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EXECUTIVE SUMMARY

The City of Saco is experiencing worsening access and congestion along Main Street from the King Street intersection to the interchange at Exit 2 of I-195. These conditions have necessitated the development of the Main Street Access Study by the City of Saco through the Portland Area Comprehensive Transportation Committee (PACTS).

The purpose and goal of the study is to identify short, mid and long term recommendations to address vehicular, pedestrian and bicyclist traffic access issues while balancing the competing needs of traffic movement and land access. This study is intended to be utilized as a tool by the City of Saco to use when capital improvement, development, and re-development projects occur.

The development of the study has included coordination efforts with the City staff, Maine Department of Transportation, Southern Maine Regional Planning Commission, PACTS, the Saco business community and the citizens of Saco. In addition to the coordination efforts the available traffic data, accident data, a survey of the community and a planning workshop with the public were used in preparing the study.

The recommendations of the study included the following techniques to improve access and reduce congestion safety along this section of Main Street:

- Driveway elimination, sharing and narrowing
- Rear access roads along Main Street and the rear access roads
- Formal bicycle lanes
- Pedestrian crosswalk locations
- Traffic signal coordination and interconnection
- 3, 4 and 5-lane roadway considerations
- Additional signage to assist users to their destinations
- Additional green space and landscaping

The specific recommendations along the corridor can be found within the recommendations section of the study.

The implementation of the recommendations will systematically provide a safe and efficient environment for the motorists, bicyclists, pedestrians, businesses, homes, shops and the Saco community for years to come.

INTRODUCTION



Burger King with 2 of 3
Driveways Shown

The City of Saco, Maine through the Portland Area Comprehensive Transportation Committee (PACTS) initiated the Main Street Access Study after recognizing the need to proactively address the worsening access and congestion issues along outer Main Street. This access study was conducted along Main Street beginning at the intersection with King Street and continuing approximately 3,000 feet to the interchange at Exit 2 with I-195 with a study width of approximately 500 feet on either side of Main Street to address the neighboring surface streets. Hoyle, Tanner & Associates, Inc. was retained by PACTS and the City of Saco, through a quality based selection process consisting of the submittal of qualifications and an interview, to complete the study for the City of Saco and PACTS.

This section of Main Street is the major roadway to access downtown Saco, Old Orchard Beach, downtown Biddeford and the interstate. This corridor has become known as “Hamburger Alley” due to the development of many “fast food” restaurants over the years. In addition to the restaurants, businesses such as banks, grocery stores, a pharmacy and a gas station have located along this corridor. These types of businesses create many trips of short duration throughout the day. These short duration trips in association with an overabundance of driveways to access the businesses has strained the access and egress to Main Street.



Stockman Avenue approach to Main
Street with Dairy Queen to the left and
McDonalds across Main Street.



Wendy's with rear access only

In addition to the vehicular traffic along this corridor, pedestrians and bicyclists also utilize this section of Main Street. The bicyclists use this corridor to access other less congested bicycle routes within the Saco region. Pedestrians from the nearby residential neighborhoods and the students and staff of Thornton Academy utilize the sidewalks within the corridor for recreational purposes as well as to access the local businesses.

PURPOSE OF STUDY

The combination of vehicular, pedestrian and bicyclist traffic to Saco's regional and local destination points has created an access and congestion situation along this section of Main Street that the City of Saco will be addressing proactively. Therefore, the purpose of the study is to evaluate the existing conditions and develop a study report of improvements to be utilized by the City of Saco as a planning tool that results in improved access management along outer Main Street. The study report developed short, mid and long-term recommendations and costs to address new development and re-development of properties along this section of outer Main Street.

ACCESS MANAGEMENT

What is Access Management?

Access management is defined, as the process of balancing the competing needs of traffic movement and land access. Meaning that the roadway corridor must provide a safe and efficient environment for its users, motorists, bicyclists and pedestrians, while adequately serving the businesses, homes and shops that depend on the same users of the corridor to be productive and prosperous members of the community.

What are the Benefits of Access Management?

SAFETY

- Fewer and less severe crashes
- Less auto-pedestrian conflicts

EFFICIENCY

- Less stop and go traffic
- Reduced delay
- Increased and preserved capacity
- Reduced fuel consumption
- Preservation of investment in the roadway system

AESTHETICS

- More attractive corridors
- Improved community appearance

LIVABLE COMMUNITIES

- Enhanced community character
- Preserves neighborhood integrity
- Preservation of private investment in abutting properties
- Lower vehicle emissions



What are the Results of Access Management?

Access management provides access to land development while simultaneously preserving the safe and efficient flow of traffic on the roadway system. Effective access management provides controlled access to the businesses, homes and shops along a corridor by increasing and preserving the capacity of the roadway, which in turn reduces delay, congestion and accidents.

METHODOLOGY

HTA and the City of Saco developed a systematic approach to achieve the goals and objectives of the study. This approach consisted of gathering the available existing conditions inventory, evaluating the technical data, issuance and compilation of a survey, a public planning workshop, the development of short, mid and long-term improvements and several working meetings with the city staff. The following sections provide a detailed explanation of the various components of the study.

Existing Conditions Inventory

HTA worked with staff members from the City, Maine Department of Transportation and the Southern Maine Regional Planning Commission to compile the following information:

- Aerial photography
- GIS mapping features
 - Right-of-Way
 - Property lines
 - Parcel information
 - Drainage and sewer utility information
- Available traffic information based on historical sources and development activities
- Accident statistics
- Current development projects
 - Relocation of Shannon Lane across from Hutchins Avenue
 - Clipper Mart
 - Church of Jesus Christ Latter Day Saints
 - Shannon Woods Condominiums
- Potential future development projects
 - Tim Horton's
 - Thornton Academy
 - KFC
 - McDonald's

HTA utilized this information to create a base plan to use as a tool for the study. HTA also performed site visits to take measurements and identify additional features throughout the corridor for incorporation into the base plan and study report.



Technical Data Evaluation

Traffic Information

The available traffic information consisted of the average annual daily traffic (AADT) numbers that were provided by Southern Maine Regional Planning Commission, Maine Department of Transportation and the latest traffic studies that were completed for current development projects. The 1995 AADT numbers along this section of Main Street ranged from approximately 25,000 – 27,000 vehicles per day. The 2001 AADT numbers resulted in a range of traffic from 27,000 – 32,000 vehicles per day for the area between I-195 and Stockman Avenue.

The traffic study for the current development of the Church of Jesus Christ Latter Day Saints was completed in January 2003 and was specific to their development. The review of that report is consistent with the previous AADT numbers obtained for the corridor.

The annual average daily traffic doesn't provide a complete understanding of the traffic congestion experienced on Main Street during high volume periods. The evening peak hour traffic at the intersections with Hutchins Avenue and Smith Lane process over 3,000 vehicles per hour while the intersection at Ocean Park Road processes in excess of 5,000 vehicles per hour. The peak periods of traffic during the morning, evening, weekend and the peak summer season process over 10% of the entire day's traffic, which creates the congestion issue that the City of Saco experiences daily.

Three Lane Roadways

HTA evaluated the potential of transforming the existing 4-lane section of roadway from King Street north to the Hannaford Shopping Plaza into a 3-lane section. The existing traffic numbers do not support the creation of a 3-lane section in this area based on the following. The Maine Department of Transportation uses an AADT of 20,000 vehicles per day as a threshold to consider expanding a 2-lane roadway to a 4-lane roadway. They do not have any guidelines for 3-lane roadways but provided us with a list of the busiest 3-lane roadways throughout the state and those roadways have AADT's in the low to mid 20,000 vehicles per day. The 1995 AADT's for the corridor range from 25,000 – 27,000 vehicles per day, it is unlikely that a 3-lane section is feasible based on the additional growth that has occurred over the past 10 years.

Further, in order to transform the section from King Street to the Hannaford Shopping Plaza the existing 4-lane section from Main Street would need to be transitioned from a 4-lane section to a 3-lane section at the Hannaford Shopping Plaza intersection resulting in a short 3-lane section. Should the city wish to extend a 3-lane roadway beyond King Street heading towards downtown, a detailed traffic study would be required to support such a change.

Main Street Access Study Saco, Maine



Five Lane Roadways

The evaluation of transforming the existing 4 lane roadway into a 5-lane roadway requires a detailed traffic study with current traffic counts and turning movements for the peak periods of the day as well as factoring the future development of the immediate and regional area. The existing Right-of-Way is generally set at the back of the sidewalk and with the existing shoulder widths being minimal the expansion to add another lane would require additional Right-of-Way. In addition to the cost associated with the acquisition of Right-of-Way, the impacts to businesses, parking lots, utilities and the drainage system should be considered. There are also many stakeholders (pedestrians, bicyclists, business owners, City of Saco, etc.) that should be considered in determining the overall width of a 5-lane roadway to achieve a successful project for the community of Saco.



