

*Town of Candia,
New Hampshire*

Traffic Impact Fee

Prepared for
Town of Candia, New Hampshire

Prepared by
Southern New Hampshire Planning Commission

August 2008
Revised March and June 2009

Adopted by Planning Board
June 17, 2009

Effective Date: October 1, 2009

Town of Candia Impact Fees

Traffic Impact Fee

Methodology:

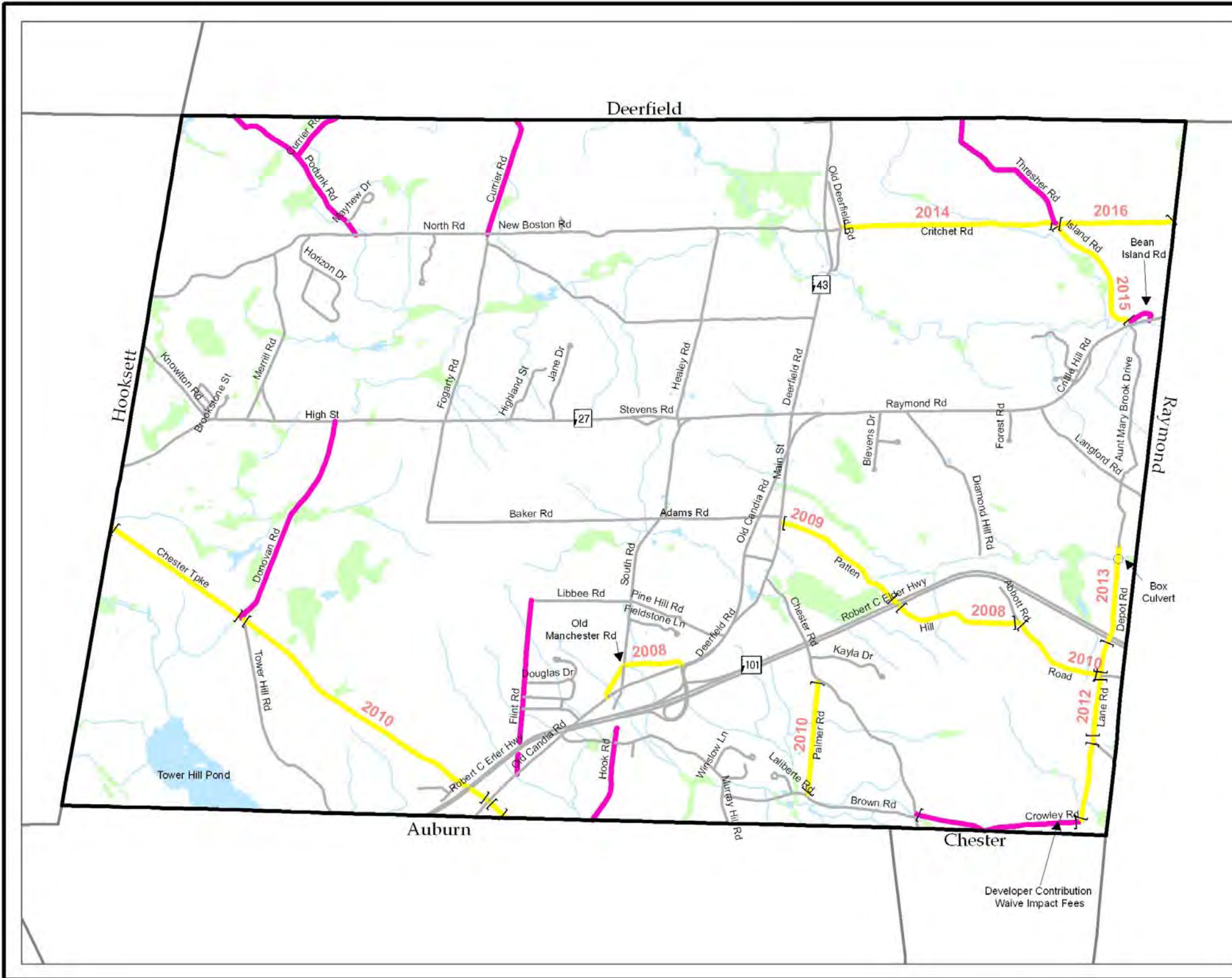
This Traffic Impact Fee is modeled after the “Sample Roadway Impact Fee” procedure. The “Sample Roadway Impact Fee” is a general traffic impact fee methodology developed by VHB/Vanasse Hangen Brustlin, Inc. This impact fee system does not require a municipality to have in place a well-defined future roadway improvement program (i.e. adopted engineering plans or studies to guide capital improvements). The procedure uses average construction costs rather than the cost of specific roadway improvements, daily trips rather than peak hour trips, and average trip lengths rather than site-specific trip assignment.

