22 COMMUNITY MITIGATION FUND

APPENDIX D – TRANSPORTATION PLANNING GRANT APPLICATION

BD-22-1068-1068C-1068L-68403

Please complete entire the Application

1. PROJECT INFORMATION	
a) NAME OF MUNICIPALITY/GOVERNMENT ENTITY/DISTRICT AND VENDOR CODE	
City of Malden	**VENDOR CODE:** VC 6000192110
b) PROJECT NAME (LIMIT 10 WORDS)	
Comprehensive Inventory and Analysis of Malden's Signalized Traffic Intersections	
c) BRIEF PROJECT DESCRIPTION (LIMIT 50 WORDS)	
The City of Malden requests $115,000 to conduct a city-wide traffic signal inventory to catalogue and evaluate the City's traffic signal systems in order to optimize traffic operations, determine appropriate near-term and long-range improvement strategies, and develop a capital plan for implementation.	
d) CONTACT PERSON(S)/TITLE (Persons with responsibility for this grant)	
John Alessi, Transportation Planner, Office of Strategic Planning and Community Development, City of Malden	
e) PHONE # AND EMAIL ADDRESS OF CONTACT PERSON(S)	
jalessi@cityofmalden.org 781-324-5720 x 5740	
f) MAILING ADDRESS OF CONTACT PERSON(S)	
Office of Strategic Planning & Community Development Malden City Hall 215 Pleasant St., Third Floor Malden, MA 02148	

2. IMPACT DESCRIPTION/CONNECTION TO GAMING FACILITY

a) Please describe in detail the transportation related impact that is attributed to the operation of a gaming facility.

The City of Malden continues to witness an increase in vehicular traffic on its roadways as a result of the Encore Casino's visitors, workers, and vendors travelling through the City. Individuals also travel into the outlying downtown area to access the Malden Center MBTA Station, which has served as a 'transportation hub' for the casino since it opened operations in June 2019. Not only are these visitors travelling into the City and contributing to congestion along major throughfares, but they are also using local streets in an unsafe manner to avoid traffic build-ups.

Malden's roadway system alone is not equipped to accommodate a significant increase in vehicular traffic due to the Encore Casino. The City's high-density layout and lack of additional roadway space means that the public right-of-way cannot be expanded to accommodate more vehicles lanes as a mitigation opportunity. An increase in traffic congestion is also known to create unsafe roadway conditions for all modes, as the risk of potential conflicts between pedestrians, bicyclists, and drivers increases with greater vehicle volumes.

Several arterial roadways pass through the City of Malden, including Route 1 (Bennett Highway), Route 60 (Pleasant Street, Centre Street, Eastern Avenue), Main Street, Route 99 (Broadway), and the Fellsway. These routes serve as primary access corridors connecting the surrounding communities of Melrose to the north, Stoneham on the northwest, Medford on the west, Everett on the south, Revere on the east, and Saugus on the northeast as well as communities to the north, west and east with the City of Boston and Metro North communities including the City of Everett. With the Encore Boston Harbor Casino in full operation, casino employees and guests from these communities and beyond put additional daily strain onto Malden's already congested corridors. The casino traffic traveling through the City of Malden is also a vital concern to safety, efficiency, and air quality along the City's roadways. Routes 1, Route 60, the Fellsway and Route 99 in particular carry much of this traffic, however, with these corridors already experiencing congestion, traffic spills over onto ancillary arterials and collectors throughout the City seeking alternate routes. Based on Encore reported total gross gaming revenue for 2019 ($147.1M), 2020 ($97.8M) and 2021 through Q3 ($174.4M), traffic generated by those visiting the casino is on the rise with many casino trips either beginning, ending, or passing through on Malden's local roadways.

Existing casino-related traffic contributing to congestion on the City's roadways and future traffic threats projected from Wynn's planned developments indicate that the City must consider solutions that do not involve expanding the physical roadway. Due to these limitations, the City believes developing a plan to update its antiquated traffic signals, which date back to the late 1970s, serves as the only major mitigation strategy. To that end, the City proposes to use the Massachusetts Gaming Commission Community Mitigation Fund Transportation Planning Grant to complete a comprehensive investigation of signalized locations within the City, to better inform the City in identifying problem areas and developing short-term improvements and a long-term capital plan to efficiently accommodate this additional traffic and improve overall circulation to keep the right traffic on the right roads.