5-Lane Roadway at Hannaford Shopping Plaza

Signalization



Signalized Intersection at
Hutchins Avenue

There are four existing signalized intersection within the study area that intersect with Main Street at the following cross streets:

- Ocean Park Road
- Hannaford Shopping Plaza
- Hutchins Avenue
- King Street

These four (4) signalized intersections are located within a 3,000-foot section of Main Street. A study to evaluate the coordination of the signals to each other and to future signals on this corridor is recommended.

Main Street Access Study Survey

HTA and the city staff collaborated on a Main Street Access Study Survey to receive feedback from the community of Saco. The survey was developed to assist in the development of the study by asking questions regarding traffic, peak periods, driveway access, rear access road access, cross walks, future development, etc. The overall responses we received from the community were as follows:

- Motorists try to avoid this area of Main Street during high volume periods of traffic.
- The evening peak hour and the summer time are peak periods of congestion.



**Main Street Access Study
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- There are too many curb cuts (driveways).
- The community of Saco would support additional rear access roadways to specific intersections.
- The number and effectiveness of the signals should be evaluated.
- Future development should be directed to the existing intersections.
- The pedestrian amenities and crosswalk locations should be evaluated.

The full results of the survey can be found in Appendix A.

Access Management Techniques

The selection of the proper access management technique is crucial in obtaining the desired results. There are a variety of techniques that can be utilized to address each unique contributing characteristic so as to balance the competing needs of traffic movement and land access. The following techniques were considered during the development of the study and a visual depiction of these techniques can be found in Appendix B:

Driveway Consolidation

A proven technique to improve movement along a main corridor and to reduce the number of access and egress turning conflict points is to minimize the number of curb cuts a property has. This technique when implemented must consider the affect this could have on the property owner particularly when it is a business entity.



Two of Three Burger King Driveways

Driveway Elimination

The elimination of driveways is possible when access is available from a side or rear access road. This technique eliminates turning conflict points along a main line, thereby increasing the movement and safety of the traveling and pedestrian public.



Wendy's and Fleet Bank have access from a rear access road at the Hannaford Shopping Plaza



Curb Cut Reduction in Width



Excessively Wide Driveway at
The China House Restaurant

The width of a driveway should be limited to what is reasonable for a particular use of that property and should not exceed the standards set forth by the City of Saco. The reduction of a driveway to an acceptable width provides channelization for vehicles and defines access and egress points for motorists. This channelization better defines the location for which motorists can enter and exit a property, thereby eliminating choices and reducing decisions that lead to motorist indecision and delay.

Driveway Sharing

The combining of driveways for a shared use to a property is similar to the technique of driveway consolidation, as it eliminates curb cuts. The operations of both properties must be considered as well as an easement agreement between the parties for the use of each other's property for access and egress purposes.

Rear Access Roads

The use of rear access roads is a great way to remove turning vehicles from the main roadway and get them on a less congested roadway where conflict points and speeds are less thereby reducing congestion and increasing safety. To facilitate the implementation of utilizing a rear access road to a business it is crucial to provide the proper signage to direct the motorist on how to access their destination via the rear access road.



Rear Access Road for
Pizza Hut, Dunkin
Donuts, and Starbucks



Signage at Starbucks to
direct motorists to the rear

Raised Median Islands



Raised median island at the Ocean Park Road intersection

The implementation of a raised median island prohibits left turns. This technique is successful in eliminating turning conflicts when applied in the right circumstances. By eliminating the left turns, proper signage must be in place to direct traffic to their desired destination.

Jug Handle

This technique is usually combined with the implementation of a raised median island. The purpose of the jug handle is to allow traffic to reverse direction at a controlled location.

3-Lane and 5-Lane Roadways

The implementation of a 3 or 5 lane roadway section establishes a two-way left turn lane to allow motorists who wish to turn left to exit the through traffic lane and wait for an acceptable gap to make a left turn into a driveway. The use of these roadways reduces the chances of rear end type accidents by moving the turning traffic from the through movement traffic heading in the same direction and provides additional visual aides for oncoming traffic and traffic egressing from a driveway.

Signalized Intersection

The introduction or modification of signalized intersections to include an exclusive left turn lane is a possibility to improve the control of access and level of service of that intersection based on the design of the signal and should be considered as an access management technique.



Exclusive left turn lane to access the Hannaford Shopping Plaza

Main Street Access Study Saco, Maine



Main Street Access Study Planning Workshop

HTA and the City of Saco held a planning workshop on July 16, 2004 to introduce a variety of access management techniques to be utilized, solicit feedback and gather additional information for the study. Business owners, residents, abutters to the project, along with City and regional officials, attended the workshop. The workshop consisted of the following:

- Introduction and goals of planning workshop
- Site walk to enhance visual awareness of study area
- Study overview by City and HTA
- Small group discussions and brain storming sessions on access management improvements
- Presentation by the small groups on their ideas
- Recap of workshop and upcoming study activities

Appendix C provides a copy of the presentation made at the workshop.

The inclusion of the stakeholders in the early stages of the study was critical in understanding what issues they consider important. The stakeholders often provided a different perspective that is valuable in advancing the study forward.



Planning Workshop at Thornton
Academy

The planning workshop was organized to provide the attendees with the parameters of the project and the access management techniques that can be used to achieve the goals of the workshop. The actual ideas for the corridor were a result of each group's discussion on what was important to them. The technical staff did not share our ideas with them intentionally, as this empowers them to brainstorm freely and imaginatively. The technical staff from HTA and the City were present to answer questions and offer support. Each small group was provided with a large-scale aerial plan, an acetate overlay and colored markers to graphically express their ideas over the entire corridor.

The presentation of each group's ideas utilized many of the access management techniques they were provided. Overall, the general theme of each of the groups was similar and was as follows:

- Eliminate or minimize driveway curb cuts
- Improve and create rear access opportunities
- Improve signage for rear access roadways and Thornton Academy
- Consider the pedestrian and bicyclists needs
- Improve the coordination and interconnection of the signalized intersections



The results of the public participation process, the survey and the planning workshop, provided HTA and the City with additional information and a perspective from the residential and business communities to use in the completion of the study.

RECOMMENDATIONS

The recommendations of the study are a compilation of the data gathered during the development of the study along with the information and ideas provided by the public through the survey and the planning workshop. With the study being utilized by the City of Saco for current and future planning efforts, the development of the recommendations has been separated into short, mid and long-term improvements that the City and PACTS can utilize in securing funding for these improvements.

HTA has utilized the following access management techniques and other roadway corridor alternatives to improve the access and safety of a roadway:

- Driveway consolidation
- Curb cut reduction in width
- Driveway elimination
- Driveway sharing
- Rear access roads
- Additional signage
- Signal coordination
- Pedestrian cross walk locations

The establishment of short, mid and long-term improvements were determined based on when these improvements could reasonably be implemented. A short term improvement could be accomplished within 2 years, a mid term improvement occurring over a 2 – 10 year period and a long term improvement occurring more than 10 years out. There are several properties where a realistic phased approach was utilized to achieve the ultimate improvements.

The following figures depict the existing conditions and the recommended short, mid and long-term improvements.

The costs to implement these improvements varies widely from a few thousand dollars to remove a driveway and replace it with curbing and a sidewalk to the construction of a new rear access road that could cost several hundred thousand dollars. The table following the figures identifies the parcels within the corridor and the budgeted 2005 construction cost estimates for the described improvements.

