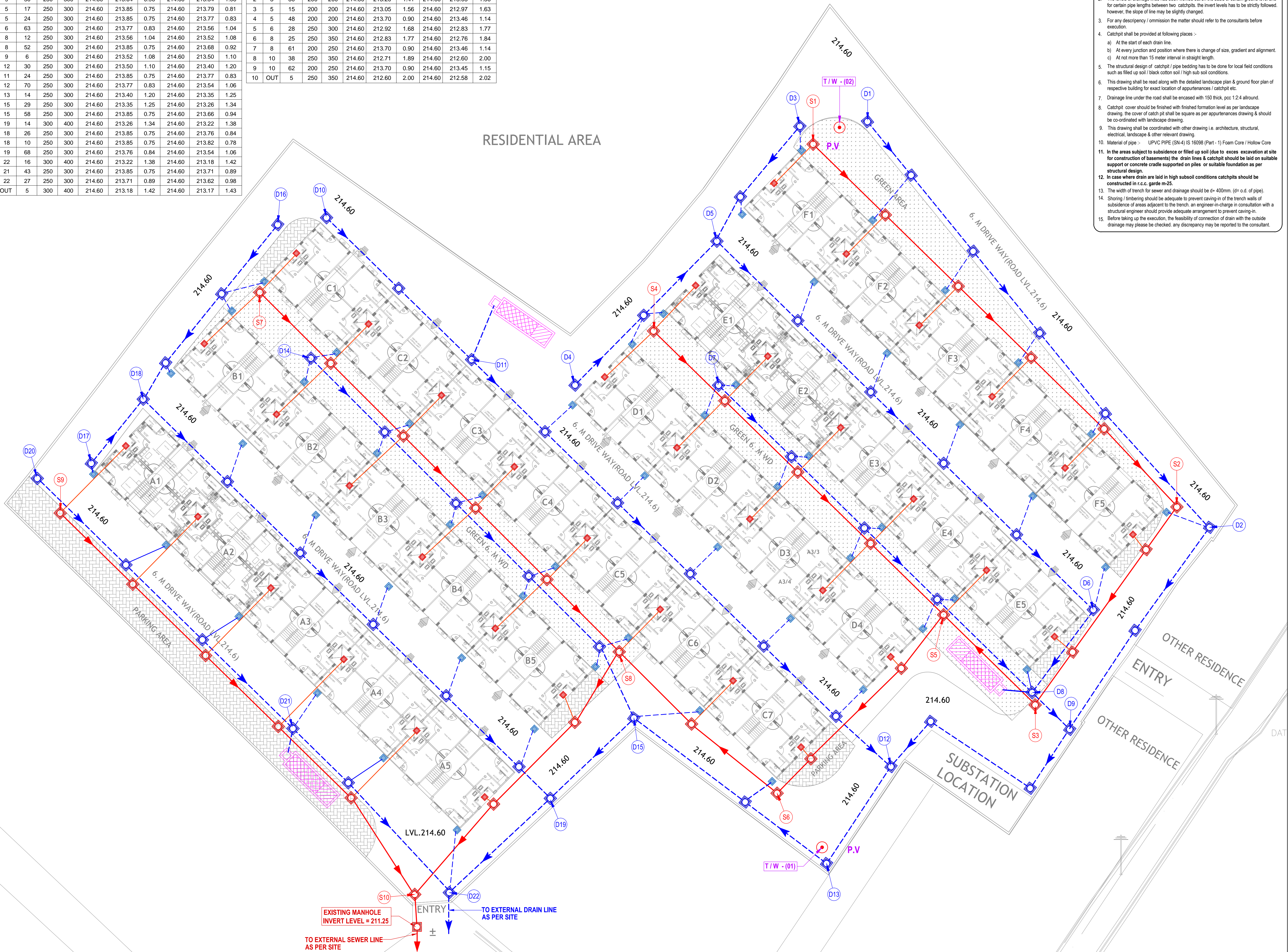


DETAILS OF DRAIN LINES									
Catch Pit No.		Length	Dia.	Slope	C.P. Top Level		Invert Level	Depth	
From	To				Upper End	Lower End			
(m)	(m)	(mm)	1 in	(m)	(m)	(m)	(m)	(m)	(m)
1	2	63	250	300	214.60	213.85	0.75	214.60	213.64
2	9	30	250	300	214.60	213.64	0.96	214.60	213.54
3	5	17	250	300	214.60	213.85	0.75	214.60	213.79
4	5	24	250	300	214.60	213.85	0.75	214.60	213.77
5	6	63	250	300	214.60	213.77	0.83	214.60	213.56
6	8	12	250	300	214.60	213.56	1.04	214.60	213.52
7	8	52	250	300	214.60	213.85	0.75	214.60	213.68
8	9	6	250	300	214.60	213.52	1.08	214.60	213.50
9	12	30	250	300	214.60	213.50	1.10	214.60	213.40
10	11	24	250	300	214.60	213.85	0.75	214.60	213.77
11	12	70	250	300	214.60	213.77	0.83	214.60	213.54
12	13	14	250	300	214.60	213.40	1.20	214.60	213.35
13	15	29	250	300	214.60	213.35	1.25	214.60	213.26
14	15	58	250	300	214.60	213.85	0.75	214.60	213.66
15	19	14	300	400	214.60	213.26	1.34	214.60	213.22
16	18	26	250	300	214.60	213.85	0.75	214.60	213.76
17	18	10	250	300	214.60	213.85	0.75	214.60	213.82
18	19	68	250	300	214.60	213.76	0.84	214.60	213.54
19	22	16	300	400	214.60	213.22	1.38	214.60	213.18
20	21	43	250	300	214.60	213.85	0.75	214.60	213.71
21	22	27	250	300	214.60	213.71	0.89	214.60	213.62
22	OUT	5	300	400	214.60	213.18	1.42	214.60	213.17

