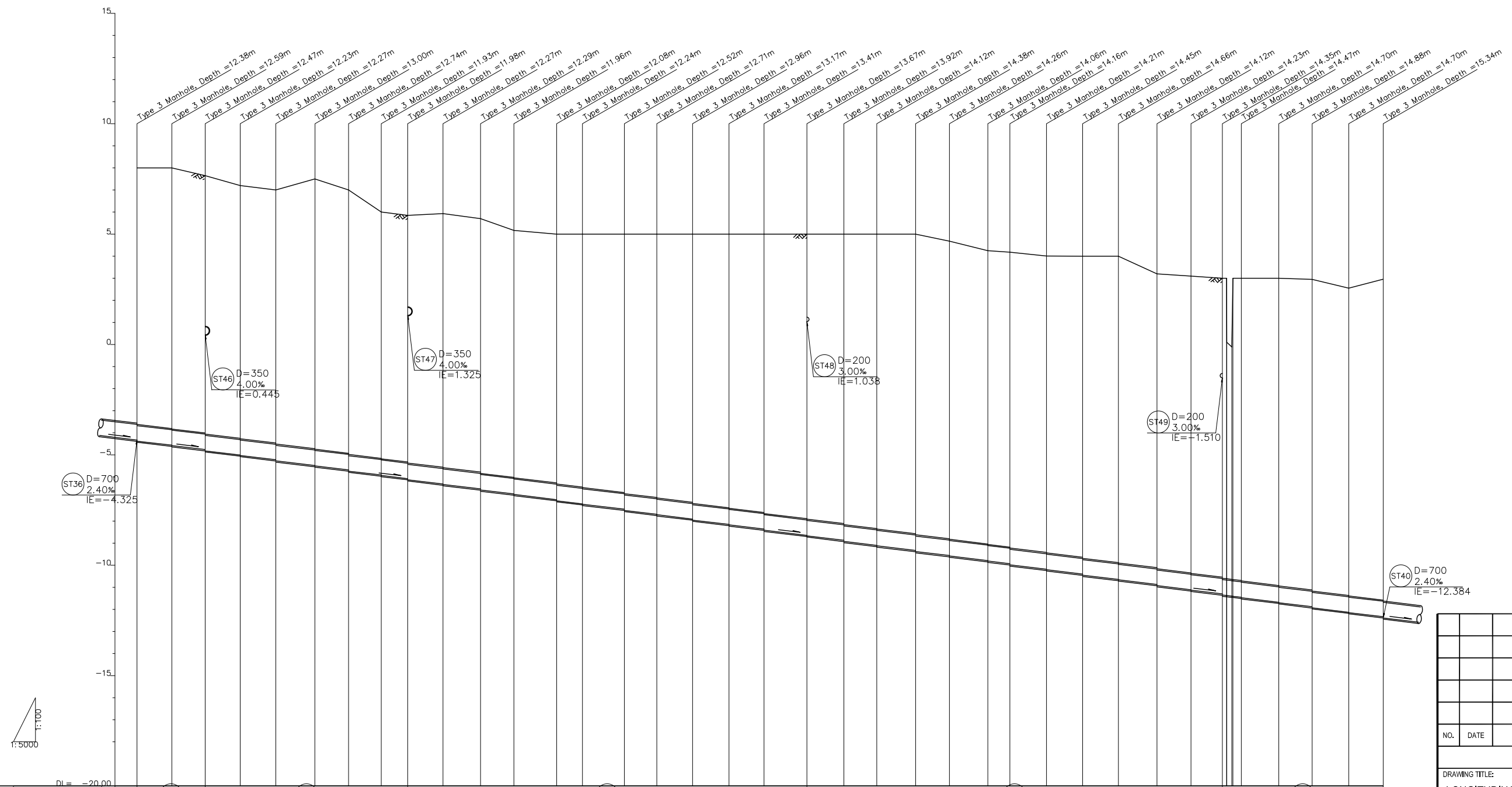
LONGITUDINAL PROFILE OF SEWER (19)



Line Number	ST31	ST32	ST33	ST34	ST35	ST36
Diameter (m)	φ300		φ450		φ600	
Gradient (%)	2.80		3.00		2.60	
Length (m)	563.44		696.36		648.34	
Ground Elevation (m)	10.20	11.00	11.31	11.30	11.00	10.83
Earth Covering (m)	4.80	5.75	6.25	6.43	6.34	6.32
Invert Elevation (m)	5.095	4.937	4.747	4.556	4.328	4.150
Total Length (m)	0.00	56.40	117.13	178.15	234.52	298.10

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (19) (ST31-ST36)			
SCALE:	A1 A3	H=1/5000, V=1/1100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

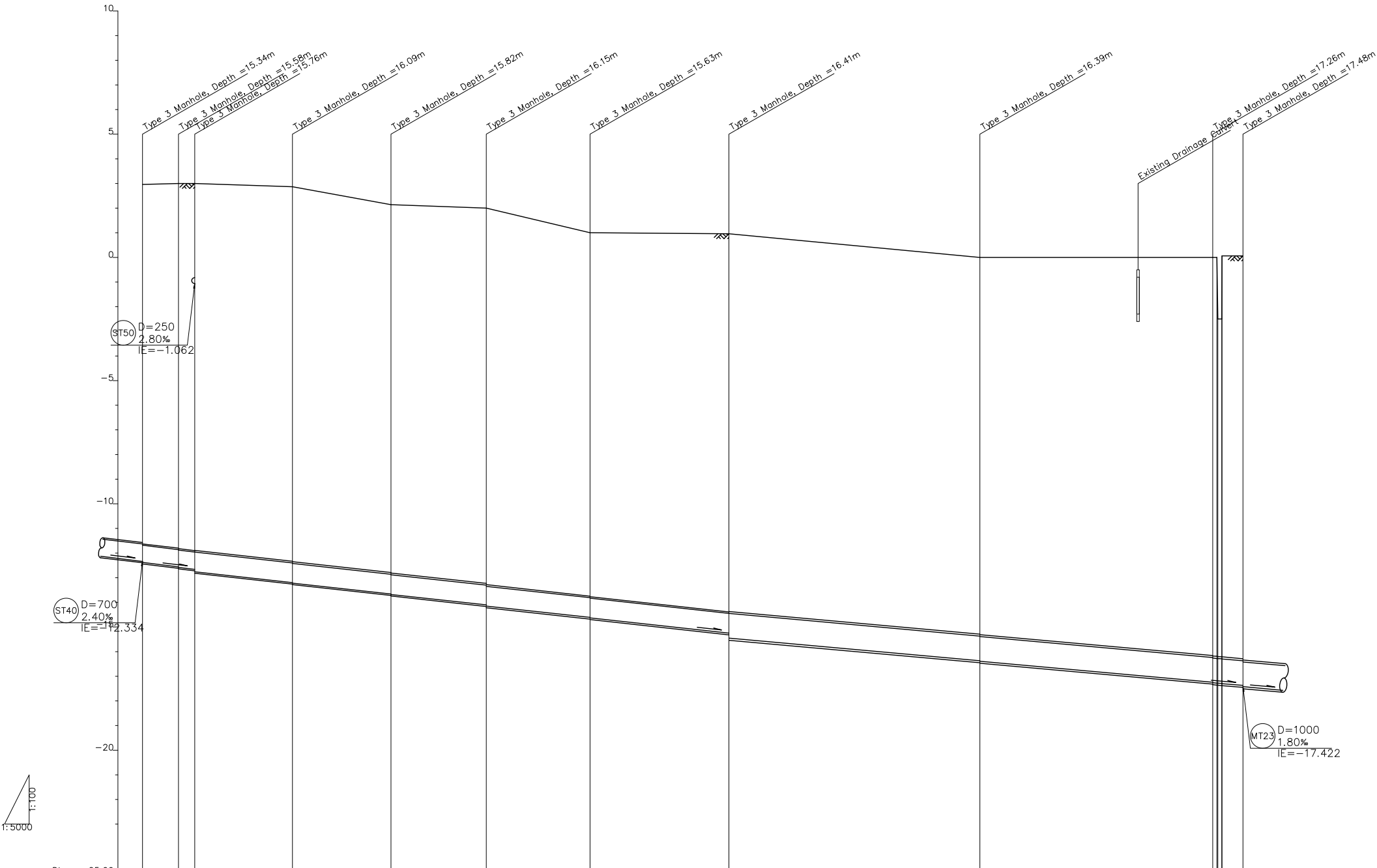
LONGITUDINAL PROFILE OF SEWER (20)



Line Number	ST36	ST37	ST38	ST39	ST40
Diameter (m)	φ700				
Gradient (%)	2.40				
Length (m)	154.42	458.86	904.52	941.47	364.59
Ground Elevation (m)	8.00	8.00	7.65	7.20	7.00
Earth Covering (m)	11.62	11.83	11.96	11.45	11.45
Invert Elevation (m)	-4.375	-4.565	-4.865	-5.026	-5.229
Total Length (m)	2859.50	2938.74	3013.92	3093.35	3173.88

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (20) (ST36-ST40)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

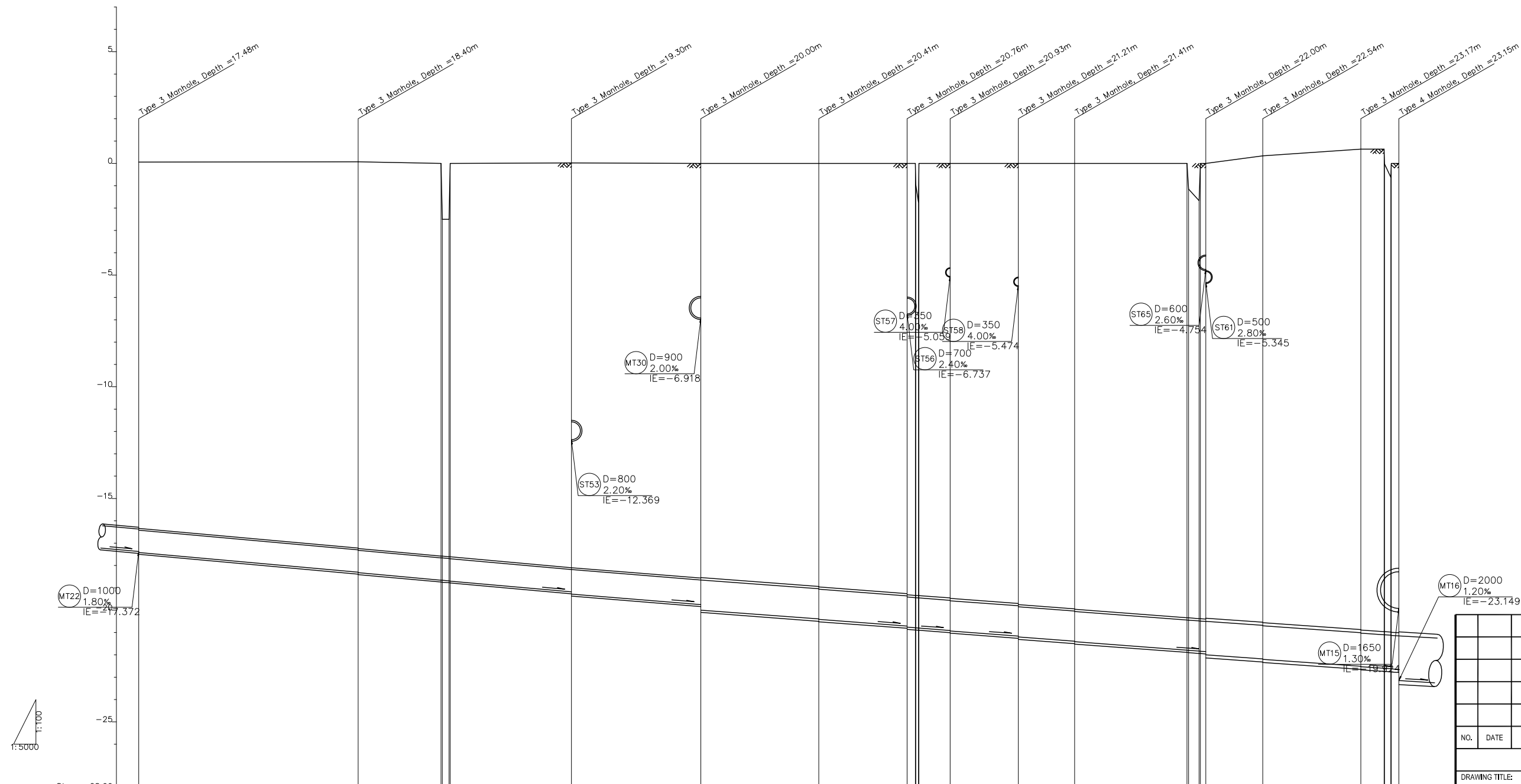
LONGITUDINAL PROFILE OF SEWER (21)



Line Number	ST40	ST41	MT22
Diameter (m)	φ700	φ800	φ1000
Gradient (%)	2.40	2.20	1.80
Length (m)	106.12	1084.42	1043.68
Ground Elevation (m)	2.96 3.00 3.00	2.87 2.14 2.00	1.00 0.96 0.00
Earth Covering (m)	14.59 14.82 14.89	15.22 14.95 15.28	14.75 15.35 15.29
Invert Elevation (m)	-12.384 -12.580 -12.759	-13.216 -13.675 -14.190	-15.254 -16.391 -17.422
Total Length (m)	5683.36 5756.54 5789.48	5985.09 6187.83 6381.16	6591.69 6873.90 7383.60

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (21) (ST40-ST41, MT22)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (22)



Line Number	MT23	MT24	MT25	MT26	MT27	MT28	MT29
Diameter (m)	φ1000	φ1100		φ1350			φ1500
Gradient (%)	1.80	1.60	1.50	1.50	1.50	1.50	1.40
Length (m)	968.34	289.53	461.67	96.53	152.25	419.52	432.16
Ground Elevation (m)	0.06	0.07	0.00	0.00	0.00	0.00	0.00
Earth Covering (m)	16.40	17.23	18.12	18.55	18.96	19.79	19.86
Invert Elevation (m)	17.422	18.325	19.183	20.394	20.711	21.397	22.183
Total Length (m)	7917.58	8408.36	8854.08	9175.45	9439.41	9637.12	10011.97

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			

DRAWING TITLE:
**LONGITUDINAL PROFILE OF SEWER (22)
(MT23-MT29)**

SCALE:	A1	H=1/5000, V=1/100	UNITS:
	A3	H=1/10000, V=1/200	

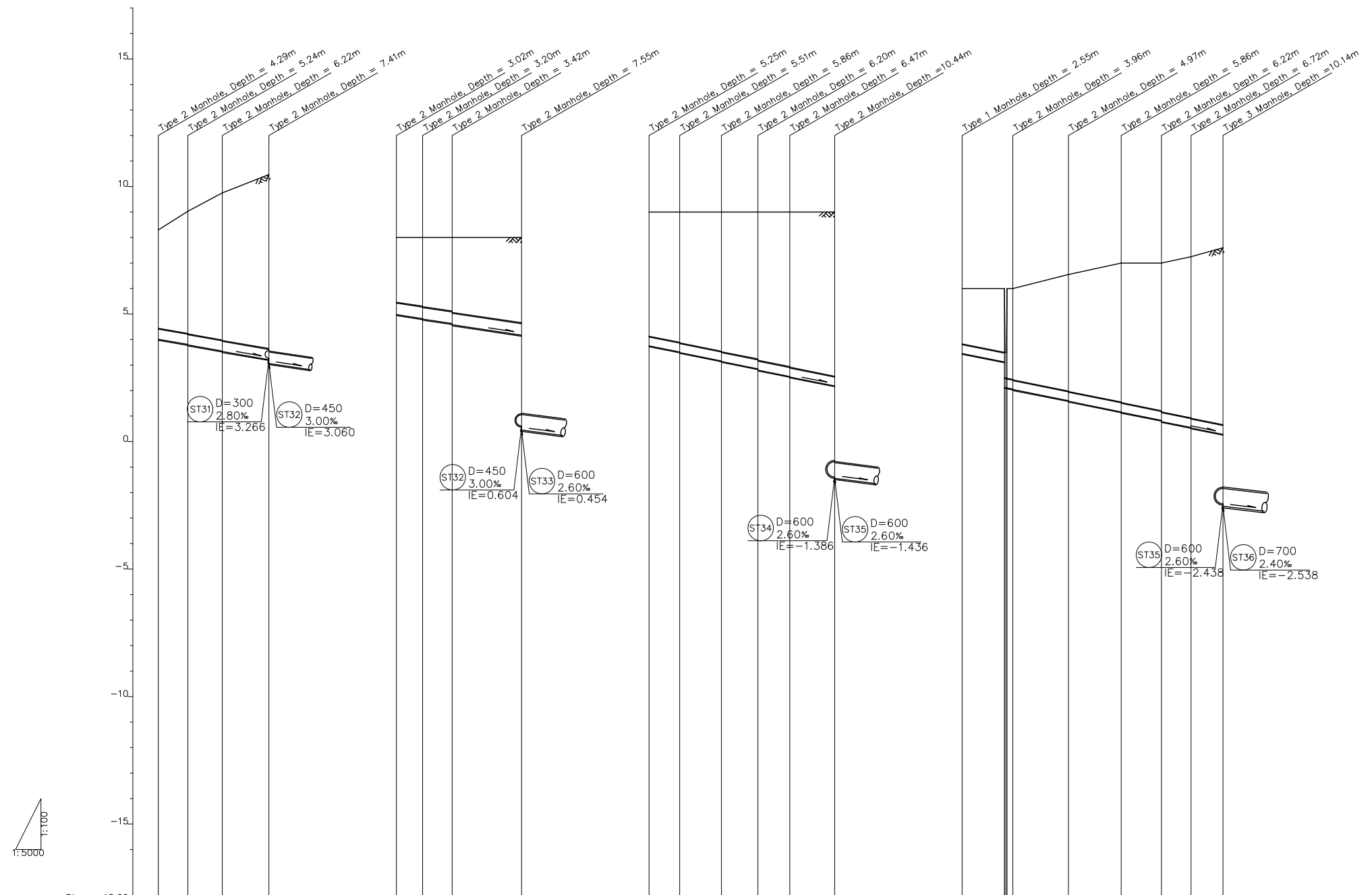
PROJECT:
PREPARATORY SURVEY FOR
PPP INFRASTRUCTURE PROJECT
SEWAGE TREATMENT PLANT PROJECT
IN DKI JAKARTA