MAIN STREET ACCESS STUDY – SACO, MAINE Improvement and Cost Breakdown						
Property	Short Term Improvements	Cost	Mid Term Improvements	Cost	Long Term Improvements	Cost
Results Engineering	None	\$0	None	\$0	None	\$0
Private Home	None	\$0	None	\$0	None	\$0
Great American Realty	None	\$0	None	\$0	Extend access to rear access road between Smith Lane and King Street based on potential development	\$260,000
Prudential	None	\$0	None	\$0	None	\$0
Rite Aid	None	\$0	None	\$0		
Amato's	Close Main Street drives and re-stripe parking to gain spaces	\$11,000	None	\$0	None	\$0
Saco Motel	Close Main Street drive and construct drive off of Academy Lane for one-way circulation and re-stripe parking	\$26,000	None	\$0	None	\$0
Credit Union			Right in / Right out only shared with Vacant Lot Reconfigure parking to accommodate rear access road to Smith Lane (formerly Shannon Lane)	\$130,000 shared with vacant lot, Service Master and KFC	Close shared Main Street Drive	\$2,500

MAIN STREET ACCESS STUDY – SACO, MAINE Improvement and Cost Breakdown						
Property	Short Term Improvements	Cost	Mid Term Improvements	Cost	Long Term Improvements	Cost
Vacant Lot			Right in / Right out only shared with Credit Union. Rear access road to Smith Lane (formerly Shannon Lane)	\$182,000 shared with Credit Union, Service Master and KFC	Close shared Main Street drive	\$0
Service Master	None	\$0	Rear access road to Smith Lane (formerly Shannon Lane). Right in/out for Main Street drive.	\$182,000 shared with Credit Union, vacant lot and KFC	Close Main Street drive	\$2,000
KFC	None	\$0	Reconfigure parking for rear access road from Smith Lane (formerly Shannon Lane) to Credit Union.	\$182,000 shared with Credit Union, vacant lot and Service Master	None	\$0
Pizza Hut	None	\$0	None	\$0	None	\$0
Dunkin Donuts	None	\$0	Shared right in/out with Starbucks. Promote rear access and signage to Smith Lane (formerly Shannon Lane)	\$15,000 shared with Starbucks	Close Main Street drive	\$8,000 shared with Starbucks
Starbucks	None	\$0	Shared right in/out with Starbucks. Promote rear access and signage to Smith Lane (formerly Shannon Lane)	\$15,000 shared with Dunkin Donuts	Close Main Street drive	\$8,000 shared with Dunkin Donuts

MAIN STREET ACCESS STUDY – SACO, MAINE Improvement and Cost Breakdown						
Property	Short Term Improvements	Cost	Mid Term Improvements	Cost	Long Term Improvements	Cost
China House Restaurant	Close southerly drive reduce width of northerly drive	\$5,000	Right turn in/out for Main Street drive. Rear access to Smith Lane (formerly Shannon Lane)	\$55,000	Close Main Street drive	\$4,000
Dairy Queen	Narrow southerly drive and close northerly drive	\$2,500	None	\$0	Acquisition when property is for sale to eliminate poor drive through access area to Stockman Ave	Market value
Clipper Mart	Current geometric and traffic signal improvements ongoing.	\$0	None	\$0	None	\$0
VIP Auto Store	Current geometric and traffic signal improvements ongoing.	\$0	None	\$0	None	\$0
Thornton Academy	None	\$0	Relocate main entrance across from Smith Lane and address parking constraints. Add a signal at Smith Lane, close northerly drive. Right turn in/out for southerly drive	\$240,000 shared with Thornton Academy	None	\$0
U-Haul	None	\$0	Possibly provide a park/green space	\$75,000	Right in/out Main Street drive. When redevelopment occurs to use Hutchins Ave signal	\$5,000

MAIN STREET ACCESS STUDY – SACO, MAINE Improvement and Cost Breakdown						
Property	Short Term Improvements	Cost	Mid Term Improvements	Cost	Long Term Improvements	Cost
Bank	None	\$0	None	\$0	None	\$0
Rosa Linda's	Close existing drives and construct one drive to north end of property to match better with existing parking.	\$6,500	None	\$0	None	\$0
Quick Prints	Shared drive with Kerry men	\$2,000 shared with Kerry men	None	\$0	None	\$0
Kerry men	Shared drive with Quick Prints	\$2,000 shared with Quick Prints	Reconstruct parking and back access	\$82,000 Shared with Burger King and McDonalds	Close northerly Main Street drive	\$8,000
Burger King	Close southernmost drive	\$2,000	Close northerly drive and reconstruct parking and back access	\$119,000 Shared with Kerry men and McDonalds	Close Main Street drive	\$8,000
McDonald's	None	\$0	Close southerly drive and make connection to northerly drive and reconstruct parking and back access	\$135,000 Shared with Kerry men and Burger King	Close Main Street Drive and	\$8,000
Wendy's	None	\$0	None	\$0	None	\$0
Hannaford	None	\$0	None	\$0	None	\$0
Fleet Bank	None	\$0	None	\$0	None	\$0
Louise Street Connection	None	\$0	None	\$0	Extend Louise Street to Smith Lane	\$150,000



**Main Street Access Study
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In addition to the individual property improvements the following corridor wide improvements are recommended:

- | | |
|----------------------|---|
| Signage | <ul style="list-style-type: none">• Supplement existing signage for businesses and destination points coming from both directions to alert traffic of the rear access roadway network |
| Signals | <ul style="list-style-type: none">• Coordinate and interconnect signalized intersections as appropriate. |
| Rear Access Roadways | <ul style="list-style-type: none">• Ocean Park Road to King Street via Louise Street to a new connection to Smith Lane (formerly Shannon Lane) to a new connection to King Street.• Formalize the existing rear access roadway from the Hannaford Shopping Plaza to Hutchins Avenue. |
| Park/Green Space | <ul style="list-style-type: none">• Smith Lane (formerly Shannon Lane) between Pizza Hut and Smith Lane.• A potential park adjacent to U-Haul.• Include green space and landscaping adjacent to sidewalks as specific projects develop along the corridor. |

MDOT/City Locally Administered Project – The City of Saco will be providing improvements consisting of a right turn lane along Main Street from Stockman Avenue to Ocean Park Road. The construction of these improvements is anticipated to begin in the spring of 2005 at a cost of \$570,000.

Fairfield Street Improvements- The proposed long term improvements to Fairfield Street consist of providing an exclusive right or left turn lane exiting Fairfield Street onto Main Street. This proposed improvement would be evaluated along with any proposed improvements to Thornton Academy that would impact the internal and external traffic patterns. The cost for these improvements would be dependant upon the extent of the roadway and signal work but could approach \$100,000.

3-Lane Roadway Section – A detailed traffic study would be required to determine the capacity and viability of these improvements over this section of Main Street and southerly into the downtown area.

5-Lane Roadway Section – A detailed traffic study should be conducted to determine the capacity and viability of these improvements over this section of Main Street. The coordination and interconnection of the existing and future signalized intersection should be analyzed prior to determining the effects that a 5-lane section would have.

Bicycle – Bicycle access and improvements should be coordinated with the Saco Bicycle and Pedestrian Master Plan completed in September 2004. There were four (4) vehicle-bicyclist accidents reported from 2000-2003 at the following locations: 1) Stockman Avenue, 2) China House Restaurant, 3) Dunkin Donuts, 4) I-195 Off Ramp. The potential re-development of a 3-



lane or 5-lane roadway section and rear access roadways should provide adequate bicycle lanes for northbound and southbound traffic. The use of the existing 4-lane facility could improve bicycle access by narrowing the travel lanes, however, this action will affect the vehicular capacity of the Main Street corridor. The desired solution would retain the existing lane widths and acquire 4' of right-of-way on both sides of Main Street to provide 5' bicycle lanes.

Crosswalks – A proposed crosswalk at the Hannaford intersection is recommended to serve the residents and business community. The inclusion of a crosswalk at the potential relocation and signalization of the Thornton Academy main entrance opposite Smith Lane is recommended to facilitate the pedestrian movements of the students, residents and the business community. There were four (4) vehicle-pedestrian accidents reported from 2000-2003 at the following locations: 1) Burger King, 2) Rite Aid, 3) Smith Lane (2 accidents).

The funding for these improvements could come from various sources with the potential for cost sharing among the stakeholders at the time of implementation. The following are potential sources of funding:

- Federal funds could be made available through the Maine Department of Transportation programs. These funds may require the State or City to provide 10 – 20% of the total funds for design, construction and Right-of-Way.
- The future development and re-development of properties provides the opportunity for the City to have the developer construct some of these improvements or provide secured funds for a portion of a larger future project.
- The City could include some of these projects within their budget for capital improvement projects.

CONCLUSIONS

The overall purpose of the project was to provide the City of Saco, Maine with a planning tool to address the access management issues that exist on the outer section of Main Street between the King Street intersection and the interchange at Exit 2 of I-195. Through the efforts and coordination with the City of Saco, PACTS, the Maine Department of Transportation, the Southern Maine Regional Planning Commission and the greater Saco community, HTA has been able to provide a study report that recommends improvements for the short, mid and long term that are reasonable for the City of Saco to pursue immediately and into the future.

The recommendations include access management solutions such as driveway consolidation, driveway narrowing, driveway sharing, rear access roadways, improved signalization coordination and interconnection and improved signage. The results of these improvements will be an improved Main Street corridor for the traveling public, the businesses and the community of Saco.

