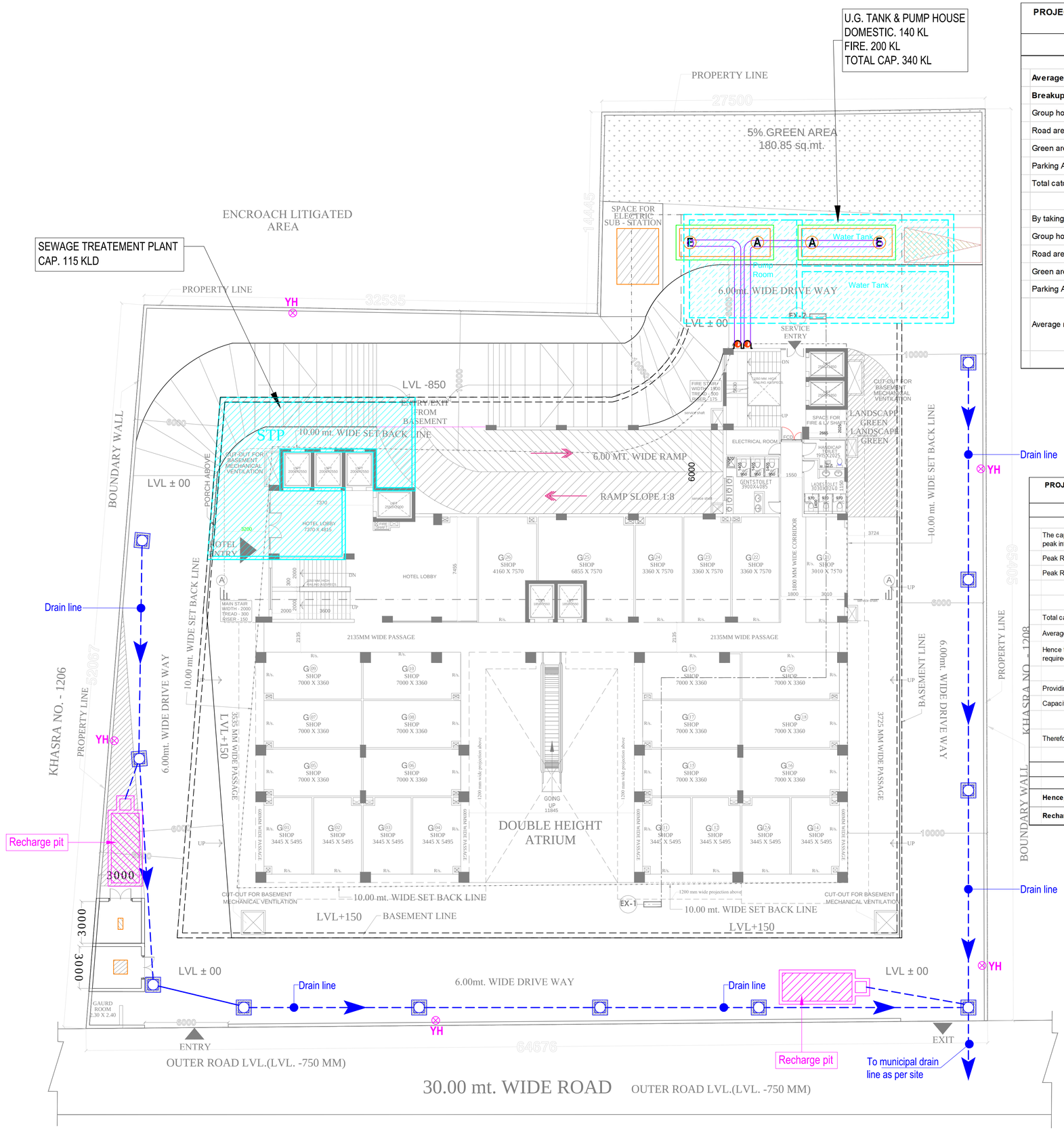

PROJECT - RIVIERA BUILDTECH COMMERCIAL AT VILLAGE NOOR NAGAR, GHAZIABAD (U.P.)

RUN OFF COEFFICIENT CALCULATION

Average Run off coefficient calculation		
Breakup of areas		
Group housing (Roof Top) area, A1	=	1295 sq.m.
Road area, A2	=	1943 sq.m.
Green area, A3	=	200 sq.m.
Parking Area, A4	=	179 sq.m.
Total catchment area, A	=	$A_1+A_2+A_3+A_4$
	=	3617 sq.m.
By taking run off coefficient for,		
Group housing (Roof Top) area, C1	=	0.85
Road area, C2	=	0.80
Green area, C3	=	0.10
Parking Area, C4	=	0.30
Average run off coefficient, C	=	$(A_1XC_1+A_2XC_2+A_3XC_3+A_4xC_4)/A$
	=	0.77

PROJECT - RIVIERA BUILDTECH COMMERCIAL AT VILLAGE NOOR NAGAR, GHAZIABAD (U.P.)

RAIN WATER HARVESTING CALCULATION

The capacity of recharge pit is designed to retain runoff for at least 15 minutes of rain fall of the peak intensity.

Peak Rainfall in one hour	=	about 40 mm / hr
Peak Rainfall in 15 minutes, R	=	40 / 4 mm
	=	10 mm =.01 m
	=	0.01 m.
Total catchment area, A	=	3617 sq.m.
Average run off coefficient, C	=	0.77
Hence total combined capacity of recharge pit required,	=	AxRxC
	=	28
Providing Recharge Pit of size	=	5 x 2 x 2 m. effective depth
Capacity of Recharge Pit of given size (Cu.m.), a	=	20
SAY	=	20
Therefore no. of recharge pit required	=	(AxRxC) / (a)
	=	1.4 nos.
Say,	=	2 nos.

Hence, 2 nos. sets of rechrge pit are required of following size :

Recharge pit	=	**5 x 2 x 2 m. effective depth**

LEGEND :

S. No.	SYMBOL	DESCRIPTION
1.	C.P.	CATCH PIT
2.		UNDER GROUND DRAIN

Rev. No.	Date	Revision
..	..	..

Project :
SAWASDEE STREET
AT VILLAGE NOOR NAGAR GHAZIABAD (U.P.)

Title :
LAYOUT PLAN

Subtitle :
EXTERNAL DRAINAGE SYSTEM

Drawing Released For :
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- ☐ CONSTRUCTION

Drg. No : Riveria / Rera / ES -03

Scale : 1:150 | **Drawn By :** Amit Kamboj

Date : February 2021 | **Design By :** Devesh Agarwal

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