

**AGREEMENT FOR TRAFFIC MANAGEMENT CONTROLLER
FIRMWARE/SOFTWARE**

**BETWEEN
THE CITY OF SAN ANTONIO**

AND

INTELIGHT, INC.

This Agreement for Traffic Management Controller Firmware/Software (this “**Agreement**”) is entered into by and between the City of San Antonio, a Texas Municipal Corporation (the “**City**”), and Intelight, Inc., an Arizona For-Profit Corporation (“**Contractor**”), referred to collectively herein as the “**Parties**.”

The Parties hereto severally and collectively agree, and by the execution hereof are bound, to the mutual obligations herein contained and to the performance and accomplishment of the tasks hereinafter described.

RECITALS

WHEREAS, the City desires to hire Contractor to provide specialized software used to manage traffic operations at signalized intersections and control pedestrian hybrid beacons; and

WHEREAS, Contractor represents that it possesses the knowledge, ability, professional skills, and qualifications to perform this work in an expeditious and economical manner consistent with the City’s interests.

NOW THEREFORE, in consideration of the promises, mutual covenants, and agreements contained herein, the Parties agree as follows:

Article 1 - Definitions

1.1 Defined Terms. Each term defined in the preamble of this Agreement has its assigned meaning, and each of the following terms has the meaning assigned to it:

“**City’s Project Manager**” means the person(s) designated by the City to perform the duties and responsibilities specified by and in accordance with Sections 6.2 of this Agreement.

“**Contract Documents**” has the meaning assigned to it in Section 3.1 of this Agreement.

“**Contractor’s Project Manager**” means the person designated by Contractor to perform the duties and responsibilities specified by and in accordance with Section 6.1 of this Agreement.

“**Cure**” has the meaning assigned to it in Section 8.4 of this Agreement.

“**Director**” means the Director of the City’s specified Department, or Director’s designee.

“**Documents**” has the meaning assigned to it in Section 12.5 of this Agreement.

“**Enhancements**” means changes to the system that make the system run better and add functionality that were not in the original specifications.

“**Items**” means all hardware and services, including components, intermediate assemblies, troubleshooting, training, and maintenance and support.

“**Maintenance**” means any upgrade or modification of a work product or artifact after delivery to correct faults or improve performance or other attributes.

“**Retention Period**” has the meaning assigned to it in Section 12.5 of this Agreement.

“**Software**” means the MAXTIME software, including its code and data, to be installed on the traffic signal controller hardware, including each license and all Enhancements, Maintenance, and warranty work. Any use of the word “firmware” shall also mean Software.

“**Support**” means assistance provided by Contractor to City by telephone or e-mail during City’s regular business hours to answer questions regarding the use of the system.

“**Term**” has the meaning assigned to it in Section 2.1 of this Agreement.

Article 2 - Term of Agreement

2.1 Term of Agreement. This Agreement begins upon the effective date of the ordinance awarding the contract or date specified in the award letter, whichever is later, and ends on the third anniversary of the date the last party signs this Agreement (the “**Term**”), unless terminated earlier in accordance with the provisions of this Agreement.

2.2 Renewal. At the City’s option, this Agreement may be renewed under the same terms and conditions for two additional one-year periods. Renewals shall be in writing and signed by the City’s Finance Department Director, without further action by the San Antonio City Council, subject to and contingent upon appropriation of funding therefore.

2.3 Temporary Short Term Extensions. The City shall have the right to extend this Agreement under the same terms and conditions beyond the original term or any renewal thereof, on a month to month basis, not to exceed three months. Said month to month extensions shall be in writing, signed by the City’s Finance Department Director, and shall not require City Council approval, subject to and contingent upon appropriation of funding therefore.

Article 3 - Contract Documents

3.1 The term “**Contract Documents**” means the documents, which contain the agreements of the Parties with respect to this transaction. The Contract Documents shall consist of this Agreement, the Requirements Traceability Matrix (**Attachment A**), the Scope of Services (**Attachment B**), the City of San Antonio Data Security Policy (**Attachment C**), the Price Schedule (**Attachment D**), and the Travel and Related Expense Forms (**Attachment E**), all of which are attached hereto and are incorporated into this Agreement by this reference.

Article 4 - Order of Precedence

4.1 In the event of any conflict or inconsistency among the Contract Documents, said conflict or inconsistency shall be resolved by giving precedence to the documents in the following order:

- (a) This Agreement;
- (b) Requirements Traceability Matrix (**Attachment A**);
- (c) Scope of Services (**Attachment B**);
- (d) The City of San Antonio Data Security Policy (**Attachment C**);
- (e) Price Schedule (**Attachment D**); and
- (f) Travel and Related Expense Forms (**Attachment E**).

Article 5 - Contractor's Obligations

5.1 Statement of Work. Contractor shall perform and produce all Items and Software as detailed in **Attachment A** and **Attachment B**.

5.2 Timely Services. Contractor shall perform all services with due diligence and shall meet all dates set forth in this Agreement and as may from time to time be agreed upon in writing by the Parties. Contractor shall meet with the City, as necessary, to discuss statuses and provide timely responses to issues related to project progress raised in writing by Contractor or the City.

5.3 Employees and Subcontractors. Contractor agrees to utilize only experienced, responsible, and competent personnel in its performance under this Agreement. Contractor shall assign, to the project, such personnel in sufficient numbers to ensure the project's timely completion. Contractor shall remove from the project any personnel who endanger persons or property or whose continued participation in the project is found to be inconsistent with the best interests of the City. Contractor shall be fully responsible to the City for the performance and behavior of its employees, subcontractors, and persons either directly or indirectly employed by

its subcontractors.

5.4 Data Security. Contractor shall comply with the City of San Antonio Data Security Policy, provided by the City's Administrative Directive 7.3a, attached hereto and incorporated herein for all purposes as **Attachment C**.

5.5 Clean Air Act & Federal Water Pollution Control Act. Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§7401-7671q) and the Federal Water Pollution Control Act (33 U.S.C. §§1251-1387), as amended. Contractor agrees to report each violation to the City and understands that the City will, in turn, report each violation as required to the federal agency providing funds for this contract and the appropriate EPA Regional Office. Contractor further agrees to include these requirements in each subcontract to this contract exceeding \$150,000, financed in whole or in part with federal funds.

5.6 Procurement of Recovered Materials. Contractor and its subcontractors shall comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, including, but not limited to, the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

Article 6 - Project Managers

6.1 Contractor's Project Manager. Contractor shall designate one or more Project Manager(s) who will work directly with the City's Project Manager(s) and project team to finalize documentation specific to the management aspects of the project, monitor project communications and actions to make sure they align with agreed upon processes, ensure timely delivery of Items and Software, and manage review and approval processes.

6.2 City's Project Manager. The City shall designate one or more Project Manager(s) who will direct the City's efforts. The City's Project Manager(s) shall be the point of contact for Contractor to resolve any contract issues pertaining to system Maintenance, Enhancements, and warranty work. Any requests for Maintenance, Enhancements, or warranty work shall only be payable if made by the City's Project Manager(s), evidenced in writing and signed by the City's Project Manager(s). Signed written requests for such services shall, as between the City and Contractor, be deemed conclusive evidence of the City's authorization of such services. The City's Transportation and Capital Improvements Department Director has the authority to designate a new or additional Project Manager for the City. Except as otherwise provided in this Agreement, any change made by Contractor at the direction of any other person in any other manner shall be considered as having been made without authority.

Article 7 – Consideration, Invoices, and Expenses

7.1 Consideration. In consideration of the Items and Software furnished by Contractor

pursuant to this Agreement, the City shall pay Contractor the fees set forth in the Price Schedule, attached hereto and incorporated herein for all purposes as **Attachment D**.

7.2 Invoices. Contractor shall submit invoices to the City's Project Manager(s), in accordance with Article 10 of this Agreement, to receive payment for all Items or Software provided under this Agreement. All invoices shall detail the Items provided and the fixed price for those Items. Contractor shall comply with reasonable requests made by the City to include additional information on the invoice. City shall pay Contractor within the time limits imposed by Texas law on municipalities and in accordance with Article 10 of this Agreement.

7.3 Travel and Related Expenses. The City of San Antonio Administrative Directive 8.31 establishes uniform procedures for the processing of requests for travel authorization, advances and reimbursements, identifies travel expenses eligible for payment and establishes proper accounting for all travel-related expenses for the City. Travel expense reimbursement may include personal vehicle mileage or commercial coach transportation, hotel accommodations, parking and meals; provided, however, the amount of reimbursement by the City shall not exceed the amounts authorized by the current GSA Travel Regulations per diem. Travel time may not be included as part of the amounts payable by Contractor for any services rendered under this Agreement. Air transportation shall be booked at the lowest available fare available at the time. Anticipated travel expenses must be pre-approved in writing by the City. The City has provided forms as examples to be used for reporting expenses for reimbursement in **Attachment E**. The City requires that receipts for expenses not covered by the per diem be attached to the reimbursement request forms for proper verification and processing. **Attachment E** includes the following forms: 1) Personal Vehicle Mileage Record, and 2) Travel & Miscellaneous Expense Report. Contractor may use their own forms for reporting travel expenses that provide the same information requested in the forms found in **Attachment E**.

Article 8 - Inspection and Rejection

8.1 All Items. In addition to the delivery of the Software, which is governed by Article 9 below and not by this Article 8, all Items shall be subject to inspection and testing by the City to the extent practicable.

8.2 Approval and Acceptance. The City shall review, approve, and sign off on each Item received. Upon acceptance of each Item and receipt of Contractor's correct invoice, the City shall pay Contractor according to the terms and conditions of this Agreement.

8.3 Nonconformity or Non-functionality. In the event of any material nonconformity or non-functionality of any Item, as determined solely by the City, the City shall provide written notice to Contractor within 14 business days of the date the Item is received by the City.

8.4 Opportunity to Cure. Contractor may cure any nonconformity or non-functionality of any Item completed, performed, or produced of which Contractor is notified of by the City.

The following provisions apply to Contractor's opportunity to cure:

- (a) *Time to Cure.* Upon receipt of such notice of nonconformity or non-functionality, Contractor shall have 30 business days to cure the nonconformity or non-functionality. The City must receive the delivery of such cured Deliverable or work (the "**Cure**") no later than the 31st business day following Contractor's receipt of the notice of nonconformity or non-functionality for such Deliverable or work. Notwithstanding the foregoing, the City may, upon Contractor's written request and solely within the discretion of City's Transportation and Capital Improvements Department Director, extend the time to cure to a number of days deemed reasonable under the circumstances.
- (b) *City's Acceptance of Cure.* Upon delivery of the Cure, the City will have 14 business days to evaluate and determine if such Cure is acceptable.
- (c) *Failure to Cure, Second Notice.* In the event the Item remains unacceptable, the City will provide a second written notice of nonconformity or non-functionality to Contractor no later than the 15th business day following the City's receipt of such Cure. Contractor shall then have an additional 14 business days to cure the nonconformity or non-functionality. The City must receive delivery of such second-attempted Cure no later than the 15th business day following Contractor's receipt of the second notice of nonconformity or non-functionality for such Item.
- (d) *Second Attempt to Cure.* Upon delivery of the Cure in response to the second notice of nonconformity or non-functionality, the City will have 14 business days to evaluate and determine if such Cure is acceptable.
- (e) *Failure to Cure, Third Notice.* In the event the Item remains unacceptable, the City will provide a third notice of any nonconformity or non-functionality to Contractor and the City, without waiving any rights the City may have under this Agreement or otherwise by law as a result of such default, may (i) accept the defective Item and require such Item be reduced in price by Contractor in an amount that is equitable under the circumstances; (ii) accept the defective Item and, by separate contract or otherwise, correct such Item and charge Contractor, or deduct from any amount due to Contractor, any additional costs incurred by the City to correct such Item; or (iii) reject the defective Item and, by separate contract or otherwise, replace the defective Item and charge Contractor, or deduct from any amount due to Contractor, any additional costs incurred by the City to replace such Item.

8.5 Delay and Reduction in Value. All inspections and tests by the City shall be performed in such a manner as not to unduly delay the project. With respect to rejected Items, the City shall not be liable for any reduction in value of any such rejected Item used in connection with such inspection or test.

8.6 Failure to Inspect or Reject. Failure to inspect or reject Items shall not relieve Contractor of responsibility for Items that are not in accordance with the requirements of the Contract Documents, nor impose any liability on the City for any reason. Inspection and testing of any Item does not relieve Contractor from any responsibility regarding latent defects or defects that may be discovered prior to payment or during warranty periods.

Article 9 - Acceptance Testing

The purpose of the acceptance tests is to provide the City with a complete and accurate assessment of whether the Software meets the requirements set forth in the Contract Documents and any system specifications necessary to meet those requirements, whether contained in the Contract Documents or elsewhere.

9.1 Generally. The acceptance tests shall fully test each function of the Software. The City reserves the right to test such functions more than once. Additionally, the City may test such functions singularly, in groups, at the sub-system level, and at the system level. The City reserves the right to conduct any other inspections or tests to ensure the Software meets requirements and specifications.