This methodology is a relatively new procedure which has been applied by various New Hampshire communities, including the Town of Hooksett within the Southern New Hampshire Planning Region. The Town of Deerfield also employs a similar approach as part of an Impact Fees Analysis and Fee Schedule prepared for the town in 1994.

The methodology considers the cost of providing a roadway system that can accommodate new vehicle trips *independent of the existing capacity of the roadway*. The procedure simply multiplies the average expected vehicle miles (number of trips times the average trip length) for a particular use times the cost of constructing a lane-mile.

While the Town of Candia has developed a 15-year Road Reconstruction Plan and the Gravel Road Upgrade to Paved Roads included within the Town’s existing 2006-2011 CIP – as well as the attached Candia Road Construction Plan map as prepared by the Town Road Agent, there is no official adopted future roadway improvement plan. Because the Town of Candia does not have in place an official future roadway improvement plan, the “Sample Roadway Impact Fee” procedure represents the most appropriate impact fee methodology to employ in developing transportation impact fees for the Town of Candia.

The methodology provides the town a means to equitably share the cost of constructing roadway improvements. The basis of the procedure is that the Town of Candia is responsible for addressing or fixing existing roadway deficiencies while future users of the transportation system will be responsible for their proportionate share of the cost of providing sufficient capacity to accommodate future growth. The future users are charged a user or impact feet through the private developer.



Candia Road Construction Plan

- Town Boundary
- Waterbodies
- Wetlands
- Streams
- Roads**
- Gravel Road Upgrade Rebuild
- Gravel Road Upgrade
- 15-yr Reconstruction Plan Rebuild
- 15-yr Reconstruction Plan
- No Updates

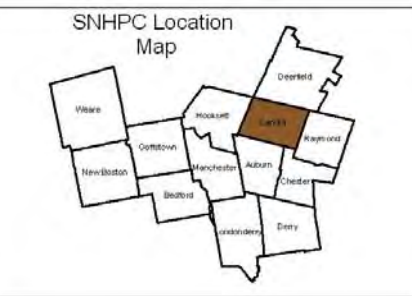
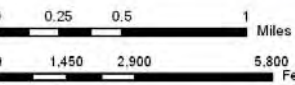
Data Sources:
 Grant Digital Data (1:24,000)
 NH Department of Transportation
 SNHPC



The individual municipalities represented on this map and the SNHPC make no representations or guarantees to the accuracy of the features and designations of this map.

Map produced by SNHPC September 2008.

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Developer Contribution Waive Impact Fees

The “Sample Roadway Impact Fee” methodology meets the “rational nexus” test, which is the basis of fairness in allocating impact fees. To meet the rational nexus test, the impact fee must be determined in proportion to the impact of the user on the roadway improvement or in proportion to the benefit that the user derives from the improvement. An impact fee system that fails to demonstrate this direct link of proportional impact or benefit could be subject to legal challenge.

