

CITY OF GRANITE FALLS

ORDINANCE NO. 651

AN ORDINANCE OF THE CITY OF GRANITE FALLS,
WASHINGTON, ADOPTING THE 2002 TRAFFIC
MITIGATION IMPACT FEE STUDY.

The City Council of the City of Granite Falls, Washington, does hereby ordain as follows:

Section 1. Document Adopted.

The 2002 Traffic Mitigation Impact Fee Study is hereby adopted by the City of Granite Falls.

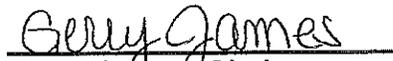
Section 2. Effective Date:

This Ordinance shall be in force and take effect five days after publication as provided by law.

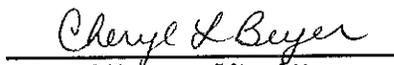
Passed and approved this 13 day of February, 2002.


MAYOR

ATTEST:


Gerry James, Clerk

APPROVED AS TO FORM:


Cheryl Beyer, City Attorney

DATE OF FIRST READING:	January 23, 2002
DATE OF SECOND READING:	February 13, 2002
DATE OF PUBLICATION:	February 14, 2002
EFFECTIVE DATE:	February 19, 2002

CITY OF GRANITE FALLS
SNOHOMISH COUNTY WASHINGTON

2002 TRAFFIC MITIGATION IMPACT FEE STUDY

G&O #01786
JANUARY 2002



Gray & Osborne, Inc.

CONSULTING ENGINEERS
701 DEXTER AVENUE NORTH SUITE 200
SEATTLE, WASHINGTON 98109 • (206) 284-0880

TABLE OF CONTENTS

OVERVIEW	1
BACKGROUND	2
METHODOLOGY	4
METHODOLOGY – TRUCK TRAFFIC CONSIDERATIONS.....	5
LEVEL OF SERVICE.....	7
ALTERNATE ROUTE LID	9
AWDT TRIP FEE AND SINGLE FAMILY RESIDENCE (SFR)	
MITIGATION.....	10
SUMMARY	12

LIST OF TABLES

<u>No.</u>	<u>Table</u>	<u>Page</u>
1	Level of Service	8
2	Traffic Mitigation Fees	11

