City of West Hollywood
California 1984

City of West Hollywood
Department of Public Works
Engineering Division

Sewer Capacity Study Requirements

1. The sewer capacity study shall be signed and stamped by a California licensed Civil Engineer.

2. Project Description: The study shall describe the project's location, including the approximate acreage of the project site. The study shall describe what is being proposed on the development site. The current land uses and proposed land uses of the development shall be identified.

3. Existing & Proposed Sewer System: The study shall identify the existing site's connections to the public sewer system, including the number of laterals, the lateral sizes, and their location. The study shall identify the proposed site's connections to the public sewer system, including the number of laterals, the lateral sizes, their location, and the flow discharging through each. (A copy of the development's plumbing plans and site utility plans documenting the proposed sewer system shall be included in the report's appendix.) The study shall identify the location, size, and flow direction of the public sewer mains, including street names, of where the site discharges to. A vicinity map shall be included showing the surrounding region sewer network, including street names, manhole locations and i.d. numbers, main diameters, and flow direction arrows. Applicant shall contact the Engineering Division Planchecker for the extent of the map delineation required.

4. Existing Sewer System Flow Monitoring: A 14-day flow monitoring study shall be required to obtain the existing flow performance. Applicant shall contact the Engineering Division Planchecker for identification of the downstream sewer manhole(s) where monitoring shall be conducted. Pending the results of the Sewer Capacity Study, additional flow monitoring may be required by the City. (The City of Los Angeles sewers located downstream may be impacted by the proposed development project. Therefore, the sewer study may need to include monitoring locations within the City of Los Angeles.) The existing average daily flow and peak flow shall be determined in cubic feet per second. (a copy of the monitoring study shall be included in the report's appendix.)

5. Proposed Flow Generation: The study shall include the proposed development land use(s). (A copy of the development's architectural plans documenting the proposed land use(s) shall be included in the report's appendix.) Expected average daily flow generation in cubic feet per second shall be determined from the closest matching user category(s) in the Los Angeles County Sanitation District's Loading for Each Class of Land Use Table. (a copy is provided herein, however, Applicant shall obtain the latest version directly from the District's website.) The peak flow (QPF) for this study shall be calculated in cubic feet per second (cfs) by QPF = 2.5 x QAF where 2.5 is the peaking factor used to determine the maximum peak flow rate for sewer diameters 15" or less. The peaking factor shall be 2.0 for diameters greater than 15".

6. Conclusion: The study shall identify the effect of the proposed development on the existing sewer system. Applicant shall contact the Engineering Division Planchecker for identification of the sewer reach(es) that shall be modeled. (a copy of the asbuilt record plan of the sewer reach(es) shall be included in the report appendix.) Depending on the results of the Sewer Capactiy Study, additional sewer reaches may be required to be modeled.

The study shall summarize in table format: Existing Average Flow, Existing Peak Flow, Existing Average Velocity, Existing Peak Velocity, Proposed Average Flow, Proposed Peak Flow, Proposed Average Velocity, Proposed Peak Velocity.

The Existing Average Flow and Existing Peak Flow shall be taken from the flow monitoring results.
Modeling shall utilize the following design criteria:

n = 0.013
D/d ≤ 0.50 for d ≤ 15”
D/d ≤ 0.75 for d> 15”

The study shall state the D/d resulting from the combined discharge of the existing peak flow measured in the monitoring study plus the proposed peak flow from the development. The study shall demonstrate that the combined discharge does not exceed the design criteria of the sewer reach(es). The study shall demonstrate that the combined discharge results in a velocity value that is no less then 2 fps and no greater than 10 fps.
If the study results in a violation of either of these requirements, the study shall identify the proposed mitigation necessary to comply, such as the upsizing of deficient sewer reach(es). The report shall include the calculations of this section in the appendix.

TABLE 1

LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
R E S I D E N T I A L				
Single Family Home	Parcel	260	1.22	0.59
Duplex	Parcel	312	1.46	0.70
Triplex	Parcel	468	2.19	1.05
Fourplex	Parcel	624	2.92	1.40
Condominiums	Parcel	195	0.92	0.44
Single Family Home (reduced rate)	Parcel	156	0.73	0.35
Five Units or More	No. of Dwlg. Units	156	0.73	0.35
Mobile Home Parks	No. of Spaces	156	0.73	0.35
C O M M E R C I A L				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft^2	100	0.43	0.23
Supermarket	1000 ft^2	150	2.00	1.00
Shopping Center	1000 ft^2	325	3.00	1.17
Regional Mall	1000 ft^2	150	2.10	0.77
Office Building	1000 ft^2	200	0.86	0.45
Professional Building	1000 ft^2	300	1.29	0.68
Restaurant	1000 ft^2	1,000	16.68	5.00
Indoor Theatre	1000 ft^2	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft^2	3,700	15.86	8.33
Tunnel - Recycling	1000 ft^2	2,700	11.74	6.16
Wand	1000 ft^2	700	3.00	1.58
Financial Institution	1000 ft^2	100	0.43	0.23
Service Shop	1000 ft^2	100	0.43	0.23
Animal Kennels	1000 ft^2	100	0.43	0.23
Service Station	1000 ft^2	100	0.43	0.23
Auto Sales/Repair	1000 ft^2	100	0.43	0.23
Wholesale Outlet	1000 ft^2	100	0.43	0.23
Nursery/Greenhouse	1000 ft^2	25	0.11	0.06
Manufacturing	1000 ft^2	200	1.86	0.70
Dry Manufacturing	1000 ft^2	25	0.23	0.09
Lumber Yard	1000 ft^2	25	0.23	0.09
Warehousing	1000 ft^2	25	0.23	0.09
Open Storage	1000 ft^2	25	0.23	0.09
Drive-in Theatre	1000 ft^2	20	0.09	0.05

TABLE 1
(continued)
LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons Per Day)	COD (Pounds Per Day)	SUSPENDED SOLIDS (Pounds Per Day)
C O M M E R C I A L				
Night Club	1000 ft^2	350	1.50	0.79
Bowling/Skating	1000 ft^2	150	1.76	0.55
Club	1000 ft^2	125	0.54	0.27
Auditorium, Amusement	1000 ft^2	350	1.50	0.79
Golf Course, Camp, and Park (Structures and Improvements	1000 ft^2	100	0.43	0.23
Recreational Vehicle Park	No. of Spaces	55	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft^2	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft^2	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft^2	600	2.58	1.35
Without Showers	1000 ft^2	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
I N S T I T U T I O N A L				
College/University	Student	20	0.09	0.05
Private School	1000 ft^2	200	0.86	0.45
Church	1000 ft^2	50	0.21	0.11