9.2 Problem or Failure. Contractor shall define and document the cause of any problem or failure with the Software. Contractor shall facilitate the resolution of, and shall furnish the corrective action to fix, any such problem or failure of the Software. In the event that a problem or failure is caused by a problem with any product or facility provided by the City, Contractor's obligations to facilitate resolution and/or furnish the corrective action shall be met by diagnosing the problem and advising the City on how the problem or failure can be corrected. Nothing set forth in this Section 9.2 relieves Contractor from the obligation of correcting problems or failures caused by any product or facility provided by Contractor.

9.3 Items Passing Test. The City shall determine, solely in the City's reasonable discretion, whether the Software passes an acceptance test. If the City reasonably determines that the Software has not passed an acceptance test, the City shall provide Contractor with a written description of the way(s) in which the Software was deemed unsatisfactory. This written description shall include a limited but reasonable period of time in which the problem is to be resolved by Contractor.

Article 10 - Payment

10.1 Final Acceptance. Upon approval and acceptance by the City for each Item and Software, Contractor shall submit a written invoice to the City in accordance with the Price Schedule. The preferred method of delivery is electronically to the following e-mail address:

accounts.payable@sanantonio.gov

Invoices submitted electronically to the e-mail address above must be in separate .pdf

format file. Multiple invoices cannot be submitted in a single .pdf file; however, Contractor may submit multiple, separate invoice files in a single e-mail. Any required documentation in support of the invoice should be compiled directly behind the invoice in the same .pdf file. Each electronically submitted file must have a unique identifying name that is not the same as any other file name. Invoices submitted by electronic submission are only considered “original” when the submission comes directly from the Contractor to Accounts Payable using this e-mail address. Contractor may courtesy copy the ordering City department personnel on the e-mail. If Contractor is not able to submit invoices with the required file formatting above, Contractor may mail original invoices, on white paper only, to the following address:

City of San Antonio
Finance Department/Accounts Payable
111 Soledad, 4th Floor
San Antonio, Texas 78205

10.2 Time for Payment. Upon receipt of Contractor’s written invoice, the City shall have not less than 30 calendar days to pay for goods or services. Time for payment will be computed from the later of:

- (a) the date City receives conforming goods under the contract;
- (b) the date performance of the service under the contract is completed; or
- (c) the date the City receives a correct and valid invoice for the goods or services.

Payment is deemed to be made on the date of mailing of the check. Payment is made in US dollars only.

10.3 Payment Delay Caused by Dispute. Section 10.2 shall not apply where there is a bona fide dispute between the City and Contractor about the goods delivered or the service performed that causes the payment to be late, or where the invoice is not mailed to the address provided herein. The payment amount due on invoices may not be manually altered by City personnel. Once disputed items are reconciled, Contractor must submit a corrected invoice or a credit memorandum for the disputed amount. The City will not make partial payments on an invoice where there is a dispute.

Article 11 - Intellectual Property

11.1 Intellectual Property Rights. Contractor shall pay all royalties and licensing fees arising from or in connection with the performance of this Agreement. Contractor shall hold the City harmless and indemnify the City from the payment of any royalties, damages, losses or expenses including attorney's fees for suits, claims, or otherwise, growing out of infringement or alleged infringement of copyrights, patents, trademarks, or trade secrets arising from or in connection with any material or method used by Contractor in Contractor’s performance of this

Agreement. In accordance with Section 11.3, Contractor shall defend all suits for infringement of any Intellectual Property rights. Further, if Contractor has reason to believe that the design, service, process, or product specified is an infringement of an Intellectual Property right, it shall promptly give such information to the City.

11.2 Notification of Intellectual Property Infringement. Upon receipt of notification that a third party claims that the Software or any other intellectual property infringe upon any United States or International patent, copyright, or trademark, Contractor shall immediately:

- (a) (i) obtain, at Contractor's sole expense, the necessary license(s) or rights that would allow the City to continue using the Software or any other intellectual property as the case may be, or (ii) alter the Software or any other intellectual property so that the alleged infringement is eliminated; and
- (b) reimburse the City for any expenses incurred by the City to implement emergency backup measures if the City is prevented from using the Software or other intellectual property while the dispute is pending.

11.3 Response to Intellectual Property Infringement. Contractor further agrees to:

- (a) assume the defense of any claim, suit, or proceeding brought against the City for infringement of any United States patent, copyright, trademark, or any other intellectual property rights arising from the use and/or sale of the equipment, software, or other intellectual property under this Agreement,
- (b) assume the expense of such defense, including costs of investigations, reasonable attorneys' fees, expert witness fees, damages, and any other litigation-related expenses, and
- (c) indemnify the City against any monetary damages and/or costs awarded in such suit;

provided that:

- (a) Contractor is given sole and exclusive control of all negotiations relative to the settlement thereof, but that Contractor agrees to consult with the City Attorney of the City during such defense or negotiations and make good faith effort to avoid any position adverse to the interest of the City,
- (b) the equipment, software, or other intellectual property is used by the City in the form, state, or condition as delivered by Contractor or as modified without the permission of Contractor, so long as such modification is not the source of the infringement claim,

- (c) the liability claimed shall not have arisen out of the City's negligent act or omission, and
- (d) the City promptly provide Contractor with written notice within 15 calendar days following the formal assertion of any claim with respect to which the City asserts that Contractor assumes responsibility under this Section.

Article 12 – Document Ownership, Access, and Retention

12.1 Document Ownership. Contractor shall comply with all applicable federal, state, and local laws, rules, and regulations governing documents and ownership, and access and retention thereof, including, but not limited to, the following Sections in this Article 12.

12.2 Local Government Records. In accordance with Texas law, Contractor acknowledges and agrees that all local government records created or received in the transaction of official business or the creation or Maintenance of which were paid for with public funds are declared to be public property and subject to the provisions of Chapter 201 of the Texas Local Government Code and Subchapter J, Chapter 441 of the Texas Government Code. Thus, no such local government records produced by or on the behalf of Contractor pursuant to this Agreement shall be the subject of any copyright or proprietary claim by Contractor.

12.3 Local Government Record Defined. The term “local government record” as used herein shall mean any document, paper, letter, book, map, photograph, sound or video recording, microfilm, magnetic tape, electronic medium, or other information recording medium, regardless of physical form or characteristic and regardless of whether public access to it is open or restricted under the laws of the state, created or received by local government or any of its officials or employees pursuant to law, including an ordinance, or in the transaction of official business.

12.4 City Ownership. Contractor acknowledges and agrees that all local government records, as described herein, produced in the course of the work required by this Agreement, will belong to and be the property of the City. Contractor shall turn over to the City, all such records as required by this Agreement. Contractor shall not, under any circumstances, release any records created during the course of performance of this Agreement to any entity without City’s written permission, unless required to do so by a court of competent jurisdiction.

12.5 Records Retention. Contractor and its subcontractors, if any, shall properly, accurately and completely maintain all documents, papers, and records, and other evidence pertaining to the services rendered hereunder (“**Documents**”), and shall make such Documents available to the City at their respective offices, at all reasonable times and as often as the City may deem necessary during the Term of this Agreement, including any extension or renewal hereof, and the record retention period established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by the City and any of its authorized representatives. Contractor shall retain any and all Documents produced as a result of services

provided hereunder for a period of four years (“**Retention Period**”) from the date of expiration or termination of this Agreement. If, at the end of the Retention Period, there is litigation or other questions arising from, involving or concerning these Documents or the services provided hereunder, Contractor shall retain the Documents until the resolution of such litigation or other such questions. Contractor acknowledges and agrees that the City shall have access to any and all such Documents at any and all times, as deemed necessary by the City, during said Retention Period. The City may, at its election, require Contractor to return the Documents to the City at Contractor’s expense prior to or at the conclusion of the Retention Period. In such event, Contractor may retain a copy of the Documents.

12.6 Exclusions. Item-specific documentation, including technical data sheets, user and maintenance manuals, technical notes, training guides and presentations, functional test documentation, and other material for training purposes will be provided to the City under an irrevocable, perpetual use license. All such training material is and shall remain the sole intellectual property of Contractor.

Article 13 - Insurance

13.1 Insurance Requirements. Contractor shall comply with the insurance requirements set forth below:

- (a) Prior to the commencement of any work under this Agreement, Contractor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City’s Finance Department, which shall be clearly labeled “Traffic Management Controller Software/Firmware” in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must be signed by the Authorized Representative of the carrier, and list the agent’s signature and phone number. The certificate shall be mailed, with copies of all applicable endorsements, directly from the insurer’s authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City’s Finance Department. No officer or employee, other than the City’s Risk Manager, shall have authority to waive this requirement.
- (b) The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City’s Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will the City allow modification whereby the City may incur increased risk.

- (c) Contractor's financial integrity is of interest to the City; therefore, subject to Contractor's right to maintain reasonable deductibles in such amounts as are approved by the City, Contractor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Contractor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

| <u>INSURANCE TYPE</u> | <u>AMOUNTS</u> |
|--|--|
| 1. Workers' Compensation | Statutory |
| 2. Employers' Liability | \$1,000,000/\$1,000,000/\$1,000,000 |
| 3. Commercial General Liability Insurance to include coverage for the following: a. Premises/Operations b. Products/Completed Operations c. Personal/Advertising Injury d. Contractual Liability | For Bodily Injury and Property Damage \$1,000,000 per occurrence; \$2,000,000 general aggregate \$2,000,000 Products & Completed Operations, or its equivalent in Umbrella or Excess Liability Coverage. |
| 4. Business Automobile Liability a. Owned/leased vehicles b. Non-owned vehicles c. Hired Vehicles | Combined Single Limit for Bodily Injury and Property Damage of \$1,000,000 per occurrence. |
| 5. Professional Liability –[Technology Errors and Omissions] (Claims-made basis) To be maintained and in effect for no less than two years subsequent to the completion of the professional service. | \$1,000,000 per claim, to pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages by reason of any act, malpractice, error, or omission in professional services. |

- (d) Contractor agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same categories of insurance coverage required of Contractor herein, and provide a certificate of insurance and endorsement that names the Contractor and the City as additional insureds. Policy limits of the coverages carried by subcontractors will be determined as a business decision of Contractor. Contractor shall provide the City with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.

- (e) As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all required endorsements. Contractor shall be required to comply with any such requests and shall submit requested documents to the City at the address provided below within 10 calendar days. Contractor shall pay any costs incurred resulting from provision of said documents.

City of San Antonio
Attn: Finance Department
P.O. Box 839966
San Antonio, Texas 78283-3966

- (f) Contractor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:
 - (i) Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;
 - (ii) Provide for an endorsement that the "other insurance" clause shall not apply to the City of San Antonio where the City is an additional insured shown on the policy; and
 - (iii) Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of the City.
- (g) Contractor shall provide advance written notice directly to the City of any suspension or non-renewal in coverage, and not less than 10 calendar days advance notice for nonpayment of premium.
- (h) Within 5 calendar days of a suspension, cancellation or non-renewal of coverage, Contractor shall provide a replacement Certificate of Insurance and applicable endorsements to City. The City shall have the option to suspend Contractor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.
- (i) In addition to any other remedies the City may have upon Contractor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Contractor to stop work hereunder, and/or withhold any payment(s) which become due to Contractor hereunder until Contractor demonstrates compliance with the requirements hereof.

- (j) Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payments of damages to persons or property resulting from Contractor's or its subcontractors' performance of the work covered under this Agreement.
- (k) It is agreed that Contractor's insurance shall be deemed primary and non-contributory with respect to any insurance or self- insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.
- (l) It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided.
- (m) Contractor and any subcontractors are responsible for all damage to their own equipment and/or property.

Article 14 - Notices

14.1 Addresses. Any notice, request, or consent sent under this Agreement shall be written and mailed with sufficient postage, sent by certified mail, return receipt requested, documented facsimile or delivered personally to an officer of the receiving party at the following addresses:

THE CITY:
City of San Antonio
Transportation & Capital Improvements
Att: Marc Jacobson
3500 NW Loop 410
San Antonio, TX 78229

CONTRACTOR:
Q-Free, Intelight, Inc.
Att: Tom Stiles
4660 La Jolla Village Dr, Ste 100
San Diego, CA 92122

14.2 Change of Address. Notice of change of address by any party must be made in writing and mailed to the other Parties within 15 business days of such change. All invoices, notices, requests, or consents under this Agreement shall be (a) in writing, (b) delivered to a principal officer or managing entity of the recipient in person, by courier or mail or by facsimile or similar transmission, and (c) effective only upon actual receipt by such person's business office during normal business hours. If received after normal business hours, the invoice, notice, request, or consent shall be considered received on the next business day after such delivery. Whenever any notice is required to be given by applicable law or this Agreement, a written waiver thereof, signed by the Person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

Article 15 – Indemnification and Limitation of Liability

15.1 City Indemnified. CONTRACTOR covenants and agrees to FULLY INDEMNIFY, DEFEND, and HOLD HARMLESS the CITY and the elected officials, employees, officers, directors, volunteers, and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability, and suits of any kind and nature, including, but not limited to, personal or bodily injury, death, and property damage, made upon the CITY and directly or indirectly arising out of, resulting from, or related to CONTRACTOR'S activities under this Agreement, including any acts or omissions of CONTRACTOR or the agents, officers, directors, representatives, employees, consultants, or subcontractors of CONTRACTOR and their respective officers, agents employees, directors, and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of the CITY or its officers or employees in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT CONTRACTOR AND THE CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY, IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

15.2 Indemnity for Benefit of the Parties. The provisions of the indemnification provided for in this Agreement are solely for the benefit of the Parties hereto and are not intended to create or grant any rights, contractual or otherwise, to any other person or entity. Contractor shall provide written notice to the City within 24 hours of any claim or demand against the City or Contractor known to Contractor and related to or arising out of Contractor's activities under this Agreement; and Contractor shall see to the investigation and defense of such claim or demand at Contractor's cost. The City shall have the right, at its option and at its own expense, to participate in such defense without relieving Contractor of any of its obligations under this paragraph or Section 15.1 above.