CITY OF GRANITE FALLS
SNOHOMISH COUNTY
WASHINGTON

**2002 TRAFFIC MITIGATION
IMPACT FEE STUDY**



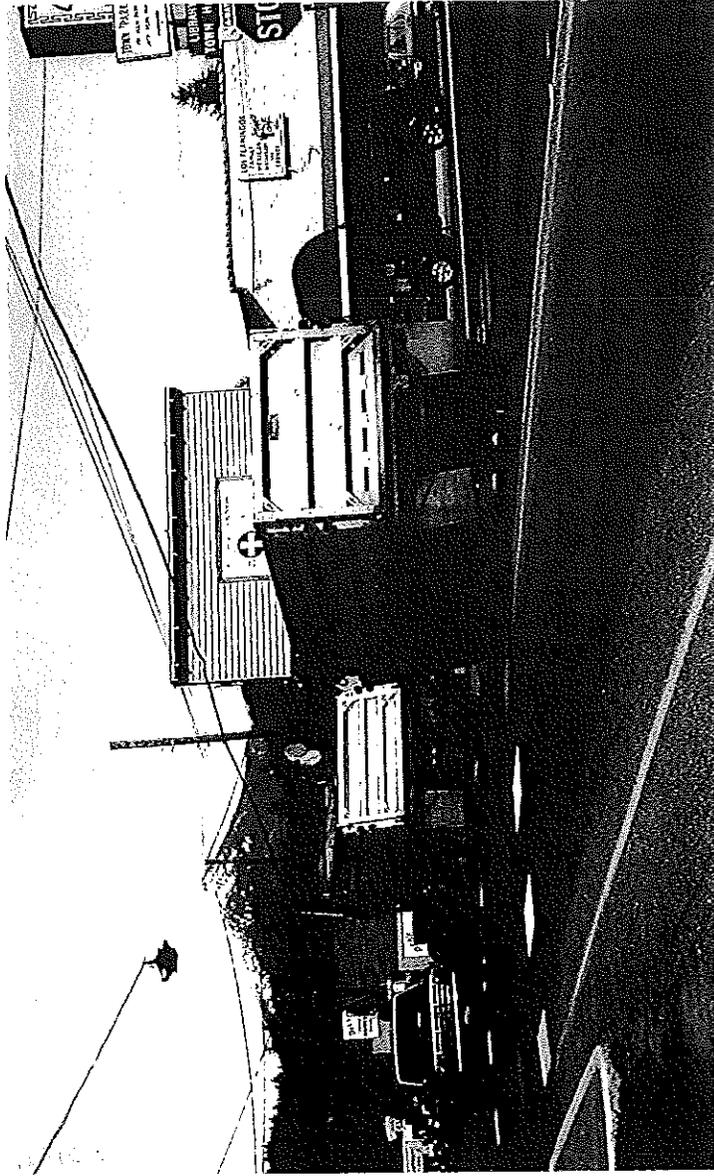
**G&O #01786
JANUARY 2002**

CITY OF GRANITE FALLS

SNOHOMISH COUNTY

WASHINGTON

2002 TRAFFIC MITIGATION IMPACT FEE STUDY



G&O #01786
JANUARY 2002

OVERVIEW

This report identifies traffic mitigation trip fees to be used in providing traffic improvements resulting in the adopted traffic level of service (LOS) being met. The Traffic Mitigation Payment System (MPS) is designed to collect fair share fees from developments to provide their proportionate costs of capacity improvement projects which will mitigate the affects of increasing traffic.

The City of Granite Falls adopted traffic LOS "D" in the 1994 Comprehensive Plan. Impacts of growth are to be mitigated to meet LOS D. RCW 36.70A.070(6) defines "concurrent with development" as "shall mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements within six years". WAC 365-195-210 provides concurrency definitions including that public transportation facilities are in place to meet adopted level of service standards within six years from the time of development.

Traffic volumes were forecast for the year 2012 in the Granite Falls Alternate Route GFAR Report (GFAR Report). The forecasts were made based on existing land use with no foreseeable land use designation changes. Growth will remain essentially the same as in the past and the traffic growth rate will continue as it has. Traffic improvements were identified in the GFAR Report that will provide LOS "D" in 2012. Cost estimates of the improvements were made. The costs have been divided by the traffic volumes in this report resulting in a cost/trip (traffic mitigation fee). The fee is part of the Mitigation Payment System.

The Traffic Mitigation Payment System (MPS) is an element of the financial strategy to provide the 2012 traffic capacity improvements. Development traffic contributes to the need for capacity improvements. The MPS will collect development impact fees that will provide funds for their proportionate share of the improvement costs. Per trip fees have been determined by dividing project improvement costs by the total traffic. Impact costs for a development are calculated by multiplying the development traffic times the trip fee.

The collected funds must be used for the identified capacity improvement projects within six years of collection. They "shall be earmarked specifically and retained in special interest-bearing accounts" (WAC 82.02.070). The mitigation fees provide a portion of the improvement funding costs, grants and other sources will also be utilized. The fees may be used in phases for a project such as design, right of way, and construction or a project that is completed in phases. A distinct portion of the mitigation fee should be designated for the Alternate Route.

The Mitigation Payment System (MPS) Report will be used in the preparation of an Interlocal Agreement (ILA) between the City of Granite Falls and Snohomish County. The ILA will provide the mechanism to collect traffic mitigation fees for capacity

improvements that will serve increasing City and County traffic. The agreement will be modeled on that of Arlington and Marysville where the City collects traffic mitigation fees from County development impacting City capacity and the County collects fees from City development impacting County roads capacity.

There are several acronyms used in this report. For the ease of the reader and reference, they are listed below:

ADT	Average Daily Total
AWDT	Average Week Day Total
GFAR Report	Granite Falls Alternate Route Predesign Report
ILA	Interlocal Agreement
ITE	Institute of Transportation Engineers
LOS	Level of Service
MPS	Mitigation Payment System
SFR	Single Family Residence
TIP	Transportation Improvement Program

BACKGROUND

The Granite Falls Alternate Route (GFAR) Report was prepared under the joint direction of the Snohomish County Public Works Department and the City of Granite Falls. The GFAR Report identified traffic capacity deficiencies within Granite Falls that affects traffic travel within, to/from, and through Granite Falls. Traffic analysis was part of the evaluation of needs and effects of an alternate route to Stanley Street. Capacity improvements including the Alternate Route and other improvements were identified. The GFAR Report identified funding sources. A traffic Mitigation Payment System with an Interlocal Agreement between Snohomish County and the City will be one of the multiple funding sources required to implement this plan.

