

10. TRAFFIC ANALYSIS

Parking and traffic analyses were completed for the overall Technology Park in 2011. With the proposed development of LCE 4, parking and traffic have been re-evaluated to ensure that the development will remain within the standards that were originally considered. In general, the individual lot demand for parking and traffic has been decreased, as the size of the proposed building is 19,000 square feet instead of 20,000 square feet. This is the first development in the Technology Park, so the traffic will be significantly less than the total amount anticipated for the fully built-out Technology Park.

10.1 TRAFFIC MOVEMENT PERMIT

Gorrill Palmer developed a Traffic Impact Study in 2011 for the overall Technology Park. The City of Portland Planning Board approved a Traffic Movement Permit based on that study in January 2012. Gorrill Palmer has re-evaluated the trip generation calculations for LCE 4 and has determined that the anticipated traffic demand will be equal to or less than the permitted traffic levels. This new evaluation was based on the reduced building footprint and the anticipated number of employees, and is summarized in the attached memo. The proposed development will be in conformance with the issued Traffic Movement Permit.

10.2 PARKING

A total of 70 parking spaces are being provided within LCE 4. Six spaces will be designated for visitor parking including two handicapped spaces with a van-accessible lane. An accessible route will exist between these visitor spaces and the front building entrance. A third van-accessible handicapped space is also being provided behind the building with an accessible route to the back employee entrance.

The plan currently shows space for parking 10 bicycles. We understand that based on City of Portland Code requirements, a total of 14 bicycle parking spaces are required (2 per 100 parking spaces). We will be adjusting our plan to show the total required 14 spaces, and will provide an updated plan.

One of the conditions of the previous Subdivision approval stated the maximum number and size of parking spaces approved at that time could be developed given that a parking analysis be completed with each development project. The original plan for the entire Technology Park included an overall parking ratio of 3.7 spaces per 1,000 square feet of building. The original plan for LCE 4 included a 20,000 square foot building with 78 parking spaces, for a ratio of 3.9. With the proposed 19,000 square foot building, a parking lot with 70 spaces is proposed, for a ratio of 3.7, matching the overall approved Technology Park parking ratio. Gorrill Palmer has evaluated the parking needs for Patrons Oxford, and the attached memo documents that a 70-space parking lot is appropriate for the development.

The parking space size of 18'x8'2" matches the size that was used on the previously approved plans. This reduced size will allow for the required quantity of parking with less impacts to wetlands, as well as less impervious surface. The smaller parking space size fits with the intent of low impact development for the technology park.

10.3 ATTACHMENTS

- Gorrill Palmer Memo

MEMORANDUM

Date: October 2, 2015
Subject: Parking Demand and Trip Generation Summary
Portland Technology Park – Portland, Maine
To: Ryan Kanteres, Scott Simons Architects
From: Randy Dunton, Gorrill Palmer (JN 3078)

Introduction:

Gorrill Palmer (GP) has evaluated the potential parking demand and trip generation for the proposed office space to be located on Lot 4 of the recently permitted Portland Technology Park development located off the Rand Road in Portland, Maine. The Portland Technology Park is located in the O-P Office Park Zone. The proposed building will have 19,000 square feet of office space and 60-65 employees. The parking evaluation is based on the City of Portland Ordinance for this use and the trip generation is based on the Institute of Transportation Engineers' publication *Trip Generation*, Seventh Edition.

Parking Analysis:

Vehicular Parking:

The parking evaluation considers the City of Portland Ordinance for an office building as well as the previously approved parking ratio, and expected numbers of employees and visitors. The City of Portland Ordinance requires a minimum of one off street parking space for every 400 square feet of floor area. Since the proposed office building has 19,000 square feet of floor area, a minimum of 48 parking spaces are required. However, the proposed use is expected to have 65 employees as well as designating 6 parking spaces for visitors only, and is therefore proposing a total of 70 parking spaces. Providing 70 parking spaces yields a parking ratio of 3.7 per 1,000 sf, which is consistent with the parking ratio that was previously approved for the subdivision.

Bicycle Parking:

Per City Ordinance, non-residential structures are required to provide bicycle accommodations in proportion to vehicular parking. For non-residential structures 2 bicycle parking spaces are required for every 14 vehicle parking spaces. Based on the Ordinance this project would require 14 bicycle parking spaces.



Trip Generation:

Permitted Trip Generation

The Portland Technology Park was issued a Traffic Movement Permit by the City of Portland (who has delegated review authority from MaineDOT) that approved 163 trip ends during the AM peak hour and 153 trip ends during the PM peak hour for the entire development. This approved trip generation was based on the Institute of Transportation Engineers' publication *Trip Generation*, Seventh Edition, Land Use Code (LUC) 760 – Research and Development Center. The original approval included a 20,000 sf building for Lot 4. Since the trip generation was for the entire site and is not broken down by individual buildings, we have calculated just the 20,000 sf building using the same Land Use Code as the original approval. The trip generation calculations assuming 20,000 sf of research and development are attached and summarized as follows:

- AM Peak Hour: 34 trip ends
- PM Peak Hour: 35 trip ends

Proposed Development:

The proposed building on Lot 4 is 19,000 square feet and is proposed to have 60-65 employees. The Institute of Transportation Engineers' publication *Trip Generation*, Seventh Edition, Land Use Code (LUC) 710 – General Office Building and LUC 715 – Single Tenant Office Building were utilized to forecast the trip generation. The following table summarizes the trip generation for both LUC 710 and LUC 715 with calculations attached.

Trip Generation Summary

	Based on 19,000 sf		Based on 65 Employees	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
General Office Building	29	28	31	30
Single Tenant Office Building	34	33	34	33

Both land uses (using floor area and employees) are equal to or less than the equivalent of a 20,000 sf research and development building.

Conclusion:

Lot 4 of the Portland Technology Park development is estimated to require approximately 70 vehicular parking spaces and 14 bicycle parking spaces. The vehicular parking needed would be expected to potentially decrease as the park is built out and the TDM plan is implemented to a greater degree; however that could be several years. The proposed development is forecast to generate the same amount or fewer trip ends during a peak hour than the equivalent permitted trip ends for Lot 4.