DESIGNED BY	DATE	SIGNATURE
DRAWN BY		
CHECKED BY		
APPROVED BY:		

DRAWING NO.:	REV.
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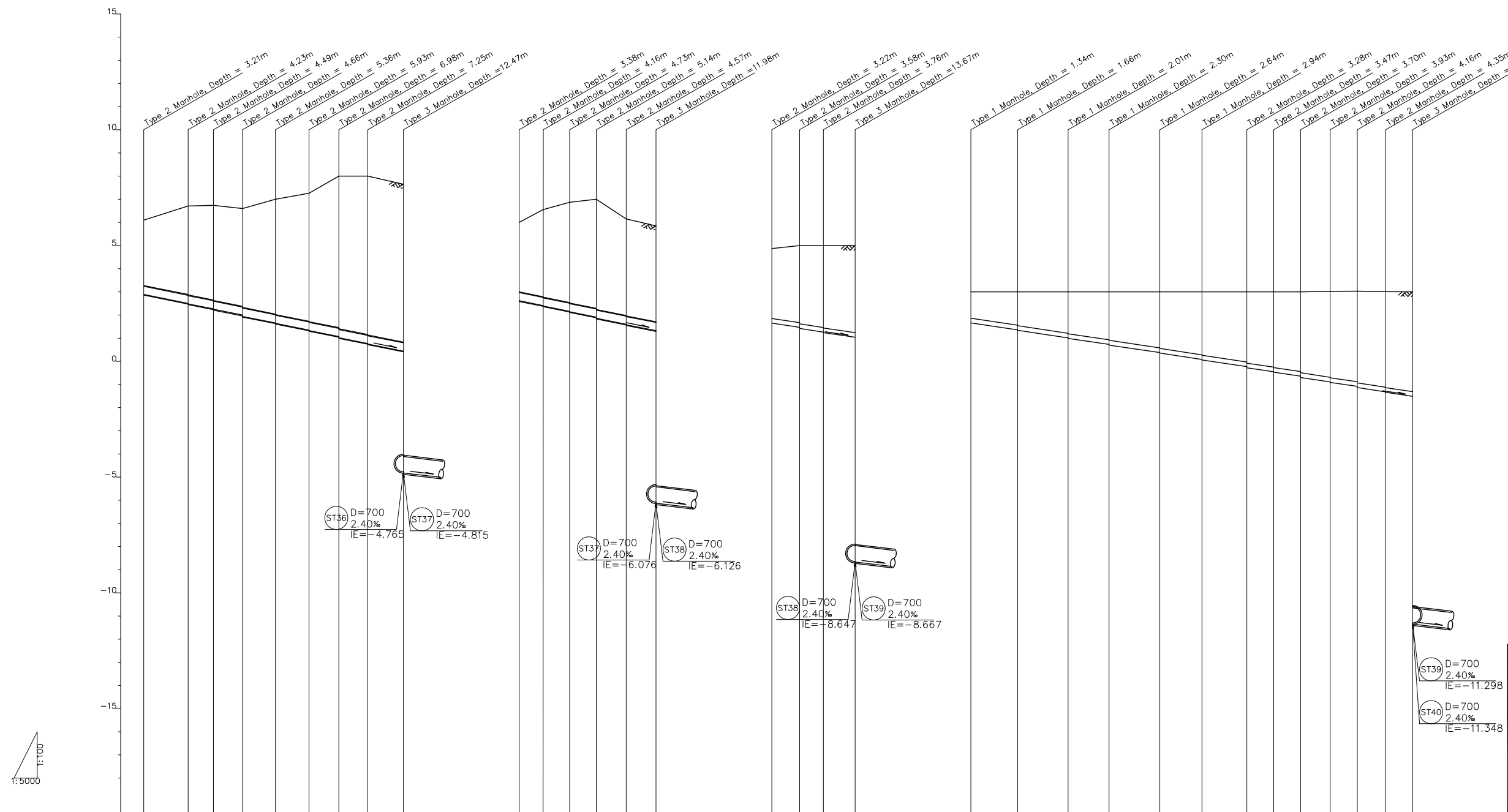
LONGITUDINAL PROFILE OF SEWER (23)



Line Number	ST42				ST43				ST44				ST45										
Diameter (m)	φ400				φ450				φ350				φ350										
Gradient (%)	3.50				3.00				4.00				4.00										
Length (m)	216.88				245.58				363.92				511.65										
Ground Elevation (m)	8.30	9.03	9.75	10.47	8.00	8.00	8.00	8.00	9.00	9.00	9.00	9.00	9.00	9.00	6.00	6.00	6.55	7.00	7.00	7.25	7.60		
Earth Covering (m)	3.86	4.79	5.77	6.83	2.54	2.69	2.71	2.89	3.34	4.87	5.13	5.48	5.26	6.08	6.44	2.17	2.60	3.58	4.57	5.47	5.84	6.34	6.94
Invert Elevation (m)	4.009	3.986	3.985	3.529	3.210	4.976	4.800	4.627	4.169	3.748	3.587	3.180	2.864	2.534	2.182	3.451	2.118	2.036	1.880	1.145	0.980	0.527	0.277
Total Length (m)	0.00	56.03	125.65	216.88	0.00	51.86	109.43	245.58	0.00	60.19	141.94	213.36	275.83	363.92	0.00	208.64	312.27	391.06	449.23	511.65			

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (23) (ST42, ST43, ST44, ST45)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

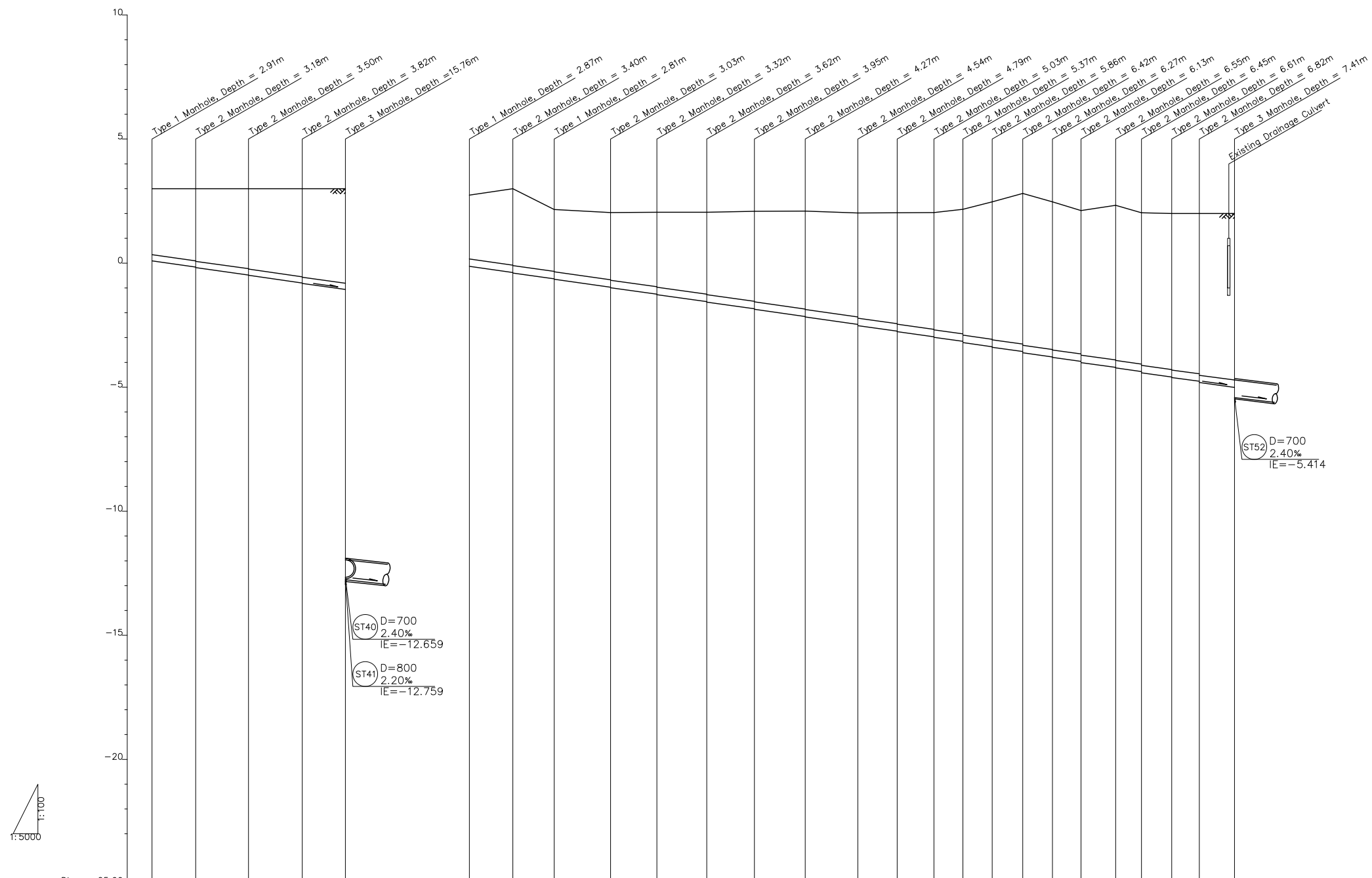
LONGITUDINAL PROFILE OF SEWER (24)



Line Number	ST46								ST47				ST48			ST49																				
Diameter (m)	ø350								ø350				ø200			ø200																				
Gradient (%)	4.00								4.00				3.00			3.00																				
Length (m)	560.89								295.52				179.85			954.24																				
Ground Elevation (m)	6.10	6.71	6.74	6.60	7.00	7.26	8.00	8.00	7.65	6.00	6.55	6.87	7.00	6.15	5.85	4.87	5.00	5.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Earth Covering (m)	2.83	3.82	4.01	4.27	4.98	5.55	6.60	6.85	6.62	3.00	3.78	4.35	4.76	4.19	4.14	3.02	3.38	3.53	3.76	1.13	1.46	1.86	2.09	2.44	2.73	3.07	3.24	3.44	3.72	3.96	4.14	4.30				
Invert Elevation (m)	2.888	2.984	2.946	2.945	2.640	2.331	2.023	1.753	1.445	2.617	2.310	2.141	1.911	1.682	1.325	1.647	1.466	1.283	1.036	1.662	1.358	0.991	0.765	0.327	0.083	-0.227	-0.451	-0.665	-0.887	-1.093	-1.316	-1.510				
Total Length (m)	0.00	95.93	150.47	213.34	284.56	356.90	421.38	483.91	560.89	0.00	51.86	109.05	166.67	231.30	295.52	0.00	60.23	111.38	179.85	0.00	101.48	210.32	298.85	408.06	499.45	596.21	654.36	712.45	776.37	834.94	896.08	954.24				

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (24) (ST46, ST47, ST48, ST49)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

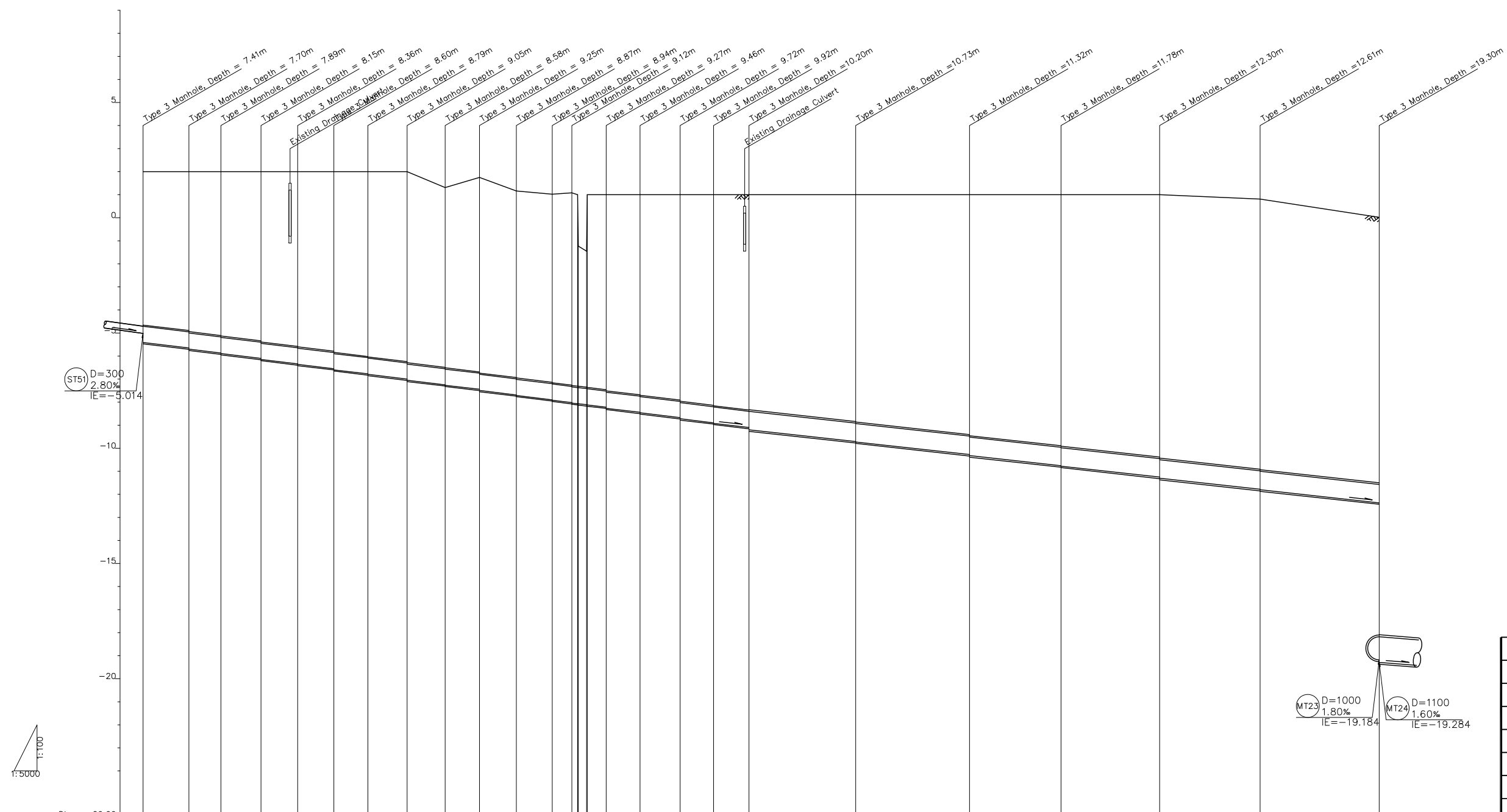
LONGITUDINAL PROFILE OF SEWER (25)



Line Number	Diameter (m)	Gradient (%)	Length (m)	Ground Elevation (m)	Earth Covering (m)	Invert Elevation (m)	Total Length (m)
ST50	φ250	2.80	389.97	3.00	2.65	0.089	0.00
				3.00	2.99	-0.177	87.99
				3.00	3.24	-0.425	194.32
				3.00	3.54	-0.789	303.06
				3.00	3.80	-1.062	389.97
ST51	φ300	2.80	1542.42	2.74	2.56	-0.133	0.00
				3.00	3.09	-0.399	87.70
				2.16	2.88	-0.632	170.84
				2.04	2.72	-0.931	284.66
				2.05	3.01	-1.252	377.89
				2.05	3.32	-1.554	478.44
				2.09	3.64	-1.863	574.65
				2.10	3.96	-2.150	677.16
				2.02	4.29	-2.497	783.14
				2.03	4.48	-2.760	862.77
				2.04	4.72	-2.987	936.66
				2.17	5.06	-3.150	994.86
				2.47	5.53	-3.366	1054.07
				2.81	6.06	-3.658	1115.67
				2.47	5.96	-3.796	1175.50
				2.12	5.62	-3.957	1233.16
				2.33	6.24	-4.223	1303.14
				2.03	6.09	-4.369	1355.15
				2.00	6.38	-4.590	1416.05
				2.00	6.46	-4.765	1471.35
				2.00	6.71	-5.014	1542.42

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (25) (ST50, ST51)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