15.3 Defense Counsel. The City shall have the right to approve Contractor's proposed defense counsel to be retained by Contractor in fulfilling its obligation hereunder to defend and indemnify the City. The City may only reject the hiring of Contractor's proposed defense counsel if there is an apparent conflict of interest between the proposed defense counsel and the City. If suit is filed and Contractor fails to retain City approved defense counsel by the 10th calendar day before the expiration of the time required to file an answer, the City shall have the right to retain defense counsel on its own behalf and Contractor shall be liable for all costs incurred by the City. The City shall also have the right, at its option, to be represented by advisory counsel of its own selection and at its own expense, without waiving the foregoing.

15.4 Employee Litigation. In any and all claims against any party indemnified hereunder by any employee or subcontractor of Contractor, anyone directly or indirectly employed by any employee or subcontractor of Contractor, or anyone for whose acts any of them may be liable, the indemnification obligation herein provided shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any subcontractor under worker's compensation or other employee benefit acts.

15.5 Limitation of Liability. THE TOTAL LIABILITY OF CONTRACTOR ARISING OUT OF OR RELATED TO THIS AGREEMENT WILL NOT EXCEED THE TOTAL AMOUNT PAID TO CONTRACTOR BY THE CITY DURING THE TERM OF THIS AGREEMENT.

Article 16 - Contractor's Representations and Warranties

16.1 Licenses, Certifications, and Training. Contractor warrants and certifies that Contractor and any other person designated to provide services hereunder has the requisite training, license, and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

16.2 Undisclosed Features. Contractor warrants that Items, equipment, and Software provided to the City under this Agreement do not contain any undisclosed features or functions that would impair or might impair the City's use of any Items or Software. Specifically, but without limiting the previous representation, Contractor warrants there is no "Trojan Horse," lock, "time bomb," backdoor, or similar routine. This Agreement shall not now nor will it hereafter be subject to the self-help provisions of the Uniform Computer Information Transactions Act or any other law not specified herein. Contractor specifically disclaims any unilateral self-help remedies.

16.3 Suspension and Debarment. This Agreement is a covered transaction for purposes of 2 CFR Part 1200. As such, Contractor is required to verify that neither Contractor, nor its principals, as defined at 2 CFR 180.995, are excluded or disqualified as defined at 2 CFR 180.940 and 2 CFR 180.935, respectively. Contractor is required to comply with 2 CFR 1200, Subpart C and must include the requirement to comply with 2 CFR 1200, Subpart C in any lower tier covered transaction it enters into. By signing and entering into this Agreement, Contractor certifies that:

- (a) Neither it nor its principals are presently debarred, suspended for debarment, declared ineligible or voluntarily excluded from participation in any State or Federal Program; and
- (b) Contractor shall provide immediate written notice to the City if, at any time during the Term of this Agreement, including any renewals or extensions hereof,

Contractor learns that its certification was erroneous when made or has become erroneous by reason of changed circumstances.

The certification in this clause is a material representation of fact relied upon by the Department of Transportation. If it is later determined that Contractor knowingly rendered an erroneous certification, in addition to remedies available to the Department of Transportation, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. Contractor agrees to comply with the requirements of 2 CFR 1200, Subpart C throughout the Term of this Agreement. Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

16.4 Prohibited Financial Interest. Contractor acknowledges that the Charter of the City of San Antonio and the City of San Antonio Code of Ethics prohibit a City officer or employee, as those terms are defined in §2-52 of the Code of Ethics, from having a direct or indirect financial interest in any contract with the City. An officer or employee has a prohibited “financial interest” in a contract with the City or in the sale to City of land, materials, supplies, or service, if any of the following individuals or entities is a party to the contract or sale:

- (a) a City officer or employee, his or her spouse, sibling, parent, child, or other family member within the first degree of consanguinity or affinity;
- (b) an entity in which the officer or employee, or his or her parent, child, or spouse directly or indirectly owns (i) 10% or more of the voting stock or shares of the entity, or (ii) 10% or more of the fair market value of the entity; or
- (c) an entity in which any individual or entity listed above is (i) a subcontractor on a City contract, (ii) a partner, or (iii) a parent or subsidiary entity.

Contractor warrants and certifies, and this Agreement is made in reliance thereon, that none of the above listed individuals or entities is a party to this Agreement.

16.5 Prohibition on Contracts with Companies Boycotting Israel. Texas Government Code §2270.002 provides that a governmental entity may not enter into a contract with a company for goods or services, unless the contract contains a written verification from the company that it:

- (a) does not boycott Israel; and
- (b) will not boycott Israel during the term of the contract.

"Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel

or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

"Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

By executing Contract Documents with the City, Contractor hereby verifies that it does not boycott Israel and will not boycott Israel during the term of this Agreement. The City hereby relies on Contractor's verification. If found to be false, the City may terminate this Agreement for material breach.

16.6 Contracts with Companies Engaged in Business with Iran, Sudan, or Foreign Terrorist Organization Prohibited. Texas Government Code §2252.152 provides that a governmental entity may not enter into a governmental contract with a company that is identified on a list prepared and maintained under Texas Government Code §§ 806.051, 807.051, or 2252.153. By executing Contract Documents with the City, Contractor hereby certifies that it is not identified on such a list and that it will notify the City should it be placed on such a list while under contract with the City. The City hereby relies on Contractor's certification. If found to be false, the City may terminate this Agreement for material breach.

Article 17 - Termination

17.1 The City's Right to Terminate. Termination by the City may be effected by the City's Transportation and Capital Improvements Department Director, without further action by the San Antonio City Council. In addition, the following rules govern the City's right to terminate:

- (a) Termination-Breach. Should Contractor fail to fulfill in a timely and proper manner, as determined solely by the City's Transportation and Capital Improvements Department Director, its material obligations under this Agreement, or violate any of the material terms of this Agreement, the City shall have the right to terminate this Agreement, in whole or in part, if after prompt written notice to Contractor specifying the failure(s) or violation(s) and a minimum of a 10 business day cure period, the failure or violation has not been corrected. If a cure period has already been given to Contractor in accordance with Article 8 of this Agreement, the City may not give the cure period specified by this Section 17.1(a). Notice of termination shall be provided in writing to Contractor, effective upon the date set forth in the notice. Such termination shall not relieve Contractor of any liability to the City for damages sustained by virtue of any breach by Contractor.
- (b) Termination-Notice. The City may terminate this Agreement, in whole or in part, without cause. The City shall be required to give Contractor notice not less than 10

business days prior to the date termination of this Agreement without cause is to be effective.

- (c) Termination-Funding. The City retains the right to terminate this Agreement at the expiration of each of the City's budget periods. This Agreement is conditioned on a best efforts attempt by the City to obtain and appropriate funds for payment of any debt due by the City herein.

17.2 Sections that Survive Termination. The provision previously designated and any other right, obligation, or required performance of the Parties in this Agreement, which by its express terms or nature and context is intended to survive termination or expiration of this Agreement, will survive any such termination or expiration. In addition, the obligations of the Parties to protect propriety and confidential information and the obligation of Contractor to indemnify and hold the City harmless for copyright, patent, or trademark infringement contained in this Agreement shall also survive termination of this Agreement.

Article 15 – Legal Construction

17.1 Compliance with Law. Contractor shall provide and perform all services required under this Agreement in compliance with all applicable federal, state, and local laws, rules, and regulations.

17.2 Severability. If any clause or provision of this Agreement is held invalid, illegal, or unenforceable under present or future federal, state, or local laws, including but not limited to the City of San Antonio Charter, City of San Antonio Codes, or City of San Antonio ordinances, then and in that event it is the intention of the Parties hereto that such invalidity, illegality, or unenforceability shall not affect any other clause or provision hereof and that the remainder of this Agreement shall be construed as if such invalid, illegal, or unenforceable clause or provision was never contained herein. It is also the intention of the Parties hereto that in lieu of each clause or provision of this Agreement that is invalid, illegal, or unenforceable, there be added as a part of this Agreement a clause or provision as similar in terms to such invalid, illegal, or unenforceable clause or provision as may be possible, legal, valid, and enforceable.

17.3 Venue, Jurisdiction, and Arbitration. For any dispute or claim arising from or in connection with this Agreement, venue shall be in Bexar County, Texas and the laws of the State of Texas shall apply. The City will not contractually agree to engage in binding arbitration and will not contractually agree to relinquish its right to a trial by jury.

17.4 Attorney's Fees. The Parties hereto expressly agree that, in the event of litigation, each party hereby waives its right to payment of attorneys' fees, unless specified otherwise in this Agreement.

17.5 Force Majeure. Neither party will be liable to the other for any failure or delay in the performance of such party's non-monetary obligations due to any occurrence not occasioned

by the conduct of either party and beyond the party's control, such as failure or delay caused, directly or indirectly, by fire, flood, earthquakes, or other elements of nature, acts of war, terrorism, riots, civil disorders, rebellions or revolutions, epidemics, communications line or power failures, or governmental laws, court orders, and regulations imposed after the fact. Such party shall be excused from performance for a period of time as is reasonably necessary after such occurrence to remedy the effects thereof, and each party shall bear the cost of any expense it may incur due to the occurrence.

17.6 Non-waiver of Performance. Unless otherwise specifically provided for in this Agreement, a waiver by either party of a breach of any of the terms, conditions, covenants, or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant, or guarantee herein contained. Further, any failure of either party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification, or discharge by either party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the party to be charged. No act or omission by a party shall in any manner impair or prejudice at any time any right, power, privilege, or remedy available to that party hereunder or by law or in equity.

Article 18 – General Terms and Conditions

18.1 Captions. All captions used in this Agreement are only for the convenience of reference and shall not be construed to have any effect or meaning as to the agreement between the Parties to this Agreement.

18.2 Non-Discrimination. As a party to this Agreement, Contractor understands and agrees to comply with the Non-Discrimination Policy of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, shall not discriminate on the basis of race, color, national origin, sex, sexual orientation, gender identity, veteran status, age, or disability, unless exempted by state or federal law, or as otherwise established herein.

18.3 Independent Contractor. Each party to this Agreement will be acting in its own capacity in performance of this Agreement. Contractor and all persons designated by Contractor to provide services in connection with this Agreement are and shall be deemed to be independent contractors, responsible for their respective acts or omissions. The City shall in no way be responsible for Contractor's actions, and neither of the Parties hereto will have authority to bind the other or to hold out to third parties that it has such authority. Nothing contained herein shall be deemed or construed by the Parties hereto or by any third party as creating the relationship of principal and agent, partners, joint ventures, or any other similar such relationships, between the Parties hereto. This provision shall survive termination of this Agreement.

18.4 Assignment. Except as otherwise stated herein, Contractor may not sell, assign, pledge, transfer, or convey any interest in this Agreement, nor delegate the performance of any duties hereunder by transferring, assigning, subcontracting, or any other means without the written consent of the City's Transportation and Capital Improvements Department Director. As a condition of such consent, if such consent is granted, Contractor shall remain liable for completion of the services and provision of goods outlined in this Agreement in the event of default by the successor contractor, assignee, transferee, or subcontractor. Any attempt to transfer, pledge, or otherwise assign this Agreement, in whole or in part, without said written consent shall be void ab initio and shall confer no rights upon any third person.

18.5 Change of Ownership. Contractor agrees to notify the City of any changes in ownership interest greater than 50%, and of any changes in control of its business entity, not less than 45 days in advance of the effective date of any such change. Notwithstanding any other remedies that are available to the City under this Agreement, any such change of ownership interest or control of Contractor's business entity may be grounds for termination of this Agreement at the sole discretion of the City.

18.6 Change Orders. In order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this Agreement:

- (a) Any change orders that become necessary during the Term of this Agreement as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment, or supplies to be furnished must be in writing and conform to the requirements of City Ordinance 2011-12-08-1014, as may hereafter be amended from time to time.
- (b) Changes that do not involve an increase in contract price may be made by the City's Finance Department Director.
- (c) Any other change will require approval of the City Council of the City of San Antonio.
- (d) No oral statement of any person shall modify or otherwise change or affect the terms, conditions, or specifications stated herein.