Similar to an effort completed by the City of Lynn to address casino related traffic impacts, under the proposed Scope of Work the City's traffic signal systems will be catalogued and evaluated in order to identify necessary improvements needed to optimize traffic operations, improve safety for all modes, and determine appropriate near-term and long-range signal improvement strategies required as a result of anticipated traffic generated by ongoing casino operations and future anticipated casino generated traffic. A physical and operational review of all City-owned locations under traffic signal control will be conducted throughout the City. The purpose of the review will be to determine the extent of the deficiencies, identify locations in need of the improvements (equipment and/or operation), develop repair strategies and recommendations, and establish a capital plan with associated costs for engineering and construction. As discussed, it is our understanding that the City of Lynn, as well as the City of Everett, performed a similar Scope of Services to identify operational and safety deficiencies of its signalized intersections. The deliverables of the inventories created the basis for developing a capital plan to implement improvements, which produced positive results.

b) Please provide documentation, specificity or evidence that gives support for the determination that the operation of the gaming facility caused or is causing the impact (i.e. surveys, data, reports)

It is important to note that since the casino opened in June 2019 and was shut down during its first year of operation due to the Covid-19 pandemic, documentation and analysis of traffic impacts on Malden as a surrounding community and 'transportation hub' are not available at this time. Rather, the city relies on a variety of anecdotal sources to inform this determination. These include field observations from the City's Engineering Office, constituent reports on the city's online reporting system (SeeClixFix), and raised concerns from City Council members.

Throughout these sources, the following arterial and collector roadways have been identified as experiencing the greatest increases in traffic congestion: Rt. 60, Rt. 99, Main St., Salem St., Commercial St., Pleasant St. These roadways are critical access corridors that connect residents to the City's neighborhoods, economic districts, and other city services. However, the proposed use of these grant funds would allow the City to collect this traffic data and inform analysis of the continuing impact moving forward.

c) How do you anticipate your proposed remedy will address the identified impact.

This grant request is necessary for the City of Malden to develop a capital plan for making improvements to its traffic signals, which will in turn reduce vehicle congestion on its roadways and increase safety for all roadway users. The City's Engineering Department does not have the capacity to conduct an investigation like this, so these funds would be a critical first step towards remedying this impact. As indicated beforehand, the city would like to address the impact of traffic congestions and unsafe conditions for all roadway users by conducting a city-wide traffic signal inventory. This would catalogue and evaluate the city's traffic signal systems in order to optimize traffic operations, determine appropriate near term and long-range improvement strategies, and develop a capital plan for implementation. The City understands that this comprehensive investigation will not implement a remedy to the impact directly, but it will be the first step in planning how the City can do so.

3. PROPOSED USE OF TRANSPORTATION PLANNING FUNDS (Please attach additional sheets/supplemental materials if necessary.)
a) Please identify the amount of funding requested. In determining the funding request, please round up to the nearest hundred dollars.
$115,000.00
b) Please identify the manner in which the funds are proposed to be used. Please provide a detailed scope, budget, and timetable for the use of funds
Attached to this application is Attachment A – Scope of Services provided by WorldTech, Inc. that outlines the project's scope of services, budget, and timetable.
c) Please provide documentation (e.g. - invoices, proposals, estimates, etc.) adequate for the Commission to ensure that the funds will be used for the cost of mitigating the impact.
Attached to this application is the Attachment A – Scope of Services provided by WorldTech, Inc. that outlines the project's scope of services, budget, and timetable. If the Gaming Commission approves this application, the City of Malden would plan to execute a contract with WorldTech, Inc. to complete this work. Oversight on this project will be provided by the City's Transportation Planner who will serve as the project manager. Coordination will also take place with the City's Engineer and Assistant Engineer. Invoices from the consultant would undergo a thorough internal review and approval process before Gaming Commission funds would be used to pay for said services.
d) Please describe how the mitigation request will address the impact indicated. Please attach additional sheets/supplemental materials if necessary.
This mitigation request seeks funds to catalogue and evaluate the city's traffic signal system to identify necessary improvements needed to optimize traffic operations, improve safety for all modes, and determine appropriate near-term and long-range signal improvement strategies required as a result of traffic generated by ongoing casino operations and future developments. Attached to this application is Attachment A – Scope of Services provided by WorldTech, Inc. that explains the scope of work in further detail.

e) How will you provide the data for reporting? How will you measure the effectiveness of the proposed project in mitigating the impacts?