Methodology/Calculating the Fee:

The Traffic Impact Fee, using the “Sample Roadway Impact Fee” methodology, for any given land use is determined as follows:

- Estimate the total daily vehicle trips generated by the particular use. The trip estimates are based on the Institute of Transportation Engineers’ publication Trip Generation.
- Divide the total daily vehicle trips by two. This is done to avoid double counting. Otherwise a person’s trip from home to work would be counted as two trips when it’s actually only one trip.
- Apply an adjustment factor to the total one-way vehicle trips to establish the number of new one-way vehicle trips. The trips generated by certain land uses such as retail are not all new trips as a portion of the trips are drawn from the existing traffic stream.
- Multiply the number of new trips by the average trip length to obtain vehicle land miles. The average trip length for all land use categories for the Town of Candia has been determined to be 3.85 miles based upon the average trip lengths calculated by Traffic Analysis Zone in the Southern New Hampshire Planning Commission’s Travel Demand Model – see Appendix for summary table).
- Multiply the vehicle lane miles for each category by the estimated cost to reconstruct a lane-mile of roadway (\$448,000) based on an estimate of \$85.00 per linear foot (provided by the Town Road Agent) and divide by the daily capacity of a lane of roadway at a Level of Service D (8,800 vph). This works out to be a rounded cost of \$51.00 per vehicle lane mile (\$448,000 divided by 8,800 vph). The cost to reconstruct a lane-mile of roadway (\$448,000) in the Town of Candia is based upon a recently completed roadway project for Patten Hill Road in 2008. The Town of Candia obtains its road base materials (gravel) from local town owned sources.
- A 25 percent credit is applied to account for any state and federal grants funding traffic improvements and any prospective or retrospective debt service payments.
- To ensure that the calculated fee is conservative (favors the developer rather than the town) as possible, an additional 25 percent reduction is applied to the calculated fee in all categories.
- Finally, all fees are presented in terms of easy to apply variables such as; per unit for residential and per square foot for all other uses.

A traffic impact fee can also be calculated for proposed uses that are not specifically identified under a land use category in the Traffic Impact Fee Matrix. This can be done by estimating the number of new daily vehicle trips for the particular use and multiplying that number by \$42.50 the estimated cost per vehicle trip.

The Institute of Transportation Engineer's, ITE's publication Trip Generation should be used to determine vehicle trip estimates. Note that estimating vehicle trips for non-specified or unique cases should be determined by a qualified traffic engineer.

Having established the impact fee, the following Traffic Impact Fee Zone Map is established. This map was developed by the Town Road Agent considering the road network of the town and relative location of proposed future road reconstruction and paving projects. The traffic impact fee zones are also consistent in geography with the Traffic Analysis Zones (TAZ) developed for the Southern New Hampshire Planning Commission's Travel Demand Model (see map of TAZs in Appendix).

The Town of Candia will need to maintain separate traffic impact fee accounts for each zone to ensure that fees that are collected within a particular zone are expended within the same zone. Maintaining separate accounts provides the direct link between the fee and the benefit derived by the user, which is necessary to meet the rational nexus test.