The City of Granite Falls adopted traffic level-of-service (LOS) "D" as their standard with the Comprehensive Plan. Traffic volumes for the year 2012 were forecast in the GFAR Report. Traffic improvements were determined that will result in the LOS "D" standard being met in 2012. The proposed improvements include the Alternate Route, intersections, and links between intersections. Cost estimates have been prepared for the improvements. These costs have been divided by the 2012 traffic volumes for each project resulting in a per project trip fee. The sum of the project trip fees is the proposed Granite Falls trip mitigation fee.

The Institute of Transportation Engineers (ITE) Trip Generation Manual is used to forecast development trip generation. This manual is used throughout the nation, state and local region for this purpose; it is periodically updated by ITE. A single family residence generates 9.57 average weekday trips. A development's traffic mitigation

impact fees would be calculated using the per trip fee multiplied times the number of weekday total trips. Snohomish County mitigation fees are calculated using an Average Daily Total (ADT) trip fee. The Snohomish County method and Granite Falls method are similar.

Both City and County developments are increasing traffic that results in the need for capacity improvements so that LOS "D" is met. City traffic includes more internal trips to the schools, library, shopping, sport fields, and neighbors. County generated traffic is more focused on traveling through Granite Falls to regional jobs, shopping and activities. For example, portions of Menzel Lake Road or Robe Menzel Road development traffic will travel through or to Granite Falls affecting the Stanley/Granite, Stanley/Portage and other intersections. The "internal" improvements are needed for trips to, through, or circulating within Granite Falls. The Alternate Route will provide additional access routes to enter or exit Granite Falls.

The Alternate Route provides increased east-west capacity on a regional scale that results in the internal Granite Falls circulation and capacity being improved. Trips that divert to the Alternate Route result in "more" available capacity on Stanley and the connecting streets. Likewise, internal Granite Falls capacity improvements are needed to provide for increasing traffic and traffic pattern changes attributable to the Alternate Route traffic circulation changes. The GFAR Report traffic analysis identified that both the Alternate Route and internal Granite Falls traffic improvements are needed to provide capacity. The capacity serves three different trip purposes: traffic through, to/from, and within Granite Falls.

Traffic mitigation fees were identified as one of the sources in the Granite Falls Alternate Route (GFAR) funding plan. While there is some development in Granite Falls, it is expected that there will be more development outside of Granite Falls with that traffic traveling to or through Granite Falls. An interlocal agreement with the County is anticipated as a means of collecting mitigations from development occurring in the county that impacts Granite Falls.

As part of the development approval process Granite Falls developers would take their traffic study to Snohomish County for assessment and determination of County mitigations in addition to City mitigation. County developers would do the same process of bringing their traffic studies to Granite Falls to determine and pay mitigations. This process is similar to that between Snohomish County and Arlington or Marysville.

For example, a proposed development that would be located east of Granite Falls in the County could be reasonably expected to have 100% of its traffic pass through Granite Falls. The Granite Falls mitigation fee would be calculated as 100% of the development's AWDT multiplied by the Granite Falls per trip fee. A similar example for a proposed development to the west of Granite Falls in the County would have less traffic using

Granite Falls streets, say 25% for example. So 25% of that development's AWDT multiplied times the Granite Falls per trip fee would be the mitigation of that development to Granite Falls. Granite Falls would collect the fee and provide a certification of mitigation, which would be provided to the County. A development in Granite affecting County roads would do a similar process providing mitigation to the County.

A development in the County would most likely pay traffic mitigation fees to both the County and the City. A development in the City would pay traffic mitigation fees to the City and to the County based on their projected use of County Roads.