APPENDIX A

Main Street Access Study Survey Results



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Main Street Access Study Survey Results

1. Do you avoid Main Street, between I-95 and King Street, during high volume traffic periods? Yes 18 No 7
If so, how and why:

- I live on North Street, so I will either take the spur or Industrial Part Road if I'm going North or wait until later in the evening when possible.
- The traffic is too backed up for just getting around town. It's easier to take short cuts or alternate routes. Too many tourists are on this section as well and they are a hazard to our town because they don't know where they are going and make driving mistakes at our cost. It's just not worth the stress to drive that way. Also, the light on North Street heading across to Beach Street doesn't stay green long enough. North Street gets backed up as well during busy times which makes it hard to get across when the light only lets 4-5 cars go through when the lights in other directions at that intersection let 15-20 cars through when green. That light really needs to be adjusted because people are getting into the other lane to turn left to Rt. 1 and going straight instead, which causes a lot of horns to blow and it's a very dangerous situation. PLEASE FIX THAT LIGHT TO ALLOW MORE CARS TO GO THROUGH FROM NORTH STREET TO BEACH STREET!!!!
- I live in a neighborhood off Main Street and either have to travel Main Street or North Street to get home.
- I avoid tourist traffic by taking Old Orchard Road over to 195. I also try to avoid making any left turns off of Main St by positioning myself on the correct side of Main St so that I can turn right instead of left, across traffic.
- If, for example, we were headed to Shaw's from I-95, we would take the Industrial Parkway to North Street. The worst part of the traffic jam is not in this section, but at the intersection of North/Beach and Main Street. Why not ask about this bottleneck?
- Cumberland Ave. to King to Beach Street
- turnpike-faster
- How: cutting through on Stockman Ave to Washington Why: sometimes driving a mile out of the way is faster
- Yes, there is simply too much traffic. I live on the Ferry Rd and travelling thru the "zone" is too much work for such a short distance travelled.
- I don't avoid the section in question however I do avoid Main Street from Beach Street to pepperell square by going around on James Street. I think this study is focusing on the wrong section of Main Street. The bigger problem is the section from Beach Street to Saco Island. The railroad crossing at the southern end of Main Street and the traffic light at Pepperell square really screw up the traffic flow. The intersection at Main Street and Beach Street is also a screwed up intersection.
- I often take the Turnpike or go out on Industrial Park Road to I-195, then to Route One. The reason: the right lane (both directions) moves like molasses with the large number of curb cuts, and the left lane is always stopped up by people waiting to turn left across two lanes of oncoming traffic (often at a stand still).
- Shop in other areas or very early in the morning or late at night.



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- I take side road or plan my schedule around the traffic.
- Congested traffic
- Takes too long – Lights too short
- If at all possible I avoid this area as there is too much traffic & it takes too long to get to Beach Street. I go through the rotary in Old Orchard & take a right onto Old Orchard Road instead of accessing Old Orchard Road from Beach Street.
- I don't want to get stuck in traffic jams.

2. How do you believe the access issues are during the following periods:

	No Importance	Low Importance	Medium Importance	High Importance
Morning rush hour	<u> </u>	<u> 3 </u>	<u> 8 </u>	<u> 15 </u>
Midday rush hour	<u> 1 </u>	<u> 4 </u>	<u> 13 </u>	<u> 7 </u>
Evening rush hour	<u> 1 </u>	<u> 1 </u>	<u> 7 </u>	<u> 17 </u>
Saturday rush hour	<u> </u>	<u> 8 </u>	<u> 11 </u>	<u> 5 </u>
Winter	<u> 2 </u>	<u> 10 </u>	<u> 10 </u>	<u> 3 </u>
Spring	<u> 2 </u>	<u> 9 </u>	<u> 9 </u>	<u> 5 </u>
Summer	<u> </u>	<u> 1 </u>	<u> 6 </u>	<u> 19 </u>
Fall	<u> 2 </u>	<u> 4 </u>	<u> 13 </u>	<u> 5 </u>

3. Do you believe there are too many driveways along Main Street? Yes 18 No 9

Would you be in favor of:

Consolidating and combining driveways	<u> 18 </u>	<u> 7 </u>
Eliminating driveways	<u> 14 </u>	<u> 13 </u>
Constructing a raised median island to prevent	<u> 11 </u>	<u> 17 </u>



City of Saco

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mid block left turns

4. Are you aware of the rear access locations from:	Yes	No
Hannaford to Hutchins Avenue?	<u>24</u>	<u>4</u>
Shannon Lane to Starbucks?	<u>19</u>	<u>9</u>
Do you use them?	<u>3</u>	<u>2</u>

Please explain why you do or do not use them:

- I use them if I am in a convenient location. For instance, the credit union or Kerrymen's. I would also use them if traffic was very slow and I was going to Hannaford's.
- I go to Hannafords from the spur area, as I live off of Rt. 112. I never go through town to get to the grocery store. It's easier to get off the exit on the spur and you are there. We really should have had a middle lane for turns so save on the stop and go problem we have when people are trying to turn into oncoming traffic, like right downtown by the post office, for example.
- I don't use Shannon Lane because I rarely go to Starbucks and I suppose I never thought to use Hutchins as a means of getting back home after shopping at Hannaford.
- I didn't know about Hannaford access, but I do use the Starbucks/Shannon Lane access, but the signage is not very good, so I think a lot of folks don't know about it.
- I do use the rear access from Hannaford to Hutchins occasionally. Given the lighting near the Pizza Hut and the U-Haul and the prohibition of right-on-red turns, it's not much help.
- I use the Shannon Lane access by car and the Hutchins Ave. when on my bicycle.
- Safety-lights at intersections
- I occasionally use the rear-access routes to avoid traffic along Main St/Rte 1 during times of busy traffic.
- I do use them very often. I try to consolidate left side vs right side business and sometimes park and walk to where I want to go.
- Coming from the south, I will use Hutchins Lane to get to Hannaford, but I will not use it to return. The reason is that there is no turn on red from Hutchins onto Main Street, so I often have to wait at the light. Also, the section of road behind the Kerrymen Pub is very narrow and it can be hard for two vehicles to pass through at the same time.
- I only use them when traffic is really backed up.
- I use them as required but I am mostly traveling thru the area and not using any businesses in the area. I think that these options should be better advertised to tourists so we can eliminate the "Oops, I need to take a left...." routine that is all



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too common during peak times. If these roads could be expanded to access all business on each respective side of the road, then it would definitely eliminate traffic congestion on Main St.

- Yyes, I try to turn onto main st at the lights whenever possible, especially if trying to turn left.
- I do use them when I go to businesses on the rear access however I do not use them to skirt around traffic.
- I use the rear access from Hannaford to Hutchins on rare occasions, usually after I'm at the bank (Saco Valley Credit Union)
- I use the Shannon Lane one often as it is required to leave both coffee shops to go Southbound on Rt One. Hutchins Ave I only use when Rt One isn't busy, as it is easier to turn into Hannaford at the main entrance with the dedicated left turn lane.
- Ease if access and safety traffic constantly exceeds speed limit and tries to "beat" lights.
- Usually aren't of any help to me.
- I don't go to Starbucks.
- I had no idea about the rear access to Hannaford!

5. Would you support additional rear access roadways to minimize and direct traffic to specific locations and intersection along Main Street? Yes 22 No 5

6. Do you believe there are to many or not enough signalized intersections? Too many 14 Not enough 6

Explain:

- I think there should be a light to enter Rite Aid and possibly Amato's eliminating the four ways of entering Amato's. A similar thing could be done to McDonalds, Burger King, and Kerryman's, utilizing and perhaps reconstructing the road behind Kerryman's to allow for better traffic flow.
- Main street is just too congested to have so many lights. We need our streets designed like Naples Florida where the main streets are all two lane with turning areas and less lights. Traffic would flow a lot easier.
- I'm really not certain on my answer to this question. I think there needs to be signals where they are currently, but I don't think there needs to be any more either.
- The road (Smith) between Amatos and RiteAid needs a light.
- Just right; please, no more lights on Main St!!!!
- How about an option for the right amount? I choose that one.
- I don't really believe there are too many, but the question is poorly worded. The problem is the poor synchronization (perhaps unavoidable), the lack of left turn lights and the brevity of the green light when traveling from Beach through the Main St. intersection onto Beach. It's improved slightly, but the light needs to be green another five seconds at least.



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- there should be one at right aid and at t.a.
- A traffic light is desperately needed at Amato's & Rite-Aid, to allow traffic to enter Route 1 South. Likewise, I believe such a light would benefit entering Route 1 North from Thornton Academy. HOWEVER, the light that is currently at King St is annoying and seems seldom-used to enter King St. I would think an access from Smith to King would be more beneficial.
- Well, just time yourself when all the lights are red vs. green. The more time you spend sitting at lights the longer it takes to move through a stretch; add to that all the turning traffic.
- but there should only be more if the traffic lights are better synchronized to move cars through more efficiently.
- There are adequate lights but timing is not in sync with other areas.
- need more specific turn lanes.
- I think there are too many and they are not synchronized properly to allow good traffic flow.
- I'd say the number is just about right, if rear access was increased.
- Actually, I think the number is adequate.
- Traffic lights don't flow well.
- Additional signalization would only compound the present problems.
- If the lights were synchronized it would be much easier
- There are both too many & not enough. Too many signals slows down your progress through Main St, but people are frequently taking left turns (and there's no left turn lane so they block the travel lane) and that slows down traffic. It's very difficult to take a left out of Amato's onto Main St.