The two major impacts from the casino witnessed in Malden are increased traffic congestion and unsafe roadway conditions. To analyze traffic congestion, this project will assess vehicle queues and delays at all signalized intersections. After improvements identified in the capital improvement plan are constructed, the City will re-collect this data so that comparisons can be made prior to and after signal changes. For example, if vehicle queues and delays lessen in the post-construction data, the City will know that an updated intersection, as identified in the traffic signal inventory, successfully reduced traffic congestion. This data can also be expanded to analyze congestion along the previously indicated critical access corridors. In terms of unsafe roadway conditions, the City will rely on the Malden Police Department's crash records and the Massachusetts Department of Transportation's top crash locations for vehicles, pedestrians, and bicyclists. Again, comparisons will be made prior to and after implementing signal upgrades to determine if a reduction in crashes is achieved through the mitigation strategy. Finally, the City will monitor the Massachusetts Department of Transportation's Highway Safety Improvement Program (HSIP) top crash locations and crash clusters to determine if safety is improving or not after project implementation.

f) For joint grant requests, please state the amount requested for the joint request. Please also state the amount of any Regional Planning Incentive Award requested and provide separate detail on the use of these additional funds.

N/A

4. CONSULTATION WITH MASSDOT/REGIONAL PLANNING AGENCY (RPA)/NEARBY COMMUNITIES

a) Please provide details about the Applicant's consultation with MassDOT to determine the potential for cooperative regional efforts regarding planning activities.

The City has engaged in ongoing conversations with the MBTA's Director of Transit Priority and Transit Signal Priority Coordinator to ensure that the deliverables of this work allow for coordination with Malden's surrounding communities. For example, the City is working with the MBTA to develop a consistent format catalogue data so that surrounding municipalities, state agencies, and consultants can easily access and understand the data according to today's best practices. Efforts like this will not only allow for the synchronization of traffic signals across municipal boundaries, but it will also help with the implementation of new traffic signal technologies. An example of this is transit signal priority, which will improve the reliability of the region's public transit system.

b) Please provide details about the Applicant's consultation with the Regional Planning Agency serving the community and nearby communities to determine the potential for cooperative regional efforts regarding planning activities.

In 2020, the City of Malden partnered with the City of Everett to apply for a Boston MPO Community Connections Grant. This project, planned to be completed in Summer 2022, will implement transit-signal priority along both cities' Main St. Although the City of Malden has partnered with the City of Everett, more conversations need to take place with its neighboring communities to understand how coordination between the communities can improve Malden's traffic signal inventory. This communication will be vital towards improving public transit reliability in the region.

5. MATCHING FUNDS FROM GOVERNMENTAL OR OTHER ENTITY

a) Please demonstrate that the governmental or other entity will provide significant funding to match or partially match the assistance required from the Community Mitigation Fund.

If the city receives this grant, Malden will use a variety of funding sources to implement the improvements outlined in the project's capital plan. The city's Engineering Department can use Chapter 90 funds for traffic signal upgrades. Also, the city can apply for grant funding from various MassDOT programs, such as Complete Streets, Safe Routes to School, and the Local Bottlenecks Program. As part of the final deliverables of this assessment, a capital plan for implementation will outline the ways in which the City can fund needed improvements.

b) Please provide detail on what your community will contribute to the planning projects such as in-kind services or additional planning funds.

The City of Malden's Transportation Planner will support this traffic signal assessment as the project manager. The consultant will work directly with the City's Engineering Department to ensure that the work is up to the City's standards and that the recommendations are feasible and attainable. In-kind services will be provided by the City Engineer to implement short-term changes to signalized intersections, such as timing changes, that will not require extensive resources or additional funding. If needed, the City Engineer can also provide design work for signal upgrades or replacements to bring these projects to a construction-ready phase.

6. RELEVANT EXCERPTS FROM HOST OR SURROUNDING COMMUNITY AGREEMENTS AND MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA) DECISION

a) Please describe and include excerpts regarding the transportation impact and potential mitigation from any relevant sections of any Host or Surrounding Community Agreement.

Specific excerpts from Malden's Surrounding Community Agreement with Wynn, MA LLC are included below. These recognize that Encore Casino's visitors, workers, and vendors will travel into or through Malden and cause additional vehicular and pedestrian traffic. This is attributed to the fact that the Malden Center MBTA Station serves as a 'transportation hub' for the casino, and that Malden's historical connection to the City of Everett means that its roadways will inherently receive substantial traffic leading to the casino. These excerpts indicate that a broad approach to traffic congestion issues, as attributed to ongoing Encore Casino operations, is warranted in a city-wide traffic signal assessment.