DETAILS OF SEWER LINES									
Manhole No.		Length	Dia.	Slope	MH Top Level		Invert Level	Depth	
From	To				Upper End	Lower End			
(m)	(m)	(mm)	1 in	(m)	(m)	(m)	(m)	(m)	(m)
1	2	61	200	200	214.60	213.70	0.90	214.60	213.40
2	3	30	200	200	214.60	213.20	1.41	214.60	213.05
3	5	15	200	200	214.60	213.05	1.56	214.60	212.97
4	5	48	200	200	214.60	213.70	0.90	214.60	213.46
5	6	28	250	300	214.60	212.92	1.68	214.60	212.83
6	8	25	250	350	214.60	212.83	1.77	214.60	212.76
7	8	61	200	250	214.60	213.70	0.90	214.60	213.46
8	10	38	250	350	214.60	212.71	1.89	214.60	212.60
9	10	62	200	250	214.60	213.70	0.90	214.60	213.45
10	OUT	5	250	350	214.60	212.60	2.00	214.60	212.58

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

RESIDENTIAL AREA



EXISTING MANHOLE
INVERT LEVEL = 211.25
TO EXTERNAL SEWER LINE
AS PER SITE

TO EXTERNAL DRAIN LINE
AS PER SITE

NOTES : DRAINAGE SYSTEM

1. THE SIZE OF CATCHPIT 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) 1650 to 2250 m.m. depth 1200 m.m. dia.
2. The levels of drainage lines has been worked out on the basis of certain ground level and for certain pipe lengths between two catchpits the invert levels has to be strictly followed. however, the slope of line may be slightly changed.
3. For any discrepancy / omission the matter should refer to the consultants before execution.
4. Catchpit shall be provided at following places :-
a) At the start of each drain line.
b) At every junction and position where there is change of size, gradient and alignment.
c) At not more than 15 meter interval in straight length.
5. The structural design of catchpit / pipe bedding has to be done for local field conditions such as filled up soil / black cotton soil / high sub soil conditions.
6. This drawing shall be read along with the detailed landscape plan & ground floor plan of respective building for exact location of appurtenances / catchpit etc.
7. Drainage line under the road shall be encased with 150 thick, pcc 1:2:4 allround.
8. Catchpit cover should be finished with finished formation level as per landscape drawing. the cover of catch pit shall be square as per appurtenances drawing & should be co-ordinated with landscape drawing.
9. This drawing shall be coordinated with other drawing i.e. architecture, structural, electrical, landscape & other relevant drawing.
10. Material of pipe :- UPVC PIPE (SN-4) IS 16098 (Part - 1) Foam Core / Hollow Core
11. In the areas subject to subsidence or filled up soil (due to excess excavation at site for construction of basements) the drain lines & catchpit should be laid on suitable support or concrete cradle supported on piles or suitable foundation as per structural design.
12. In case where drain are laid in high subsoil conditions catchpits should be constructed in r.c.c. grade m-25.
13. The width of trench for sewer and drainage should be d+ 400mm. (d= o.d. of pipe).
14. 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.
15. Before taking up the execution, the feasibility of connection of drain with the outside drainage may please be checked. any discrepancy may be reported to the consultant.

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) 1650 to 2250 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 discrepancy / omission 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 :- UPVC PIPE (SN-4) IS 16098 (Part - 1) Foam Core / Hollow Core
12. In the areas subject to subsidence or filled up soil (due to excess 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. grade 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
..

Project :
PROPOSED BUILDING PLAN FOR EWS
At plot 2A N.H.-24 Ghaziabad for crossing republik

Title :
LAYOUT PLAN

Subtitle :
SERVICES PLAN

Drawing Released For :
☒ APPROVAL ☐ SUBMISSION
☐ ADVANCE COPY ☐ CONSTRUCTION

Drg. No : CR / EWS / ES-04

Scale : 1:225 Drawn By : Amit Kamboj

Date : May. 2018 Design By : Devesh Agarwal

Ckd By : Anand Havelia

Architects :
BUILDING BELIEFS ARCHITECTS
3/4 MAULSRI ROAD SHIPRA SUN CITY, INDIRAPURAM, GHAZIABAD.
ph.no.- 09582218531. 9899410935.

Services Consultant :
Consummate Engineering Services (P) Ltd.
Noida Office : B - 67, Sector - 67, Noida - 201 301
Tel : (0120) 6613590 / 24 Lines)
cespi Lko. Office : R 906, Rohas Plumeria, Gomti Nagar, Lucknow
e mail : mail@cespi.in, website : www.cespi.in