METHODOLOGY

The need for capacity improvements is attributable to increasing traffic within, to/from, and through Granite Falls. The capacity improvements that will result in the City's level of service standard "D" have been identified in the GFAR report. The capacity improvements serve the overall traffic needs. The Alternate Route provides additional east/west capacity, improved north/south capacity with connections to Engebretsen Road, Jordan Road, and Mountain Loop. Internal circulation capacity is increased by the connections with the Alternate Route that serve diverted traffic and new trips. Internal capacity improvements such as those on Stanley Street and on Jordan Road are needed for increased traffic through, to/from, and circulating within Granite Falls. For example, the improvements provide increased capacity for the increasing traffic to and from the south on Menzel Lake Road and Robe Menzel Road as well as increasing north trips on Jordan Road or Engebretsen Road, east trips on the Mountain Loop Highway, and new city trips. Trips of new development inside and outside the City will utilize all of these improvements.

The significant truck traffic results in peak hour capacity needs throughout the day. The analysis and findings that the capacity improvements are needed throughout the weekday are provided in the GFAR Report. The Granite Falls Mitigation Payment System will provide funding for capacity improvements that are needed throughout the weekday. The Snohomish County system uses Average Daily Traffic trips to determine mitigation payments for improvements that are needed throughout the day. The Granite Falls MPS will use average weekday total (AWDT) traffic to determine mitigation fees. Using AWDT will provide mitigation of congestion that occurs throughout the day and is consistent with the Snohomish County method.

The mitigation trip rate fee was determined by using the total 2012 traffic volumes. The combined traffic increases through the years and the changing truck characteristics result in the capacity needs identified in the GFAR report. Truck design standards have changed from wheel base 50 to wheel base 67 and the truck/pup rigs are 75 feet long. The 1994 Comprehensive Plan notes that alternate route was identified as having been being needed

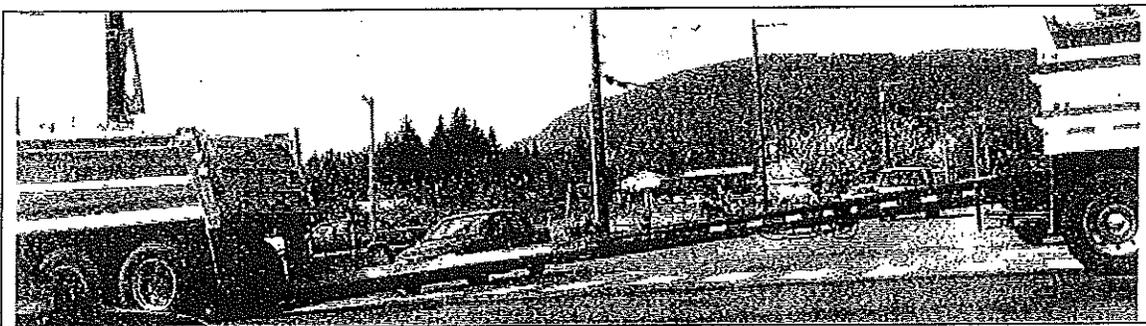
in 1973. The trip fee assessment recognizes this 30 year ago identified capacity need by utilizing the total 2012 traffic volumes in calculating trip mitigation fees. The capacity improvements have been determined using passenger car equivalency factors for the high amount of larger trucks.

The GFAR Report identified year 2001 and year 2012 traffic volumes, level-of-service, and improvement needs for several alternatives. The Alternate Route traffic volumes, level-of-service, improvements, and improvement costs are used in this report to identify fair share traffic mitigation costs.

The GFAR Report traffic projections included increases of east-west traffic, north-south traffic and internal circulatory traffic. Capacity improvements were identified for connections with the Alternate Route and the Stanley Street corridor. These improvements identified the Engebretsen Road, Jordan Road, and Mountain Loop Highway traffic along with a general area growth. The increased south traffic (Robe Menzel and Menzel Lake Roads) was included in the capacity needs assessment.

Menzel Lake Road and Robe Menzel Road development traffic will be served by the Alternate Route, east-west, north-south, and internal Granite Falls circulation capacity improvements. Two improvements are identified as future projects to serve the increasing south traffic. They are not currently scheduled nor are traffic mitigation fees identified. One is South Alder Avenue that connects to Menzel Lake Road. The second is South Granite that connects to Robe Menzel Road. Vehicle and pedestrian capacity and safety improvements will be needed to serve the increasing "south" traffic on these two segments but are outside of the current 6 year Transportation Improvement Program (TIP) window. Future SEPA findings may identify an earlier need for these improvements.