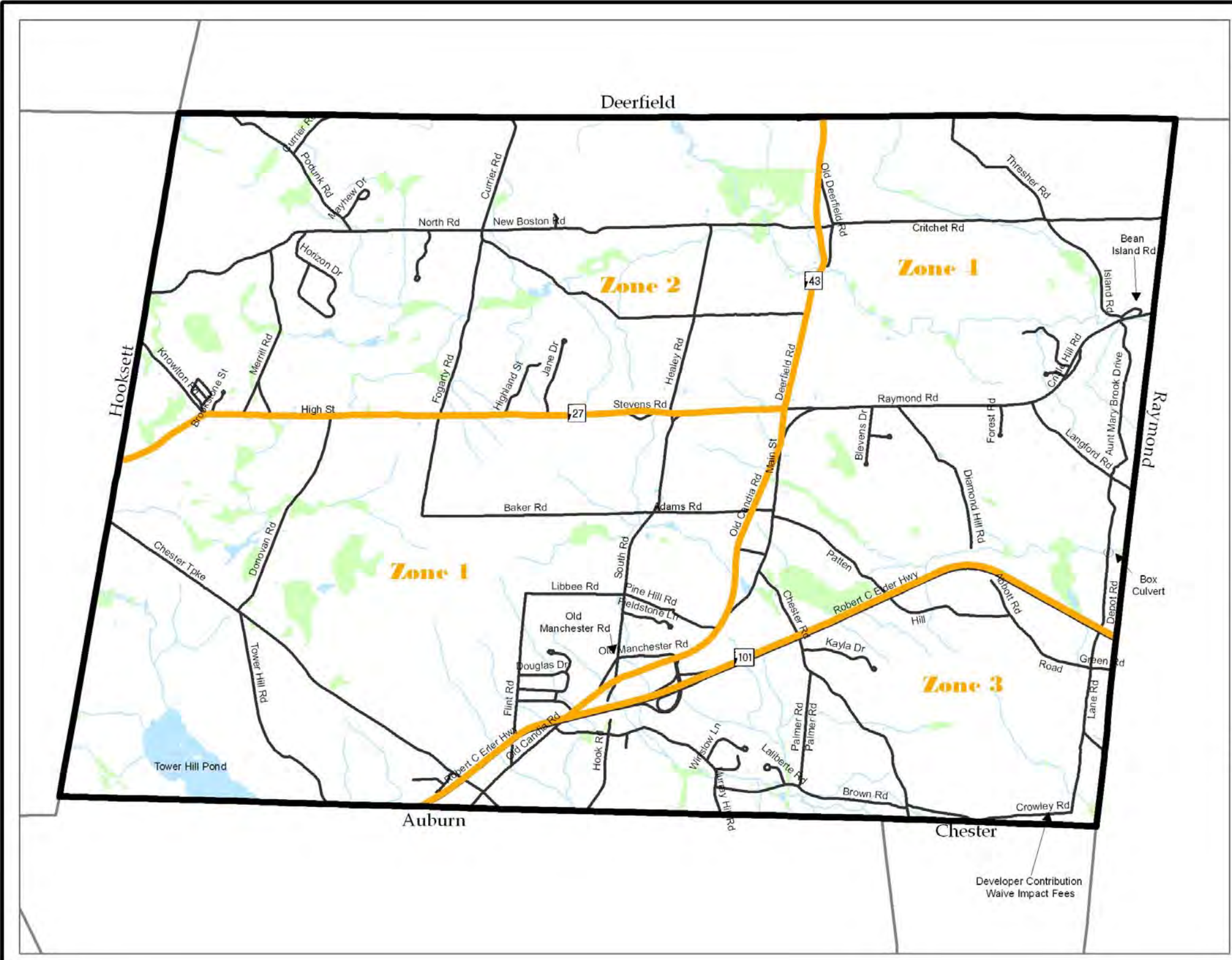
Using the Procedure

The application of the traffic impact fee is straightforward. To determine the Traffic Impact Fee for specific development project, simply identify the appropriate land use in the first column of the Traffic Impact Fee Matrix, which is provided at the end of this report. Town staff should have a copy of Trip Generation, 7th edition by the Institute of Transportation Engineers, which will be helpful in selecting appropriate land use categories and provides more specific detail on trip generation data and sample size. If Town staff does not have a copy of Trip Generation, 7th edition it is available along with assistance in using it at the Southern New Hampshire Planning Commission office. Once the appropriate land use category is selected, move across the right column in the Traffic Impact Fee Matrix to obtain the fee per square footage of the development, or in the case of residential, multiply by the number of dwelling units.

It is important to recognize that town officials will be responsible for making key decisions such as choosing the appropriate land use and recognizing unique development projects where the non-specific use rate should be applied (see footnote at the bottom of the Traffic Impact Fee Matrix). The non-specific use rate is presented in terms of dollars per new daily trips.