7. Should future Main Street development be encouraged to direct traffic to and from the existing intersections?

Yes 25 No 2



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8. Are the existing pedestrian crosswalks and amenities adequate for the volume of pedestrians?

Yes 16 No 11

9. If additional crosswalks or amenities are necessary, please explain where and for what reason: _____

- Crossing the street is very dangerous in Saco. I just went to have my hair done and nearly got hit by a car trying to cross the street and they gunned their gas pedal when I made it across, just to make it to the red light at Rapid Rays! There is just too much thru traffic going through Main Street for the width of the street. There is also not enough parking to use the stores downtown.
- Too hard to cross at Thornton/Rite Aid crosswalk; No crosswalk at Hannaford - very difficult to cross safely.
- there should be one at right aid and at t.a.
- The entire stretch of road is in dire need of better pedestrian management. Certainly not safe for students around Burns School or TA. Additionally any sporting event at TA results in major pedestrian traffic to and from the various food establishments.
- The volume of crossings at King Street and Stockman Avenue, mainly of TA students, is high, and there needs to be better pedestrian access at these two locations.
- Most local people know that it is better to drive across the street than it is to try and walk across the street.
- A pedestrian bridge would be a good idea. Even with signals, crossing this section of street is a nightmare.
- I think you'd have more pedestrians using the area if it were a pleasant (or even humane!) place to walk. The only people I ever see walking are employees of the chain stores or TA students.
- Move sidewalk away from travel lanes – 5” esplanade.
- There are inadequate bike lanes. If there could be a 2' bike lane on both sides of the road that would be a tremendous help. The sidewalks are OK for pedestrians in this area, but there's no room for bikes & it creates a dangerous situation as most vehicles don't like to share a lane with a cyclist.
- I don't know--do not use this area for walking.

10. Do you utilize the Main Street (MS) or Fairfield Street (FS) driveway to access Thornton Academy?

MS 8 FS 14



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11. Survey Respondent: (Please check one)

Main Street Business Owner	<u>2</u>
Other Business Owner	<u>1</u>
Main Street Business Property Owner	<u>1</u>
Other Business Property Owner	<u> </u>
Main Street Resident	<u> </u>
Other Resident	<u>23</u>

12. Other Comments and Concerns:

- I think a bike route which takes bikers around the busy route one area should be incorporated into the rear access lanes that already exist with signs routing bikers to them.
- We definitely need help with the traffic in this town. I use the turnpike to get to Biddeford just because of it. And again, the light from North Street to Beach Street needs to allow more cars through to prevent people using the other lane and going straight regardless of the arrows. I have come close to getting hit many times because some person doesn't want to wait behind everyone in line.
- Because of the high traffic on Main Street, it encourages people to travel in the residential neighborhood between Rt1 and North Street where we live. Drivers are not respectful of the stop signs or posted speed limits. We also feel that other accommodations are needed for Biddeford residents who live closer to the Saco exit than the Biddeford exit. They travel Rt1 through Saco to get over the bridge. Rt1 cannot handle the volume of commuter and residential traffic. Also, we would suggest more synchronized lights along Rt 1.
- As stated before, I think you are studying the wrong area. The jam at Beach and Main is much more of a concern.
- Road should be 2 lane with a turning lane as it is further down main st the business sections it is safer and yet there is more traffic and more people
- Though undoubtedly difficult and expensive, adding a center turn lane (similar to that employed on Rte 1 between Cascades Inn and the Scarborough town line) would be VERY helpful on Main St from King to I-195 -- but only if the city educated drivers about how to use it properly for entering or exiting Main St.
- I've nearly been killed at the intersection of King and Maine. Someone ran a red light; how I made it without being hit I'll never know. My mother lives on King so I'm through that intersection often. It seems the lower end of Main is a drag strip from Dyer Library to King, and then King to Dunkin Donuts. From there on there isn't much choice because of the congestion and the Hannaford light. I don't have the answers, I just know there's three Main streets - downtown, TA area, and hamburger ally. All have unique issues. Good luck!
- There should be a light on the Main Street side of TA so there are not dozens of cars and buses turning left from Fairfield onto Main. The intersection at Main/Fairfield/King is a disaster at the end of the school day.
- A possible solution is adding a "middle" lane for turning only. It may take a lot of planning as far as location of existing driveways but overall it would keep traffic moving that needs to move. Not sure if the City would need to take land from existing property owners but it may be a necessary evil. I intentionally go from exit 36 (5) down 195 to the 1/2 way in OOB back up OOB road onto Ferry Rd. to by-pass the Main St. mess.



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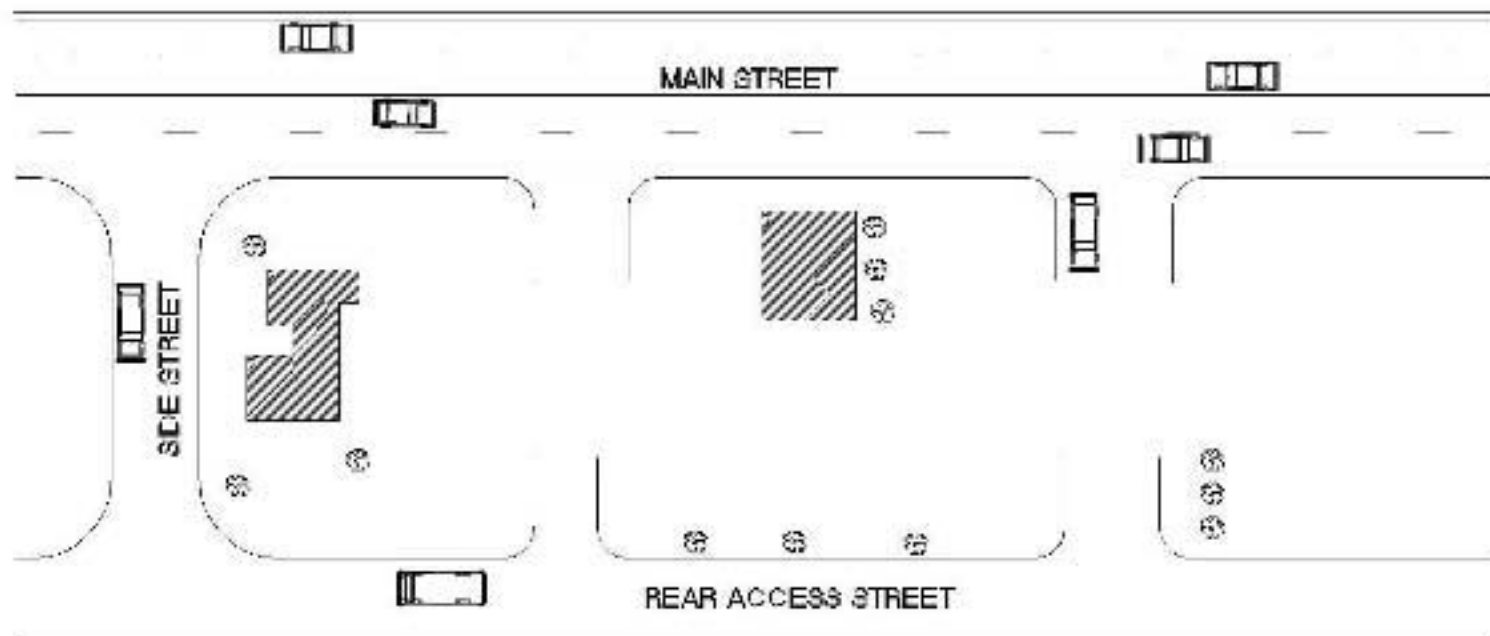
Email: bhamblen@sacomaine.org

- Again, this study is not concentrating on the real problem of Main Street. The issue concerning the section in question can easily be improved by changing the street to two lanes with a center turning lane and by removing the traffic lights at the Hannaford entrance and the light at King Street. The real problems with Main Street are the intersections at Beach Street and the traffic light and railroad crossing at Pepperell Square. This is the area that needs addressing.
- Anything we can do to improve traffic flow and make it safer along this stretch would be great. Thanks for doing this!
- The survey didn't ask about bicyclists, but I think that this is a very important potential user group that is currently underserved. I wouldn't bike down Main Street in this area, for fear of getting clipped by a vehicle.
- Bicycle lanes are inadequate in width. Traffic enforcement is not adequate to say the least! Pedestrians need to be educated to use crosswalks – cross county street crossing is hazardous at best.
- I would be in favor of a suicide lane from Ocean Park Road to Beach Street. Also, I am not a fan of rotaries, however, I believe one would work well at Maine, Beach, Elm, and North St. That intersection is terrible.
- Inadequate bike paths in Saco are my biggest concern. We need at least a 2' bike lane on the major through roads - Main St, Route 112, Beach St/Ferry Rd, Old Orchard Rd, through Ocean Park, etc. Vehicles do not like cyclists using the road, yet there's no place for the cyclists to ride (the walk way on Ferry Road is not suitable for bikes - there are too many pedestrians, strollers, dogs, etc. to ride a bike at 20 mph on the walk way).
- Would a turn lane solve some of these problems? I actually avoid this area of town totally -- in part b/c I do not eat fast food, but also b/c of the traffic. When going to Portland on Rt.1, I now usually go out Rt 112 and across the Business Park so that I come out near the bowling alley.

