

**CITY OF LEBANON
PLANNING AND ZONING DEPARTMENT**

**CITY OF LEBANON PLAN COMMISSION
STAFF REPORT
NOVEMBER 15, 2021 PUBLIC HEARING**

Project Overview:

Road Impact Fee Zone Improvement Plan

The City of Lebanon began the process of developing a Road Impact Fee for the city in early 2020 when our consultant, A&F Engineering began collecting traffic counts throughout the city, culminating with the establishment of an Impact Fee Advisory Committee to work on the creation of a Zone Improvement Plan, which is the supporting document and precursor for the Common Council to adopt an impact fee. The Zone Improvement Plan is required to be adopted as an amendment to the Comprehensive Plan first before the impact fee ordinance can be considered for adoption.

The process to develop the Zone Improvement Plan includes establishing the plan area, identifying potential growth areas over a ten-year time period, determining traffic demand based on this growth and how it will impact the road network, and determining costs associated with improvements to the road network to accommodate traffic increases. The Impact Fee Advisory Committee, made up of both city staff and representatives from the real estate/development community, evaluated and responded to conclusions reached in each of these steps to inform the process.

The following information, taken from the draft report, further explains the goals and process.

INTRODUCTION

The City of Lebanon has undertaken a project to determine the amount of Road Impact Fees that can be assessed against future developments that will be constructed within the city limits. This analysis will project and evaluate the future impact of these developments on the roadway system.

In order to develop a meaningful impact fee study, the Rational Nexus Theory was implemented. This analysis determines the impact fee schedule that would be required to fund the future roadway needs of the Town. The Rational Nexus Theory simply states that new developments cannot be held responsible for the existing inadequacy of the street system. Therefore, this study was developed in two separate parts. The first part determined the existing inadequacy of the intersections and roadways in the study area and assigned costs to bring those intersections/roadways up to acceptable standards to accommodate the existing traffic volumes. The second part of the analysis determined the traffic volumes that would be generated by the vacant parcels of land within the study area that could be developed over a 10-year period. The generated traffic volumes were assigned to the street system in the study area. The projected future traffic volumes were then used to test the street system to determine the intersection and roadway improvements that would be necessary to accommodate the added traffic volumes. Cost estimates were conducted for the recommended improvements. The resulting impact fee was then calculated by dividing the estimated cost to mitigate 10-year traffic volumes by the number of 24-hour

weekday trips generated by the 10-year proposed developments identified by the City of Lebanon Planning Department. This amount is the cost the development community will be required to fund to meet the future needs of the City.

In determining the results of this analysis, A&F Engineering has followed acceptable traffic and transportation engineering methodologies and has completed this study by following the Rational Nexus Theory to its complete understanding.

PURPOSE

The purpose of this project is as follows:

Existing Conditions – Review the major street network as it presently exists within the study area. If necessary, intersection and roadway improvements will be recommended based on the existing traffic volumes. Estimated construction costs will be determined for the corresponding intersection and roadway improvements.

Projected 10-Year Conditions – Estimate the trips that could be generated by the vacant parcels of land and partially vacant parcels of land as identified by the City of Lebanon planning staff in 2017 within the study area. These trips will then be added to the existing traffic volumes to estimate the 10-year traffic volumes that will use the City’s roadway system. Intersection and roadway improvements will then be recommended based on these future traffic volumes. Estimated construction costs will be determined for the corresponding intersection and roadway improvements.

Impact Fee – Calculate the road impact fee based on the estimated construction costs for the incremental improvements from existing conditions to the projected 10-year conditions, the cost of performing the impact fee study and the projected 24-hour weekday trips that will be generated by the vacant land parcels.

SCOPE OF WORK

The scope of work for this analysis is as follows:

Existing Conditions

- 1. Determine the existing traffic volumes at all intersections and on all roadway segments.
 - a. Perform manual turning movement traffic counts at the existing study area intersections.*
 - b. Perform 24-hour machine traffic counts along the existing study area roadway segments.**
- 2. Inventory all existing study area intersections to determine traffic control and intersection geometrics.*
- 3. Inventory all existing roadway segments to determine number of lanes, lane widths, shoulder widths and speed limits.*
- 4. Prepare a capacity analysis for each intersection and each roadway segment using existing geometrics, existing traffic controls and existing traffic volumes. The capacity analysis will provide levels of service for each of the intersections and roadway segments which can be compared to the acceptable level of service standards.*
- 5. Make recommendations to improve the intersections and roadway segments that are below acceptable levels of service.*
- 6. Estimate construction costs based on the corresponding intersection and roadway improvements needed to accommodate the existing traffic volumes.*

Projected 10-Year Conditions

1. Based on input from the City of Lebanon's planning staff, identify all vacant and partially vacant parcels of land within the study area and confirm the potential land uses for those parcels.
2. Estimate the number of AM peak hour and PM peak hour trips that will be generated by the potential use of each of these parcels.
3. Assign and distribute the generated trips for the peak hour periods throughout the street system.
4. Determine the total peak hour generated trips from all the vacant parcels at each intersection and along each roadway segment within the study area roadway network.
5. Add the generated trips to the existing traffic volumes to develop 10-year traffic volume estimates.
6. Prepare a capacity analysis for each intersection and each roadway segment using the projected 10-year traffic volumes based on the mitigated conditions for the existing traffic volumes and any planned improvements proposed by the City of Lebanon. The capacity analysis will provide levels of service for the roadway segments and intersections which can be compared to the acceptable level of service standards.
7. Make recommendations to improve the intersections and roadway segments that are below acceptable levels of service after the improvements are considered within step 6 (see above).
8. Estimate construction costs based on the corresponding roadway and intersection improvements needed to accommodate the projected 10-year traffic volumes.

Impact Fee

1. Estimate the 24-hour trips that will be generated by the potential use of each vacant parcel.
2. Determine the construction costs of the roadway segments and intersections based on the incremental improvements from existing recommendations to future recommendations. Add the cost of performing the impact fee study to the construction, to obtain the total impact fee cost.
3. Divide the total impact fee cost by the total 24-hour trips to calculate the road impact fee per trip.

Plan Commission Action:

In order to amend the Comprehensive Plan to include this Recreation Impact Fee Zone Improvement Plan, the Plan Commission must hold a public hearing and review the plan in order to provide a recommendation to the Council for adoption. If you have any questions, comments, or requested revisions, please be prepared to discuss these items during the meeting so that they can be incorporated prior to Council review and action.

Planning Staff recommends that the Plan Commission forward the Road Impact Fee Zone Improvement Plan to the Council with a favorable recommendation.