METHODOLOGY – TRUCK TRAFFIC CONSIDERATIONS



The Granite Falls level-of-service is significantly affected by the abnormally high volume of trucks in the traffic stream. The GFAR Report provides extensive information identifying truck traffic capacity effects. The hourly truck volume distribution results in "peak hour" volumes occurring throughout the day, particularly from 7am to 6pm. Figure

The Average Weekday Total (AWDT) volumes are being used as the capacity improvements are needed through the weekday. As previously stated, using the AWDT will provide consistency with the Snohomish County method of using Average Daily Traffic (ADT). This is consistent with the GFAR Report analysis and findings. The GFAR Report has been adopted by the City Council contingent on Snohomish County approval.

The Average Daily Traffic (ADT) is typically 90% of the Average Weekday Total (AWDT). There are two effects of this in the Mitigation Payment System (MPS). Using the higher volume AWDT results in a lower per trip fee. Using the higher volume AWDT results in higher amount of trips being used to calculate the mitigation fee. The ITE Trip Generation Manuals have continually used AWDT since the 1970s. The AWDT for single family detached housing in the current 6th Edition is 9.57 trips/weekday. The Granite Falls capacity analysis is based on weekday traffic, when the congestion and capacity deficiencies occur.

RCW 82.02.070 (3) stipulates that fees must be expended or encumbered for a permissible use within six years of receipt, unless there exists an extraordinary and compelling reason for fees to be held longer than six years. They can be used for any of the capacity projects identified. The fees can be used for project phases such as design, right-of-way, or construction and/or for projects that are divided into separate phases. The list of projects, improvements, LOS, project costs, and fees are provided in Table I. Developments being submitted prior to the Comprehensive Plan Transportation Element and Capital Facilities Element updates that affect any of the capacity deficient locations are typically denied until the mitigation fee system is adopted. An alternative for a developer waiting for the impact mitigation adoption has been when the developer provides a volunteered mitigation of their traffic impacts and the City accepts it.

Mitigation fees would be determined by multiplying development traffic times the fee. The amount of development traffic would be forecast using the ITE Trip Generation Manual for standard residential and commercial developments. A development's traffic mitigation impact fees would be calculated using the per trip fee multiplied times the number of weekday total trips. Quarries and other significant truck traffic generators would forecast their trips and convert the 5 axle and more trucks to passenger car equivalents using a factor of 4 PCE. Trucks of less than 5 axles would use a factor of 2 PCE per truck or bus.

LEVEL OF SERVICE

In addition to the Alternate Route, the "internal" capacity improvements such as those on Stanley Street and Jordan Road are necessary to provide LOS "D". The following table lists the identified projects to provide 2012 LOS "D":

TABLE 1
Level of Service

Project	Improvements	2001 AWDI	2012 AWDI	2001 LOS	2012 LOS w/o Alt	2012 LOS w/Alt Rec	2012 Mitigated LOS
1. Alder & Alpine	Signal, turn lanes, c/g/sw, drainage, signing, lighting	8,000	9,800	B	F	B	
2. Stanley & Alder	Signal, c/g/sw, drainage, signing, lighting	7,800	9,400	B	F	B	
3. Stanley & Granite	Signal, c/g/sw, drainage, signing, lighting	15,200	18,000	E	F	F	D
4. Stanley & Portage	Signal, c/g/sw, turn lanes, drainage, signing, lighting	15,500	18,500	C	F	F	C
5. Stanley & Jordan	Signal, turn lanes, c/g/sw, drainage, signing, lighting	18,700	22,800	A	F	B	
6. Jordan & Burn	Signal, c/g/sw, drainage, signing, lighting	8,400	13,400	B	F	C	
7. Alternate Route (2012 AWDI in PCE)	New 2 mile arterial with signals, signing, drainage, lighting	0	11,000	-	-	C	

The improvements result in LOS "D" being met and there being some capacity for additional traffic increases. The traffic volume difference between the forecast 2012 volume and the volume resulting in LOS "E" is identified as reserve capacity. A common MPS practice is for developments to subtract what the volume will be with their traffic from the reserve capacity to ascertain that concurrency is met, that LOS "D" is not going to be exceeded. Snohomish County uses this process and a similar procedure for is proposed for Granite Falls.