Thank You

APPENDIX B

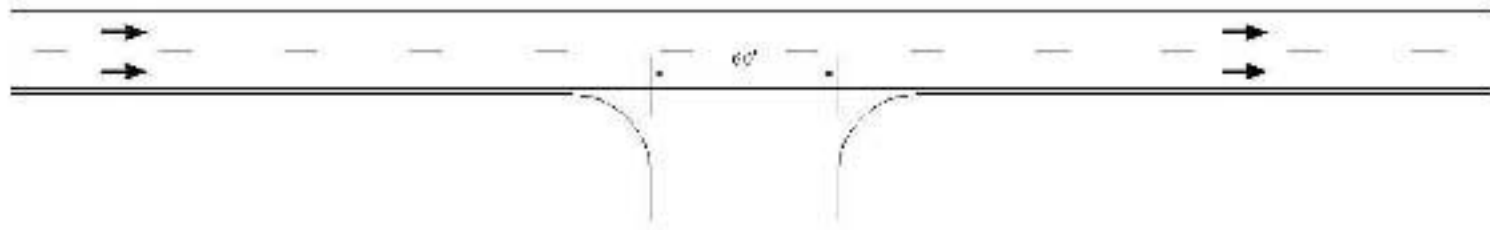
Access Management Techniques



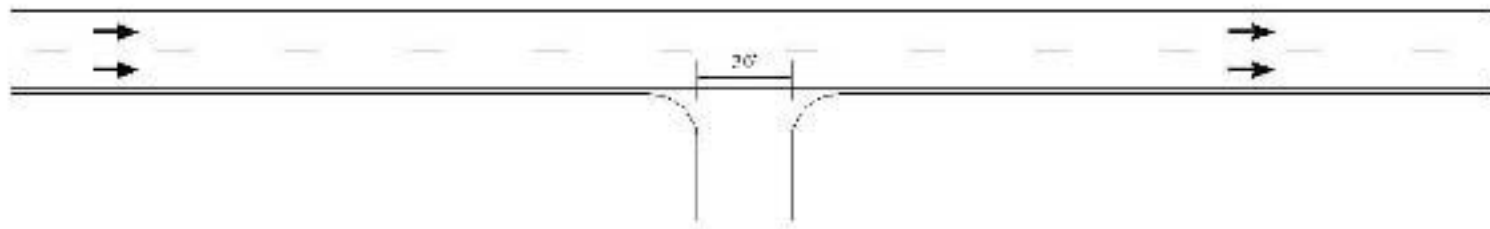
CITY OF
SACO, MAINE

**MAIN STREET ACCESS STUDY
REAR ACCESS**

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BEFORE



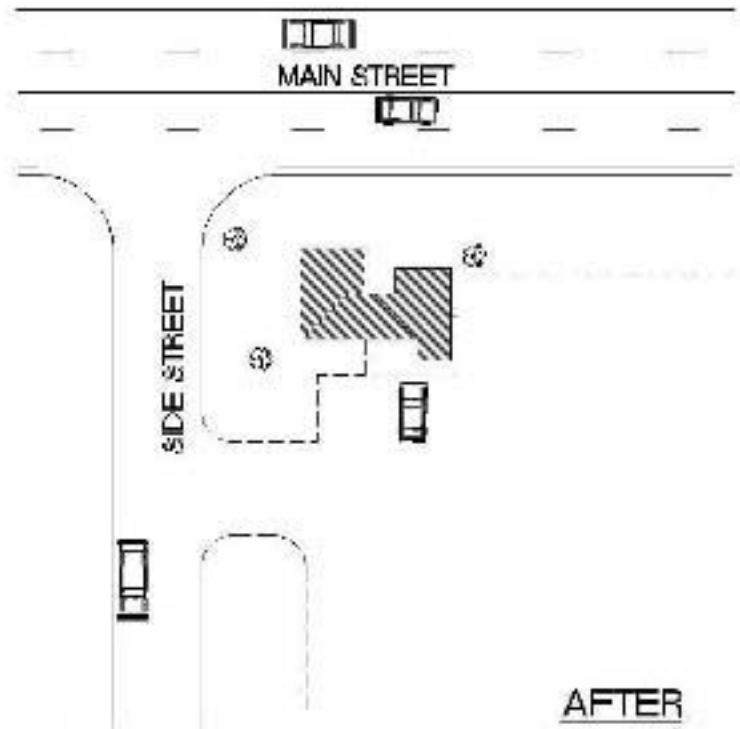
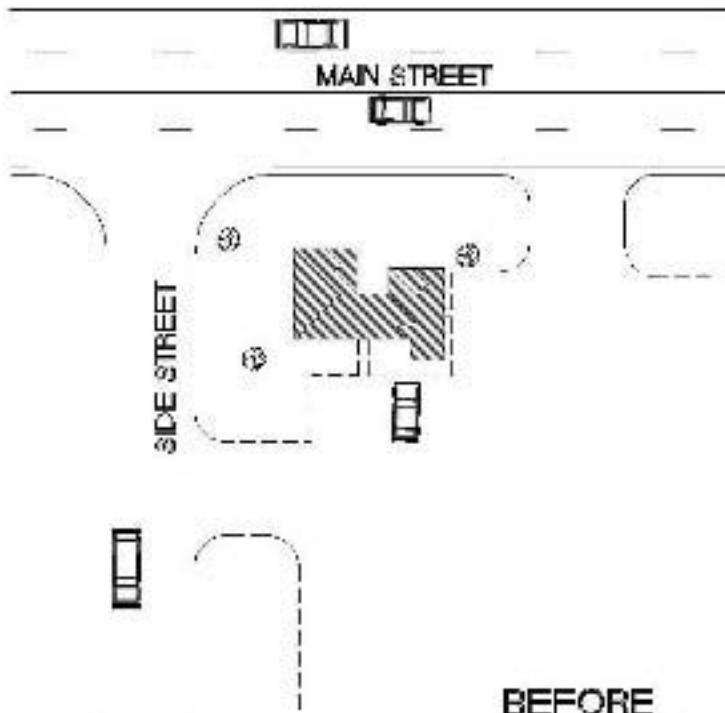
AFTER