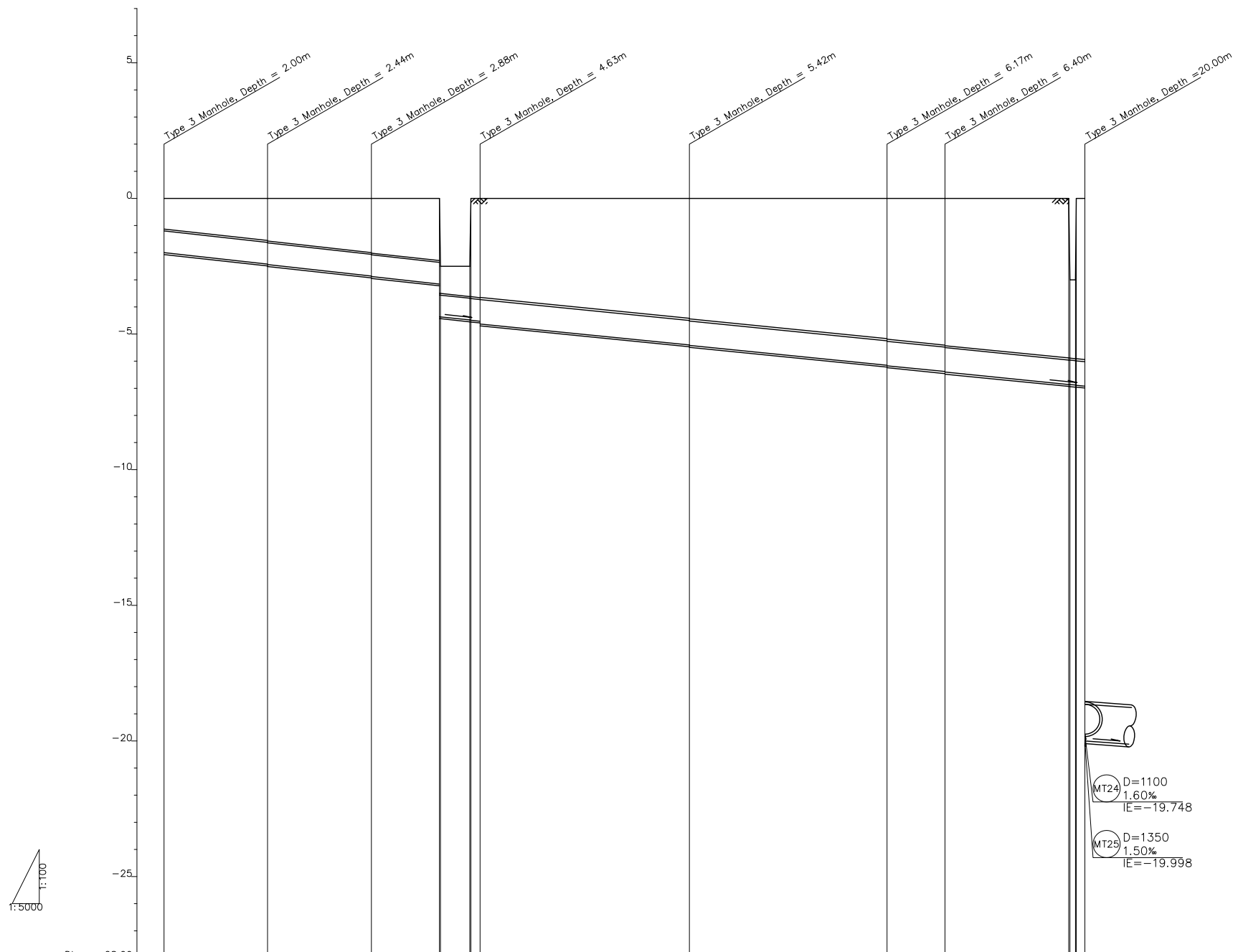
LONGITUDINAL PROFILE OF SEWER (26)



Line Number	ST52													ST53												
Diameter (m)	φ700													φ800												
Gradient (%)	2.40													2.20												
Length (m)	1315.08													1367.55												
Ground Elevation (m)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.31	1.75	1.16	1.02	1.08	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.02
Earth Covering (m)	6.66	6.89	7.13	7.39	7.66	7.84	8.04	8.29	7.82	8.49	8.09	8.18	8.34	8.06	8.36	8.45	8.09	8.91	9.16	9.34	9.86	10.46	10.99	11.39	11.72	11.52
Invert Elevation (m)	-5.414	-5.652	-5.889	-6.097	-6.338	-6.546	-6.754	-6.998	-7.227	-7.445	-7.587	-7.895	-8.017	-8.097	-8.118	-8.216	-8.463	-8.571	-8.895	-9.100	-8.729	-10.323	-10.759	-11.360	-11.880	-12.369
Total Length (m)	1542.42	1641.71	1711.41	1798.27	1877.97	1956.36	2030.40	2115.25	2198.12	2272.44	2352.26	2430.40	2472.98	2466.73	2506.58	2547.60	2621.10	2707.95	2780.43	2857.50	3088.86	3336.07	3534.20	3748.40	3986.62	4225.05

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (26) (ST52-ST53)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (27)



Line Number	(ST54)							(MT30)							
Diameter (m)	φ800							φ900							
Gradient (%)	2.20							2.00							
Length (m)	583.07							1115.63							
Ground Elevation (m)	0.00	0.00	0.00	-0.60	-0.90	-0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Earth Covering (m)	1.13	1.57	2.02	3.08	3.42	3.65	4.74	5.17	5.43	5.74	6.17	6.40	6.40	6.40	
Invert Elevation (m)	-2.000	-2.420	-2.882	-3.488	-4.488	-4.528	-5.318	-6.168	-6.382	-6.582	-6.802	-7.002	-7.002	-7.002	
Total Length (m)	0.00	190.89	382.61	506.14	566.24	583.07	968.95	1333.70	1440.48	1698.91	1888.70	1888.70	1888.70	1888.70	

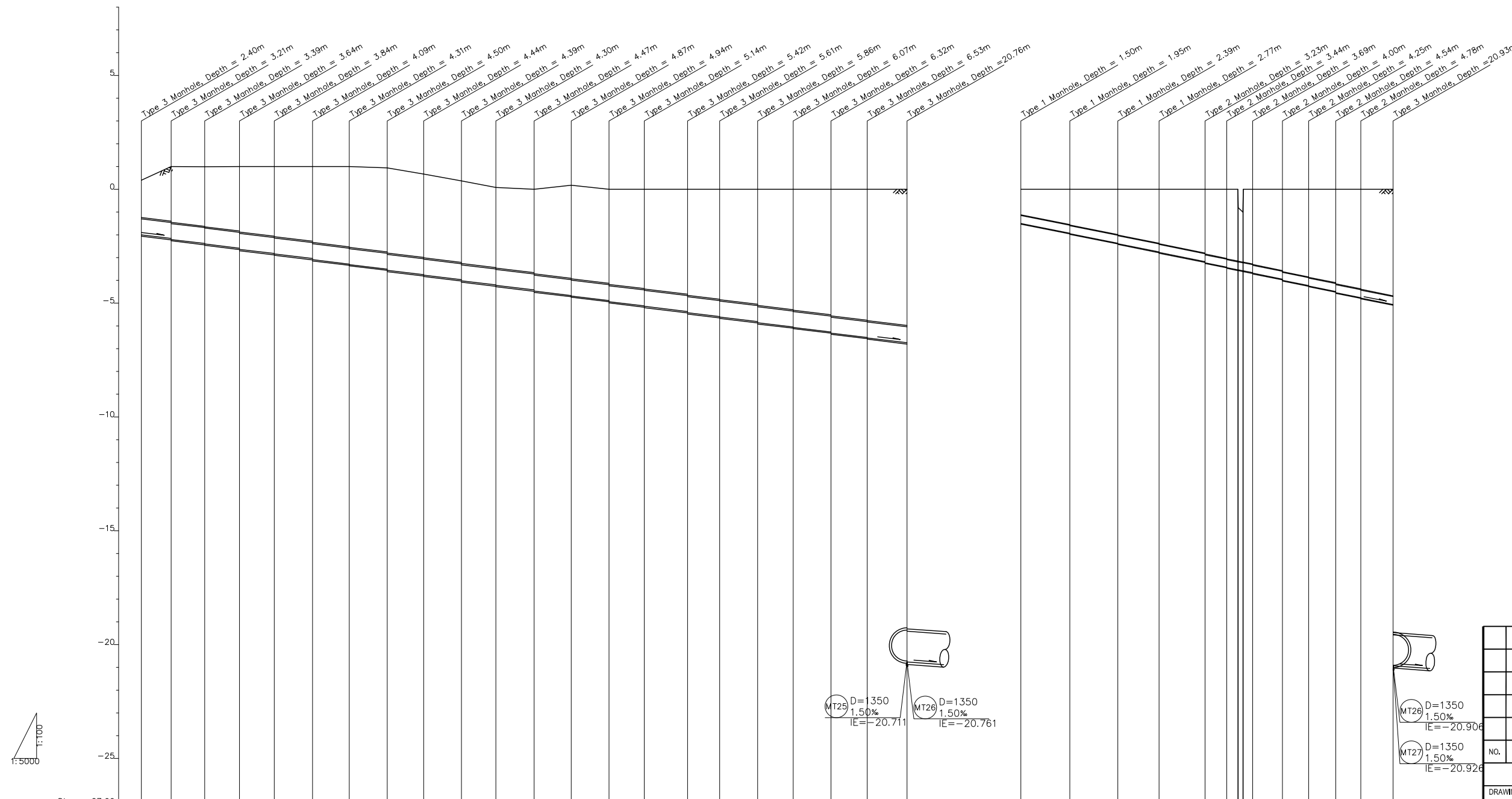
MT24 D=1100
 1.60%
 IE=-19.748

 MT25 D=1350
 1.50%
 IE=-19.998



NO.	DATE	DESCRIPTIONS	APPD. BY				
REVISIONS							
DRAWING TITLE:							
LONGITUDINAL PROFILE OF SEWER (27) (ST54, MT30)							
SCALE:	A1	H=1/5000, V=1/100	UNITS:				
	A3	H=1/10000, V=1/200					
PROJECT:							
PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA							
		DATE	SIGNATURE				
DESIGNED BY							
DRAWN BY							
CHECKED BY							
APPROVED BY:							
DRAWING NO.:							REV.
JAPAN INTERNATIONAL COOPERATION AGENCY							

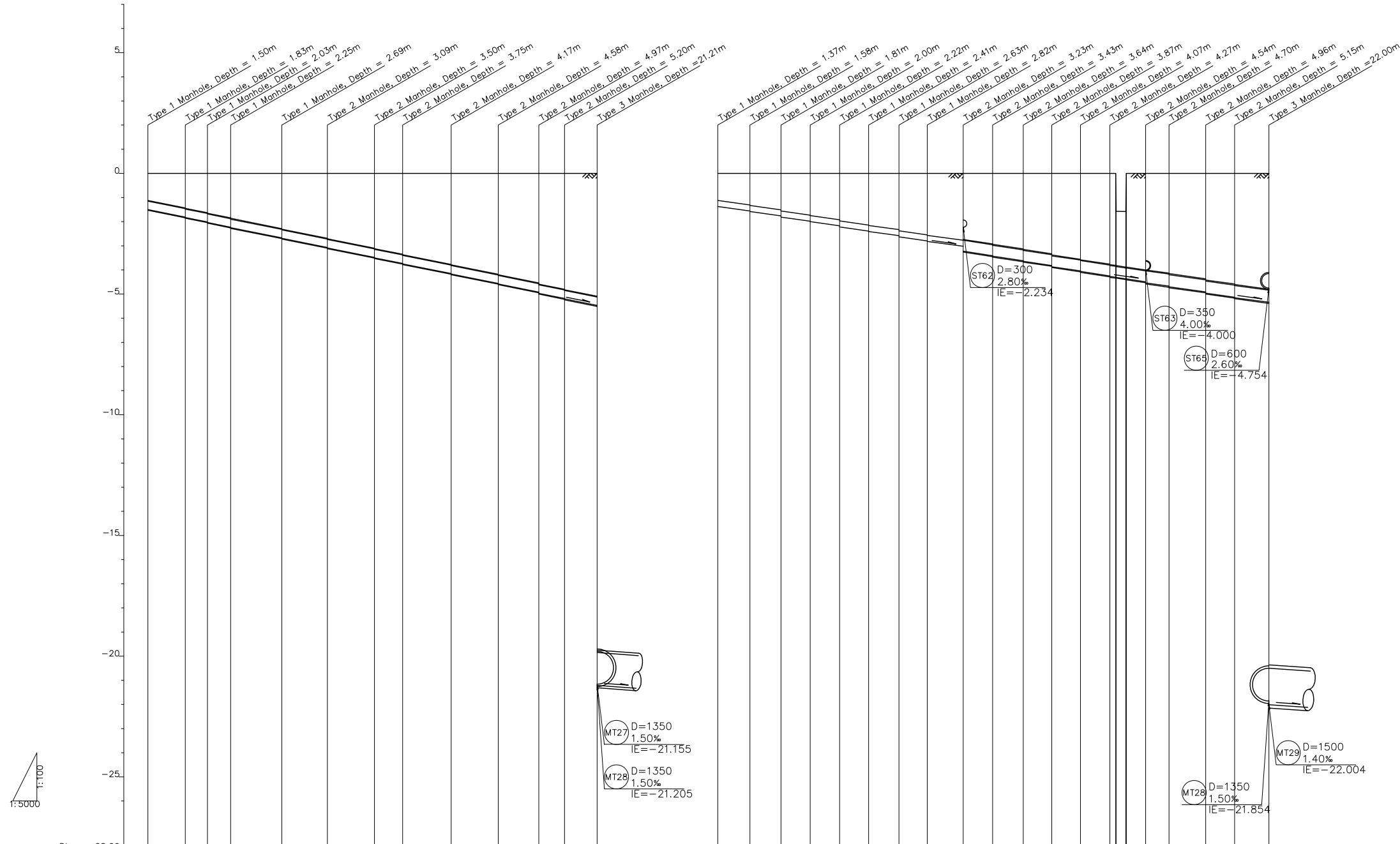
LONGITUDINAL PROFILE OF SEWER (28)



Line Number	Diameter (m)	Gradient (%)	Length (m)	Ground Elevation (m)	Earth Covering (m)	Invert Elevation (m)	Total Length (m)
ST55	Ø 700	2.40	65.28	0.40	1.64	-2.000	0.00
		2.40	1616.18	1.00	2.49	-2.167	65.28
		2.40	139.00	0.99	2.62	-2.284	139.00
		2.40	215.64	1.00	2.88	-2.638	215.64
		2.40	291.84	1.00	3.08	-2.841	291.84
		2.40	375.97	1.00	3.24	-3.043	375.97
		2.40	456.34	1.00	3.53	-3.386	456.34
		2.40	540.05	0.94	3.74	-3.507	540.05
		2.40	619.96	0.67	3.68	-3.749	619.96
		2.40	702.86	0.37	3.69	-4.018	702.86
		2.40	778.28	0.08	3.52	-4.219	778.28
		2.40	862.59	0.00	3.77	-4.471	862.59
		2.40	944.09	0.18	4.01	-4.687	944.09
		2.40	1027.15	0.00	4.18	-4.886	1027.15
		2.40	1104.71	0.00	4.36	-5.122	1104.71
		2.40	1198.68	0.00	4.66	-5.370	1198.68
	2.40	1270.09	0.00	4.83	-5.589	1270.09	
	2.40	1353.34	0.00	5.09	-5.899	1353.34	
	2.40	1431.26	0.00	5.23	-6.046	1431.26	
	2.40	1514.62	0.00	5.51	-6.266	1514.62	
	2.40	1594.16	0.00	5.77	-6.527	1594.16	
	2.40	1681.46	0.00	5.98	-6.737	1681.46	
	Ø 350	4.00	817.42	0.00	1.12	-1.500	0.00
	Ø 350	4.00	107.36	0.00	1.57	-1.929	107.36
	Ø 350	4.00	212.86	0.00	1.91	-2.391	212.86
	Ø 350	4.00	303.63	0.00	2.39	-2.754	303.63
	Ø 350	4.00	404.45	0.00	2.85	-3.127	404.45
	Ø 350	4.00	452.01	0.00	3.06	-3.437	452.01
	Ø 350	4.00	488.81	0.00	3.26	-3.686	488.81
	Ø 350	4.00	508.81	0.00	3.50	-3.886	508.81
	Ø 350	4.00	574.57	0.00	3.62	-3.998	574.57
	Ø 350	4.00	632.06	0.00	3.87	-4.228	632.06
	Ø 350	4.00	691.52	0.00	4.19	-4.486	691.52
	Ø 350	4.00	746.55	0.00	4.39	-4.776	746.55
	Ø 350	4.00	817.42	0.00	4.68	-5.059	817.42

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (28) (ST55-ST56, ST57)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