18.7 Entire Agreement. This Agreement, together with its authorizing Ordinance, Attachments, and Exhibits, if any, constitutes the final and entire agreement between the Parties hereto and contains all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind the Parties hereto, unless same be in writing, dated subsequent to the date hereof, and be duly executed by the Parties, in accordance with the change order provision in Section 18.6 above.


[Remainder of Page Intentionally Left Blank - Signature Page Follows]

EXECUTED and **AGREED** to as of the dates indicated below. This Agreement may be executed in multiple copies, each of which shall constitute an original.

CITY OF SAN ANTONIO

INTELIGHT, INC.

Director of Transportation and Capital
Improvements Department




Name: Tom Stiles, P.E. PTOE
Title: Executive Vice President, Urban Solutions

Date: _____

Date: 1/29/2020

APPROVED AS TO FORM:



Assistant City Attorney

ATTEST:

Leticia Vacek
City Clerk

Attachment A – Requirements Traceability Matrix

(attached as a separate document)

REQUIREMENTS TRACEABILITY MATRIX

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 1 | GENERAL Local Controller Software shall: | | | | | | |
| 1.1 | Be menu driven with all parameters allowed to be programmed through direct keyboard interface. Because of the complexity of software there shall be a minimum of ten programmable short-cut keys to access user defined screens. | Mandatory | | X | | | |
| 1.2 | All controller functions shall be accessible and editable by means of menus. All menu items shall be labeled in plain English. Likewise, all elements in data tables and displays shall be clearly labeled in English. Hexadecimal numbers are not permitted in any display. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 1.3 | Where dynamic displays are used to indicate the duration of a controller phase, function, or output they shall count upward, starting at zero. At a minimum dynamic displays for minimum green, maximum green, yellow, all red, local cycle counter, master cycle counter, and phase. | Mandatory | | X | | | |
| 1.4 | Cycle counters shall count up to a value equal to the length of the current cycle minus one, then return to zero and begin counting up again | Mandatory | | X | | | |
| 1.5 | Gap timers shall count downward, starting at the programmed or, when gap reduction is used, calculated gap time | Mandatory | | X | | | |
| 1.6 | Have features that will allow the controller database to be backed up to internal memory, USB Flash Drive, and DataKey. | Mandatory | | X | | | MAXTIME allows the controller database to be backed up internally and to a USB Flash Drive plugged into the controller. The ATC software spec does not include support for DataKeys, however support can be provided if contract is awarded. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 1.7 | The software shall run on LINUX-based 2070-1C cards. It desirable, but not a requirement, that the software support legacy 2070 controllers with 1B and 1E CPU cards. Respondent shall indicate options, and limitations with either. Local Controller Software shall run on the following Manufacturer CPU cards: | Mandatory | | X | | | MAXTIME is built exclusively on the ATC platform. 1B and 1E not supported. Support for 3 rd party vendor's 1C CPUs provide if the following minimum requirements are met: Minimum 64 MB Memory and must fully support the ATC 5401 API standard. |
| 1.7.1 | Econolite | Mandatory | | X | | | 1C CPU Only |
| 1.7.2 | Intelight | Mandatory | | X | | | 1C CPU Only |
| 1.7.3 | McCain | Mandatory | | | X | | Full software logic functionality, will not include software update without restart/flash, NTP |
| 1.7.4 | Peek/formerly "Quixote" | Mandatory | | | X | | Requires vendor to provide board support package, SDK, including ATC API |
| 1.7.5 | Safetran | Mandatory | | X | | | 1C CPU Only – Same as Safetran |
| 1.7.6 | Siemens | Mandatory | | | X | | Requires vendor to provide board support package, SDK, including ATC API |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 1.8 | Use the following I/O configurations on the 2070 | | Desired | X | | | |
| 1.8.1 | 2070-2A | | Desired | X | | | Can also drive TS2 or ATC SDLC via serial port |
| 1.8.2 | 2070-2B | | Desired | X | | | |
| 1.8.3 | 2020-2E | | Desired | X | | | |
| 1.8.4 | 2070-2N | | Desired | X | | | |
| 1.8.5 | 2070-2S | | Desired | X | | | |
| 1.9 | Proposed Local Controller Software must be able to use Network Time Protocol for proper time synchronization. GPS reference should also be supported for time clock synchronization. | Mandatory | | X | | | MAXTIME NTP can act as client OR Server with no additional configuration |
| 1.10 | The Local Controller Software shall allow data to be entered from a personal computer, ethernet port, or serial port. | Mandatory | | X | | | Can also be entered over a WiFi connection |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 1.11 | Data entry and modification shall be accessible via a web-enabled interface hosted on the local controller and accessible via the controller's programmed IP address or host name when on an IP network. | | Desired | X | | | True Web-Server, no applications needed. Host Name and DHCP (Client and Host) supported. |
| 1.12 | The Local Controller Software shall support export of the parameter database in a format that supports copy/paste | Mandatory | | X | | | |
| 1.13 | A backup method should be provided that would allow immediate reloading of all the controller's parameters via the front panel. The parameters should be backed up onto a nonvolatile memory device (such as the 2070 datakey and USB). Changes made to the controller timing should be able to be automatically backed up to the key when changed from the central system. | | Desired | X | | | Fully supported with the Kimley Horn, KITS system. (Implemented in Tallahassee, FL) |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 1.14 | The Local Controller Software shall be able to hold multiple full database copies that can be switched by selection on the front panel. | | Desired | X | | | MAXTIME holds approximately 300 complete timing databases. |
| 1.15 | The Local Controller Software shall support the following cabinet types: | Mandatory | | X | | | |
| 1.15.1 | NEMA TS-1 | Mandatory | | X | | | |
| 1.15.2 | NEMA TS-2 | Mandatory | | X | | | |
| 1.15.3 | Caltrans 332 | Mandatory | | X | | | |
| 1.15.4 | Caltrans 336 | Mandatory | | X | | | |
| 1.15.5 | ITS | Mandatory | | X | | | MAXTIME supports 40 phases and 32 overlaps, allowing for complex operations when combined with a 28 or 32 channel ITS/ATC Cabinet. |
| 1.15.6 | ATC | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 1.16 | The Local Controller Software shall be able to request a full database download from central from the front panel. | | Desired | X | | | MAXTIME, in combination with latest version of KITS, supports this operation. |
| 1.17 | The Local Controller Software shall be able to request a full database upload to central from the front panel. | | Desired | X | | | MAXTIME, in combination with latest version of KITS, supports this operation. |
| 2 | DISPLAY | | | | | | |
| 2.1 | The Local Controller Software shall provide indications to facilitate the determination of the operation. The indications shall include the following: | Mandatory | | X | | | |
| 2.1.1 | Phase or phases in service | Mandatory | | X | | | Phases enclosed in brackets |
| 2.1.2 | Phases or phases next to be serviced | Mandatory | | X | | | Phases blink |
| 2.1.3 | Presence of a vehicle call | Mandatory | | X | | | Input and source of input shown (i.e. Detector or Phase Recall menu) |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 2.1.4 | Presence of a pedestrian call | Mandatory | | X | | | See previous |
| 2.2 | The Local Controller Software shall provide for the simultaneous presentation for all phases | | Desired | X | | | |
| 2.3 | The Local Controller Software shall provide indications to indicate the status of each active phase in the ring. These indications shall include the following: | Mandatory | | X | | | Dynamic ring intervals show the active phase and the current, corresponding interval state with timer. |
| 2.3.1 | Initial | Mandatory | | X | | | |
| 2.3.2 | Extension | Mandatory | | X | | | |
| 2.3.3 | Yellow Change | Mandatory | | X | | | |
| 2.3.4 | Red Clearance | Mandatory | | X | | | |
| 2.3.5 | Walk | Mandatory | | X | | | |
| 2.3.6 | Pedestrian Clearance | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 2.3.7 | Green termination through Gap-out | Mandatory | | X | | | Current termination + last 5 cycle terminations shown |
| 2.3.8 | Green termination through Maximum time-out | Mandatory | | X | | | Current termination + last 5 cycle terminations shown |
| 2.3.9 | Green termination through Force-off | Mandatory | | X | | | Current termination + last 5 cycle terminations shown |
| 2.3.10 | Rest State | Mandatory | | X | | | |
| 3 | SECURITY Local Controller Software shall: | | | | | | |
| 3.1 | Not require any "hardware" lock to operate. | Mandatory | | X | | | |
| 3.2 | Local Controller Software shall be provided with incremental password protection. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 4 | VEHICULAR/PEDESTRIAN/BICYCLE PHASES | | | | | | |
| 4.1 | Local Controller Software shall be provided with a minimum sixteen phases. Each phase shall have a minimum of three maximum times per phase, with dynamic max operation capability. | Mandatory | | X | | | MAXTIME supports 40 phases and 3 max times per phase per phase table. MAXTIME supports 32 phase tables, allowing for a total of 96 possible max times per phase, based upon TOD. However, the need for multiple Max Greens is greatly reduced with the availability of fixed/floating force-off by phase settings |
| 4.2 | The Local Controller Software shall provide at least 4 concurrently timing rings. The initial default setup for the rings, barriers, and phases shall follow the standard NEMA eight-phase, dual-ring configuration | Mandatory | | X | | | MAXTIME supports up to 16 concurrently timing rings. Database templates include the 16 standard NEMA Sequences. |
| 4.3 | The Local Controller Software shall provide multiple gap/passage, max greens, and pedestrian times, all TOD selectable. | | Desired | X | | | Users can select from one of 32 phase time and option tables by TOD. |
| 4.4 | Each phase will have minimum, maximum and soft recall modes. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 4.5 | Local Controller Software shall provide early and delayed walk timing via program entry without using any additional logic or dummy phase. | Mandatory | | X | | | |
| 4.6 | Local Controller Software shall provide pedestrian clearance through yellow/red (configurable from end of red). | Mandatory | | X | | | |
| 4.7 | Local Controller Software shall provide conditional service during free and coordinated operation, with conditional service minimum and maximum green times. | Mandatory | | X | | | Conditional service currently uses the phases selected min and max green time. |
| 4.8 | Local Controller Software shall provide manual control operation with selectable call, omit, sync and protected pedestrian clearance phases. | Mandatory | | X | | | Manual Control can call an alternate sequence |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 4.9 | Local Controller Software shall provide per phase preempt timing (vehicle and pedestrian). | | Desired | X | | | Achieved via NTCIP logic. Entry and clearance times use the lesser of preempt time, or individual phase times. |
| 4.10 | Local Controller Software shall provide ability to change Phase Next decision during Phase Clearances. | Mandatory | | X | | | Now Limited to Preempt. This feature was directly implemented for City of Dallas however it severely disrupted advanced overlap operations (bridging), coordination, etc. Similar operations can be achieved using MAXTIME's feature set. |
| 4.11 | Local Controller Software shall provide pedestrian recycle modes provided for late/multiple service opportunities. | | Desired | X | | | |
| 4.12 | Local Controller Software shall provide for exclusive pedestrian timing, such that all pedestrian phases to display "WALK", allowing diagonal pedestrian crossing. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 4.13 | Local Controller Software shall provide for any pedestrian phase to be assigned as an exclusive phase, all other vehicular phases displaying red. | | Desired | X | | | |
| 4.14 | Menu selectable operational templates for 4-phase, 3- phase, lag/lead and lead/lag diamond phasing shall be provided. | | Desired | X | | | TTI and traditional diamond operations supported with both database templates and software feature-sets. |
| 4.15 | Where NTCIP 1202 specifies that a parameter shall be programmable in increments of 0.1 seconds, then the controller display shall likewise display it in increments of 0.1 seconds. Otherwise, data shall be displayed in increments of one second. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 4.16 | Simultaneous Gap Out shall allow the user to ensure that defined phases which will terminate, must simultaneously reach a point of being committed to terminate before Green timing termination shall begin. | Mandatory | | X | | | |
| 4.16.1 | Simultaneous Gap Out shall be enabled/disabled via program entry | Mandatory | | X | | | |
| 4.17 | Dual Entry provides that one phase in each ring must be in service, subject to compatibility, at all times | | Desired | X | | | |
| 4.17.1 | Dual Entry shall be selectable via program entry in the ring to be active | | Desired | X | | | Selectable by phase. |
| 4.18 | Red Revert – The Local Controller Software shall provide a minimum red indication ranging from 2-6 seconds following the Yellow Change interval and prior to the next display of Green on the same phase. | | Desired | X | | | MAXTIME allows Red Revert configuration on both a global and a per phase basis. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 4.19 | The Local Controller Software shall support Dallas Phasing and the Arlington Phasing. | Mandatory | | X | | | Support provided via pre-configured overlap type. |