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SACO, MAINE**

**MAIN STREET ACCESS STUDY
CURB CUT REDUCTION IN WIDTH**

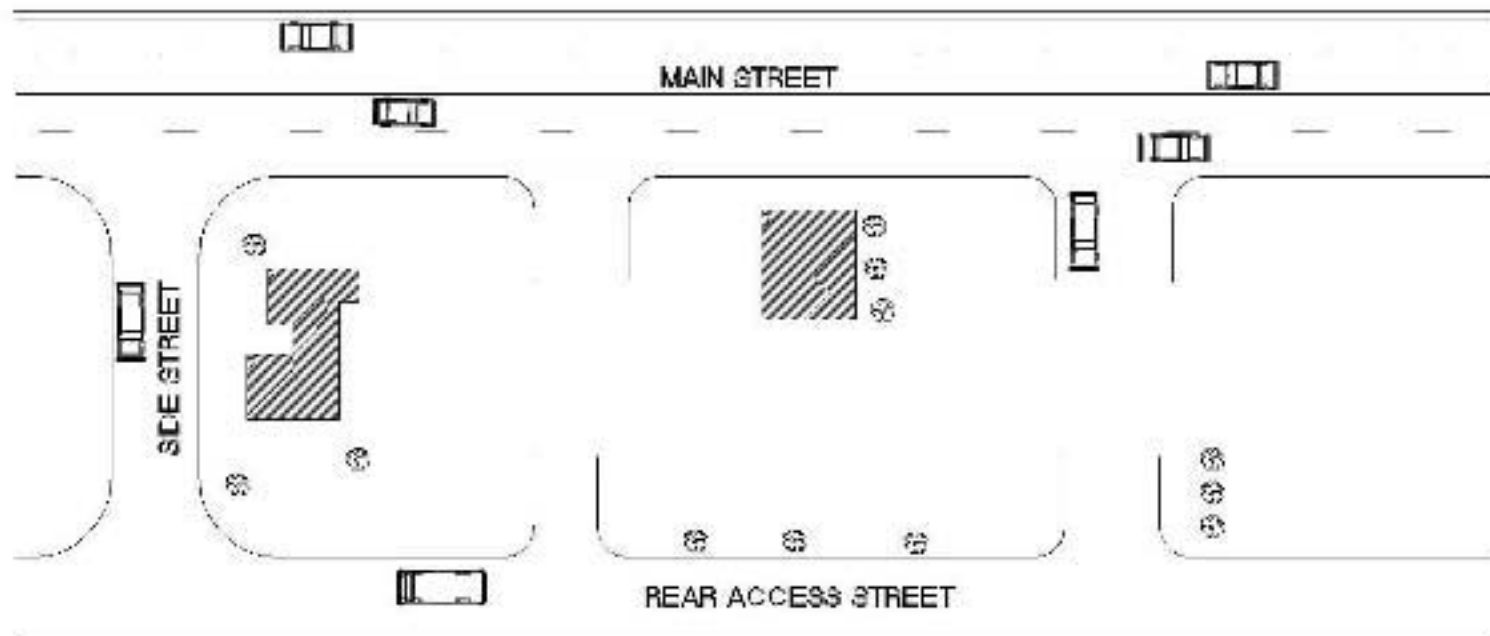
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**MAIN STREET ACCESS STUDY
DRIVEWAY ELIMINATION**

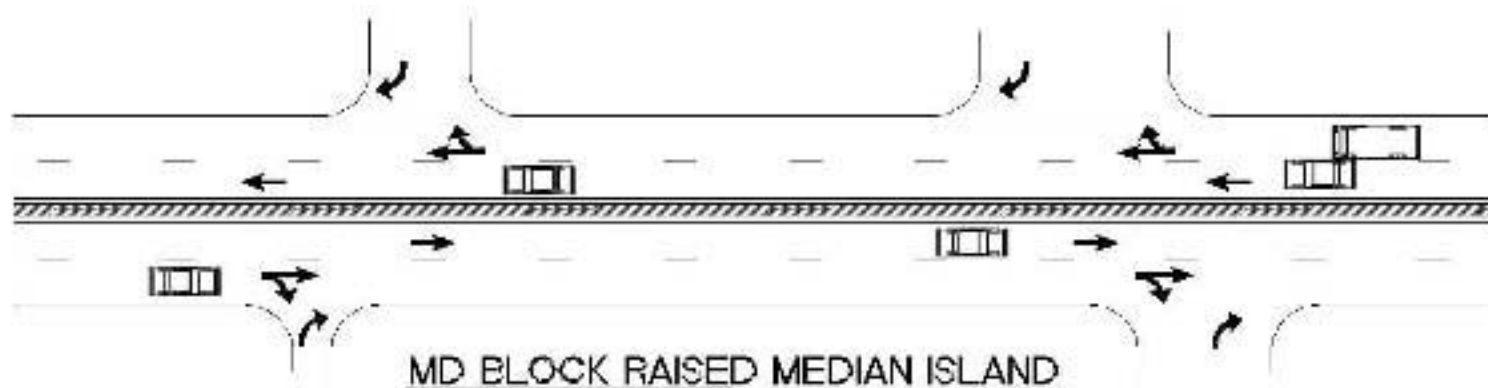
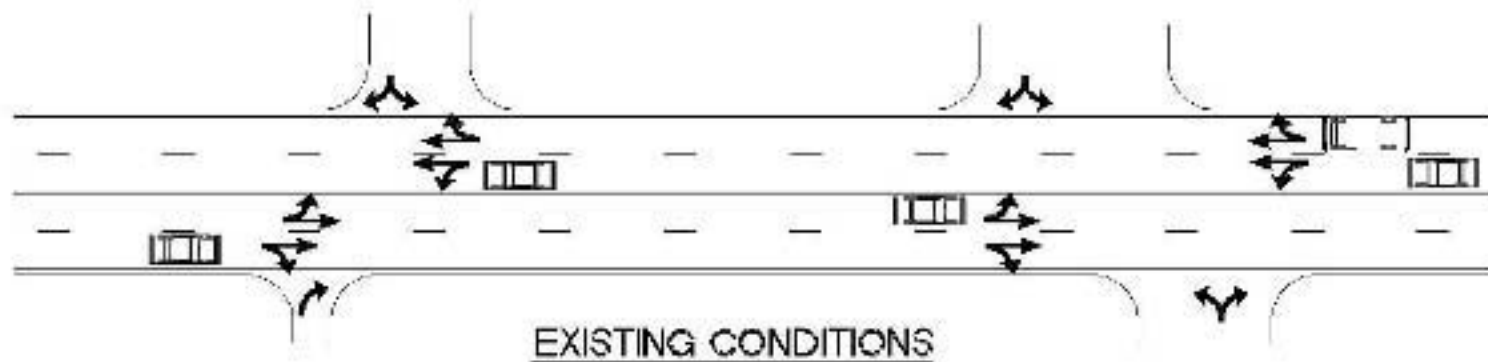
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REAR ACCESS

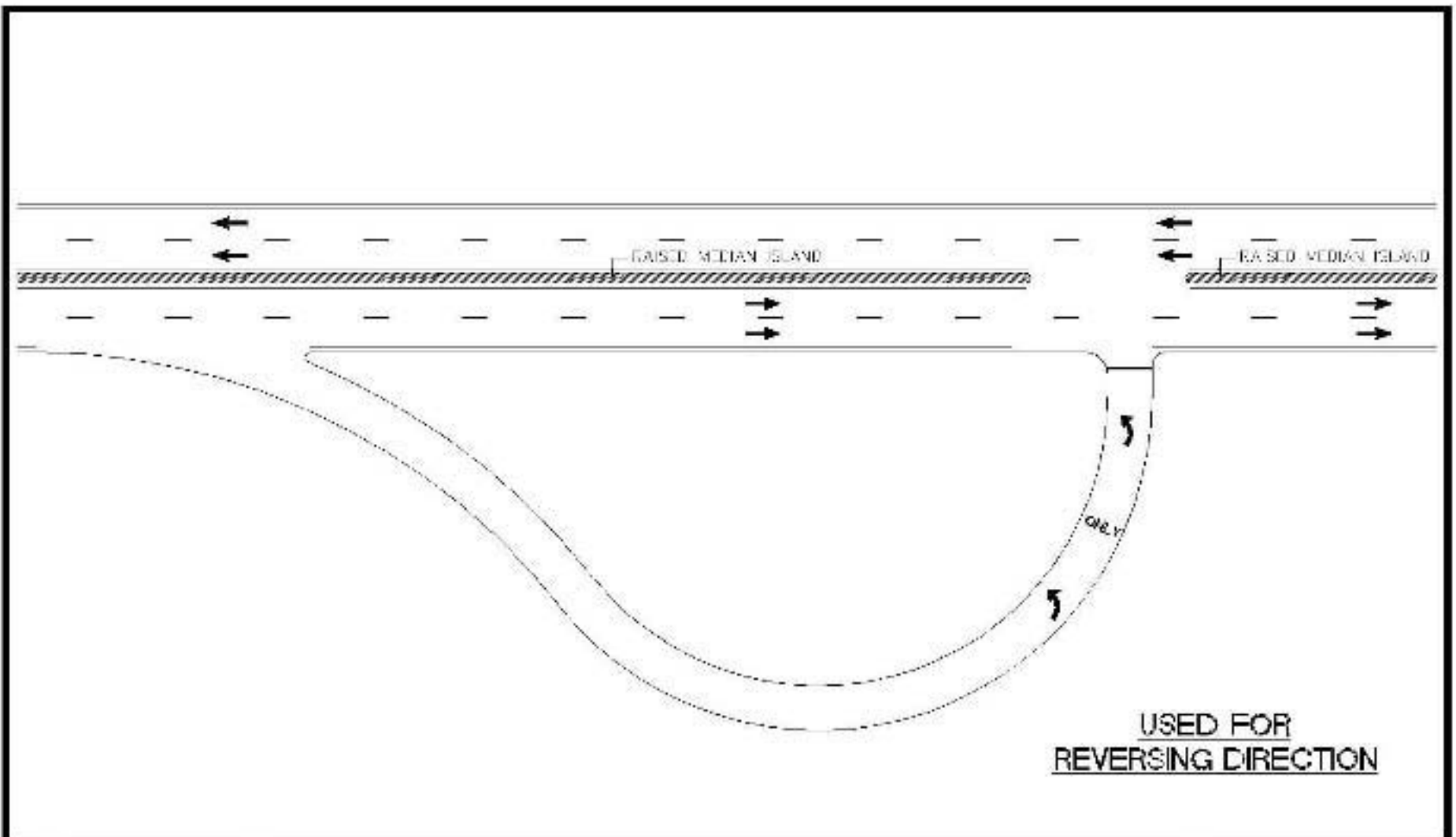
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MAIN STREET ACCESS STUDY
DRIVEWAY ACCESS