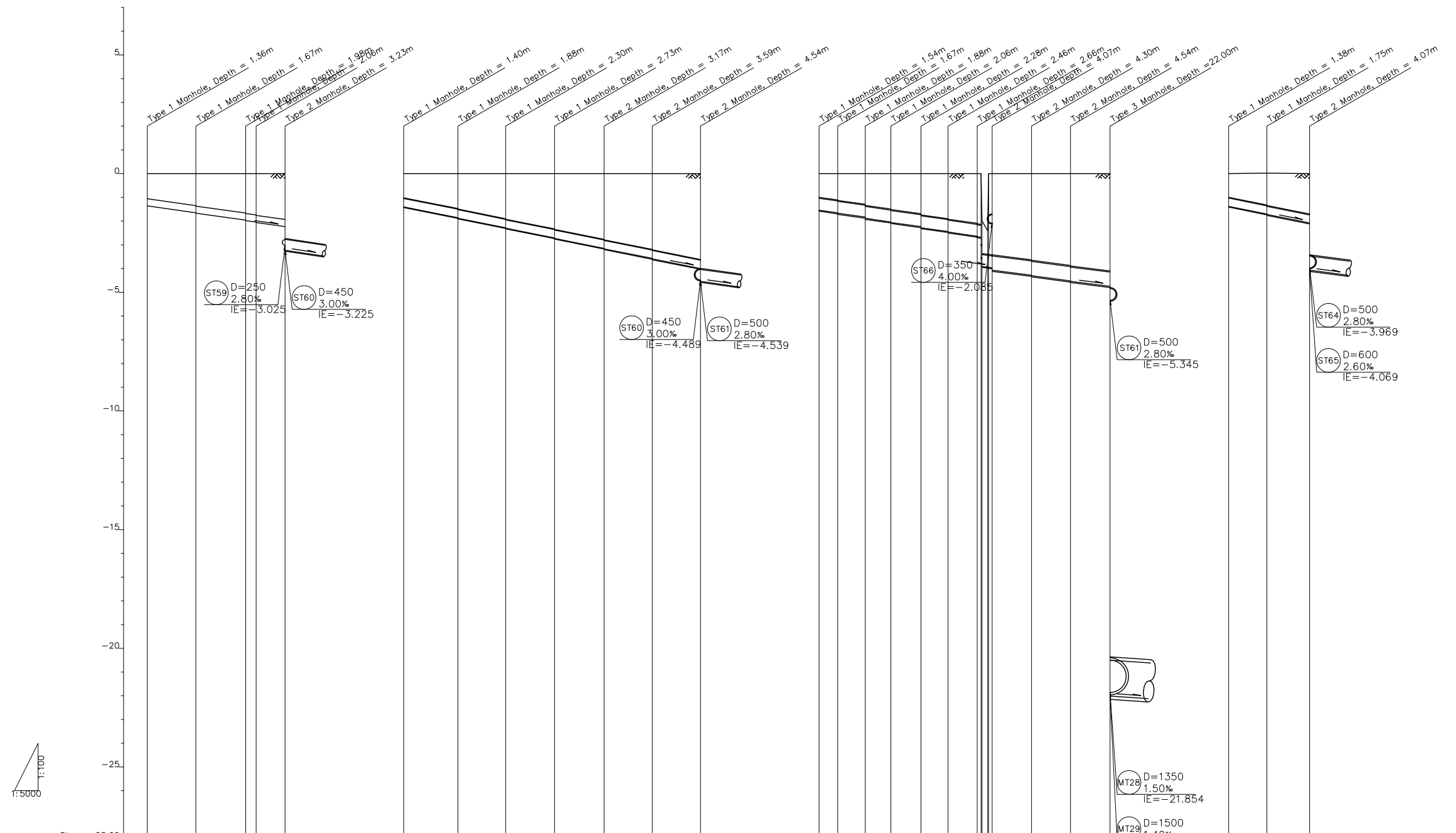
LONGITUDINAL PROFILE OF SEWER (29)



Line Number	ST58															ST59															ST60															ST61														
Diameter (m)	φ350															φ250															φ450															φ500														
Gradient (%)	4.00															2.80															3.00															2.80														
Length (m)	930.88															508.38															378.02															255.83														
Ground Elevation (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
Earth Covering (m)	1.12	1.43	1.65	1.86	2.29	2.59	3.12	3.35	3.75	4.18	4.56	4.82	5.09	1.11	1.32	1.59	1.74	1.96	2.13	2.37	2.56	2.74	2.84	3.15	3.38	3.58	3.76	3.88	2.88	4.00	4.15	4.32	4.68	4.80																										
Invert Elevation (m)	-1.500	-1.828	-2.033	-2.245	-2.669	-3.068	-3.428	-3.752	-4.173	-4.563	-4.971	-5.184	-5.474	-1.371	-1.558	-1.768	-1.928	-2.219	-2.386	-2.582	-2.787	-3.025	-3.428	-3.620	-3.666	-4.065	-4.248	-4.380	-4.539	-4.695	-4.908	-5.126	-5.345																											
Total Length (m)	0.00	77.36	123.48	171.72	277.43	372.17	469.70	528.13	628.32	725.77	810.19	863.36	930.88	0.00	66.74	131.01	191.64	252.83	312.62	375.43	434.24	508.38	569.55	633.22	692.01	751.55	812.70	846.80	886.40	935.05	1011.09	1071.00	1142.23																											

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (29) (ST58, ST59-ST61)			
SCALE:	A1 A3	H=1/5000, V=1/1100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:			REV.

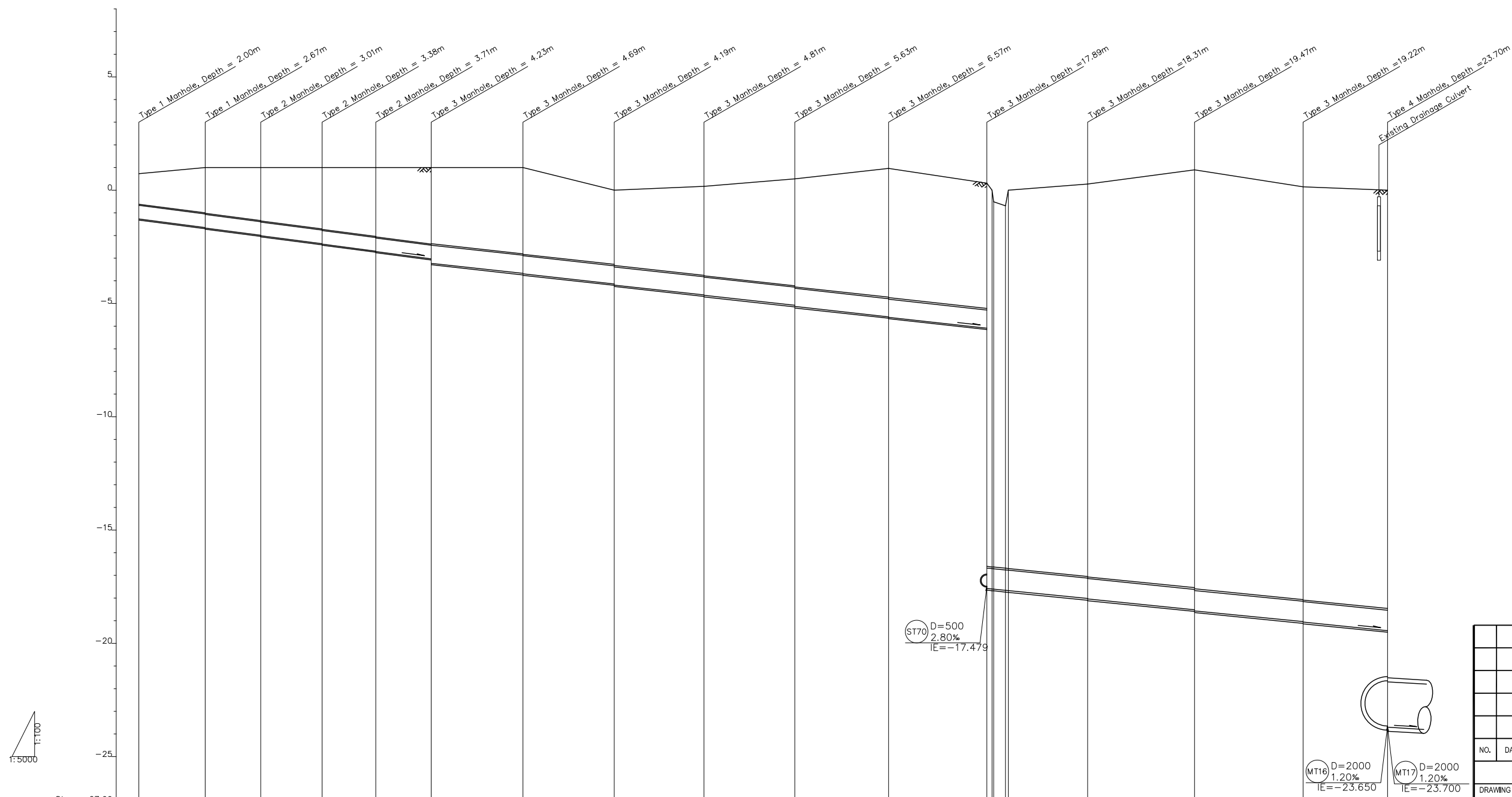
LONGITUDINAL PROFILE OF SEWER (30)



Line Number	ST62					ST63					ST64					ST65					ST66				
Diameter (m)	ø300					ø350					ø500					ø600					ø350				
Gradient (%)	2.80					4.00					2.80					2.60					4.00				
Length (m)	290.69					625.49					364.91					248.24					170.72				
Ground Elevation (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00		
Earth Covering (m)	1.05	1.36	1.65	1.75	1.93	1.02	1.43	1.92	2.35	2.79	3.21	3.62	1.00	1.13	1.29	1.49	1.74	1.92	2.00	2.09	3.85	3.87	4.10		
Invert Elevation (m)	-1.361	-1.668	-1.963	-2.062	-2.234	-1.398	-1.855	-2.297	-2.710	-3.168	-3.574	-4.000	-1.542	-1.673	-1.834	-2.055	-2.233	-2.463	-2.600	-2.680	-4.384	-4.517	-4.754		
Total Length (m)	0.00	102.67	207.43	229.35	290.69	0.00	114.20	214.58	317.93	422.51	524.04	625.49	0.00	39.53	97.12	151.13	214.78	271.85	337.20	364.91	447.64	529.65	613.15		

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE:			
LONGITUDINAL PROFILE OF SEWER (30) (ST62, ST63, ST64-ST65, ST66)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT:			
PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

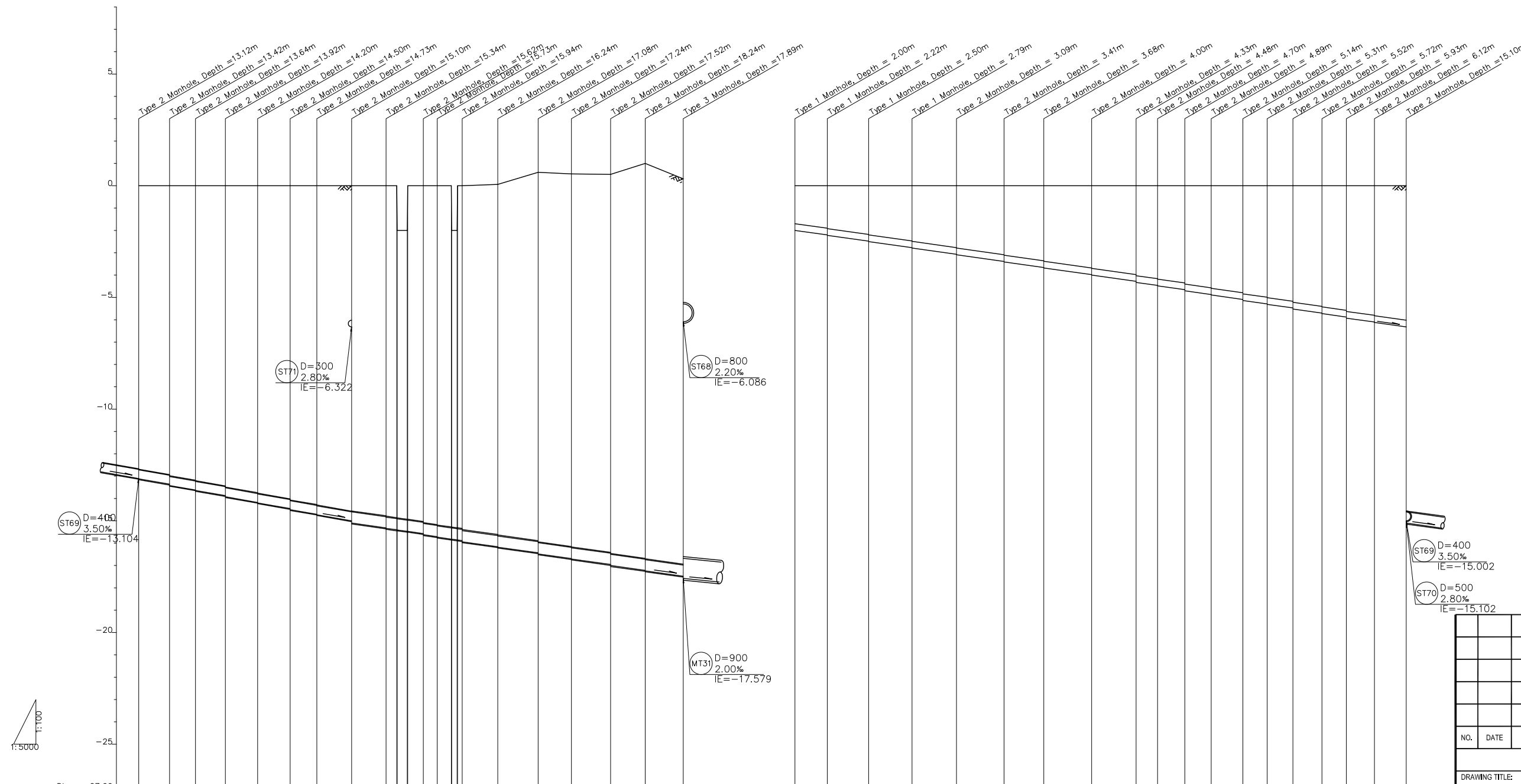
LONGITUDINAL PROFILE OF SEWER (31)



Line Number	ST67										ST68										MT31																																																																					
Diameter (m)	#600																														#800																														#900																													
Gradient (%)	2.60																														2.20																														2.00																													
Length (m)	645.43																														1226.74																														884.19																													
Ground Elevation (m)	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.17	0.50	0.96	0.00	-0.08	-0.08	0.27	0.90	0.15	0.00	0.73	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.17	0.50	0.96	0.00	-0.08	-0.08	0.27	0.90	0.15	0.00	0.73	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.17	0.50	0.96	0.00	-0.08	-0.08	0.27	0.90	0.15	0.00																																
Earth Covering (m)	1.35	2.02	2.36	2.73	3.06	3.38	3.83	3.32	3.93	4.77	5.68	5.70	5.53	16.92	16.99	17.34	18.44	18.24	18.46	1.35	2.02	2.36	2.73	3.06	3.38	3.83	3.32	3.93	4.77	5.68	5.70	5.53	16.92	16.99	17.34	18.44	18.24	18.46	1.35	2.02	2.36	2.73	3.06	3.38	3.83	3.32	3.93	4.77	5.68	5.70	5.53	16.92	16.99	17.34	18.44	18.24	18.46																																	
Invert Elevation (m)	-1.270	-1.651	-2.089	-2.381	-2.689	-3.028	-3.653	-4.186	-4.622	-5.082	-5.808	-5.508	-5.058	-17.658	-17.659	-18.024	-18.516	-19.065	-19.437	-1.270	-1.651	-2.089	-2.381	-2.689	-3.028	-3.653	-4.186	-4.622	-5.082	-5.808	-5.508	-5.058	-17.658	-17.659	-18.024	-18.516	-19.065	-19.437	-1.270	-1.651	-2.089	-2.381	-2.689	-3.028	-3.653	-4.186	-4.622	-5.082	-5.808	-5.508	-5.058	-17.658	-17.659	-18.024	-18.516	-19.065	-19.437																																	
Total Length (m)	0.00	146.64	269.10	404.40	522.93	645.43	847.80	1049.36	1247.70	1447.77	1654.97	1872.17	1919.92	2094.62	2330.70	2570.22	2756.36	0.00	146.64	269.10	404.40	522.93	645.43	847.80	1049.36	1247.70	1447.77	1654.97	1872.17	1919.92	2094.62	2330.70	2570.22	2756.36	0.00	146.64	269.10	404.40	522.93	645.43	847.80	1049.36	1247.70	1447.77	1654.97	1872.17	1919.92	2094.62	2330.70	2570.22	2756.36																																							

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (31) (ST67-ST68, MT31)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (33)



Line Number	ST69	ST70	ST71
Diameter (m)	φ400	φ500	φ300
Gradient (%)	3.50	2.80	2.80
Length (m)	476.49	741.82	1367.96
Ground Elevation (m)	0.00	0.00	0.00
Earth Covering (m)	12.69	15.98	6.01
Invert Elevation (m)	-13.124	-16.177	-6.322
Total Length (m)	2858.26	4076.57	1367.96

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			

DRAWING TITLE:
LONGITUDINAL PROFILE OF SEWER (33)
 (ST69-ST70, ST71)