Malden as a Transportation Hub:

> 'To facilitate public transportation to the Project, the Parties shall identify a specific portion of the Malden Center MBTA station and/or surrounding area to be used exclusively for Wynn shuttles serving Wynn guests, invitees, employees and/or vendors of the Project arriving to the area via public transportation including buses, trains, water services, or commuter rail services.'
>
> 'The Parties will explore the use of covered parking facilities within the City of Malden to provide additional off-site parking for Wynn employees and/or vendors who would utilize Wynn shuttles to and from the Project. The specifics of such an agreement, if one can be reached, shall be contained in a separate document outlining the terms of such agreement in its entirety.'
>
> 'The Parties shall work together to promote Malden as a 'transportation hub' for Wynn guests, invitees, employees and/or vendors while also providing said individuals with a positive impression of Malden. The foregoing will be accomplished through mutually agreed upon promotional materials and improvements (including, without limitation, safety upgrades, improved lighting, fixtures, signage and beautification efforts) to the Malden Center MBTA station and surrounding area.'
>
> 'In addition, the Parties will work with Malden's business community to promote and support businesses so that they may benefit from and effectuate the use of Malden as a 'transportation hub,' as contemplated herein.'

Public Safety Impact relating to Roadway Safety:

> 'As a result of the 'transportation hub' resulting in additional pedestrian and vehicular traffic, the Parties recognize and agree that there may be a need for increased police, fire, traffic and public works personnel to maintain roadway safety due to increased use.'

Transitional Roads in Malden:

'The Parties recognize and agree that due to the historic connectivity between the City of Everett and the City of Malden (i.e., the City of Everett was formerly a part of the City of Malden), the roadway system flow from one city to the other. Therefore, certain improvements may be required in order to maintain a consistent aesthetic, quality, signage, and safety improvements.'

b) Please provide a demonstration that such mitigation measure is not already required to be completed by the licensee pursuant to any regulatory requirements or pursuant to any agreements between such licensee and applicant.

The 'Surrounding Community Agreement by and between the City of Malden, Massachusetts and Wynn MA, LLC dated November 12, 2013 states no obligation under this document for the licensee to undertake a comprehensive investigation of Malden's signalized traffic intersections.

c) Please also briefly summarize and/or provide page references to the most relevant language included in the most relevant MEPA certificate(s) or comment(s) submitted by the community to MEPA.

From the Second Supplemental Final Environmental Impact Report (SSFEIR) (dated August 28, 2015), traffic impacts were a primary concern as part of MEPA review of the casino project to which the proponent made significant commitments to minimize and mitigate including providing an annual operating subsidy to the MBTA. MassDOT and MAPC concur with the proponent's traffic analysis and mitigation plans will address long-term impacts on the transportation infrastructure. There is no proposed mitigation in the SSFEIR to address the City of Malden's traffic signals.

d) Please explain how this transportation impact was either anticipated or not anticipated in that Agreement or such MEPA decision.

Any impacts to the transportation infrastructure were anticipated and as such the proponent has committed specific steps to mitigate said impacts. There is no proposed mitigation in the SSFEIR to address the City of Malden's traffic signals.

e) If transportation planning funds are sought for mitigation not required under MEPA, please provide justification why funding should be utilized to plan for such mitigation.

Although the mitigation outlined in this application is not required under MEPA, there are several reasons why funding should be utilized. First, the City needs to take a system-wide approach towards addressing its traffic congestion issues. The City is confident that this comprehensive investigation of signalized traffic intersections will provide the basis for alleviating the impact caused by the Encore Casino because it will allow the City to understand its existing traffic congestion conditions at intersections, and then plan accordingly. Second, the City has a vested interest in preserving the safety and wellbeing of its residents and visitors. Planning for how the city's traffic signals can increase safety for not only vehicles, but pedestrians and bicyclists as well, will preserve the livability of the community and the ability of all residents and visitors to move about efficiently, conveniently, and safely.

7. INTERNAL CONTROLS/ADMINISTRATION OF FUNDS

a) Please provide detail regarding the controls that will be used to ensure that funds will only be used to plan to address this transportation impact.
The City of Malden will document all mitigation funds received to ensure that these funds are spent for the project purpose.

b) Will any non-governmental entity receive funds? If so, please describe. If non-governmental entities will receive any funds, please describe what reporting will be required and how the applicant will remedy any misuse of funds.
N/A

No Community is eligible for more than one Transportation Regional Planning Incentive Award.