| 4.20 | The Local Controller Software shall be capable of providing fully actuated and fixed time diamond interchange operation. The Local Controller Software shall be able to implement diamond operation as defined in section 11170.6 part E of the Texas Department of Transportation "Departmental Materials Specification 11170 – Fully Actuated, Solid-State Traffic Controller Assembly" dated July 2012. The Local Controller Software shall support the following diamond interchange operations: | | Desired | X | | | MAXTIME is approved and qualified by TxDOT |
| 4.20.1 | Figure 3 - Three Phase (Lag-Lag) | | Desired | X | | | |
| 4.20.2 | Figure 6 – Three Phase Variation (Lead-Lag) | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 4.20.3 | Figure 7 – Three Phase Variation (Lag-Lead) | | Desired | X | | | |
| 4.20.4 | Figure 4 – Four Phase w/ Overlaps (TTI Phasing) | | Desired | X | | | |
| 4.20.5 | Three Level Diamond Four Phase with Four Overlaps | | Desired | X | | | Requires additional database configuration. |
| 4.21 | The Local Controller Software shall be capable of adding custom predefined patterns that can be saved to be used on any controller. The Local Controller Software shall support the following custom predefined patterns: | Mandatory | | X | | | All pre-defined patterns/phasing provided via database templates. |
| 4.21.1 | SPUI | Mandatory | | X | | | |
| 4.21.2 | DLT | Mandatory | | X | | | |
| 4.21.3 | DDI | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 4.22 | The Local Controller Software shall have an option for a separate minimum green time, red revert, and advanced warning flasher for bicycles. | Mandatory | | X | | | Alternate min green called via detector option. Alternate bike phase can be called with unique red revert and warning flasher. Advanced operations can be programmed per phase. |
| 4.23 | The Local Controller Software shall have an option for a separate passage time for bicycles. | | Desired | X | | | Provided via bike detector extension times |
| 4.24 | The Local Controller Software shall have an extended button press option to lengthen walk times. | | Desired | X | | | Extended press time is user configurable. |
| 4.25 | The Local Controller Software shall have a safeguard to prevent the pedestrian phases from extending clearance phases at diamond interchanges. | | Desired | X | | | This operation was satisfied for the Cities of Dallas and Fort Worth using MAXTIME's advanced ped overlaps. |
| 4.26 | The Local Controller Software shall have an option for variable initial green time, with the following parameters: | | Desired | X | | | Provided in compliance with NTCIP 1202. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 4.26.1 | Added initial green time | | Desired | X | | | |
| 4.26.2 | Maximum initial green time | | Desired | X | | | |
| 4.27 | The Local Controller Software shall have an option for gap reduction, with the following parameters: | | Desired | X | | | |
| 4.27.1 | Time-Before-Reduction | | Desired | X | | | |
| 4.27.2 | Time-To-Reduce | | Desired | X | | | |
| 4.27.3 | Minimum Gap | | Desired | X | | | |
| 5 | TRANSIT PHASING - Local Controller Software shall provide: | | | | | | |
| 5.1 | Minimum of eight transit phases. | Mandatory | | X | | | Any vehicle phase can also be a transit phase. Transit priority provided via service phases assigned to one of 8 different prioritizers. See additional information in Proposal. |
| 5.2 | Transit phases to support two or three section control heads for bus/train indications. | Mandatory | | X | | | Advanced transit and bar signal operations are provided in a transit specific overlap type. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 5.3 | Advanced warning signal control per transit phase (solid or flashing indications). | Mandatory | | X | | | Provided as an overlap option. |
| 5.4 | Actuated or recall operation. | Mandatory | | X | | | |
| 5.5 | Normal or priority based service. | Mandatory | | X | | | |
| 6 | RINGS | | | | | | |
| 6.1 | Minimum of four rings (Single Intersection or two independent intersections). | Mandatory | | X | | | MAXTIME supports up to 16 rings. |
| 6.2 | Each of the four rings can be assigned to one of the two ring-groups. | | Desired | X | | | MAXTIME allows for up to 26 barriers which can tie rings together similar to NextPhase. In addition, ring offset plans allow rings to be offset internally (i.e. run multiple intersections with one controller) |
| 7 | OVERLAPS | | | | | | |
| 7.1 | The Local Controller Software shall provide internally generated Overlaps | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 7.2 | The Local Controller Software shall provide a minimum of sixteen timed Overlaps. | Mandatory | | X | | | MAXTIME supports 32 overlaps and 10 unique overlap tables which are selected by TOD |
| 7.3 | The Local Controller Software shall provide vehicle and pedestrian movements for each overlap. | Mandatory | | X | | | Any of the 32 overlaps can be configured as a pedestrian or vehicle overlap. NTCIP does not allow for a combined pedestrian/vehicle overlap type. |
| 7.4 | The Local Controller Software shall provide actuated pedestrian movements for each overlap. | Mandatory | | X | | | Pedestrian detectors can call overlaps directly, placing a service request on all included phases. |
| 7.5 | The Local Controller Software shall provide early and delayed walk timing for each overlap. | Mandatory | | X | | | Delayed walk provided as a standard overlap parameter. Early walk requires user logic however, the advanced functionality of MAXTIME ped overlaps satisfies most operations which previously required an "early walk" time. |
| 7.6 | The Local Controller Software shall provide pedestrian rest-in-walk across multiple phases. | Mandatory | | X | | | In addition, (and in conjunction with walk rest) the overlap can bridge walk/FDW through multiple service phases. |
| 7.7 | The Local Controller Software shall provide per overlap preempt timing (vehicle and pedestrian). | Mandatory | | X | | | Achieved via NTCIP logic. Entry and clearance times use the lesser of preempt time, or individual overlap times. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 7.8 | Each Overlap shall have its own timing parameters | Mandatory | | X | | | Overlap timing parameters include trail green, yellow, and red; min green; max green ext; delay; red revert; walk; ped clear; alt walk; and alt ped clear |
| 7.9 | Each overlap output shall be configurable to display any of the three output colors. | Mandatory | | X | | | MAXTIME also allows custom overlap template programming in which a user can define any output display based upon the current state of included, modifier or negative phases and re-use the custom template. |
| 7.10 | Each overlap output shall be configurable to be dark | Mandatory | | X | | | See previous comment. |
| 7.11 | In addition to defining parent phases, overlaps should be configurable with the following parameters that impact their operation: | Mandatory | | X | | | Also includes modifier overlaps, inhibit neg phases, trail green omit phases, negative ped overlaps, and green suppress phases. |
| 7.11.1 | Negative pedestrian phases | Mandatory | | X | | | |
| 7.11.1 | Negative vehicle phases | Mandatory | | X | | | |
| 7.11.1 | Negative overlaps | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 7.12 | If a negative vehicle or pedestrian phase is next and the overlap is green, the overlap should terminate and time its yellow change and red clearance interval before the negative phase displays green. | Mandatory | | X | | | Overlap clearance times are also accounted for in coordination calculations. |
| 7.13 | If a negative overlap is green when an overlap would normally be turning green then the overlap that is set to turn green will remain in red until the negative overlap has terminated. | | Desired | X | | | |
| 8 | FLASHING YELLOW ARROW (FYA) | | | | | | |
| 8.1 | The Local Controller Software shall support Flashing Yellow operation for left turn protective/permissive operation. The output of the flashing yellow arrow movement shall be configurable across two load switch outputs. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 8.2 | FYA detector logic shall be automatically selected by FYA type selection. | Mandatory | | X | | | This can be accomplished with background user logic templates however, using FYA overlaps allows users significantly more flexibility such as configuring an FYA Left- Turn and providing protected movement twice in the same cycle; using FYA and complex intersections, and easily modifying FYA with negative phases, ped movements, etc. |
| 8.3 | Program for start phase, opposing pedestrian movements, delay and skip red options. | Mandatory | | X | | | |
| 8.4 | It should be possible to omit the flashing yellow arrow by time-of-day | Mandatory | | X | | | |
| 8.5 | It should be possible to omit the protected green arrow by time-of-day | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 8.6 | <p>It should be possible to omit the flashing yellow arrow when a "conflicting" pedestrian phase is timing its WALK or DON'T WALK interval. The flashing yellow arrow should resume flashing when the pedestrian interval has completed. The minimum green time (programmed concurrently with the flashing yellow arrow) must be met in this scenario. This should be accomplished via program entry without using any additional logic or dummy phase.</p> | Mandatory | | X | | | Available for both right and left (terminates oncoming through to prevent yellow trap for late or recycled ped service) movements. Operation configured using standard overlap options and types. Dummy phases nor user logic are required. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 8.7 | The Local Controller Software shall allow programming of to omit the display of the red arrow when going from the protected condition to the permitted condition of the left turn display. In these cases the flashing yellow arrow would begin immediately after the solid yellow arrow completes its timing and remaining flashing through the programmed all-red clearance interval and the opposing green. | Mandatory | | X | | | |
| 9 | PEDESTRIAN HYBRID BEACON (PHB) MODULE - The Local Controller Software shall provide | | | | | | |
| 9.1 | Various operational modes with flash and carryover. | Mandatory | | X | | | |
| 9.2 | One or more can run independently with second ring group. | Mandatory | | X | | | MAXTIME can run up to 4 PHBs while timing an intersection. (Limited only by number of channels available) |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 9.3 | The Local Controller Software shall have the ability to specify points in a cycle where a pedestrian call will not be served. | Mandatory | | X | | | Call will be received but will not service until the points in the cycle specified. Recommend using a push button with a call indicator light for this application. |
| 10 | GENERAL DETECTION - The Local Controller Software shall provide | | | | | | |
| 10.1 | Minimum of sixty-four vehicle detectors. | Mandatory | | X | | | MAXTIME supports up to 72 vehicle detectors over 10 detector plans that are selectable by TOD |
| 10.2 | The Local Controller Software shall support speed, occupancy, and presence detection | Mandatory | | X | | | Speed detectors can be configured as a single detector or a trap with two detectors. |
| 10.3 | Each vehicle detector inputs shall be assignable to any one or more phases, via program entry | Mandatory | | X | | | MAXTIME supports multiple call phases |
| 10.4 | Programmable call and extend phases. | Mandatory | | X | | | |
| 10.5 | Delay and extend timing. | Mandatory | | X | | | |
| 10.6 | Stop-bar disconnect mode with carryover (extend) timer. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 10.7 | Stop bar disconnect mode for stop bar verse advanced detection. | Mandatory | | X | | | |
| 10.8 | Detector cross switching. | Mandatory | | X | | | |
| 10.9 | No presence/max fail detector diagnostics that can be disabled by TOD. | Mandatory | | X | | | MAXTIME also supports erratic count diagnostics by TOD. Users may also configure Min Recall, Min2 Recall, Max Recall, Max2 Recall, Max3 Recall, Fail Time or Fail Links to respond to failed detectors |
| 10.10 | A minimum of 16 Vehicle Detectors shall be assignable to a system detector function, via program entry | Mandatory | | X | | | Any or all of the 72 vehicle detectors can be assigned as a system detector to collect volume, occupancy, and/or speed. |
| 10.11 | Provision for Storing a Demand – The Local Controller Software shall support the following provisions for storing a demand: | Mandatory | | X | | | |
| 10.11.1 | The storing of a call for vehicle service on each vehicle phase when that phase is not displaying a Green indication. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 10.11.2 | The storing of a call for pedestrian service on phases equipped with pedestrian time setting, when that phase is not displaying a Walk indication | Mandatory | | X | | | |
| 10.12 | Placement of Maximum Recall – The Local Controller Software shall allow, via program entry, the ability to place a call on a phase such that the Green interval shall be extended to the Maximum Green Time. The programming of recall should be available as a global setting for a phase as well as on a per plan basis. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 10.13 | Placement of Minimum Recall – The Local Controller Software shall allow, via program entry, the ability to place a recurring demand for vehicle service on any phase when that phase is not in Green interval. The programming of recall should be available as a global setting for a phase as well as on a per plan basis. | Mandatory | | X | | | |

10.14
Placement of Pedestrian Recall – The Local Controller Software shall allow, via program entry, the ability to place a recurring pedestrian call which shall function in the same manner as an external pedestrian call, except that it shall not recycle the pedestrian service until a conflicting phase is serviced. The programming of recall should be available as a global setting for a phase as well as on a per plan basis.

