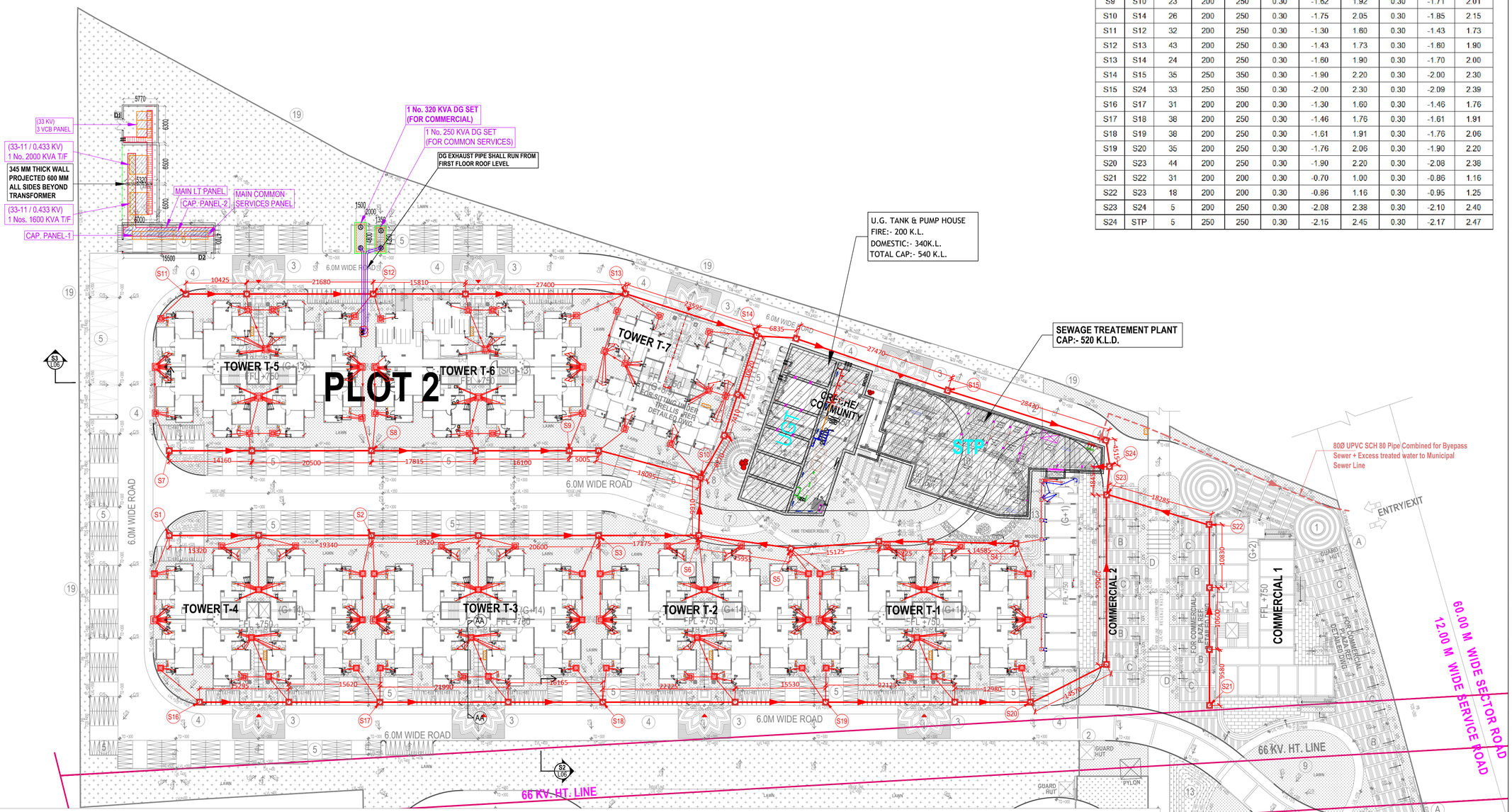


DETAILS OF SEWER LINES

Manhole No.		Length	Dia.	Slope	MH Top Level (Upper End)	Invert Level (Upper End)	Depth	MH Top Level (Lower End)	Invert Level (Lower End)	Depth
From	To	(m)	(mm)	1 in	(m)	(m)	(m)	(m)	(m)	(m)
S1	S2	35	200	200	0.30	-1.30	1.60	0.30	-1.48	1.78
S2	S3	39	200	250	0.30	-1.48	1.78	0.30	-1.64	1.94
S3	S6	17	200	250	0.30	-1.64	1.94	0.30	-1.71	2.01
S4	S5	39	200	200	0.30	-1.30	1.60	0.30	-1.50	1.80
S5	S6	16	200	250	0.30	-1.50	1.80	0.30	-1.56	1.86
S6	S10	10	200	250	0.30	-1.71	2.01	0.30	-1.75	2.05
S7	S8	35	200	200	0.30	-1.30	1.60	0.30	-1.48	1.78
S8	S9	34	200	250	0.30	-1.48	1.78	0.30	-1.62	1.92
S9	S10	23	200	250	0.30	-1.62	1.92	0.30	-1.71	2.01
S10	S14	26	200	250	0.30	-1.75	2.05	0.30	-1.85	2.15
S11	S12	32	200	250	0.30	-1.30	1.60	0.30	-1.43	1.73
S12	S13	43	200	250	0.30	-1.43	1.73	0.30	-1.60	1.90
S13	S14	24	200	250	0.30	-1.60	1.90	0.30	-1.70	2.00
S14	S15	35	250	350	0.30	-1.90	2.20	0.30	-2.00	2.30
S15	S24	33	250	350	0.30	-2.00	2.30	0.30	-2.09	2.39
S16	S17	31	200	200	0.30	-1.30	1.60	0.30	-1.46	1.76
S17	S18	38	200	250	0.30	-1.46	1.76	0.30	-1.61	1.91
S18	S19	38	200	250	0.30	-1.61	1.91	0.30	-1.76	2.06
S19	S20	35	200	250	0.30	-1.76	2.06	0.30	-1.90	2.20
S20	S23	44	200	250	0.30	-1.90	2.20	0.30	-2.08	2.38
S21	S22	31	200	200	0.30	-0.70	1.00	0.30	-0.86	1.16
S22	S23	18	200	200	0.30	-0.86	1.16	0.30	-0.95	1.25
S23	S24	5	200	250	0.30	-2.08	2.38	0.30	-2.10	2.40
S24	STP	5	250	250	0.30	-2.15	2.45	0.30	-2.17	2.47

LEGEND :

S. No.	SYMBOL	DESCRIPTION
1.	M.H	MANHOLE
2.		SEWER LINE

NOTES : SEWERAGE SYSTEM

1. THE SIZE OF MANHOLE SHALL BE AS UNDER (INNER SIZES)
   a) Upto 900 m.m. depth — 600 x 600 m.m.
   b) 900 to 1650 m.m. depth — 900 m.m. dia.
   c) Above 1650 m.m. depth — 1200 m.m. dia.
2. the levels of sewer lines has been worked out on the basis of certain ground level and for certain pipe lengths between two manholes. the invert levels has to be strictly followed. however, the slope of line may be slightly changed.
3. For any descripency / ommission the matter should refer to the consultants before execution.
4. Manhole shall be provided at following places :-
   a) At the start of each sewer line.
   b) At every junction and position where there is change of size, gradient and alignment.
   c) At not more than 45 meter interval in straight length.