8. CERTIFICATION BY MUNICIPALITY/GOVERNMENTAL ENTITY

On behalf of the aforementioned municipality/governmental entity I hereby certify that the funds that are requested in this application will be used solely for the purposes articulated in this Application.

Date: 1/31/22

Signature of Responsible Municipal Official/Governmental Entity

Gary Christenson
(print name)

Mayor
Title:

ATTACHMENT A – SCOPE OF SERVICES

MASSACHUSETTS GAMING COMMISSION

COMMUNITY MITIGATION GRANT

CITY MALDEN SIGNAL INVENTORY

The City of Malden would like to thank the Massachusetts Gaming Commission for its commitment to mitigating traffic impacts on neighboring communities generated by casino operations within the Commonwealth. In accordance with the City's Community Mitigation Fund Transportation Planning Grant agreement with the Commission, the City intends to contract with a qualified Consultant to perform the following Scope of Services relative to mitigation of the adverse impacts arising from traffic generated by the Encore Boston Harbor casino in the City of Everett.

Several arterial roadways pass through the City of Malden, including Route 1 (Bennett Highway), Route 60 (Pleasant Street, Centre Street, Eastern Avenue), Main Street, Route 99 (Broadway), and the Fellsway. These routes serve as primary access corridors connecting the surrounding communities of Melrose to the north, Stoneham on the northwest, Medford on the west, Everett on the south, Revere on the east, and Saugus on the northeast as well as communities to the north, west and east with the City of Boston and Metro North communities including the City of Everett. With the Encore Boston Harbor Casino in full operation, casino employees and guests from these communities and beyond put additional daily strain onto Malden's already congested corridors. The casino traffic traveling through the City of Malden is also a vital concern to safety, efficiency, and air quality along the City's roadways. Routes 1, Route 60, the Fellsway and Route 99 in particular carry much of this traffic, however, with these corridors already experiencing congestion, traffic spills over onto ancillary arterials and collectors throughout the City seeking alternate routes. Based on Encore reported total gross gaming revenue for 2019 ($147.1M), 2020 ($97.8M) and 2021 through Q3 ($174.4M) traffic generated by casino employees the gaming visit population is on the with many casino trips either beginning, ending, or passing through on Malden's local roadways.

City-owned traffic signals are critical to vehicular circulation throughout the roadway network. To that end, the City proposes to utilize the Massachusetts Gaming Commission Community Mitigation Fund Transportation Planning Grant to complete a comprehensive investigation of signalized locations within the City, to better inform the City in identifying problem areas and developing short-term improvements and a long-term capital plan to efficiently accommodate this additional traffic and improve overall circulation to keep the right traffic on the right roads.

Similar to a similar effort completed by the City of Lynn to address casino related traffic impacts under the proposed Scope of Work the City's traffic signal systems will be catalogued and evaluated in order to identify necessary improvements needed to optimize traffic operations,

improve safety for all modes, and determine appropriate near-term and long-range signal improvement strategies required as a result of anticipated traffic generated by ongoing casino operations and future anticipated casino generated traffic. A physical and operational review of all City-owned locations under traffic signal control will be conducted throughout the City. The purpose of the review will be to determine the extent of the deficiencies, identify locations in need of the improvements (equipment and/or operation), develop repair strategies and recommendations, and establish a capital plan with associated costs for engineering and construction. As discussed, it is our understanding that the City of Lynn, as well as the City of Everett, performed a similar Scope of Services to identify operational and safety deficiencies of its signalized intersections. The results of the inventories were the basis of developing a capital plan to implement improvements with positive results.

Scope of Services

A. Physical Inventory of Existing Signal Equipment

1. WORLDTECH will conduct a physical signal inventory of all City-owned locations operating under traffic signal control throughout the CITY to assess anticipated operations with the addition of casino construction traffic. The inventory will include signal systems at signalized intersections. The physical signal inventory will include an inventory of all existing signal equipment, including an assessment of condition and workability. In addition, the inventory will catalogue phasing, sequence and timing, geometric layout, bicycle accommodation and review each traffic signal location for conformance with federal and state guidelines (i.e., Manual on Uniform Traffic Control Devices (MUTCD) and the AASHTO *Green Book*). Wherever possible, any existing signal permits or as-built signal plans will be researched and documented.