Mandatory X

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 10.15 | Placement of Call at Phase Termination – The Local Controller Software shall have the user configurable ability to place a call on a terminating phase when the terminating phase has remaining time in the Passage Time. | | Desired | X | | | Provided via yellow/red detector lock. |
| 10.16 | Conditional Service – The Local Controller Software shall provide conditional service phase selection, via program entry. | | Desired | X | | | Supported via NTCIP 1202 Conditional service and Conditional reserve options. |
| 10.17 | The Local Controller Software shall collect high-density data. The data should be able to be stored locally for 30 days to be retrieved when a communication link is reestablished. | Mandatory | | X | | | Controller memory stores ~24 hours of high resolution data. Can be archived to USB drive or SD Card at a rate of 1 month/Gigabyte. Data is also available on controller in real-time. |
| 10.17.1 | The Local Controller Software shall collect event and detector data at resolutions of 0.1 seconds | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 10.17.2 | The Local Controller Software shall adhere to the Purdue controller enumerations schema (http://docs.lib.purdue.edu/jtrpdata) (Indiana Traffic Signal Hi Resolution Data Logger Enumerations) | Mandatory | | X | | | Intelligent has added approximately 30 additional enumerations that have been shared with the leading agencies through a pool fund study. Intelligent will provide the manufacturer specific enumerations to Kimley Horn if not yet implemented. |
| 10.18 | The Local Controller Software shall provide Automatic Detector Diagnostics for the following conditions | | Desired | X | | | User can configure failed state to link the detector to another detector input or enable the following recalls: min, min2, max, max1, max2, max3, none. |
| 10.18.1 | Max Presence | | Desired | X | | | |
| 10.18.2 | No Activity | | Desired | X | | | |
| 10.18.3 | Erratic Output | | Desired | X | | | |
| 10.18.4 | Failed Communications | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 10.19 | The Local Controller Software shall be able to place a vehicle or pedestrian call from the front panel on any phase or overlap that can be toggled off or will automatically be removed after a user selectable timeout period. | | Desired | X | | | Text UI supports Phase and Ped calls from front panel status screen. Web UI supports phase, ped, and overlap calls. |
| 11 | QUEUE DETECTION - The Local Controller Software shall provide | | | | | | |
| 11.1 | Minimum of sixteen queue detectors. | Mandatory | | X | | | Any of MAXTIME's 72 queue detectors can trigger 1 of 8 queue responsive plans. |
| 11.2 | Capability to detect traffic backups. | Mandatory | | X | | | Queue Responsive Plan is triggered by user configured vol and/or occupancy thresholds. |
| 11.3 | Capable of selecting alternate coordination patterns, maximum green timings or specified preempts. | Mandatory | | X | | | Users can also disable prioritizers based upon queue detection. If max green timing is changed users can configure from which phases this time will be subtracted. |
| 11.4 | Capability to provide advance green to clear vehicle movements prior to transit vehicle arrival | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 12 | PEDESTRIAN/BICYCLE DETECTION - The Local Controller Software shall provide | | | | | | |
| 12.1 | Minimum of sixteen pedestrian/bicycle detectors. | Mandatory | | X | | | MAXTIME supports up to 72 pedestrian detectors and 72 vehicle detectors either of which can be used for bicycle detection. |
| 12.2 | Programmable calls for pedestrian/bicycle phases. | Mandatory | | X | | | |
| 12.3 | Sequential pedestrian/bicycle call, allowing for sequential calling of two pedestrian/bicycle phases. | Mandatory | | X | | | |
| 12.4 | Each pedestrian/bicycle detector inputs shall be assignable to any one or more phases, via program entry | | Desired | X | | | |
| 12.5 | Delay and extend pedestrian/bicycle timing. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 12.6 | Be able to place a vehicle or pedestrian call from the front panel on any phase or overlap that can be toggled off or will automatically be removed after a user selectable timeout period. | Mandatory | | X | | | See response in item 10.9. |
| 13 | TRANSIT DETECTION - The Local Controller Software shall provide | | | | | | |
| 13.1 | Minimum of eight transit detectors. | Mandatory | | X | | | MAXTIME supports up to 32 transit detectors over 10 detector tables. |
| 13.2 | Programmable calls for transit phases. | Mandatory | | X | | | Transit detectors call Transit Prioritor routines |
| 13.3 | Delay and extend timings per each transit phase. | Mandatory | | X | | | Configured in split tables (use in free or coord) or use min/max greens. |
| 13.4 | Travel time delay. | Mandatory | | X | | | Provided in MAXTIME as "Delay" |
| 13.5 | Alternate travel times programmable by TOD. | Mandatory | | X | | | Can be configured using alternate detector plans by TOD. |
| 13.6 | Adaptive arrival time adjustment. | Mandatory | | X | | | Provided in MAXTIME as "Travel Time". |
| 14 | REMOTE TRANSIT DETECTION - The Local Controller Software shall provide | | | | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 14.1 | Minimum of thirty-two remote transit detectors. | | Desired | X | | | |
| 14.2 | Calls received from other intersections via Peer-to-Peer network. | Mandatory | | X | | | |
| 14.3 | Travel time delay. | Mandatory | | X | | | |
| 14.4 | Alternate travel times programmable by TOD. | Mandatory | | X | | | |
| 14.5 | Adaptive arrival time adjustment. | Mandatory | | X | | | |
| 15 | COORDINATION FEATURES - The Local Controller Software shall provide | | | | | | |
| 15.1 | The Local Controller Software shall be capable of providing coordinated operation | Mandatory | | X | | | |
| 15.2 | Minimum of one-hundred twenty-eight coordination patterns. | Mandatory | | X | | | |
| 15.3 | Cycle time and three offsets per plan and ring group. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 15.4 | Flexible global split adjustment for transition. | Mandatory | | X | | | |
| 15.5 | Flexible per phase split adjustment for transition. | Mandatory | | X | | | |
| 15.6 | Fixed/floating force-offs with per phase floating green parameter. | Mandatory | | X | | | MAXTIME allows for direct fixed or float phase option (no need for a floating green parameter) |
| 15.7 | Automatic permissive calculations, in single/multi band modes, with permissive limit timer. | Mandatory | | X | | | |
| 15.8 | Ability to enter up to two permissive windows (opening and force off) per phase in lieu of automatically calculating from split | | Desired | | X | | Multiple permissive modes allow for dynamic service windows. "Actuated Coord" mode allows more multiple permissive windows within the same cycle (i.e. controller runs free outside of coord phases) |
| 15.9 | Three pedestrian permissive modes per pattern. | Mandatory | | | X | | Multiple permissive modes allow for dynamic service windows. Need additional requirement information. (Requirement is to general, or proprietary). |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 15.10 | Selectable re-service phases (fully-actuated coordination). | Mandatory | | X | | | MAXTIME allows for full free operation outside of coordinated windows. Protects from skipping phases to return to Coord. Also supports individual phase reserve during coord (NTCIP) |
| 15.11 | Double service of phases without use of overlaps. | Mandatory | | X | | | Provided via NTCIP Phase Reserve Option (Free and Coord) |
| 15.12 | Actuated coordinated phases can gap-out early and redistribute unused time to movements with greater demand. | Mandatory | | X | | | "Early Coord Gap-out" feature supports this operation. Parameter specifies time coordinated phase can gap out prior to force off. |
| 15.13 | Programmable recalls, omits, and alternate base timing for each pattern. | Mandatory | | X | | | |
| 15.14 | Adaptive splits per timing pattern with global step and threshold values. | Mandatory | | X | | | During coordination, MAXTIME supports dynamic max green and can move split time via Queue Recovery Functionality |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 15.15 | Multiple interconnect modes to include at a minimum of TOD, central control via hardware or twisted pair, IP based communication. | Mandatory | | X | | | |
| 15.16 | In the absence of central control, a local controller can be operated in a "Master" mode utilizing twisted-pair, IP or hard-wire inner-connect connectivity. | Mandatory | | X | | | MAXTIME includes a master control module that meets the NTCIP 1210 Master standard. The master can operate mirror (TOD) or signature (Traffic Responsive) modes while operating an intersection. |
| 15.17 | Multiple transition modes shall be provided for programmed pattern changes. Controller shall have capability to cycle in a dwell state or short, long or combination thereof. Advanced transition mode that will ignore minimum pedestrian phase timings shall also be provided. | | Desired | X | | | |
| 15.18 | The offset be referenced (or be capable of being referenced) to the end of the green (beginning of yellow) of the coordinated phase(s). | Mandatory | | X | | | MAXTIME can also reference the begin of green, end of yellow and end of red. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 15.19 | Minimum pedestrian service time can exceed the split time for a phase. | Mandatory | | X | | | |
| 15.20 | The Local Controller Software shall support a local Adaptive mode that adjusts splits based on Phase gap outs and max outs. | | Desired | X | | | Provided via Dynamic Max which can operate during coordination. MAXTIME adaptive provides full split tuning (additional license fee) and runs on the controller's ATC API alongside MAXTIME. |
| 16 | PREEMPTION FEATURES - The Local Controller Software shall provide | | | | | | |
| 16.1 | Minimum of ten prioritized preempts. | Mandatory | | X | | | MAXTIME supports up to 16 preempts |
| 16.2 | Each Pre-emption input shall be programmable to have equal or higher priority. | Mandatory | | X | | | |
| 16.2.1 | Equal priority preempts shall be served on a first called, first served basis | Mandatory | | X | | | |
| 16.2.2 | Higher priority preempts shall override a lower priority preempt | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|-----------------------------------|
| 16.3 | Each preempt must include two track clearance states, dwell state and exit state. | Mandatory | | X | | | |
| 16.4 | Permit or allow the use of any phase/overlap for each preempt state. | Mandatory | | X | | | |
| 16.5 | Per phase preempt timing (vehicle and pedestrian) | Mandatory | | X | | | |
| 16.6 | Presence preempt input with optional fail-safe interlock input, Advanced Preempt Circuit capability. | Mandatory | | X | | | IL, OH, and IN operation provided |
| 16.7 | Utilize gate down input as part of Advanced Preempt Circuit to provide early termination of preempt feature, track clearance. | Mandatory | | X | | | |
| 16.8 | Check-in/Check-out preempt detection option with override timer. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 16.9 | Exit to programmed phase, next phase (phase following the active phase when preempt commenced), same phase (if phase was cut short at the start of preempt), or in-sync. | Mandatory | | X | | | MAXTIME also supports exit to queue recovery which exits to the phase that has been waiting the longest |
| 16.10 | Automatic yellow trap protection for all preemption sequences. | Mandatory | | X | | | Can be user disabled |
| 16.11 | Four soft preempts provided for step-by-step (special preempt sequence). | Mandatory | | X | | | Requirement too general or proprietary. However, MAXTIME can meet the same operational requirements of D4 soft preempts. |
| 16.12 | Eight state per soft preempt sequence (timed or actuated). | Mandatory | | X | | | See previous comment. Proprietary requirement. However, MAXTIME can satisfy same operation using existing preempt and prioritizer functionality. |
| 16.13 | Each of the soft preempt states allows programmable calls, omits, hold and force-offs for each phase and overlap. | Mandatory | | X | | | May require some user logic to satisfy requirement |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|-----------------------------------|
| 16.14 | The Local Controller shall provide user selectable entry and exit phases for each unique preempt input | | Desired | X | | | |
| 16.15 | At the Conclusion of any preempt call, the Local Controller Software shall provide an exit transition timing and signal display to a programmed return-to-normal condition. | | Desired | X | | | Provided via coord status screen. |
