

Project Background

Project Information

The Hilton Hotel at BWI Airport is a full-service hotel that is located less than two miles from the Baltimore-Washington International (BWI) Airport in Linthicum Heights, Maryland. The primary customers at the hotel will be both business and leisure travelers flying in and out of BWI Airport. There are two main floors and nine floors in the guest room tower above grade; below grade is a below-grade parking garage. The hotel is approximately 277,000 square feet, and has a variety of functions. Not only does it have 280 guest rooms, but it also includes several large and small meeting rooms, offices, restaurant, two bars, swimming pool, exercise room, and attached parking garage. The hotel will have the largest conference space in the area near the airport, and it will be a strong tool to attract business to the hotel and Anne Arundel County, Maryland.

Space Designations

The hotel is primarily comprised of three different sectors – the public spaces, the private spaces, and the service spaces. The public spaces include the lobby seating area, pre-function area, eating areas, egress/transportation areas, and the large and small meeting rooms. The eating areas include the restaurant, bar, coffee bar, and the bar lounge. The large meeting rooms are double-story height areas and have movable walls that can open up into one large ballroom. The means of egress in the building include the numerous corridors, two stairwells up through the guest room tower, and the four elevators.

The ground and second floors of the BWI Hilton are the primary public and service spaces in the hotel. The public spaces in the building have occupancies that are changing throughout the course of the day. This ever-changing fluctuation in these spaces lends itself well for use of a variable air volume (VAV) system in the public spaces.

The meeting rooms could be completely full with a convention or other gathering or completely empty when no one is using the spaces. The restaurant will be heavily used for limited around breakfast, lunch, and dinner. The bar and coffee bar will primarily be used in the evening hours. The offices will be used most when many employees are working. During the day hours, mostly the room cleaning personnel are in the hotel, while the caterers are there more during the evening and dinner times. The lobby areas will be used almost constantly during both the day night hours as customers and employees are continually coming or leaving, but the number of the occupants there at the same time will change throughout the day.

The other public spaces in the BWI Hilton include the swimming pool area and the exercise room. The swimming pool and exercise room will mostly be used in the morning and evening hours and possibly some during the day. However, the swimming pool has special temperature and humidity requirements that necessitate an air conditioning and dehumidification system separate from all the other public spaces.

The private spaces include the offices, employee rooms, kitchen, storage, laundry room, and the mechanical and electrical rooms. Some of the employee rooms are the offices, locker rooms, and cafeteria on the ground and second floors. There is also a concierge lounge on the eleventh floor. Other spaces in the building include the parking level below grade, exercise room, swimming pool, and the guest rooms. The guest rooms come in 15 different varieties, and there are a total of 280 guest rooms in the guest room tower of the hotel.

The guest rooms will primarily be occupied at night when customers will be sleeping, and some during the morning and evening hours. It is intended that each guest room has a separate air conditioning unit with individual control over the space temperature. Noise issues are also a concern, which affects the type of system chosen.

The service spaces in the BWI Hilton are made up of the spaces that only employees typically use. These include the offices, boardroom, kitchen, employee cafeteria, employee locker rooms/toilets, and banquet storage spaces. The service spaces, like the public spaces, have changing occupancy conditions all through the day. A VAV system could also work well for these types of spaces. The kitchen also requires make-up air to replace the exhausted air through exhaust fans and fume hoods.

Other service spaces include mechanical and electrical equipment rooms, communication rooms, vending areas, as well as the laundry facilities. All of these spaces contain certain types of equipment that require ventilation to provide conditioning for the equipment-generated heat.

All the previously discussed spaces in the BWI Hilton are listed with their corresponding areas and percentages of total building area in Figure 1 – Building Spaces Table. A visual representation of this information is also shown in Figure 2 – Building Spaces Chart.

Table 1 - Building Spaces Breakdown

Function / Use	Space Area (sf)	% of Total Area	No. of Spaces
Bedroom/Living Room	88,872	40.05%	280
Parking Garage	41,084	18.51%	1
Corridor	24,886	11.22%	26
Service Area	13,024	5.87%	48
Conference/Meeting	11,394	5.13%	9
Lobby/Pre-function	7984	3.60%	4
Storage Room	7369	3.32%	19
Office Space	6013	2.71%	31
Restaurant/Cafeteria	4872	2.20%	2
Swimming Pool	3477	1.57%	2
Kitchen	3363	1.52%	1
Bar	2795	1.26%	2
Laundry Area	2593	1.17%	3
Toilets	2507	1.13%	8
Health Club/Aerobics	1665	0.75%	1
Total Area	221,898		

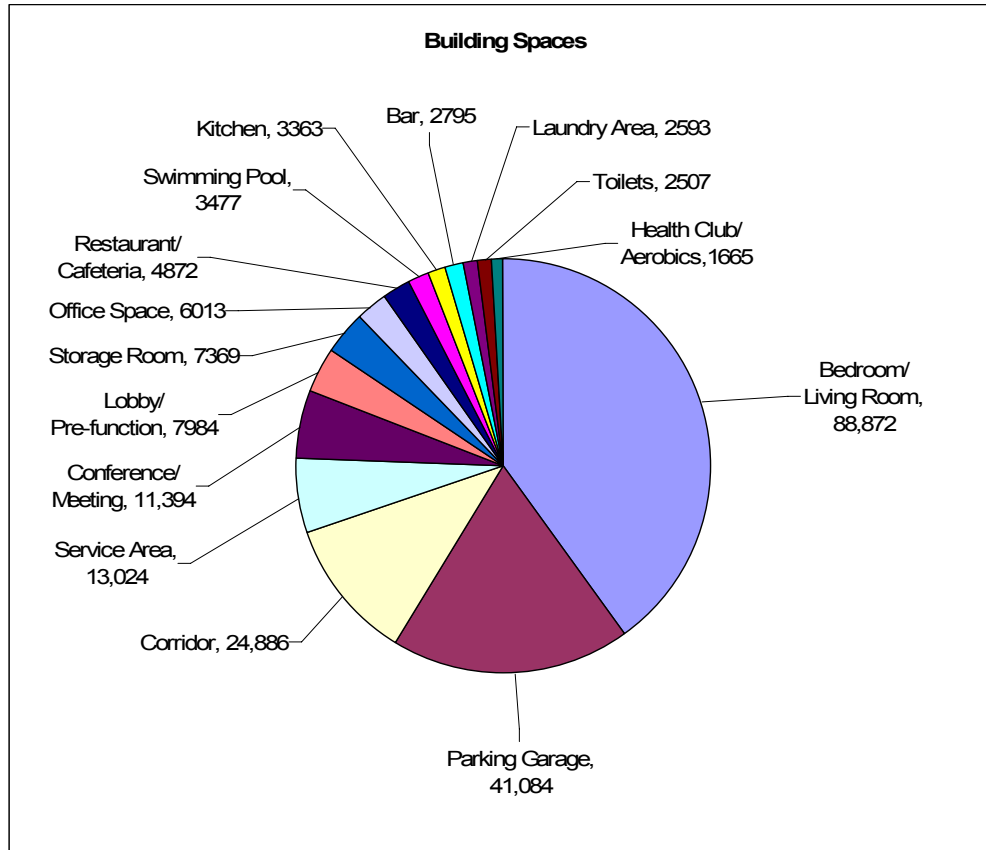


Figure 1 - Areas of Building Spaces