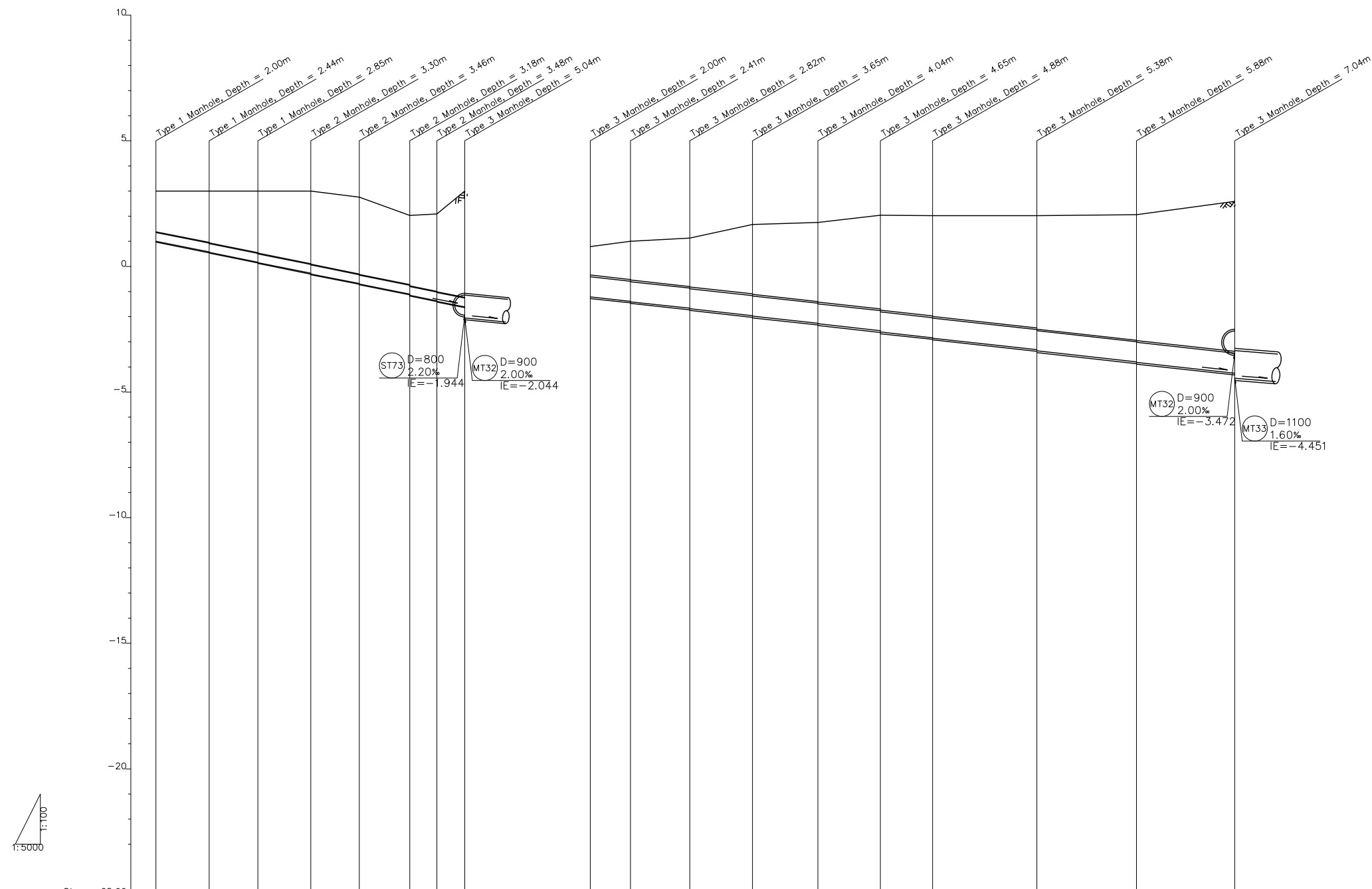
SCALE:	A1	H=1/5000, V=1/100	UNITS:
	A3	H=1/10000, V=1/200	

PROJECT:
 PREPARATORY SURVEY FOR
 PPP INFRASTRUCTURE PROJECT
 SEWAGE TREATMENT PLANT PROJECT
 IN DKI JAKARTA

DESIGNED BY	DATE	SIGNATURE
DRAWN BY		
CHECKED BY		
APPROVED BY:		

DRAWING NO.:	REV.
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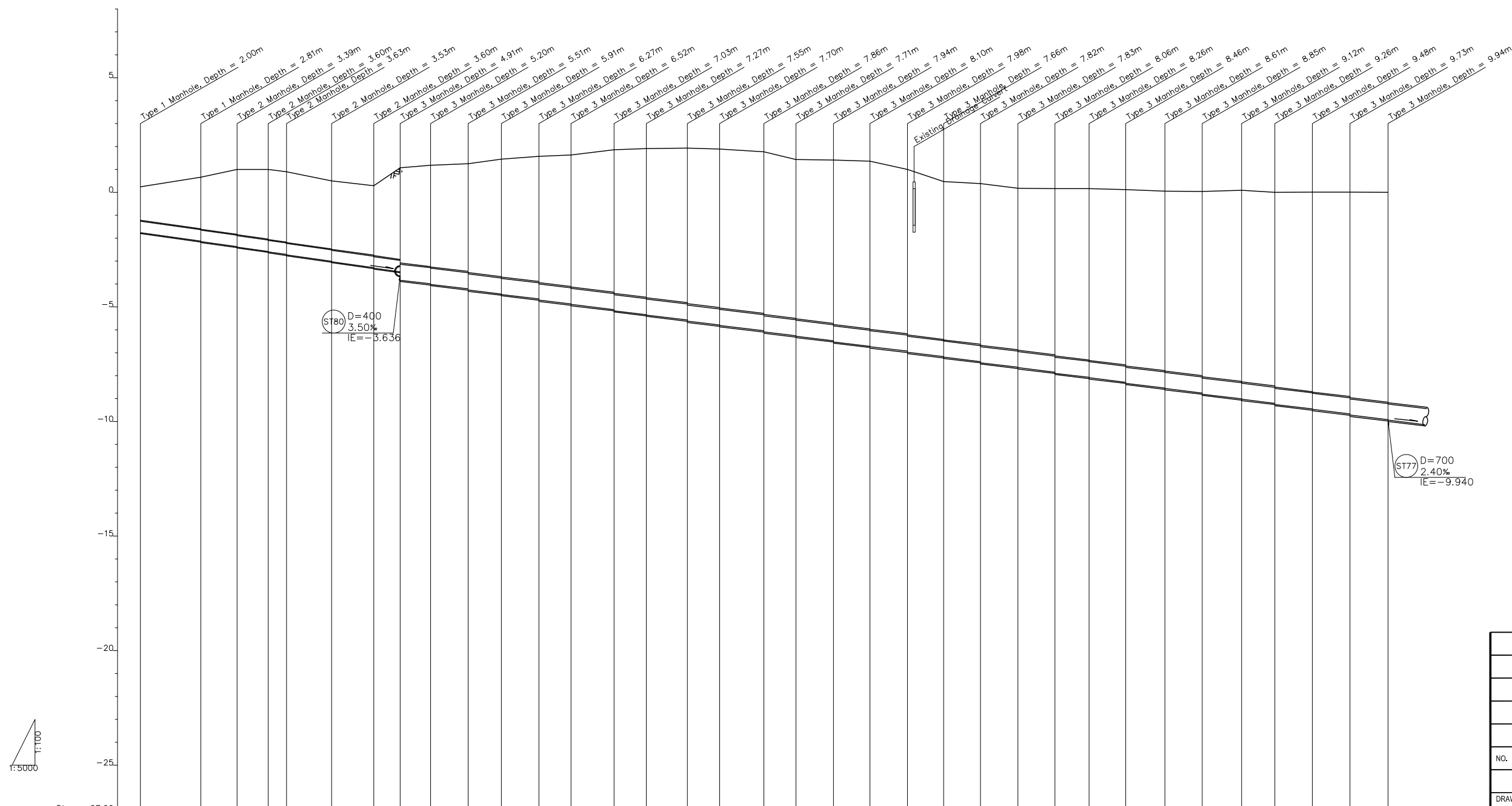
LONGITUDINAL PROFILE OF SEWER (35)



Line Number	ST74										ST75									
Diameter (m)	ø350										ø800									
Gradient (%)	4.00										2.20									
Length (m)	615.22										1282.95									
Ground Elevation (m)	3.00	3.00	3.00	3.00	2.76	2.03	2.09	3.00	0.79	1.00	1.13	1.67	1.75	2.04	2.02	2.02	2.06	2.59		
Earth Covering (m)	1.62	2.06	2.47	2.99	3.08	2.86	3.08	4.23	1.13	1.54	1.93	2.78	3.17	3.78	3.98	4.52	5.02	5.98		
Invert Elevation (m)	1.000	0.557	0.189	-0.295	-0.980	-1.163	-1.388	-1.611	-1.210	-1.386	-1.685	-1.980	-2.285	-2.580	-2.858	-3.314	-3.821	-4.251		
Total Length (m)	0.00	105.87	202.78	308.70	405.07	505.73	559.42	615.22	0.00	79.86	197.70	322.88	452.55	577.47	681.21	886.64	1087.35	1282.95		

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (35) (ST74, ST75)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

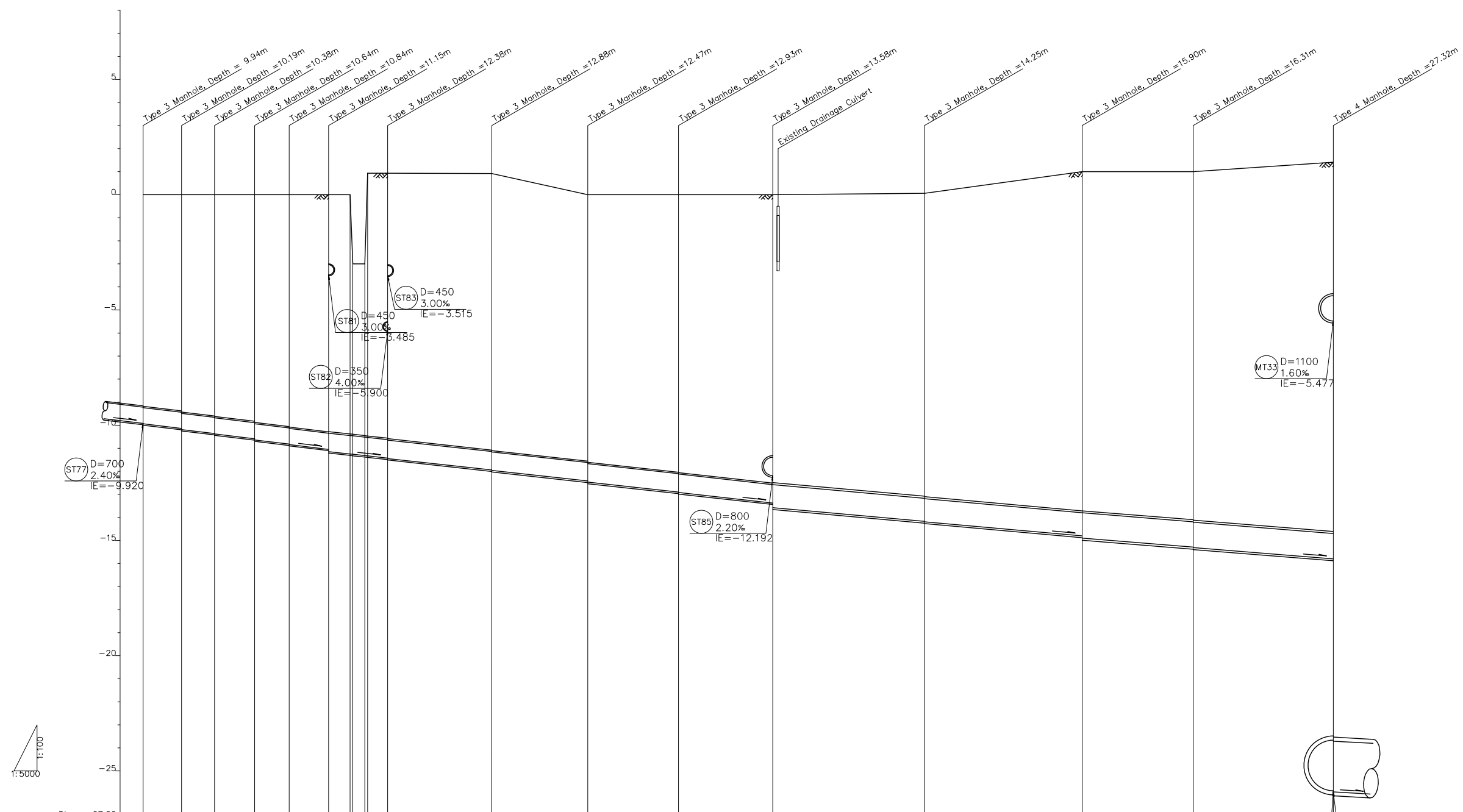
LONGITUDINAL PROFILE OF SEWER (36)



Line Number	ST76																				ST77																			
Diameter (m)	φ500																				φ700																			
Gradient (%)	2.80																				2.40																			
Length (m)	567.04																				2156.21																			
Ground Elevation (m)	0.24	0.66	1.00	1.00	0.90	0.50	0.29	1.07	1.18	1.25	1.45	1.57	1.63	1.86	1.91	1.93	1.89	1.77	1.43	1.41	1.36	1.00	0.47	0.38	0.18	0.16	0.12	0.05	0.04	0.09	0.00	0.01	0.01	0.00						
Earth Covering (m)	1.46	2.27	2.85	3.06	3.09	2.99	3.06	4.09	4.42	4.75	5.13	5.45	5.74	6.22	6.45	6.74	6.92	7.10	6.95	7.18	7.32	7.23	6.99	7.08	7.09	7.35	7.46	7.65	7.83	8.04	8.37	8.65	8.73	8.97	9.16					
Invert Elevation (m)	-1.760	-2.130	-2.370	-2.581	-2.713	-3.028	-3.387	-3.468	-3.895	-4.262	-4.438	-4.652	-4.881	-5.167	-5.358	-5.620	-5.810	-6.092	-6.259	-6.426	-6.737	-6.933	-7.194	-7.386	-7.632	-7.896	-8.095	-8.336	-8.561	-8.757	-9.033	-9.287	-9.454	-9.671	-9.920					
Total Length (m)	0.00	132.05	210.78	278.94	319.07	417.48	509.46	567.04	633.45	715.51	788.08	869.80	940.02	1034.06	1104.58	1193.75	1264.44	1361.22	1430.84	1513.09	1592.61	1674.30	1753.74	1833.93	1915.68	1996.54	2071.22	2150.88	2236.36	2318.08	2404.12	2476.44	2558.35	2640.30	2723.25					

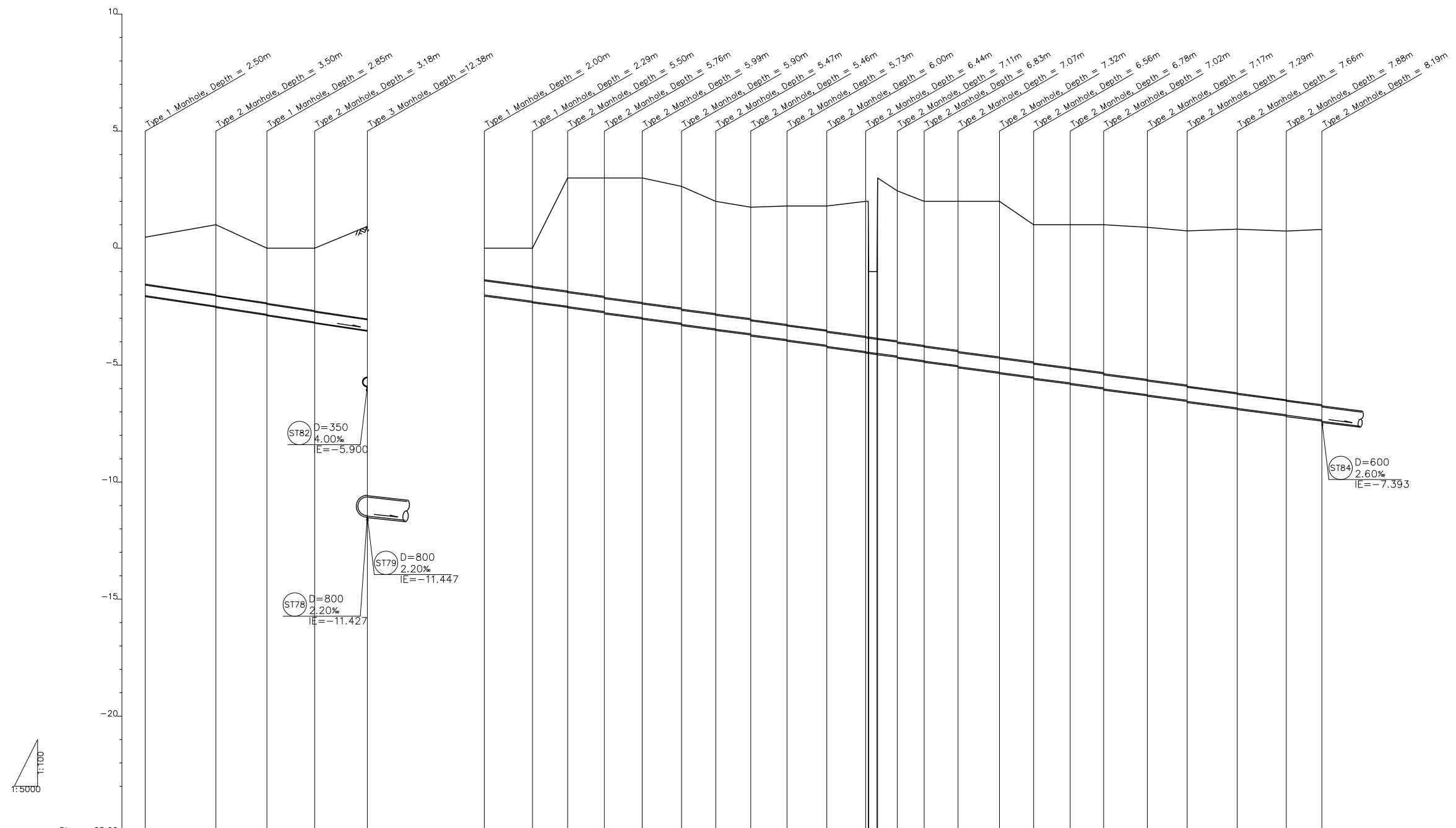
NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (36) (ST76-ST77)			
SCALE:	A1 A3	H=1/5000, V=1/1100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (37)