| 16.16 | All preempts inputs shall have priority over Automatic Flash. | | Desired | X | | | User definable option (Per NTCIP) |
| 16.17 | The Local Controller Software shall provide indications to identify the status of preempt operation. These indications shall include the following: | | Desired | X | | | |
| 16.17.1 | Preempt Call | | Desired | X | | | |
| 16.17.2 | Preempt in Control | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 16.17.3 | Preempt Interval | | Desired | X | | | |
| 16.17.4 | Preempt Interval Counter | | Desired | X | | | |
| 16.18 | During preemption operation, the overlaps should respect their parent phase programming unless specifically programmed to terminate during preemption. | | Desired | X | | | "Allow All Overlaps" option should be set to true in all default databases. |
| 17 | TRANSIT PRIORITY FEATURES - The Local Controller Software shall provide | | | | | | |
| 17.1 | Programmable transit priority options for each transit phase. | Mandatory | | X | | | |
| 17.2 | Operates based on arrival times using local intersection detection and remote "peer-to-peer" combined with estimated delay from upstream intersections. | Mandatory | | X | | | |
| 17.3 | Separate options for free or coordinated operation. | Mandatory | | X | | | |
| 17.3.1 | Extend only (no phase abbreviation) or Early/Extend operation. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 17.3.2 | Minimum phase green timing. | Mandatory | | X | | | |
| 17.3.3 | Maximum extend limit. | Mandatory | | X | | | |
| 17.3.4 | Optional vehicle/pedestrian phase omits. | Mandatory | | X | | | |
| 17.3.5 | Alternate sequence switching. | Mandatory | | | X | | Standard feature will be added in a future release under the DFW Local Controller Firmware Contract. |
| 17.4 | Adaptive arrival times to automatically compensate for varying station dwell times. | Mandatory | | X | | | |
| 18 | EMERGENCY VEHICLE PRIORITY - The Local Controller Software shall provide | | | | | | |
| 18.1 | Local Controller Software must support EVP field equipment (installed and maintained by various others). | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 18.2 | EVP field equipment is GPS based, no direct inputs to controller preemption | | Desired | | X | | GPS Vendor should be specified to determine if requirement met. Intelight has agreements with multiple GPS EVP vendors and will fully implement protocol as part of this contract. A design to meet this specification has already been discussed with several vendors. |
| 18.3 | All messaging must be passed directly to the controller via Ethernet (using a crossover cable if no Ethernet switch is present) and pass the Vehicle ID directly to the controller. No direct connection to preempt inputs is allowed. | | Desired | | X | | See previous |
| 18.4 | Raw inputs shall not be used in the detector racks. | | Desired | | X | | See 18.2 |
| 18.5 | EVP Travel Time shall be reported and available on status screen away from the intersection (in seconds), minimum of eighty seconds advance notice required. | | Desired | | X | | TSP algorithm currently supports this function. Integration with EVP will write time via REST interface or NTCIP |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 18.6 | EVP Vehicle ID shall visible from the controller front panel and in the controller logs | | Desired | | X | | See comment in 18.2 |
| 18.7 | Local Controller Software shall have the following available EVP inputs: | | Desired | | X | | See comment in 18.2 |
| 18.7.1 | A minimum of Minimum of four messages per direction, sixteen total. | | Desired | | X | | See comment in 18.2 |
| 18.7.2 | Two - Advance messages (four preferred). | | Desired | X | | | |
| 18.7.3 | One - Left turn message (latched). | | Desired | | X | | See comment in 18.2 |
| 18.7.4 | One - Check-out message (active when vehicle is at the stop-bar). | | Desired | X | | | See comment in 18.2 |
| 18.7.5 | Each of the advance messages shall not activate until the specified travel time away from the intersection is reached. | | Desired | X | | | MAXTIME uses the travel time to estimate arrival and reduce disruption to vehicle traffic |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---------------------|
| 18.8 | Local Controller Software shall provide input as default, "No Left Turn". | | Desired | | X | | See comment in 18.2 |
| 18.8.1 | Any required left turn request (per approach) must be logged. | | Desired | | X | | See comment in 18.2 |
| 18.8.2 | Left turn inputs shall be able to be "latched" call. | | Desired | | X | | See comment in 18.2 |
| 18.8.3 | Left turn signal shall only need to be on for minimum one second to latch. | | Desired | | X | | See comment in 18.2 |
| 18.9 | The natural controller sequence shall be preserved at all times. By default no phases are skipped and left-turn signals operate as normal unless requested by the emergency vehicle. | | Desired | X | | | See comment in 18.2 |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---------------------|
| 18.10 | No phase with demand shall be shortened to less than the alternate minimum green and the priority shall proportionally truncate all conflicting phases subject to this constraint. | | Desired | X | | | See comment in 18.2 |
| 18.11 | In the instance where phase truncation is necessary (with full vehicular demand on the conflicting movements), the controller shall not arrive on the service phase earlier than the specified travel time for that approach. | | Desired | X | | | |
| 18.12 | Local Controller Software shall have at least four emergency vehicle priority modules (one per approach). | Mandatory | | X | | | |
| 18.12.1 | Provides two-way communication between emergency / transit vehicles and the traffic signal to provide intelligent priority requests | Mandatory | | | X | | See comment in 18.2 |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---------------------|
| 18.12.2 | Interface to GPS equipment that provides travel time away. Vehicle ID and left-turn requests with the goal of maintaining arterial two-way progression | Mandatory | | | X | | See comment in 18.2 |
| 18 | EMERGENCY VEHICLE PRIORITY (cont.) - The Local Controller Software shall provide | | | | | | |
| 18.13 | Each module should consist of the following programming items: | | Desired | | | | |
| 18.13.1 | Primary service phase (thru phase) – activated by GPS advance message(s). | | Desired | | X | | See comment in 18.2 |
| 18.13.2 | Secondary service phase (left turn phase) – activated by GPS left-turn message. | | Desired | | X | | See comment in 18.2 |
| 18.13.3 | Flags with the ability to omit phases or pedestrian movements as necessary for each of the priority modules (no omits by default). | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 18.13.4 | Travel time parameter for the primary service phase (thru-phase) where the specified movement shall be green by the time the vehicle is that distance away. | | Desired | X | | | |
| 18.13.5 | Any conflicting walk rest shall be terminated once a conflicting emergency vehicle request is recognized by the controller. | | Desired | | X | | |
| 18.13.6 | On a coordinated street the opposing direction walk rest shall be terminated only if a conflicting secondary service phase is programmed. | | Desired | | X | | |
| 18.13.7 | Any walk rest parallel to the emergency vehicle shall rest as normal. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 18.13.8 | Travel time parameter for the secondary service phase (left-turn-phase) where the specified movement shall be green by the time the vehicle is that distance away. | | Desired | X | | | MAXTIME prioritizers support multiple service phases |
| 18.13.9 | Check out input – activated by GPS check-out message. | | Desired | | X | | |
| 18.13.10 | Maximum presence timer where the priority is ignored until the call is dropped. | | Desired | X | | | |
| 18.14 | A conflicting emergency vehicle priority request on the cross street shall be able to force-off the coordinated phases early in order to serve the green by the specified travel time. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---------------------|
| 18.15 | Local Controller Software shall have mechanism in place to prevent acceptance of increasing travel times from the GPS unit if the emergency vehicle were to encounter reduced speeds. | | Desired | | X | | See comment in 18.2 |
| 18.16 | All phases shall have an alternate priority minimum green (typically greater than the normal minimum green) that will apply if there is demand for a particular phase. | | Desired | X | | | See comment in 18.2 |
| 18.17 | Upon check-out the Local Controller Software shall immediately move onto the next phase if the priority is timing beyond the normal force-off point, subject to the alternate minimum green. | | Desired | | X | | See comment in 18.2 |
| 18.18 | Local Controller Software shall log all priority requests and left-turn requests, including Vehicle IDs. | | Desired | | X | | See comment in 18.2 |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 19 | STATUS/DIAGNOSTIC FEATURES - The Local Controller Software shall provide | | | | | | |
| 19.1 | A multitude of detailed controller status displays shall be available through the front panel display of the 2070 Controller. | Mandatory | | X | | | |
| 19.2 | At a minimum, the following status screens shall be user selectable: | Mandatory | | X | | | |
| 19.2.1 | Phase, ring and overlap status. | Mandatory | | X | | | |
| 19.2.2 | Transit phase/priority status. | Mandatory | | X | | | |
| 19.2.3 | Coordination status. | Mandatory | | X | | | |
| 19.2.4 | Preemption status. | Mandatory | | X | | | |
| 19.2.5 | Vehicle and Pedestrian detector status. | Mandatory | | X | | | |
| 19.2.6 | Transit priority status. | Mandatory | | X | | | |
| 19.2.7 | Cabinet/Field/ I/O Status. | Mandatory | | X | | | |
| 19.2.8 | System communication status. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--|
| 19.2.9 | Current active software version and intersection street names. | Mandatory | | X | | | |
| 19.3 | A minimum of six-thousand controller event log shall be provided. | Mandatory | | X | | | Provided via 1/10th second high resolution data |
| 19.3.1 | Multiple classes of events can be individually enabled for logging. | Mandatory | | X | | | By default, MAXTIME logs all events and filters/search queries allow users to view specific data |
| 19.3.2 | Logs can be retrieved and/or reset from ATMS connection (serial or IP), or from front panel. | Mandatory | | X | | | Requires integration with KITS |
| 19.4 | A minimum sixty days logging of volume/occupancy for sixteen detectors at fifteen minute intervals. | Mandatory | | X | | | May require use of USB depending on number of vehicles counted |
| 19.5 | A minimum six-hundred CMU/MMU time-stamped event log shall be accessible, that will include reason for failure and status of all the field outputs at time of fault. | Mandatory | | X | | | MaxTime provides full serial or ethernet integration with EDI monitors. |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------------------|
| 19.6 | All changes to the database should be time-stamped | | Desired | X | | | Also tracked by user |
| 19.7 | The Local Controller Software shall provide controller logs containing the following minimum information | | Desired | X | | | |
| 19.7.1 | Critical Response Frame Errors | | Desired | X | | | |
| 19.7.2 | Non-critical Response Frame Errors | | Desired | X | | | |
| 19.7.3 | Detector Errors | | Desired | X | | | |
| 19.7.4 | Local Flash Faults | | Desired | X | | | |
| 19.7.5 | Preempt | | Desired | X | | | |
| 19.7.6 | Power On/Off | | Desired | X | | | |
| 19.7.7 | Coordination transition | | Desired | X | | | |
| 19.7.8 | Coordination errors | | Desired | X | | | |
| 19.7.9 | Priority status | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 20 | CONTROLLER LOGIC REQUIREMENTS - The Local Controller Software shall provide | | | | | | |
| | At a minimum the following logic descriptions and functions must be provided as primary I/O logic requirements (OR, AND, NOT, NOR & NAND). | | | | | | |
| 20.1 | | Mandatory | | X | | | |
| 20.2 | All available "timed" parameters and status indicators for phases and overlaps should be able to be used in the definition of logic statements. | | Desired | X | | | |
| 20.3 | Logic statements shall be evaluated prior to the controller taking action directly based on an input. | | Desired | X | | | |
| 20.4 | 64 cabinet logic channels to accomplish custom controller I/O operation. | Mandatory | | X | | | MAXTIME supports 32 user programs, each with up to 64 logic statements providing a more powerful and advanced user logic than legacy logic channels. |