The Granite Falls reserve capacity can be used by increased east/west traffic, increased north/south (such as to/from Jordan Road, Engebretsen Road, Menzel Lake Road, or Robe Menzel Road), increased internal traffic, or combinations. The actual distributions of traffic will determine the future LOS.

An approximation of Granite Falls reserve capacity has been determined by expanding the existing traffic patterns. Traffic volumes were increased and LOS analysis conducted to determine when the two "critical" intersections would drop to LOS "E". The Stanley/Granite and Jordan/Alternate Route intersections will reach LOS "E" before any others unless there is an unusual and/or extraordinary change in the projected traffic pattern changes. The calculated peak hour reserve capacity for Stanley/Granite is 705 and the Jordan Road/Alternate Route is 1,640.

The reserve capacity will depend on approach volume distributions (splits) as traffic growth occurs and will need to be reassessed in the same manner that Snohomish County uses to determine remaining reserve capacity. The steps of determining the reserve capacity are: developments provide a trip generation, distribution, LOS analysis, and accounting of the reserve capacity for each development. The reserve capacity accounting will be maintained by the City of Granite Falls permit process to ascertain that concurrency is met.

ALTERNATE ROUTE LID

The Granite Falls Alternate Route is an integral part of the capacity improvement plan to provide LOS "D". Funding for the Alternate Route is expected to include grants, mitigations, and a Local Improvement District (LID). The funding strategies are further described in the GFAR Predesign Report. These funding sources ranging from federal and state grants through local participation are being developed and will take a period of years. A development example is that traffic mitigation is provided in accord with the MPS system and those mitigations would be credited toward an LID assessment for the special benefit of the Alternate Route.

GFAR No-Protest LID Agreements will be obtained from developers. A development will be credited any MPS fees collected toward an LID assessment. Boundaries of the

LID area benefited by the Alternate Route extend beyond the Granite Falls corporate limits to the extent of trips passing through Granite Falls which benefit from the Alternate Route. LID formation will be at some future time as determined by the Granite Falls City Council.

AWDT TRIP FEE AND SINGLE FAMILY RESIDENCE (SFR) MITIGATION

A development's traffic impact fees are calculated based on the number of trips generated. Trip generation varies by size and type of the particular development. A detached single family residence (SFR) is used as the benchmark fee. This is similar to water rates, sewer rates, and storm water rates where the SFR is used as the rate benchmark.

The Alternate Route is an integral element of the proposed improvements providing capacity to meet the LOS D standard. However, the project primarily provides capacity for regional needs and exceeds "routine" capacity improvements such as signalization, widening for additional lanes, and intersection improvements and has a much higher cost than "routine" capacity improvements.

The Alternate Route is a significant factor in the in the calculation of the Impact Fee. The total project cost for the Alternate Route is estimated at \$15.3 million. The project cost for the portion within Granite Falls is estimated at \$9.3 million. If the entire \$9.3 million were included for mitigation the SFR mitigation fee would be \$9,076. All the other identified improvements together result in a single family residence (SFR) mitigation fee of \$954.87. The Snohomish County fee for single family homes in the areas around Granite Falls is \$2,830. In similar situations, other agencies have adjusted the mitigation fee.

Table 2 lists the projects, traffic volume, project cost and project AWDT trip fee. The bottom rows provide AWDT trip fees determined using the internal trip fee and 40% and 20% of the Alternate Route fee. The 40% and 20% levels for the Alternate Route reduce the mitigation fee from \$9,076 to \$4,203 and \$2,579 respectively for a SFR. Fees should be calculated in passenger car equivalent traffic volumes. Capacity is measured and improvements constructed to provide capacity that is measured in PCEs. The reduction from \$9,076 to about \$2,600 provides parity with the adjacent Snohomish County system and recognizes the regional traffic need and funding of the Alternate Route.