Candia Traffic Impact Fee Zone Map



- Town Boundary
- Zones
- Waterbodies
- Wetlands
- Streams
- Roads

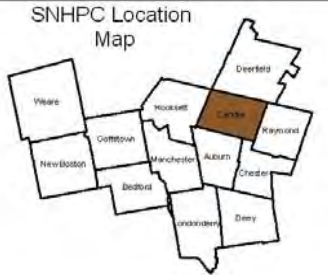
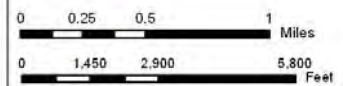
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Construction Cost Adjustment

Because the construction cost estimates that were developed for use in the Traffic Impact Fee procedure are in present day dollars, the procedure has been designed to allow the fee structure to be adjusted annually for inflation. Engineering News Record (ENR) has been tracking a construction cost index (CCI) since 1921 and publishes the index. In addition, the New Hampshire Department of Transportation (NH DOT) is currently using an annual inflation rate of 3.2 percent for costing out all transportation projects in 2008. While the Traffic Impact Fee Matrix will be provided to the town on an Excel spreadsheet, the estimated cost and established traffic impact fees will need to be adjusted annually in the future by simply inputting the current year CCI or NH DOT inflation rate to update the cost.

Town Impact Fee Ordinance

The Town of Candia has an Impact Fee Ordinance in place (adopted March 8, 1960 and recently amended as of March 11, 2008) that allows the town to collect impact fees for capital facilities owned or operated by the municipality as authorized under RSA 674:21, Innovative Land Use Controls. As defined in the statute, capital facilities include and limited to “water treatment and distribution facilities; wastewater treatment and disposal facilities; sanitary sewers; storm water drainage and flood control facilities; public road systems and rights of way; municipal office facilities; public school facilities; the municipality’s proportional share of capital facilities of a cooperative or regional school district of which the municipality is a member; public safety facilities; and recreational facilities not including public open space.”

The Traffic Impact Fee established by this report is consistent with the town’s existing Impact Fee Ordinance and once adopted by the Planning Board (following a public hearing); the Traffic Impact Fee can be incorporated into the town’s ordinance. It is recommended that the planning board review the town’s Impact Fee Ordinance to make sure that it is consistent with RSA 674:21 before adopting this Traffic Impact Fee.

Traffic Impact Fee Assessment

It is important that all Traffic Impact Fees imposed by the Town of Candia pursuant to the following Traffic Impact Fee Matrix be assessed at the time of planning board approval of a subdivision plat or site plan. When no planning board approval is required, or has been made prior to the adoption or amendment of the impact fee ordinance, traffic impact fees should be assessed prior to, or as a condition for, the issuance of a building permit or other appropriate permission to proceed with development.



Traffic Impact Fee Collection

It is equally important that all Traffic Impact Fees be collected at the time a certificate of occupancy permit is issued. If no certificate of occupancy is required, traffic impact fees can be collected when the development is ready for its intended use.

These requirements, however, do not prevent the Town of Candia and the assessed party from establishing an alternate, mutually acceptable schedule of payment of impact fees in effect at the time of subdivision plat or site plan approval by the planning board. If an alternative schedule of payment is established, the Town of Candia may require developers to post bonds, issue letters of credit, accept liens, or otherwise provide suitable measures of security so as to guarantee future payment of the assessed impact fees in accordance with RSA 674:21.

Land Use Categories

This Traffic Impact Fee procedure provides common land use categories and provides a fee per vehicle trip that can be applied to proposed land uses that do not easily fit into any specific land use categories.

The Traffic Impact Fee Matrix is provided at the end of this section of the report. The following provides a brief description of each of the land use categories that are included in the table.

Residential Uses:

Single-Family – Single-Family detached housing includes all single-family detached homes on an individual lot.

Apartment – Apartments are rental dwelling units that are located within the same building with at least three other dwelling units (four unit minimum). Both high-rise and low-rise apartments are included in this land use.