2. Traffic signal locations will be mapped graphically and attributed within the ArcMap GIS environment. The inventory attributes to be collected include, but are not necessarily limited to, the following within each signalized location:

   Cabinet Inventory

   - Local Controller make, model, and serial number
   - Master Controller make, model, and serial number
   - Malfunction Management Unit make and model
   - Detector Amplifier make, model, and quantity, as well as open slots
   - Load Switch make, model, and quantity, as well as open slots
   - Flasher Relay make, model, and quantity
   - Bus Interface Unit make, model, and quantity
   - Cabinet make, model, size, color, and quantity
   - Quantity of spare load switches, flasher relays, detector amplifiers, etc.
   - Emergency Preemption make and model
   - Timing and Phasing

Vehicle Signal Head Inventory

- Number of vehicle signal heads, by number of sections
- Number of lenses by size (8" or 12"), type (red ball, yellow arrow, etc.), and illumination (LED, incandescent, or fiber optic)
- Condition of signal heads
- Number of backplates

Pedestrian Signal Equipment Inventory

- Number of pedestrian signal heads, by size, number of sections, message type ("WALK"/"DON'T WALK", outline symbols, or solid symbols), and condition
- Number of countdown timers
- Pushbutton quantity, type, and ADA compliance
- Pushbutton signs
- Accessible Pedestrian Signal (APS) equipment

Signal Support Inventory

- Number of mast arms by type (truss, mono-lever)
- Number of span poles by type (free-swinging, tether)
- Number of 8 foot signal posts
- Number of 10 foot signal posts

Signal Operation Inventory

- Number of Phases
- Coordination
- Actuation
- Phasing

4. Available intersection plans and/or permit drawings will be digitized as Portable Document Format (PDF) files and will be catalogued with hyperlinks to the database. Plans will be marked up by hand to reflect current conditions prior to digitizing. Creation or editing of intersection plans in a CAD environment is not included in this Scope of Services.

5. Sequence and timing charts will be prepared per location, as may be applicable, to reflect existing traffic signal controller settings.

6. A list of City-owned traffic signals is included in Attachment B.

B. Operational Evaluations

1. Vehicle queues and delays will be observed and recorded at each Traffic-Actuated Signal location identified in Attachment A for a 15-minute interval during a typical morning peak period (7:00 to 9:00 a.m.) and a typical afternoon peak period (4:00 to 6:00 p.m.).

2. Queues and delays for each approach or lane group will be averaged to determine "typical" peak hour operations during each peak period.

3. Average delays and queue lengths will be incorporated into a GIS layer, graphically displaying the queue length and color coded by Highway Capacity Manual level of service thresholds for delay.

4. Traffic operations will be based on field observations and measurements only. Collection of traffic volume data and/or traffic operational analysis is outside of this Scope of Services and is not included in the lump sum fee. Collection of traffic counts and traffic operational analysis will be performed on a per-location basis as requested by the CITY for a mutually agreed upon fee.

C. Evaluation and Recommendations Report

1. The inventory will be compiled and presented to the CITY in a bound report and in an electronic format consisting of a series of summary tables and GIS maps. Inventory information, sequence and timing diagrams, and reports will also be provided in database format so that the CITY can periodically update them, once the work is accepted, in Microsoft Access or ArcGIS. In addition, the data will be summarized in a Microsoft Excel spreadsheet. Photographs, when required, will be provided in JPG format. Reports and recommendations will be provided in PDF format.
2. The final report will be submitted detailing the condition of each intersection and its compliance with standards and guidelines. The database output will identify required changes to each intersection to improve traffic operations and overall traffic flow. Recommendations will also include improvements to pedestrian access and bicycle accommodations, where feasible. Recommendations will be broken down into three separate areas: Field adjustments, short-term improvements, and long-term improvements. Recommendations will be offered for improvements in each of these areas as appropriate and will include preliminary cost estimates to complete the work.

3. Field adjustment recommendations will consist of sequence and timing changes that will improve traffic operations. If appropriate, these low-cost improvements will require fine tuning current signal operations to result in more efficient traffic flow, reduced vehicle delays, and improved safety. No physical improvements to traffic signals are anticipated as a part of this effort. The Scope of Services for field adjustments is identified in Section E – Field Adjustments.