Line Number	ST77		ST78		ST79		MT34		MT35		MT19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Diameter (m)	φ700		φ800		φ800		φ1000		φ1100		φ2200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Gradient (%)	2.40		2.20		2.20		1.80		1.60		1.10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Length (m)	402.28		128.02		835.54		671.15		545.01		25.85																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Ground Elevation (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.00	1.00	1.41																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Earth Covering (m)	9.18	9.33	9.65	9.88	10.08	10.28	10.48	10.68	10.88	11.08	11.28	11.48	11.68	11.88	12.08	12.28	12.48	12.68	12.88	13.08	13.28	13.48	13.68	13.88	14.08	14.28	14.48	14.68	14.88	15.08	15.28	15.48	15.68	15.88	16.02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Invert Elevation (m)	-9.940	-10.16	-10.383	-10.592	-10.821	-11.046	-11.265	-11.48	-11.699	-11.918	-12.137	-12.356	-12.575	-12.794	-13.013	-13.232	-13.451	-13.670	-13.889	-14.108	-14.327	-14.546	-14.765	-14.984	-15.203	-15.422	-15.641	-15.860	-16.079	-16.298	-16.517	-16.736	-16.955	-17.174	-17.393	-17.612	-17.831	-18.050	-18.269	-18.488	-18.707	-18.926	-19.145	-19.364	-19.583	-19.802	-20.021	-20.240	-20.459	-20.678	-20.897	-21.116	-21.335	-21.554	-21.773	-21.992	-22.211	-22.430	-22.649	-22.868	-23.087	-23.306	-23.525	-23.744	-23.963	-24.182	-24.401	-24.620	-24.839	-25.058	-25.277	-25.496	-25.715	-25.934	-26.153	-26.372	-26.591	-26.810	-27.029	-27.248	-27.467	-27.686	-27.905	-28.124	-28.343	-28.562	-28.781	-29.000	-29.219	-29.438	-29.657	-29.876	-30.095	-30.314	-30.533	-30.752	-30.971	-31.190	-31.409	-31.628	-31.847	-32.066	-32.285	-32.504	-32.723	-32.942	-33.161	-33.380	-33.599	-33.818	-34.037	-34.256	-34.475	-34.694	-34.913	-35.132	-35.351	-35.570	-35.789	-36.008	-36.227	-36.446	-36.665	-36.884	-37.103	-37.322	-37.541	-37.760	-37.979	-38.198	-38.417	-38.636	-38.855	-39.074	-39.293	-39.512	-39.731	-39.950	-40.169	-40.388	-40.607	-40.826	-41.045	-41.264	-41.483	-41.702	-41.921	-42.140	-42.359	-42.578	-42.797	-43.016	-43.235	-43.454	-43.673	-43.892	-44.111	-44.330	-44.549	-44.768	-44.987	-45.206	-45.425	-45.644	-45.863	-46.082	-46.301	-46.520	-46.739	-46.958	-47.177	-47.396	-47.615	-47.834	-48.053	-48.272	-48.491	-48.710	-48.929	-49.148	-49.367	-49.586	-49.805	-50.024	-50.243	-50.462	-50.681	-50.900	-51.119	-51.338	-51.557	-51.776	-51.995	-52.214	-52.433	-52.652	-52.871	-53.090	-53.309	-53.528	-53.747	-53.966	-54.185	-54.404	-54.623	-54.842	-55.061	-55.280	-55.499	-55.718	-55.937	-56.156	-56.375	-56.594	-56.813	-57.032	-57.251	-57.470	-57.689	-57.908	-58.127	-58.346	-58.565	-58.784	-59.003	-59.222	-59.441	-59.660	-59.879	-60.098	-60.317	-60.536	-60.755	-60.974	-61.193	-61.412	-61.631	-61.850	-62.069	-62.288	-62.507	-62.726	-62.945	-63.164	-63.383	-63.602	-63.821	-64.040	-64.259	-64.478	-64.697	-64.916	-65.135	-65.354	-65.573	-65.792	-66.011	-66.230	-66.449	-66.668	-66.887	-67.106	-67.325	-67.544	-67.763	-67.982	-68.201	-68.420	-68.639	-68.858	-69.077	-69.296	-69.515	-69.734	-69.953	-70.172	-70.391	-70.610	-70.829	-71.048	-71.267	-71.486	-71.705	-71.924	-72.143	-72.362	-72.581	-72.800	-73.019	-73.238	-73.457	-73.676	-73.895	-74.114	-74.333	-74.552	-74.771	-74.990	-75.209	-75.428	-75.647	-75.866	-76.085	-76.304	-76.523	-76.742	-76.961	-77.180	-77.399	-77.618	-77.837	-78.056	-78.275	-78.494	-78.713	-78.932	-79.151	-79.370	-79.589	-79.808	-80.027	-80.246	-80.465	-80.684	-80.903	-81.122	-81.341	-81.560	-81.779	-81.998	-82.217	-82.436	-82.655	-82.874	-83.093	-83.312	-83.531	-83.750	-83.969	-84.188	-84.407	-84.626	-84.845	-85.064	-85.283	-85.502	-85.721	-85.940	-86.159	-86.378	-86.597	-86.816	-87.035	-87.254	-87.473	-87.692	-87.911	-88.130	-88.349	-88.568	-88.787	-89.006	-89.225	-89.444	-89.663	-89.882	-90.101	-90.320	-90.539	-90.758	-90.977	-91.196	-91.415	-91.634	-91.853	-92.072	-92.291	-92.510	-92.729	-92.948	-93.167	-93.386	-93.605	-93.824	-94.043	-94.262	-94.481	-94.700	-94.919	-95.138	-95.357	-95.576	-95.795	-96.014	-96.233	-96.452	-96.671	-96.890	-97.109	-97.328	-97.547	-97.766	-97.985	-98.204	-98.423	-98.642	-98.861	-99.080	-99.299	-99.518	-99.737	-99.956	-100.175	-100.394	-100.613	-100.832	-101.051	-101.270	-101.489	-101.708	-101.927	-102.146	-102.365	-102.584	-102.803	-103.022	-103.241	-103.460	-103.679	-103.898	-104.117	-104.336	-104.555	-104.774	-104.993	-105.212	-105.431	-105.650	-105.869	-106.088	-106.307	-106.526	-106.745	-106.964	-107.183	-107.402	-107.621	-107.840	-108.059	-108.278	-108.497	-108.716	-108.935	-109.154	-109.373	-109.592	-109.811	-110.030	-110.249	-110.468	-110.687	-110.906	-111.125	-111.344	-111.563	-111.782	-112.001	-112.220	-112.439	-112.658	-112.877	-113.096	-113.315	-113.534	-113.753	-113.972	-114.191	-114.410	-114.629	-114.848	-115.067	-115.286	-115.505	-115.724	-115.943	-116.162	-116.381	-116.600	-116.819	-117.038	-117.257	-117.476	-117.695	-117.914	-118.133	-118.352	-118.571	-118.790	-119.009	-119.228	-119.447	-119.666	-119.885	-120.104	-120.323	-120.542	-120.761	-120.980	-121.199	-121.418	-121.637	-121.856	-122.075	-122.294	-122.513	-122.732	-122.951	-123.170	-123.389	-123.608	-123.827	-124.046	-124.265	-124.484	-124.703	-124.922	-125.141	-125.360	-125.579	-125.798	-126.017	-126.236	-126.455	-126.674	-126.893	-127.112	-127.331	-127.550	-127.769	-127.988	-128.207	-128.426	-128.645	-128.864	-129.083	-129.302	-129.521	-129.740	-129.959	-130.178	-130.397	-130.616	-130.835	-131.054	-131.273	-131.492	-131.711	-131.930	-132.149	-132.368	-132.587	-132.806	-133.025	-133.244	-133.463	-133.682	-133.901	-134.120	-134.339	-134.558	-134.777	-134.996	-135.215	-135.434	-135.653	-135.872	-136.091	-136.310	-136.529	-136.748	-136.967	-137.186	-137.405	-137.624	-137.843	-138.062	-138.281	-138.500	-138.719	-138.938	-139.157	-139.376	-139.595	-139.814	-140.033	-140.252	-140.471	-140.690	-140.909	-141.128	-141.347	-141.566	-141.785	-142.004	-142.223	-142.442	-142.661	-142.880	-143.099	-143.318	-143.537	-143.756	-143.975	-144.194	-144.413	-144.632	-144.851	-145.070	-145.289	-145.508	-145.727	-145.946	-146.165	-146.384	-146.603	-146.822	-147.041	-147.260	-147.479	-147.698	-147.917	-148.136	-148.355	-148.574	-148.793	-149.012	-149.231	-149.450	-149.669	-149.888	-150.107	-150.326	-150.545	-150.764	-150.983	-151.202	-151.421	-151.640	-151.859	-152.078	-152.297	-152.516	-152.735	-152.954	-153.173	-153.392	-153.611	-153.830	-154.049	-154.268	-154.487	-154.706	-154.925	-155.144	-155.363	-155.582	-155.801	-156.020	-156.239	-156.458	-156.677	-156.896	-157.115	-157.334	-157.553	-157.772	-157.991	-158.210	-158.429	-158.648	-158.867	-159.086	-159.305	-159.524	-159.743	-159.962	-160.181	-160.400	-160.619	-160.838	-161.057	-161.276	-161.495	-161.714	-161.933	-162.152	-162.371	-162.590	-162.809	-163.028	-163.247	-163.466	-163.685	-163.904	-164.123	-164.342	-164.561	-164.780	-165.000	-165.219	-165.438	-165.657	-165.876	-166.095	-166.314	-166.533	-166.752	-166.971	-167.190	-167.409	-167.628	-167.847	-168.066	-168.285	-168.504	-168.723	-168.942	-169.161	-169.380	-169.599	-169.818	-170.037	-170.256	-170.475	-170.694	-170.913	-171.132	-171.351	-171.570	-171.789	-172.008	-172.227	-172.446	-172.665	-172.884	-173.103	-173.322	-173.541	-173.760	-173.979	-174.198	-174.417	-174.636	-174.855	-175.074	-175.293	-175.512	-175.731	-175.950	-176.169	-176.388	-176.607	-176.826	-177.045	-177.264	-177.483	-177.702	-177.921	-178.140	-178.359	-178.578	-178.797	-179.016	-179.235	-179.454	-179.673	-179.892	-180.111	-180.330	-180.549	-180.768	-180.987	-181.206	-181.425	-181.644	-181.863	-182.082	-182.301	-182.520	-182.739	-182.958	-183.177	-183.396	-183.615	-183.834	-184.053	-184.272	-184.491	-184.710	-184.929	-185.148	-185.367	-185.586	-185.805	-186.024	-186.243	-186.462	-186.681	-186.900	-187.119	-187.338	-187.557	-187.776	-187.995	-188.214	-188.433	-188.652	-188.871	-189.090	-189.309	-189.528	-189.747	-189.966	-190.185	-190.404	-190.623	-190.842	-191.061	-191.280	-191.499	-191.718	-191.937	-192.156	-192.375	-192.594	-192.813	-193.032	-193.251	-193.470	-193.689	-193.908	-194.127	-194.346	-194.565	-194.784	-195.003	-195.222	-195.441	-195.660	-195.879	-196.098	-196.317	-196.536	-196.755	-196.974	-197.193	-197.412	-197.631	-197.850	-198.069	-198.288	-198.507	-198.726	-198.945	-199.164	-199.383	-199.602	-199.821	-200.040	-200.259	-200.478	-200.697	-200.916	-201.135	-201.354	-201.573	-201.792	-202.011	-202.230	-202.449	-202.668	-202.887	-203.106	-203.325	-203.544	-203.763	-203.982	-204.201	-204.420	-204.639	-204.858	-205.077	-205.296	-20

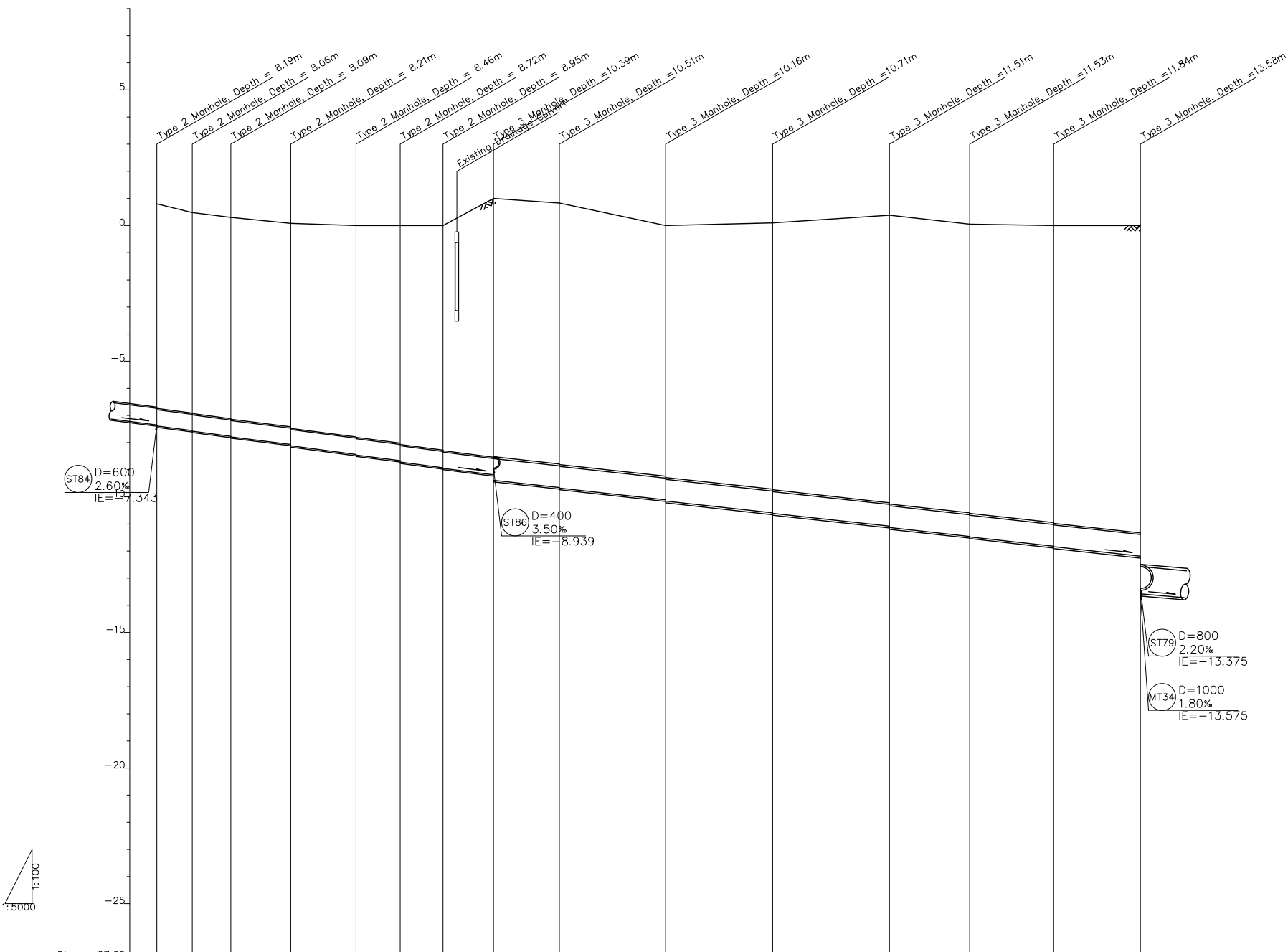
LONGITUDINAL PROFILE OF SEWER (39)



Line Number	ST83					ST84																							
Diameter (m)	φ450					φ600																							
Gradient (%)	3.00					2.60																							
Length (m)	474.68					1790.03																							
Ground Elevation (m)	0.47	1.00	0.00	0.00	0.93	0.00	0.00	3.00	3.00	3.00	2.64	2.00	1.75	1.80	1.80	3.00	2.45	2.00	2.00	2.00	1.00	1.00	1.00	0.89	0.74	0.81	0.73	0.80	
Earth Covering (m)	2.01	3.00	2.36	2.69	3.96	1.35	1.84	4.83	5.06	5.34	5.25	4.82	4.76	5.08	5.35	5.77	6.46	6.18	6.42	6.67	5.96	6.13	6.37	6.50	6.64	6.98	7.23	7.49	
Invert Elevation (m)	-2.030	-2.583	-2.851	-3.177	-3.515	-2.000	-2.287	-2.582	-2.756	-2.988	-3.255	-3.466	-3.561	-3.532	-4.154	-4.419	-4.589	-4.614	-4.822	-5.072	-5.302	-5.511	-5.784	-6.020	-6.284	-6.554	-6.852	-7.125	-7.343
Total Length (m)	0.00	150.88	266.08	361.92	474.68	0.00	102.64	177.83	256.11	337.49	421.15	494.30	569.45	646.85	732.05	814.76	882.32	939.99	1012.38	1100.81	1173.59	1251.66	1323.15	1416.99	1501.76	1608.86	1713.93	1790.03	

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (39) (ST83, ST84)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