Townhouse/Duplex – Residential condominiums/townhouses are defined as single-family ownership units that have at least one other single-family owned unit within the same building structure. Both condominiums and townhouses are included in this land use.

Mobile Home Park – Mobile home parks generally consist of trailers that are sited and installed on permanent foundations and typically have community facilities such as recreation rooms, laundry facilities, and swimming pools. Many mobile home parks restrict occupancy to adults.

Senior Housing – senior adult housing generally includes independent elderly living developments including age-restricted. These communities, which often house active but retired adults, would be expected to generate fewer vehicle trips than non-age restricted developments.

Non-Residential Uses:

General Office – A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building may contain a mixture of tenants.

Single Tenant Office – A single tenant office building generally contains the offices, meeting rooms, and space for file storage and data processing of a single business or company and possibly other service functions including a cafeteria or restaurant.

General Light Industrial – Light industrial facilities usually employ fewer than 500 persons and have an emphasis on activities other than manufacturing. Typical light industrial activities include printing plants, material testing laboratories, assemblers of data processing equipment, and power stations. Most light industrial facilities are freestanding and devoted to a single use.

Manufacturing – Manufacturing facilities are areas where the primary activity is the conversion of raw materials or parts into a finished product. Size and type of activity may vary substantially from one facility to another. Manufacturing facilities generally also have office, warehouse, research, and associated functions.

Warehousing – Warehouses are primarily devoted to the storage of materials; they may also include office and maintenance areas.

University/College – This land use category includes four-year universities and colleges that may or may not offer graduate programs.

Small Retail (Specialty Retail Center) – Specialty retail centers are generally small retail stores or small strip shopping centers that contain a variety of retail shops and specialize in apparel, hard goods, and services such as real estate offices, dance studios, florists, and small restaurants.

Quality Restaurant – Quality restaurants usually have turnover rates of an hour or longer. Generally, quality restaurants do not serve breakfast, many do not serve lunch, but all serve dinner. Reservations are often required at these restaurants and they are typically not chains.

High Turnover Restaurant – High turnover restaurants usually have turnover rates of an hour or less. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally these establishments serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. Some of these restaurants may also contain a bar area for serving food and alcoholic drinks.

Fast Food Restaurant with Drive-Through Window – Fast food restaurants are characterized by a large carryout clientele, long hours of service, and high turnover rates.

Shopping Center – A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A retail center also provides on-site parking facilities sufficient to serve its own parking demands.

Supermarket – Supermarkets are typically freestanding retail stores selling a complete assortment of food, food preparation and wrapping materials, household cleaning and servicing items. Supermarkets may also contain facilities such as money machines, photo centers, pharmacies, and video rental areas.