4. Short-term improvements will consist of measures the CITY can undertake with its own forces (or with a maintenance contractor) and for limited cost. The improvements are anticipated to include but are not necessarily limited to replacing worn or malfunctioning controller components, damaged, non-compliant or outdated signal equipment, minor geometric improvements and other improvements of a similar scale. It is anticipated that implementing these improvements would be considered maintenance (less than $25,000 per location) and would not necessarily

be included in a Capital Improvement Plan (CIP).

5. Long-range improvements will include significant improvements to alleviate congestion and/or improve safety. These improvements will form the core of a recommended CIP. The CIP will contain recommendations for the scope and extent of required improvements, a prioritization of the projects, and the potential funding sources for the projects, including federal and state programs (State Transportation Improvement Program (STIP) funds, Bottleneck Reduction Program, MassWorks grants, Chapter 90 funding, etc.) or local funds (general obligation bonds, operating funds, etc.).

6. Up to three copies of the final report will be provided to the CITY. The report will also be delivered in an electronic format.

D. Database Installation & Training

1. WORLDTECH will install the Signal Inventory Program Database and mapping at up to two (2) locations as directed by the CITY.

2. WORLDTECH will conduct up to two training sessions for CITY staff, lasting approximately two (2) hours each.

3. If applicable, the signal inventory program will be integrated into the CITY's existing GIS system.

E. Field Adjustments

1. Based on the findings and recommendations in Section B, WORLDTECH will make field adjustments to specific traffic signals where improvements to overall traffic operations can be achieved. These field adjustments will proceed only after discussion with the CITY and agreement on the proposed field measures to be implemented. Field adjustments will be limited to changes in the sequence of signal phases, changes to the duration of signal timing intervals, and/or changes to detection parameters and other signal parameters. No physical changes to the signal layout are anticipated as a part of this scope unless they are made in conjunction with an improvement specified in the short-term improvements.

2. This Scope of Services assumes field adjustments will include alterations to timing and phasing only and does not include establishing or altering a coordinated network.

3. Field adjustments will be reflected in revised sequence and timing diagrams to be submitted to the CITY. A qualified field technician will complete any proposed field adjustments.

4. On behalf of the CITY, WORLDTECH will submit revised traffic signal permits to MassDOT, as may be required, reflecting final adjustments at any traffic signal

locations.

5. Field Adjustments (Follow-On Services) will be billed to the CITY on a time and expense basis at WorldTech standard billing rates at the time services are performed and are not included in the lump sum fee.

F. Fee

1. The estimated fee for the above Scope of Services is $115,000.00.

ATTACHMENT B – TRAFFIC SIGNAL LOCATIONS (70)

Traffic-Actuated Signals (70 Locations)

1	BEACH STREET AND WESLEY STREET
2	BELMONT STREET AND HANCOCK STREET
3	BROADWAY AT # 474 (CLIFFSIDE)
5	CHARLES STREET AND CANAL STREET
6	COMMERCIAL STREET AND ADAMS STREET
7	COMMERCIAL STREET AND CHARLES STREET
8	COMMERCIAL STREET AND EXCHANGE STREET
9	COMMERCIAL STREET AND PLEASANT STREET
10	COMMERICAL STREET AND MEDFORD STREET
11	CROSS STREET AND HENRY STREET
12	CROSS STREET AND WALNUT STREET
13	EASTERN AVENUE AND BROADWAY
14	EASTERN AVENUE AND BRYANT STREET
15	EASTERN AVENUE AND FERRY STREET
16	EASTERN AVENUE AND WILLOW STREET
17	ELWELL STREET AND BROADWAY AND CENTRAL AVENUE
18	FELLSWAY EAST AND EAST BORDER RD
19	FELLSWAY EAST AND PLEASANT STREET
20	FELLSWAY EAST AND WICKLOW STREET
21	FELLSWAY WEST AND MEDFORD STREET
22	FERRY STREET AND CROSS ST
23	FLORENCE STREET AND WASHINGTON STREET
24	HIGHLAND AVENUE AND CHARLES STREET
25	HIGHLAND AVENUE AND DEVIR STREET
26	HIGHLAND AVENUE AND MAPLE STREET
27	HIGHLAND AVENUE AND PLEASANT STREET
28	LEBANON STREET AND SALEM STREET AND MAPLEWOOD STREET
29	LYNN AND BEACH AND EASTERN AVENUE
30	MAIN STREET AND CENTRE STREET/ROUTE60
31	MAIN STREET AND CHARLES STREET
32	MAIN STREET AND CROSS STREET
33	MAIN STREET AND EASTERN AVENUE AND MADISON STREET
34	MAIN STREET AND EXCHANGE STREET
35	MAIN STREET AND FLORENCE STREET
36	MAIN STREET AND FOREST STREET
37	MAIN STREET AND MEDFORD STREET
38	MAIN STREET AND MOUNTAIN AVENUE
39	MAIN STREET AND PLEASANT STREET
40	MAIN STREET AND SALEM STREET AND FERRY STREET
41	MAIN STREET AND WINTER STREET