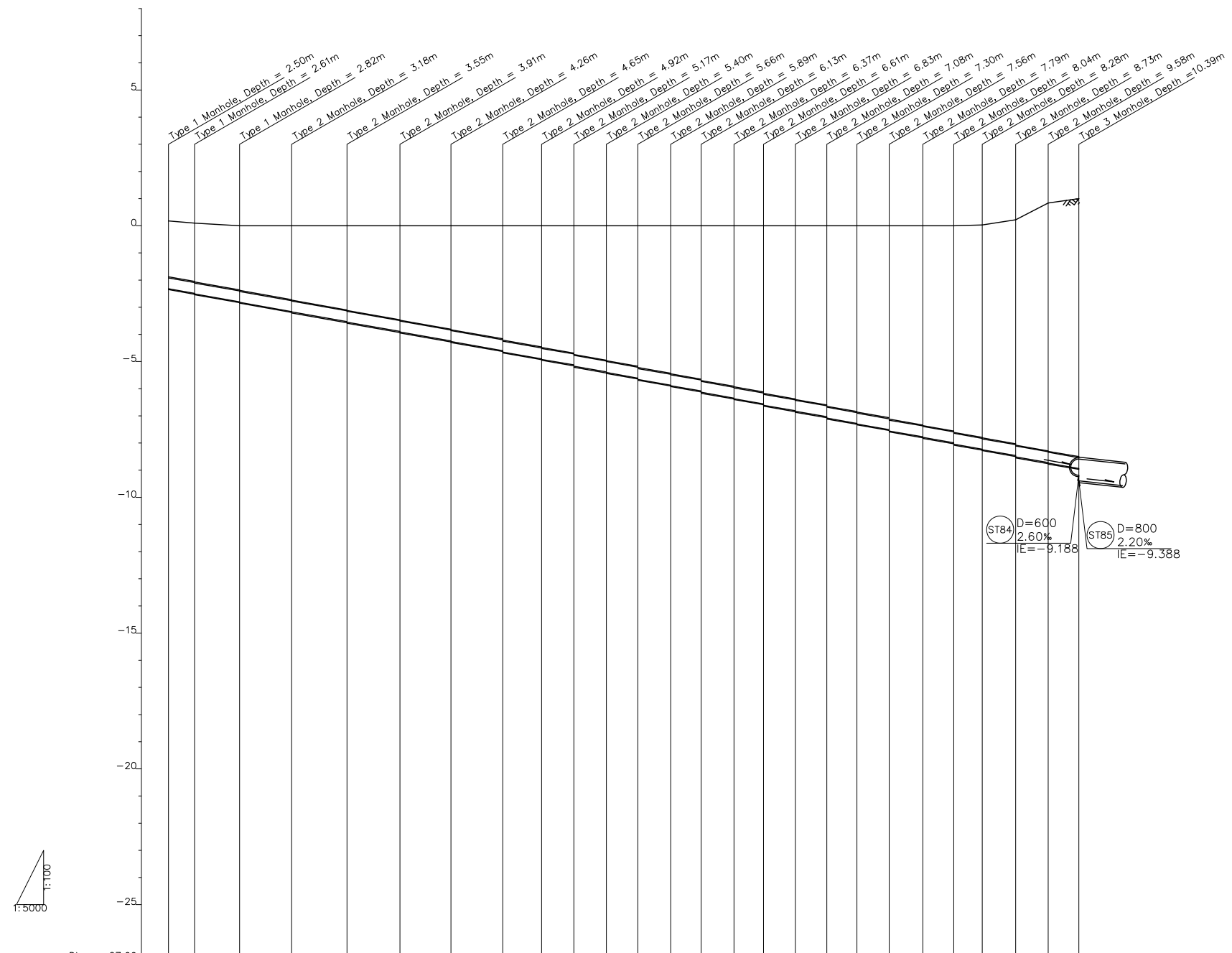
LONGITUDINAL PROFILE OF SEWER (40)



Line Number	ST84										ST85									
Diameter (m)	φ600										φ800									
Gradient (%)	2.60										2.20									
Length (m)	621.05										1193.30									
Ground Elevation (m)	0.80	0.48	0.30	0.08	0.00	0.00	0.00	0.00	1.00	0.83	0.00	0.10	0.38	0.05	0.00	0.00				
Earth Covering (m)	7.54	7.34	7.44	7.56	7.81	8.07	8.30	8.54	8.64	8.24	9.84	10.60	10.66	10.98	11.33					
Invert Elevation (m)	-7.393	-7.584	-7.788	-8.025	-8.438	-8.671	-8.926	-9.188	-9.675	-10.156	-10.810	-11.084	-11.459	-11.821	-12.192					
Total Length (m)	1790.03	1855.73	1926.38	2006.79	2157.29	2239.10	2317.90	2411.08	2532.56	2728.62	2926.07	3141.46	3289.35	3444.71	3604.38					

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: LONGITUDINAL PROFILE OF SEWER (40) (ST84-ST85)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

LONGITUDINAL PROFILE OF SEWER (41)



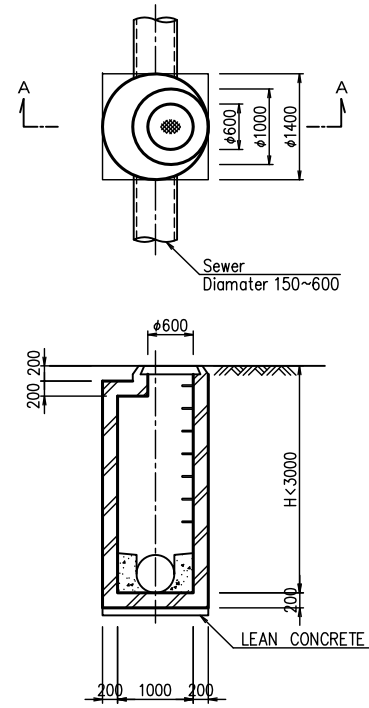
Line Number	(ST86)																													
Diameter (m)	φ400																													
Gradient (%)	3.50																													
Length (m)	1677.43																													
Ground Elevation (m)	0.18	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.22	0.84	1.00
Earth Covering (m)	2.07	2.17	2.38	2.74	3.12	3.48	3.85	4.16	4.48	4.69	4.97	5.22	5.43	5.70	5.93	6.17	6.48	6.85	6.88	7.02	7.36	7.56	7.82	8.35	8.74	9.15	9.50			
Invert Elevation (m)	-2.320	-2.488	-2.818	-3.155	-3.551	-3.892	-4.261	-4.596	-4.897	-5.124	-5.384	-5.607	-5.833	-6.084	-6.347	-6.557	-6.812	-7.084	-7.298	-7.556	-7.793	-7.993	-8.246	-8.461	-8.741	-8.939				
Total Length (m)	0.00	47.99	130.92	227.19	328.94	426.31	520.26	615.98	687.69	746.83	806.95	864.92	925.33	981.42	1042.16	1096.46	1155.16	1212.93	1268.46	1327.82	1389.88	1447.09	1499.49	1560.79	1620.88	1677.43				

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE:			
LONGITUDINAL PROFILE OF SEWER (41) (ST86)			
SCALE:	A1 A3	H=1/5000, V=1/100 H=1/10000, V=1/200	UNITS:
PROJECT:			
PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	

TYPICAL DRAWINGS
(MANHOLE, PIPE JACKING, PIPE LAYING)

TYPE 1 MANHOLE

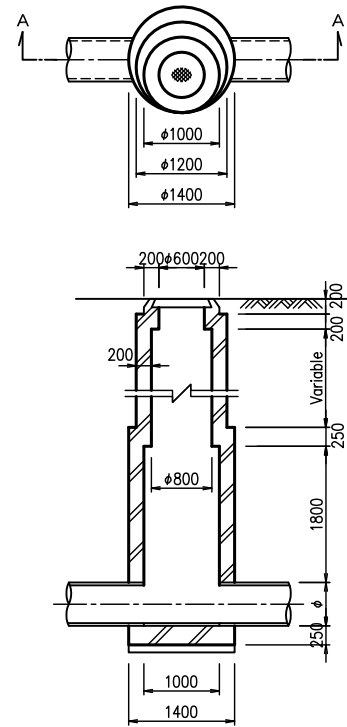
SEWER $\phi 150 \sim \phi 600\text{mm}$
MANHOLE DEPTH UP TO 3.0m



SECTION A - A

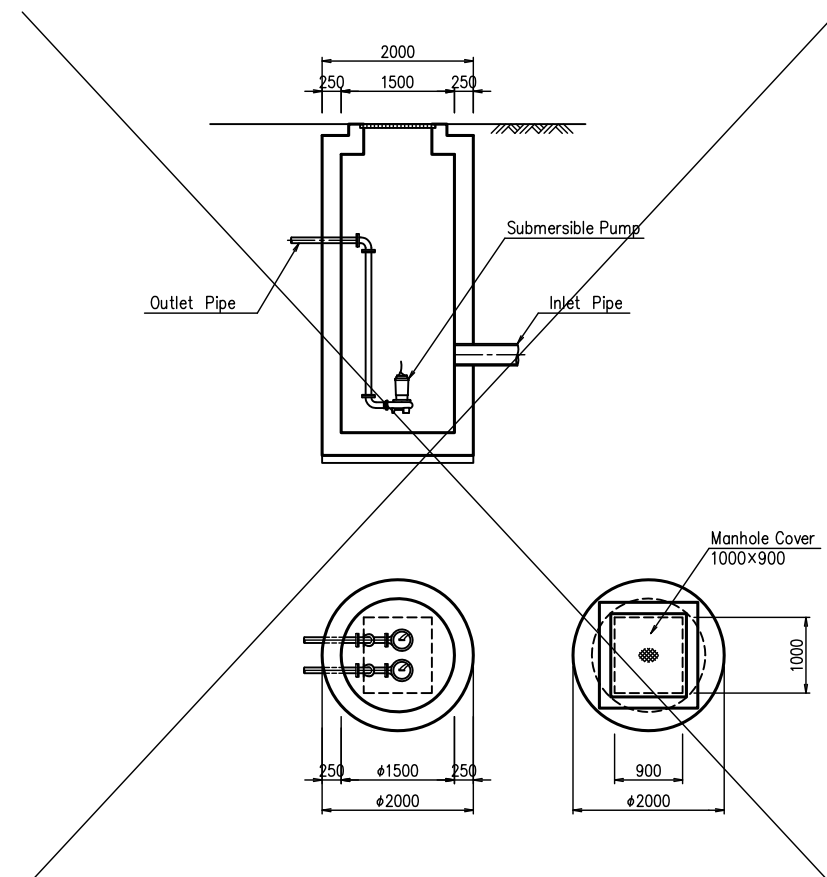
TYPE 2 MANHOLE

SEWER $\phi 150 \sim \phi 600\text{mm}$
MANHOLE DEPTH OVER 3.0m



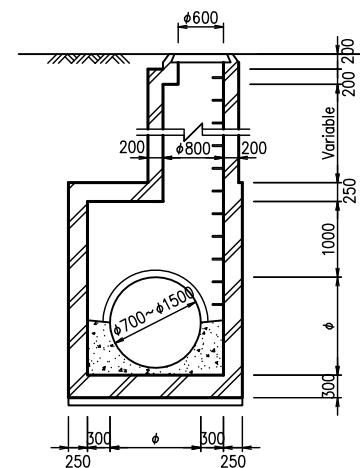
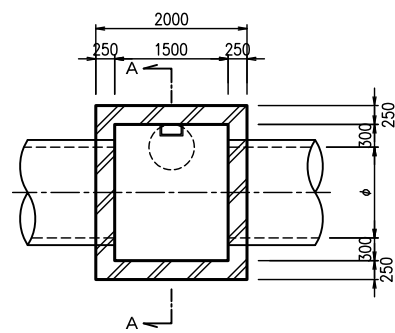
SECTION A - A

MANHOLE WITH PUMP



TYPE 3 MANHOLE

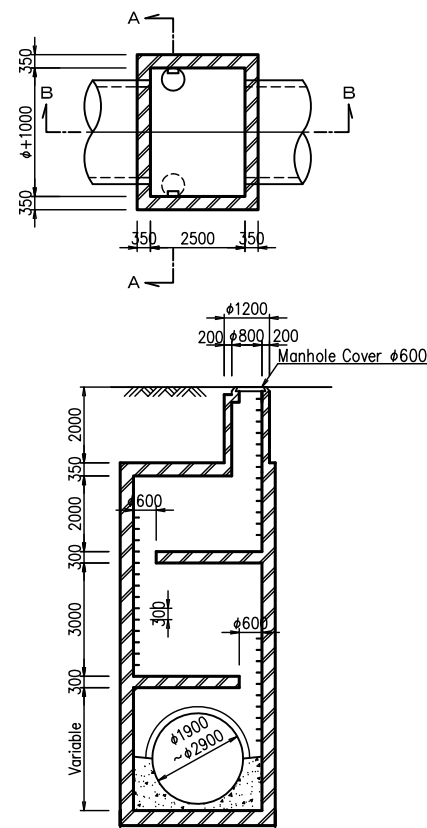
SEWER $\phi 700 \sim \phi 1500\text{mm}$



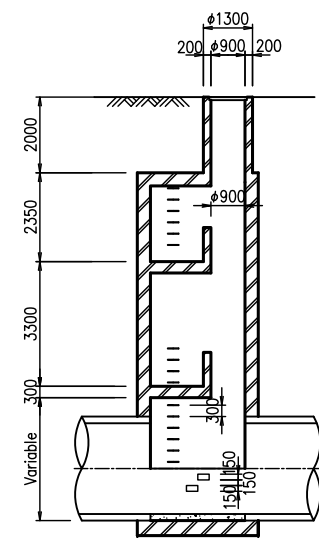
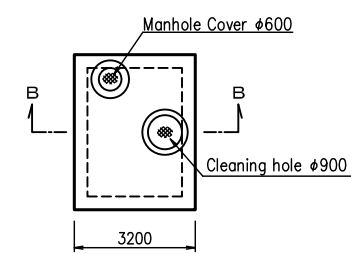
SECTION A - A

TYPE 4 MANHOLE

CONVEYANCE SEWER $\phi 1900 \sim \phi 2900\text{mm}$



SECTION A - A



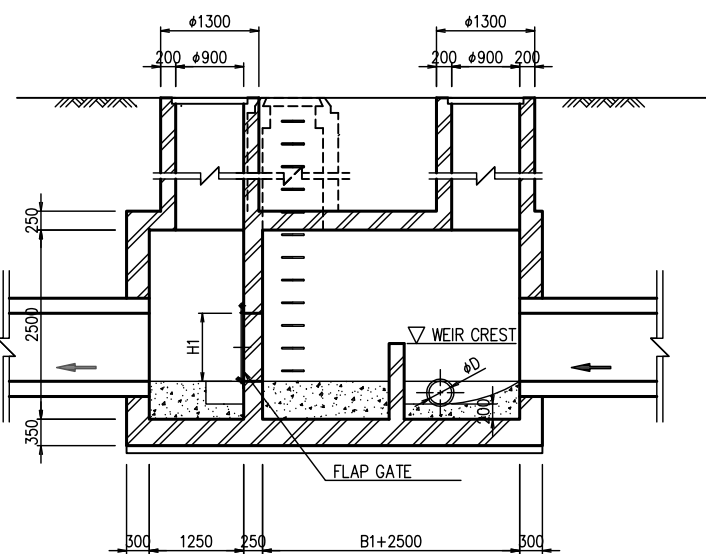
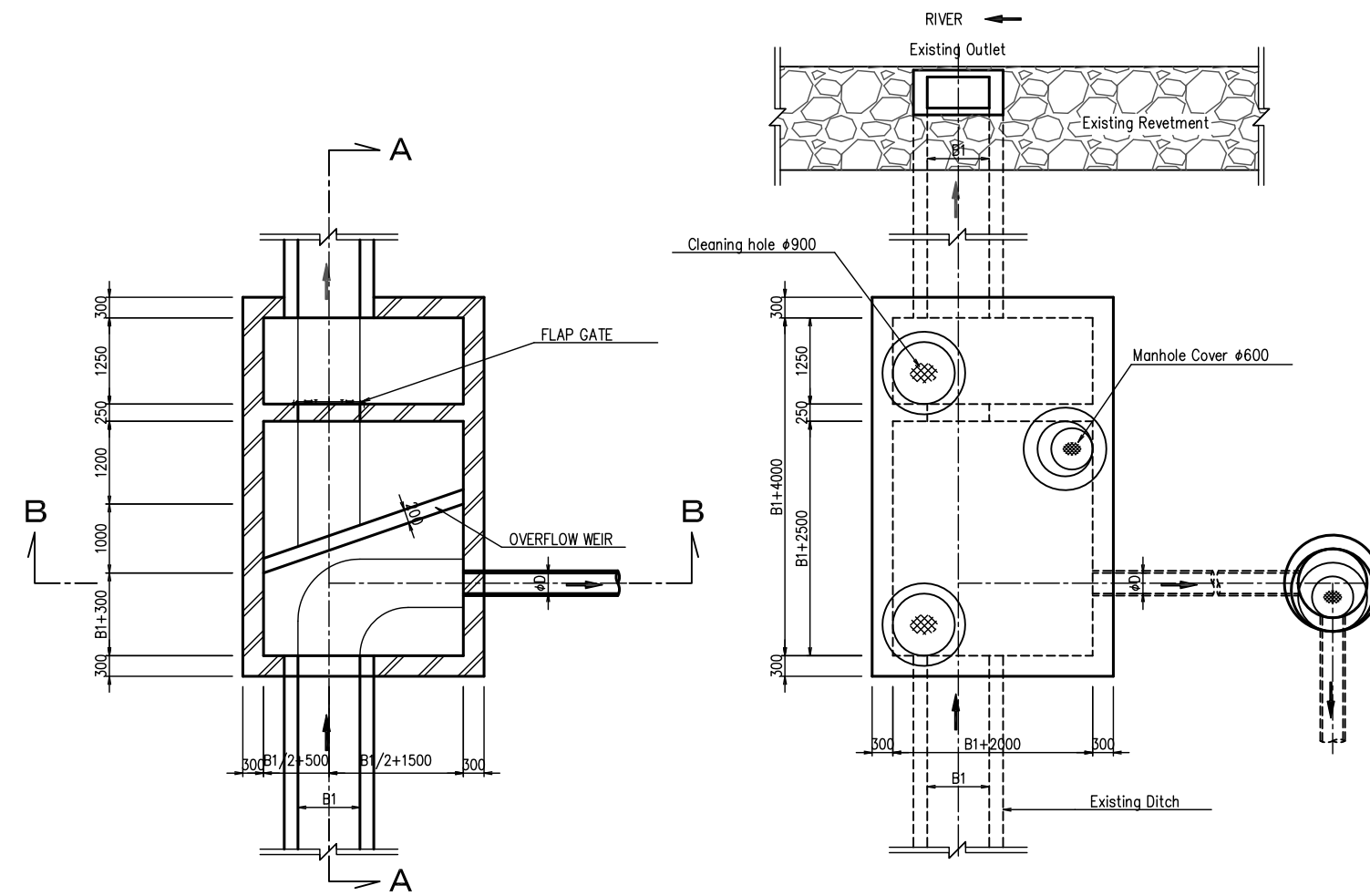
SECTION B - B

※ Dimension in mm

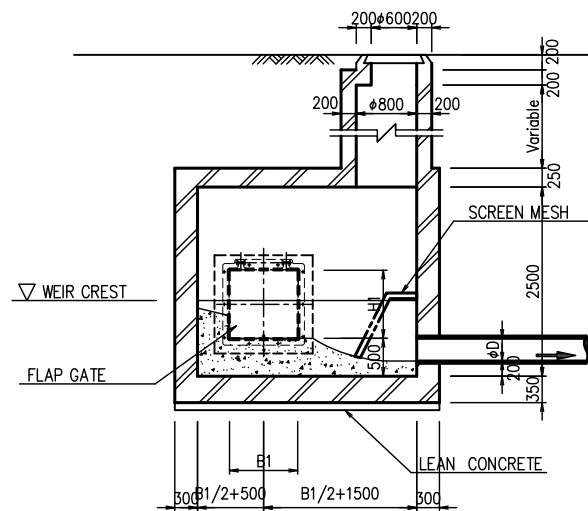
NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: DETAIL OF TYPICAL MANHOLES			
SCALE:	A1 A3	1/50, 1/100 1/100, 1/200	UNITS:
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:			REV.