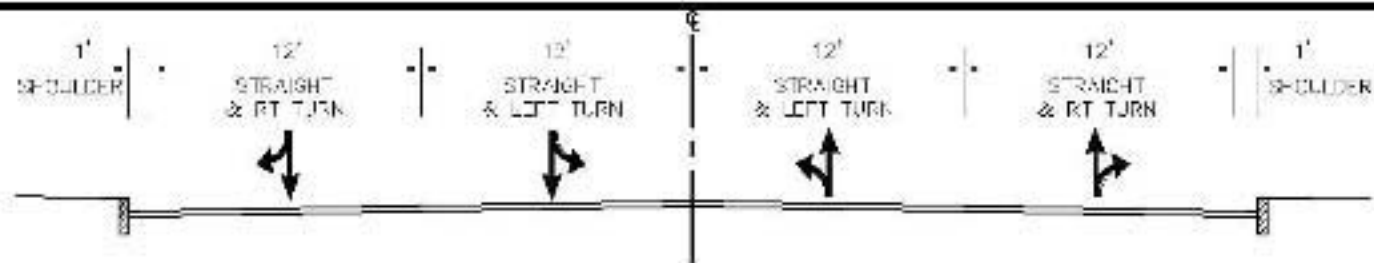
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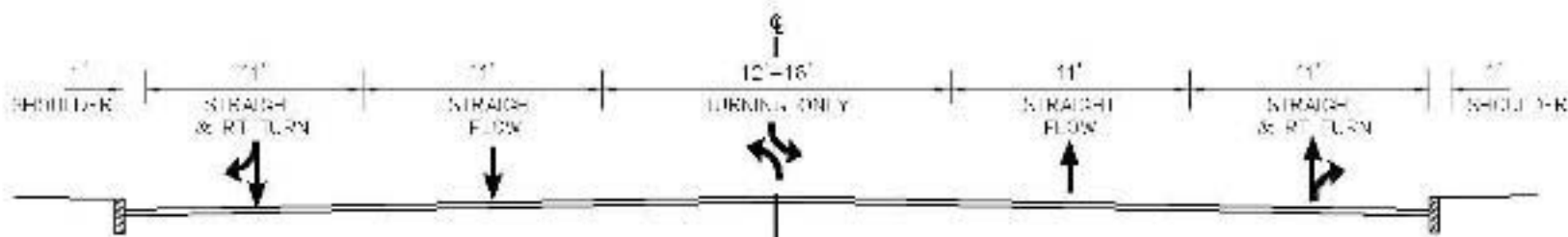
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MAIN STREET ACCESS STUDY
JUG HANDLE

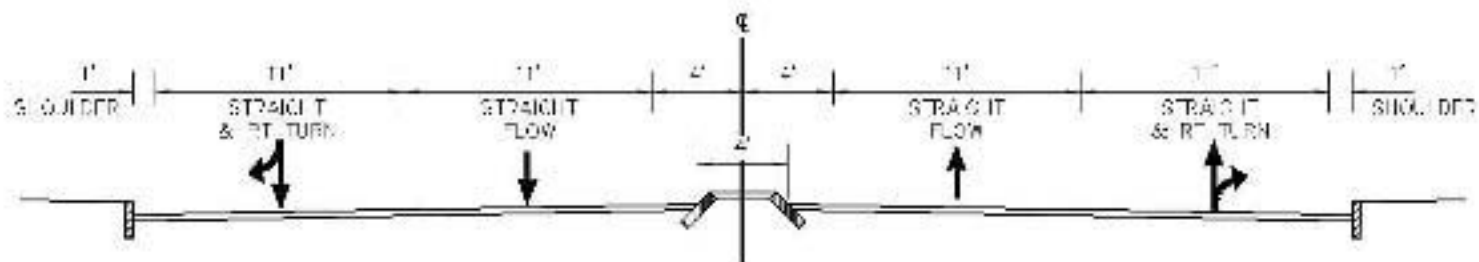
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FULL ACCESS
(EXISTING CONDITIONS)



DUAL USE CENTER LANE
(8'-12' WIDENING REQUIRED)



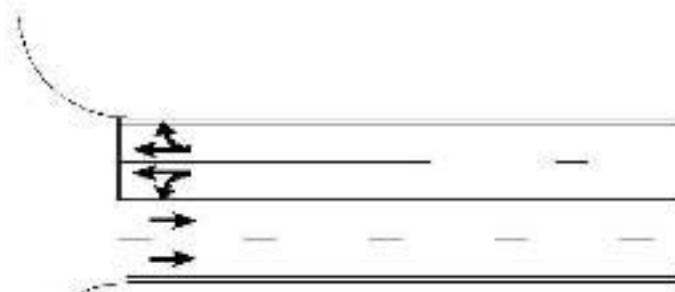
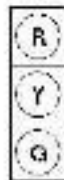
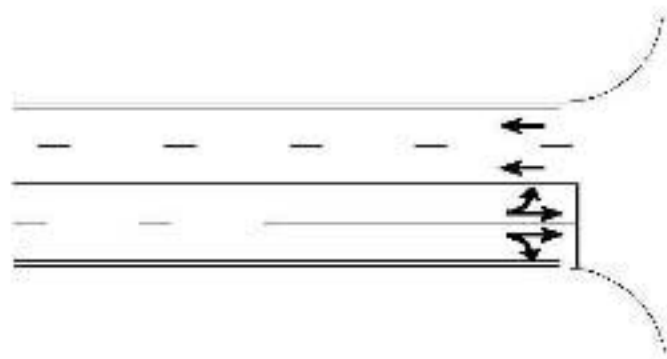
MID BLOCK MOUNTABLE MEDIAN ISLAND
(4' WIDENING REQUIRED)



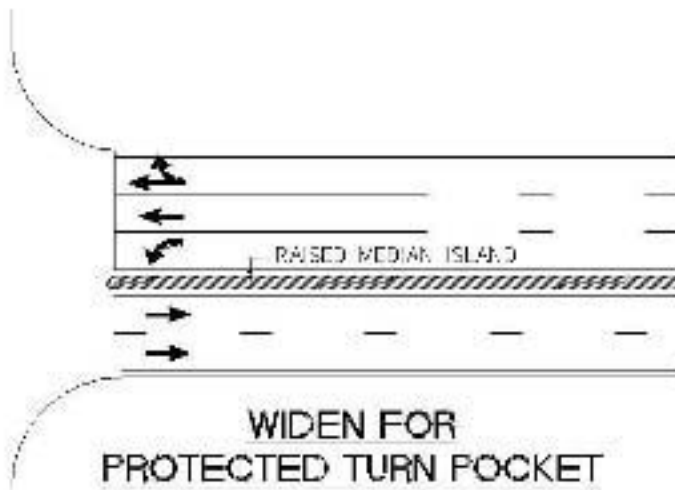
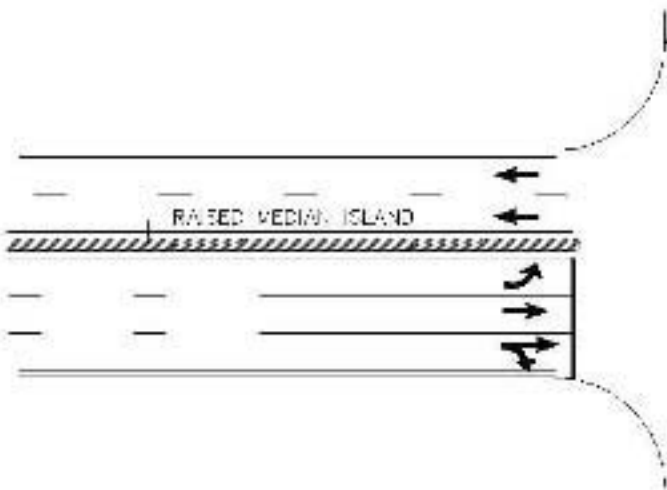
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MAIN STREET ACCESS STUDY
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EXISTING CONDITIONS



WIDEN FOR PROTECTED TURN POCKET



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SIGNALIZED INTERSECTIONS

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