5. Where the diameter of pipe is increased the crown of the pipe shall be fixed at the same level and necessary slope shall be given in the invert of the manhole chamber.
6. The structural design of manholes / pipe bedding has to be done for local field conditions such as filled up soil / black cotton soil / high sub soil conditions.
7. This drawing shall be read along with the detailed landscape plan & ground floor plan of respective building for exact location of appurtenances / man holes etc.
8. Sewer line under the road shall be encased with 150 thick, pcc 1:2:4 allround.
9. Manhole cover should be finished with finished formation level as per landscape drawing. the cover of manhole shall be square as per appurtenances drawing & should be co-ordinated with landscape drawing.
10. This drawing shall be coordinated with other drawing i.e. architecture, structural, electrical, landscape & other relevant drawing.
11. Material of pipe :- PE PIPE (SN-4) IS 16098 (Part - 2) DWC type
12. In the areas subject to subsidence or filled up soil (due to exces excavation at site for construction of basements) the sewer lines & manhole should be laid on suitable support or concrete cradle supported on piles or suitable foundation as per structural design.
13. In case where sewers are laid in high subsoil conditions manholes should be constructed in r.c.c. garde m-25.
14. The width of trench for sewer and drainage should be d+ 400mm. (d= o.d. of pipe).
15. Shoring / timbering should be adequate to prevent caving-in of the trench walls of subsidence of areas adjacent to the trench. an engineer-in-charge in consultation with a structural engineer should provide adequate arrangement to prevent caving-in.

Rev. No.	Date	Revision
R2	01-09-2022	DRAIN CATCH BASIN POSITION REVISED AS PER ESS/DG SETS/PANEL ROOM LOCATION CHANGED.
R1	05-03-2022	ISSUE GFC.

Project :
SIGNATURE GLOBAL HOUSING SEC -89,
GURUGRAM, HARYANA

Title :
LAYOUT PLAN (PROXIMA 2)

Subtitle :
EXTERNAL SEWERAGE SYSTEM

Drawing Released For :
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☐ ADVANCE COPY ☒ CONSTRUCTION

Drg. No : S-89 / PROXIMA 2 /ES-01

Scale : 1:375 **Drawn By :** Amit Kamboj

Date : Dec. 2021 **Design By :** Sanjay Goel

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