TYPE 1 DIVERSION CHAMBER

EXISTING CHANNEL: CULVERT TYPE



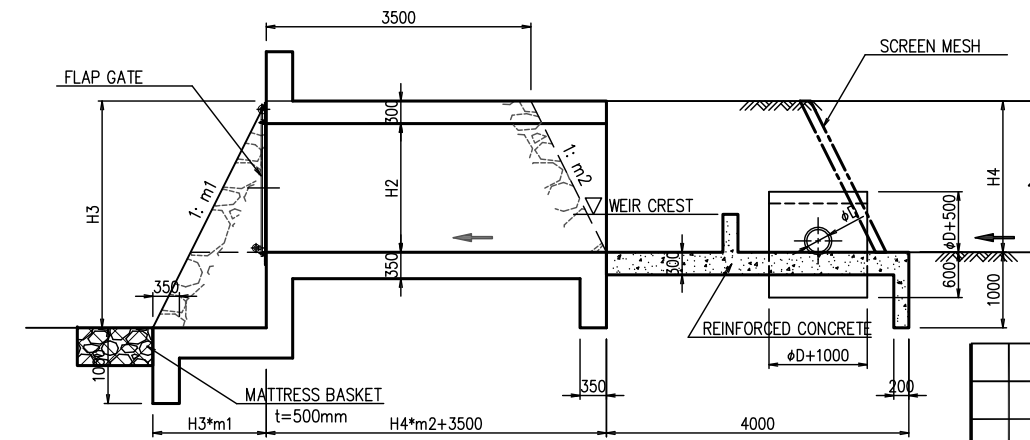
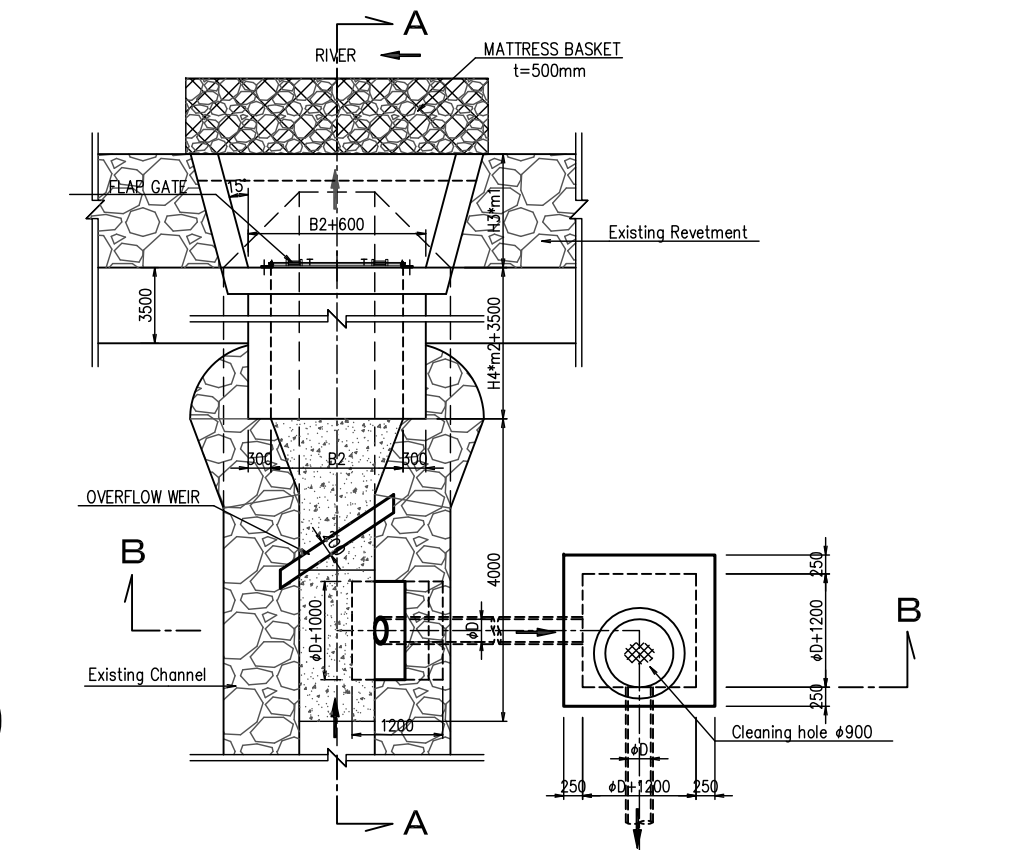
SECTION A - A



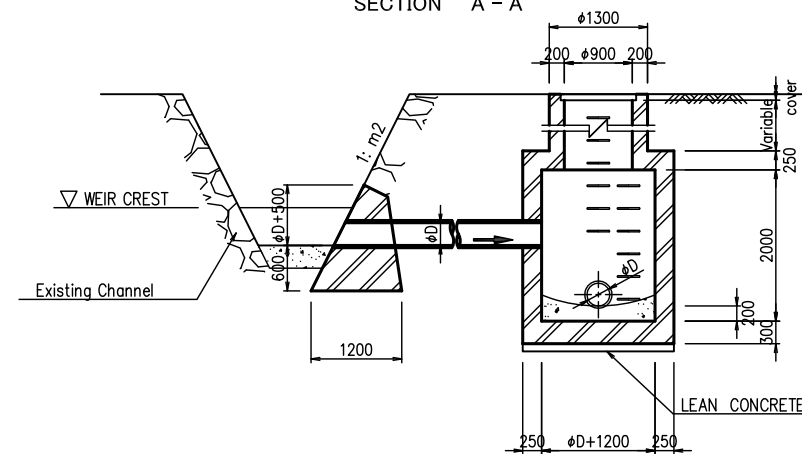
SECTION B - B

TYPE 2 DIVERSION CHAMBER

EXISTING CHANNEL: MASONRY (TRAPEZOID) TYPE



SECTION A - A



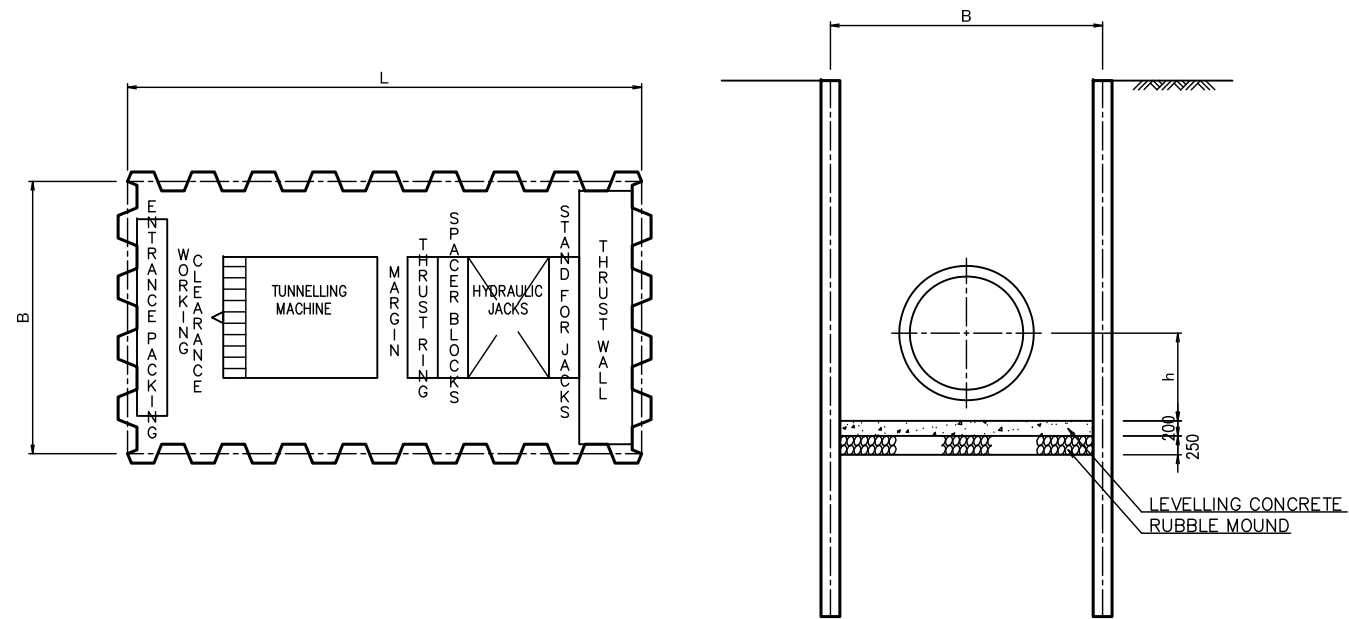
SECTION B - B

- ※ Dimension in mm
- ※ The dimension of flap gate shall be examined from the hydraulic calculation.
- ※ The height and length of weir crest are examined from the hydraulic calculation, it shall be considered the influence of the tidal level.

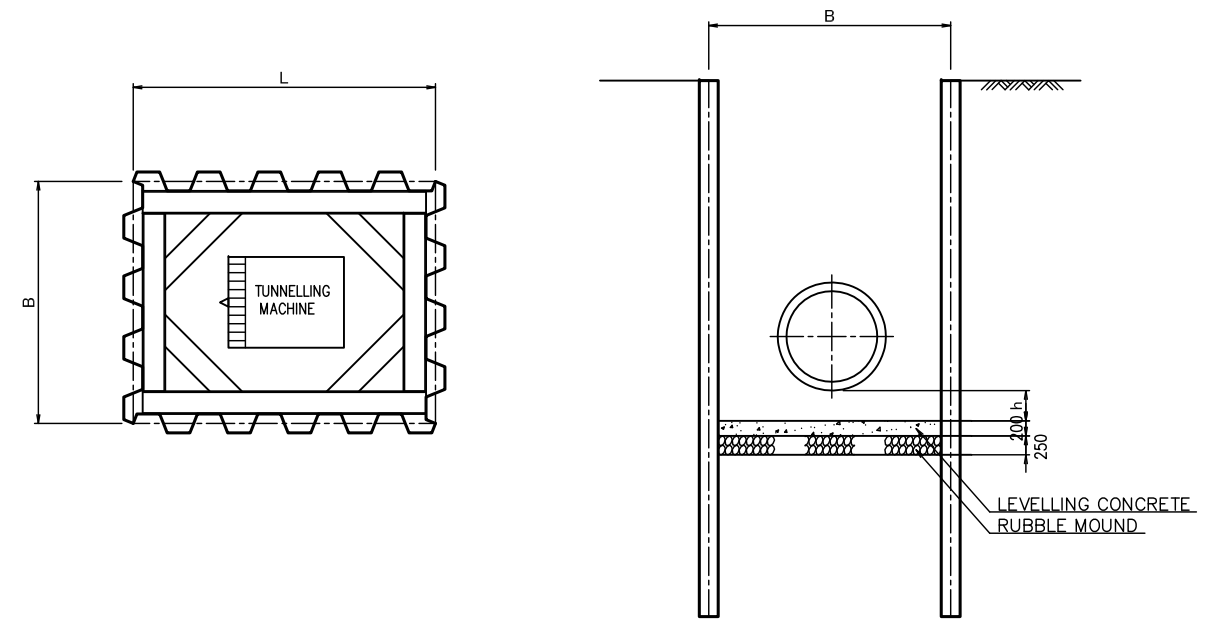
NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE: DETAIL OF TYPICAL DIVERSION CHAMBERS			
SCALE:		UNITS:	
A1	1/50		
A3	1/100		
PROJECT: PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
DESIGNED BY	DATE	SIGNATURE	
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:			REV.
JAPAN INTERNATIONAL COOPERATION AGENCY			

DETAIL OF TYPICAL VERTICAL SHAFT

JACKING VERTICAL SHAFT



RECEPTION VERTICAL SHAFT



DIMENSIONAL TABLE

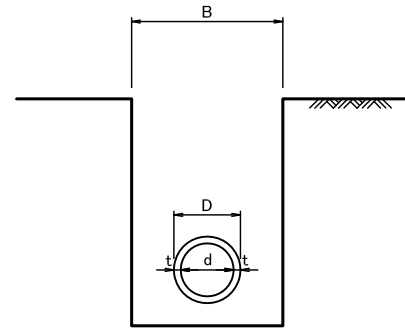
Diameter (mm)	L (mm)	B (mm)	h (mm)
200	4400	2400	600
250	5200	2800	700
300	5200	2800	700
350	5200	2800	700
400	6000	3200	700
500	6000	3200	700
600	6000	3200	750
700	6000	3200	750
800	8000	3200	750
900	8000	3200	810
1000	8000	3200	870
1100	8000	3600	925
1200	8000	3600	985
1350	8000	4000	1070
1500	8000	4000	1160
1650	8000	4000	1245
1800	8400	4400	1330
2000	8400	4800	1445
2200	8400	4800	1570

DIMENSIONAL TABLE

Diameter (mm)	L (mm)	B (mm)	h (mm)
200	2000	2000	300
250	3600	2000	300
300	3600	2000	300
350	4000	2000	300
400	4000	2400	300
500	4000	2400	300
600	4000	2400	300
700	4000	2400	300
800	4000	3200	400
900	4000	3200	400
1000	4000	3200	400
1100	4000	3600	400
1200	4000	3600	400
1350	4000	4000	400
1500	4000	4000	400
1650	4400	4000	400
1800	4400	4400	400
2000	4400	4800	400
2200	4400	4800	400


NO.		DATE		DESCRIPTIONS			APPD. BY
REVISIONS							
DRAWING TITLE:							
DETAIL OF TYPICAL VERTICAL SHAFT							
SCALE:		A1	NON	UNITS:			
		A3	NON				
PROJECT:							
PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA							
		DATE		SIGNATURE			
DESIGNED BY							
DRAWN BY							
CHECKED BY							
APPROVED BY:							
DRAWING NO.:							REV.
JAPAN INTERNATIONAL COOPERATION AGENCY							

TYPICAL SECTION OF PIPE LAYING



寸法表

呼び径 (mm)	管種	d (mm)	t (mm)	D (mm)	B (mm)
150	PVC	150	5	160	900
200	PVC	200	6	212	1050
250	PVC	250	7.5	265	1100
300	PVC	300	9	318	1200
350	RC	350	58	466	1300
400	RC	400	60	520	1400
450	RC	450	67	584	1500
500	RC	500	71	642	1600
600	RC	600	87	774	1800
700	RC	700	90	880	2000
800	RC	800	90	980	2100
900	RC	900	100	1100	2200
1000	RC	1000	110	1220	2400
1100	RC	1100	125	1350	2500
1200	RC	1200	125	1450	2600
1350	RC	1350	150	1650	2800
1500	RC	1500	155	1810	2900

NO.	DATE	DESCRIPTIONS	APPD. BY
REVISIONS			
DRAWING TITLE:			
TYPICAL SECTION OF PIPE LAYING			
SCALE:	A1 A3	NON NON	UNITS:
PROJECT:			
PREPARATORY SURVEY FOR PPP INFRASTRUCTURE PROJECT SEWAGE TREATMENT PLANT PROJECT IN DKI JAKARTA			
	DATE	SIGNATURE	
DESIGNED BY			
DRAWN BY			
CHECKED BY			
APPROVED BY:			
DRAWING NO.:		REV.	
 JAPAN INTERNATIONAL COOPERATION AGENCY			