42 MAPLEWOOD STREET AND EASTERN AVENUE
43 MAPLEWOOD STREET AND WEBSTER STREET
44 MEDFORD STREET AND CANAL STREET
45 MEDFORD STREET AND HIGHLAND AVENUE
46 MEDFORD STREET AND MADISON STREET
47 MEDFORD STREET AND PEARL STREET
48 MOUNTIAN AVENUE AND MHA
49 PEARL STREET AND CHARLES STREET
50 PLEASANT STREET AND ROUTE 60
51 PLEASANT STREET AND SUMMER STREET
52 ROUTE 60/CENTRE STREET AND CBD GARAGE
53 ROUTE 60/CENTRE STREET AND JACKSON STREET
54 ROUTE 60/CENTRE STREET / MIDDLESEX STREET
55 ROUTE 60/CENTRE STREET AND FERRY STREET
56 ROUTE 60/CENTRE STREET AND HOLDEN STREET
57 ROUTE 60/CENTRE STREET AT DELTA
58 ROUTE 60/ CENTRE STREET AND COMMERCIAL STREET
59 SALEM STREET
60 SALEM STREET AND BEACH STREET
61 SALEM STREET AND BRANCH STREET
62 SALEM STREET AND BROADWAY AND HUNTING STREET
63 SALEM STREET AND HOLDEN STREET
64 SALEM STREET AND MT VERNON STREET AND RICHARDSON STREET
65 SALEM STREET AND PIERCE STREET
66 SALEM STREET AND WOLCOTT STREET AND FRANKLIN STREET
67 SUMMER STREET AND CLIFTON STREET
68 WASHINGTON STREET AND MOUNTAIN AVENUE
69 WILLOW STREET AND CROSS STREET AND BRYANT STREET
70 WINTER STREET AND GROVE STREET AND WASHINGTON STREET AND GLENWOOD

WORLDTECH ENGINEERING
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January 31, 2022

Mr. John Alessi
Transportation Planner
Office of Strategic Planning & Community Development
Malden City Hall
215 Pleasant Street, Third Floor
Malden, MA 02148

Re: Professional Engineering Services
City-Wide Physical and Operational Traffic Signal Inventory

Dear Mr. Alessia:

WorldTech Engineering is pleased to submit the attached Scope of Services and fee for Engineering Services associated with completing City-wide physical and operational traffic signal inventory. The proposed program will catalogue and evaluate all traffic signal system(s) throughout the City of Malden in order to optimize traffic operations, determine appropriate near term and long-range improvement strategies and develop a capital plan for implementation. All inventory data will be integrated into a GIS mapping environment.

In order to accomplish these goals a physical and operational review of the traffic signals throughout the City will be conducted. The review will determine the extent of the deficiencies, identify locations in need of the improvements (equipment and/or operation), develop repair strategies and recommendations, as well as establish the associated costs for engineering and construction that will be the basis for future capital planning. We anticipate that the project would be accomplished as follows:

- Physical Inventory of Existing Traffic Signals
- Evaluation and Recommendation Report
- Field Adjustments.

It is our understanding that the City will be applying for Massachusetts Gaming Commission Community Mitigation Funds (CMF) and if successful utilizing those funds for this work. To that end, also attached is the “Attachment A - Scope of Services” in a format that can be used as part of the City’s application for CMF grant funding for the signal inventory. Attachment A is similar to the information included with the City of Lynn’s successful application. Feel free to modify/edit with any additional information pertinent to the City’s request.

We appreciate this opportunity to continue to work with the City of Malden and are looking forward to getting the traffic signal inventory project underway. If you have any questions regarding the Agreement, Scope of Services, or require additional information, please call me immediately.

Sincerely,

WORLDTECH ENGINEERING, LLC

Richard J. Benevento
President

Attachments

c. William P. Mertz, PE
Rodney C. Emery, PE, PTOE, FITE
Alan Cloutier, PE, PTOE