TABLE 2

Traffic Mitigation Fees

	Project	2012 AADT	2001 Cost	Cost/Trip
1.	Alder & Alpine	9,800	\$ 305,000	\$ 31.12
2.	Stanley & Alder	9,400	\$ 359,000	\$ 38.19
3.	Stanley & Granite	18,000	\$ 311,000	\$ 17.28
4.	Stanley & Portage	18,500	\$ 400,000	\$ 21.62
5.	Stanley & Jordan	22,800	\$ 405,000	\$ 17.76
6.	Jordan & Burn	13,400	\$ 377,000	\$ 28.13
7.	Stanley (Granite-Portage)*	15,300	\$ 603,000	\$ 39.41
8.	Stanley (Portage-Jordan)*	19,100	\$ 410,000	\$ 21.47
9.	Subtotal trip fee (3+4 & 7+8)			\$ 99.78
10.	SFR Mitigation (9.57trips) for Internal Improvements			\$ 954.87
11.	Alternate Route (PCE)	11,000	\$ 9,334,500	\$ 848.59
12.	SFR Mitigation (9.57trips) for the Alternate Route			\$ 8,121.00
13.	Total per trip fee (9+11)			\$ 948.37
14.	SFR Mitigation (100% of cost of Alternate Route + Internal Improvements (line 10 + line 12)			\$ 9,075.87
15.	SFR Mitigation (Internal Improvements + 40% of the Alternate Route)			\$ 4,203.27
16.	SFR Mitigation (Internal Improvements + 20% of the Alternate Route)			\$ 2,579.07

*These segment improvements are separated from the intersections they serve as individual projects which can be phased, obtain separate (from the intersections) grants, or receive funding from other sources. In particular, Granite Falls as a Small City is limited to Transportation Improvement Board Small City project grants of \$500,000.

The fee adoption will consider the per trip fee findings, parity with adjoining agencies, and the City of Granite Falls fiscal considerations. Examples of other agencies fee adjustments for large projects with higher than "routine" capacity improvement costs have been described. Examples of mitigation fees for a SFR adopted by other agencies include:

Snohomish County (Granite Falls area)	\$2,590	(\$259/trip)
City of Arlington	\$1,048	
City of Marysville	\$1,542	
City of Stanwood	\$1,873	
City of Duvall	\$2,710	
City of Mount Vernon	\$2,442	
City of Gold Bar	\$625	

The preceding fees were obtained from the Municipal Services Research Corporation (MSRC). They list the July 2000 and February 2001 survey updates of mitigation fees in Washington.

SUMMARY

The City of Granite Falls traffic operates at peak levels in terms of passenger car equivalents and level of service throughout the day. This is a result of the normal peak traffic and the high volumes of trucks throughout the day. The 5 axle (and more) trucks have been found to be equivalent to 4 or more passenger cars in terms of capacity. Development traffic is being assessed in passenger car equivalents using the average weekday total volume. The per trip fees have been determined on this basis.

Traffic volume increases (PCEs) will continue to result in traffic LOS degradation. Capacity improvements are needed so that the City of Granite Falls LOS "D" standard will be met. The improvement projects and cost estimates are identified in the Granite Falls Alternate Route GFAR Report. Project costs are divided by the AWDT to determine trip fees. However, the per trip fee for just the Alternate Route calculated in this manner is \$1,382. Other agencies have reduced local fair share development fees for high cost projects that are providing significant regional service and use. Using 5% or 10%, respectively, of the GFAR trip fee with fees for internal network capacity improvements results in a single family residential house fee of \$2,606 or \$3,360, respectively. This fee is comparable with fees being collected by Snohomish County for the adjacent areas.

The MPS fee should have a portion designated for the Alternate Route and the rest designated for the other improvements. The portion designated for the Alternate Route can be used as local grant matching requirements, with other sources such as the quarry voluntary contributions, with funds from Snohomish County (in addition to MPS fees), or with phases of the Alternate Route. The entire fund can be used for the alternate route but some portion should be designated specifically for GFAR. The portion of the fee collected for the Alternate Route is to be for the entire route between the Mountain Loop Highway and SR92 including the portion within the Urban Growth Boundary but not within the City at this time.

Development submitted prior to the Capital Facilities and Transportation Elements of the Comprehensive Plan update adoption would be denied if they impact beyond LOS D without the impacts being mitigated. The Transportation Element update will contain the traffic needs and mitigations. The Capital Facilities Element update will contain the funding plan. Voluntary mitigation can allow development approval by the City Engineer and responsible SEPA official if the LOS D impacts are mitigated which may be voluntary provision of the Transportation and Capital Facilities Elements mitigations.