Candia Traffic Impact Matrix, 2009

Land Use Categories	Trips per	One-way	Average	%	Vehicle	Cost	Credit*	Maximum	Impact Fee	
	Day	Trips	Trip Length	New Trips	Lane Miles				Sustainable Fee	(w/25% Reduction)
Residential Uses (\$/Unit)										
Single Family	9.57	4.79	3.85	100%	18.44	\$940.44	\$235.11	\$705.33	\$529.00	per unit
Apartment	6.72	3.36	3.85	100%	12.94	\$659.94	\$164.99	\$494.95	\$371.21	per unit
Townhouse	5.86	2.93	3.85	100%	11.28	\$575.28	\$143.82	\$431.46	\$323.59	per unit
Mobile Home Park	4.99	2.5	3.85	100%	9.63	\$491.13	\$122.78	\$368.35	\$276.26	per unit
Senior Housing (62 yrs & older)	3.71	1.86	3.85	100%	7.16	\$365.16	\$91.29	\$273.87	\$205.40	per unit
Non-Residential Uses (\$/sq.ft)**										
General Office	11.01	5.51	3.85	100%	21.21	\$1,081.71	\$270.43	\$0.81	\$0.61	per sq.ft.
Single Tenant Office	11.57	5.79	3.85	100%	22.29	\$1,136.79	\$284.20	\$0.85	\$0.64	per sq.ft.
General Light Industrial	6.97	3.49	3.85	100%	13.44	\$685.44	\$171.36	\$0.51	\$0.38	per sq.ft.
Manufacturing	3.82	1.91	3.85	100%	7.35	\$374.85	\$93.71	\$0.28	\$0.21	per sq.ft.
Warehousing	4.96	2.48	3.85	100%	9.55	\$487.05	\$121.76	\$0.36	\$0.27	per sq.ft.
University/College	2.38	1.19	3.85	100%	4.58	\$233.58	\$58.40	\$175.18	\$131.38	per student
Small Retail (Specialty Retail Center)	44.32	22.16	3.85	30%	25.59	\$1,305.09	\$326.27	\$0.97	\$0.73	per sq.ft.
Quality Restaurant	89.95	44.98	3.85	30%	51.95	\$2,649.45	\$662.36	\$1.99	\$1.49	per sq.ft.
High Turnover Restaurant	127.15	63.58	3.85	25%	61.2	\$3,121.20	\$780.30	\$2.34	\$1.75	per sq.ft.
Fast Food Restaurant	496.12	248.06	3.85	20%	191.01	\$9,741.51	\$2,435.38	\$7.31	\$5.48	per sq.ft.
Shopping Center (less than 100,000 sq.ft.)	86.58	43.28	3.85	25%	41.66	\$2,124.66	\$531.17	\$1.59	\$1.19	per sq.ft.
Shopping Center (100,000 sq.ft. or more)	53.28	26.64	3.85	30%	30.77	\$1,569.27	\$392.32	\$1.18	\$0.88	per sq.ft.
Supermarket	102.24	51.12	3.85	25%	49.2	\$2,509.20	\$627.30	\$1.88	\$1.41	per sq.ft.
Gas Station/Convenience Store	162.78	81.39	3.85	15%	47.00	\$2,397.00	\$599.25	\$1,797.75	\$1,348.31	per pump

*Assumes 25% credit for state/federal grants.

**Assumes 1,000 sq.ft. minimum per use.

Note that the fees are expressed in dollars per unit for residential and dollars per square foot for non-residential uses. For unique land use categories that are not found in the table, the impact fee can be determined by multiplying the number of new total daily trips generated by the site by \$42.50 (cost of \$85 per foot/2).



Appendix

Summary of Average Trip Length in the Town of Candia by Traffic Analysis Zone

Average Trip Length in Candia

TAZ	173	174	175	176	177	178	179	180	181
173	0.5	3.25	5.29	5.11	5.42	6.48	4.62	4.33	3.33
174	3.25	0.5	4.16	3.98	4.29	5.35	4.56	3.29	4.72
175	5.29	4.16	0.5	2.16	4.01	4.93	6.33	5.06	6.49
176	5.11	3.98	2.16	0.5	1.58	2.24	5.6	4.56	6.08
177	5.42	4.29	4.01	1.58	0.5	2.06	5.25	3.98	5.5
178	6.48	5.35	4.93	2.24	2.06	0.5	2.37	3.64	4.86
179	4.62	4.56	6.33	5.6	5.25	2.37	0.5	2.27	2.32
180	4.33	3.29	5.06	4.56	3.98	3.64	2.27	0.5	4.14
181	3.33	4.72	6.49	6.08	5.5	4.86	2.32	4.14	0.5

3.85

Unit: Mile

Source: Travel Demand Model, Southern New Hampshire Planning Commission

See attached Town of Candia – Highway Department 15 Year – Road Reconstruction Plan developed by the Town Road Agent

Also attached is a copy of the Traffic Zones Overlay Map – Town of Candia, prepared by the Southern New Hampshire Planning Commission as used for the Travel Demand Model