| Category ID | Requirement/Description | Mandatory | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------------------|------------------------------|--------------------|---|
| 21 | PEER to PEER LOGIC | | | | | |
| 21.1 | Local Controller Software must allow selected input and output functions from remote intersections to trigger an output function at the local intersection. Remote inputs and outputs will be received over the Ethernet port (ETH0) of the controller. Each peer channel shall perform Boolean logic on up to two remote input/output functions with an optional delay to trigger the peer logic channel and therefore assert the selected local output function. Local Controller Software will provide a minimum of 16 peer logic channels. | Mandatory | X | | | Each MAXTIME controller can have up to 255 peers which can be utilized in the User Logic programs |
| 22 | OUTPUTS/INPUTS | | | | | |
| 22.1 | All controller input and output functions can be mapped to any physical cabinet input and output for each of the supported cabinet types | Mandatory | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.2 | The Local Controller Software shall provide, via program entry, the following outputs: | Mandatory | | X | | | |
| 22.2.1 | Load Switch Drivers for Vehicle Phase – This output shall provide a Green, Yellow, and Red output for each vehicle phase. | Mandatory | | X | | | |
| 22.2.2 | Load Switch Drivers for Pedestrian Phase – This output shall provide a Walk, Pedestrian Clearance, and Don't Walk output for each pedestrian movement. | Mandatory | | X | | | |
| 22.2.3 | Check – This output shall indicate phase or vehicle phase call status | | Desired | X | | | |
| 22.2.4 | Phase On – This output indicates phase status | | Desired | X | | | |
| 22.2.5 | Phase Next – This output indicates the next committed phase. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.3 | The Local Controller Software shall provide the following inputs on a per ring basis: | | Desired | X | | | |
| 22.3.1 | Force Off in actuated mode terminates the Green timing of the active phase | | Desired | X | | | |
| 22.3.2 | Force Off in nonactuated mode terminates the Walk Hold of the active phase | | Desired | X | | | |
| 22.3.3 | Red Rest requires rest in Red of all phases in the timing ring | | Desired | X | | | |
| 22.3.3.1 | Registration of a serviceable conflicting call shall result in immediate advance for Red Rest to Green on the demanding phase | | Desired | X | | | |
| 22.3.4 | Inhibit Maximum Termination – disables the maximum termination functions of all phases in the selected timing ring. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 22.3.4.1 | Inhibit Maximum Termination does not inhibit timing of maximum green | | Desired | | X | | This feature can be added under the contract for no additional fee. |
| 22.3.5 | Omit Red Clearance – Omits the Red Clearance interval timings | | Desired | X | | | |
| 22.3.6 | Pedestrian Recycle – This input controls the recycling of pedestrian movements based on the operating mode | | Desired | X | | | |
| 22.3.6.1 | In actuated mode, the pedestrian movement shall be recycled if the pedestrian recycle input is active on the phase, a serviceable pedestrian call exists, and the hold input is active. | | Desired | X | | | |
| 22.3.6.2 | In non-actuated mode, the pedestrian movement is recycled if the pedestrian recycle input is active on the phase, the Pedestrian Omit is not active, and a serviceable conflicting call does not exist. | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.3.7 | Maximum II Selection – Allows the selection of the maximum II time on all phases in the selected ring | | Desired | X | | | |
| 22.3.8 | Maximum III Selection – Allows the selection of the maximum III time on all phases in the selected ring | | Desired | X | | | |
| 22.4 | The Local Controller Software shall provide the following outputs on a per ring basis: | | Desired | X | | | |
| 22.4.1 | The active phase is in its Green interval and operating in Actuated Mode | | Desired | X | | | |
| 22.4.1.1 | Minimum Timing – When timing in the Initial, Walk, or Pedestrian Clearance portions of the Green interval | | Desired | X | | | |
| 22.4.1.2 | Extension Timing – When timing that portion of the Green interval following the completion of the minimum timings | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.4.1.3 | Maximum timing – When timing that portion of the Green interval following the completion of the minimum timings, when not timing an extension and the maximum Green is timing | | Desired | X | | | |
| 22.4.1.4 | Green Rest – When timing that portion of the Green interval when the minimum timings are complete, Passage Timer is timed out and the Maximum Green timer is either timed out or has not started | | Desired | X | | | |
| 22.4.2 | The active phase is in its Green interval and operating in nonactuated Mode | | Desired | X | | | |
| 22.4.2.1 | Walk Timing – When timing in the Walk portion of the Green interval | | Desired | X | | | |
| 22.4.2.2 | Walk Hold – When the output is active, Walk timing is complete and the Hold input is active | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.4.2.3 | Pedestrian Clearance Timing – When timing the Pedestrian Clearance interval or the remaining portion of the Minimum Green | | Desired | X | | | |
| 22.4.2.4 | Green Rest – When the timing of the Pedestrian and Minimum Green are complete | | Desired | X | | | |
| 22.4.3 | The Active Phase is not in its Green interval | | Desired | X | | | |
| 22.4.3.1 | Yellow Change – When timing the Yellow Change | | Desired | X | | | |
| 22.4.3.2 | Red Clearance – When timing the Red Clearance | | Desired | X | | | |
| 22.4.3.3 | Red Rest – When timing is complete and a Red indication is displayed | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.5 | The Local Controller Software shall have the ability to utilize an alternate Yellow and All Red parameter based on an external input. | | Desired | | X | | |
| 22.6 | The Local Controller Software shall provide the following inputs, via program input, to each phase: | | Desired | X | | | |
| 22.6.1 | Hold – The hold input shall retain the Green indication on the selected phase. | | Desired | X | | | |
| 22.6.1.1 | Hold on a nonactuated phase | | Desired | X | | | |
| 22.6.1.2 | Hold on an actuated phase | | Desired | X | | | |
| 22.6.2 | Phase Omit - The Phase Omit input shall cause the omission of a phase | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 22.6.3 | Pedestrian Omit – The Pedestrian Omit input shall inhibit the selection of a phase due to a pedestrian call on that phase and to prohibit the servicing of a pedestrian call on that phase. | Mandatory | | X | | | |
| 22.6.4 | Maximum II Selection – Allows the selection of the maximum II time per phase | | Desired | X | | | |
| 22.6.5 | Maximum III Selection – Allows the selection of the maximum II time per phase | | Desired | X | | | |
| 23 | INITIALIZATION | | | | | | |
| 23.1 | The Local Controller Software shall provide the following features on a Per Unit basis: | Mandatory | | X | | | |
| 23.2 | Initialization - Initialization shall occur after either of the following conditions: | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 23.2.1 | Restoration of power after a defined power interruption | Mandatory | | X | | | |
| 23.2.2 | Activation of an External Start input | Mandatory | | X | | | |
| 23.3 | The Local Controller Software shall provide a program entry for initialization to allow define initialization start-up at the beginning of the Green, Yellow, or Red interval of any phase or nonconflicting phase pair | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 23.4 | Upon start up, software shall automatically go into time-of-day/day-of-week mode, and shall operate using the current timing plan called for in the time-of-day schedule. No intervention shall be required to operate according to the schedule. If at any time the clock is updated, whether through the keyboard or by means of the central software or portable computer, and the new time corresponds to a different timing plan, the controller shall begin to operate the new timing plan automatically. | Mandatory | | X | | | |
| 24 | ALTERNATE SEQUENCE | | | | | | |
| 24.1 | Alternate Sequence – The Local Controller Software shall provide fifteen alternatives to the standard sequence | | Desired | X | | | MAXTIME supports 19 alternative sequences (20 total sequences) |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 24.2 | The alternate sequences shall provide every combination of lead-lag operation for an eight phase Dual Ring configuration. | | Desired | X | | | |
| 24.3 | The Alternate sequence shall be user definable | Mandatory | | X | | | |
| 24.4 | The Alternative Sequence shall be selectable by Timing Plan | Mandatory | | X | | | |
| 24.5 | It shall be possible to define any phase as restricted from operating concurrently with any other phase with which it would otherwise be able to operate concurrently without the use of logic programming. | Mandatory | | X | | | |
| 24.6 | The Local Controller Software shall allow programming of Uneven Double Cycling | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 24.7 | The Local Controller Software shall allow programming to serve certain or all phases of an intersection twice within the corridor's background cycle. | Mandatory | | X | | | Operation requires the use of overlaps. |
| 24.7.1 | The split time for first and second service shall be separately defined. | Mandatory | | X | | | |
| 24.7.2 | Phases can be omitted from either the first or second service. | Mandatory | | X | | | |
| 24.8 | The Local Controller Software shall allow programming of twice-per-cycle servicing of left turns | Mandatory | | X | | | Requires use of overlaps |
| 24.8.1 | Each left turn service should have a split time that is separately defined. | | Desired | X | | | |
| 24.8.2 | Twice-per-cycle servicing of left turns shall be able to be implemented by time-of-day | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|---|
| 24.8.3 | Twice-per-cycle servicing of left turns shall be demand driven using vehicle detectors | | Desired | X | | | Queue Responsive Plans can call alternate patterns/sequences to provide dynamic double service. |
| 25 | SPECIAL FUNCTIONS | | | | | | |
| 25.1 | The Local Controller Software shall provide a minimum of 16 special functions | Mandatory | | X | | | |
| 25.2 | Each special function shall be controllable from the central control | Mandatory | | X | | | |
| 25.3 | Each special function shall be controllable from the local time-of-day schedule | Mandatory | | X | | | |
| 25.4 | Each special function shall be controllable for the special function inputs | Mandatory | | X | | | |
| 25.5 | Each special function shall be programmable per plan and pattern | Mandatory | | X | | | |
| 26 | SAFEGUARDS | | | | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 26.1 | Local Controller Software shall include safeguards to preclude dangerous or undesirable intersection operation. | | Desired | X | | | |
| 26.2 | These safeguards shall, as a minimum, include range checking, and coordinated timing plan diagnostics for each pattern/split combination. | | Desired | X | | | |
| 26.3 | At a minimum, timing plan diagnostics shall check for the following: | | Desired | X | | | |
| 26.3.1 | Split times which violate minimum phase lengths (minimum green + yellow + all red) | | Desired | X | | | |
| 26.3.2 | Split times which violate pedestrian times (walk + flashing don't walk + yellow + all red) | | Desired | X | | | |
| 26.3.3 | Split times which do not add up to cycle length | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 26.3.4 | Split times which cause barriers to not be aligned. | | Desired | X | | | |
| 26.4 | The diagnostics shall check for split time violations which occur during short way correction mode as well as those which occur during the programmed cycle length for a given coordination pattern. | | Desired | X | | | |
| 26.5 | Checking for splits which violate pedestrian times shall not prevent the use of vehicular splits which are less than the pedestrian times | | Desired | X | | | |
| 26.6 | When errors occur, the results shall be displayed clearly and concisely with information sufficient for timely correction by the operator | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 26.7 | If there are no errors, the controller shall service all serviceable phases and pedestrian movements with calls during every cycle. This shall occur regardless of whether or not the controller is in transition from one offset to another. The controller shall service every serviceable phase even while in transition from one phase sequence to another, and while leaving pre-emption. | | Desired | X | | | |
| 27 | OPERATIONS | | | | | | |
| 27.1 | The Local Controller Software shall be capable of providing internal Time Base Control, via program entry | Mandatory | | X | | | |
| 27.2 | The Local Controller Software shall be capable of being set to manually operate in a selected timing plan, via program entry | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 27.3 | The Local Controller Software shall be capable of operating in Free Mode | Mandatory | | X | | | |
| 27.4 | The Local Controller Software shall allow Start-up Flash Operation | Mandatory | | X | | | |
| 27.4.1 | The duration of start-up flash shall be programmable for 0-255 seconds in one second increments | Mandatory | | X | | | |
| 27.5 | The Local Controller Software shall provide Automatic Flash Operation | Mandatory | | X | | | |
| 27.5.1 | The Entry phases to Automatic Flash shall be selectable, via program entry | | Desired | X | | | |
| 27.5.2 | The Exit phases from Automatic Flash shall be selectable, via program entry | Mandatory | | X | | | |
| 27.5.3 | When exiting Automatic Flash, calls shall be placed on all vehicle and pedestrian movements | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|--------------------------------------|
| 27.6 | Users shall be capable of setting date and time settings in the Local Controller Software. | Mandatory | | X | | | |
| 27.6.1 | The Local Controller Software shall be capable of automatically adjusting for Daylight Savings Time using programmed month/week. | Mandatory | | X | | | |
| 27.7 | The Local Controller Software shall allow selection of timing plans on a time-of-day/day-of-week basis | Mandatory | | X | | | |
| 27.7.1 | The Local Controller Software shall allow up to 40 weekly time-of-day schedules | Mandatory | | X | | | MAXTIME supports up to 100 schedules |
| 27.8 | The Local Controller Software shall be capable of scheduling fixed holidays | Mandatory | | X | | | |
| 27.9 | The Local Controller Software shall be capable of scheduling floating holidays | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 27.9.1 | Floating holidays shall be able to be defined by the occurrence of the specific day within the month (for example 4th Friday in November not Friday during the 4th week in November). | Mandatory | | X | | | |
| 27.10 | The Local Controller Software shall be capable of scheduling different seasons of the year. This would enable the calling of different schedules/timing plans during a particular season. (For example a school year.) | Mandatory | | X | | | |
| 27.10.1 | Seasons should be specified by indicating the start and end dates for each season | Mandatory | | X | | | |
| 27.10.2 | If a specific season is not specified for a given day then the day schedule for the default season should be run | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|--|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 28 | SPECIAL DEVICES | | | | | | |
| 28.1 | The Local Controller Software shall be capable of operating Changeable Lane Assignment Signs (CLAS). This functionality can be direct, or by means of making active specific controller outputs. | Mandatory | | X | | | |
| 28.1.1 | The operation of the CLAS shall be assignable by Time-of-Day and by plan. | | Desired | X | | | |
| 28.1.2 | CLAS operation shall include clearance intervals to allow safe change from one assignment to another | | Desired | X | | | |
| 28.1.3 | CLAS shall have continuous on/off control from the Local Controller Software | | Desired | X | | | |
| 28.2 | The Local Controller Software shall be capable of operating active "No Right Turn" or "No Left Turn" signs at railroad crossings | | Desired | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 28.3 | The Local Controller Software shall be capable of collecting data from external sources including Bluetooth and Wi-Fi | | Desired | | X | | Requires integration of 3rd party products such as BlueMac. |
| 28.4 | There will be adequate diagnostics to troubleshoot any possible problems. | | Desired | X | | | |
| 28.5 | There will be a log file to review historical events. | | Desired | X | | | |
| 28.6 | The Local Controller Software shall provide NMEA 0183 support for any compliant GPS device (date and time set) | Mandatory | | X | | | |
| 29 | COMMUNICATIONS | | | | | | |
| 29.1 | The Local Controller Software shall be capable of communicating using TCP/IP Ethernet Standard Protocol | Mandatory | | X | | | |
| 29.1.1 | The Local Controller shall allow the following Ethernet Settings: | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|----------|
| 29.1.1.1 | IP Address | Mandatory | | X | | | |
| 29.1.1.2 | Subnet Mask | Mandatory | | X | | | |
| 29.1.1.3 | Broadcast Address | Mandatory | | X | | | |
| 29.1.1.4 | DHCP enable | Mandatory | | X | | | |
| 29.2 | The Local Controller Software shall allow remote ping to verify communication in an IP network. | | Desired | X | | | |
| 29.3 | High data traffic or network storms should not impact the operation of the Location Controller or cause the intersection to go into flash. | Mandatory | | X | | | |
| 29.3.1 | A loss of communication for a period of time to a Local Controller should not prevent that Local Controller from resuming communication (all functions) once communication is restored. | Mandatory | | X | | | |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|---|
| 29.3.2 | A delay in communication due to high network latency for a period of time to a Local Controller should not prevent that Local Controller from operating normally. | Mandatory | | X | | | |
| 29.4 | The Local Controller Software shall have the ability to communicate with detector equipment via the SDLC interface when installed in a 332 or 336 cabinet | Mandatory | | X | | | |
| 29.5 | The Local Controller Software shall support the triggering of all preempts from an external source via the ethernet port. | | Desired | X | | | |
| 29.6 | The Local Controller Software shall support the triggering of all transit priority features from an external source via the ethernet port. | | Desired | X | | | Any option can be set via MAXTIME's Restful API |
| 29.7 | The Local Controller Software shall have the ability to receive every input via the ethernet port. | | Desired | X | | | Any option can be set via MAXTIME's Restful API |

| Category ID | Requirement/Description | Mandatory | Desired | Currently Available | Available with Configuration | Cannot be Provided | Comments |
|-------------|---|-----------|---------|---------------------|------------------------------|--------------------|--|
| 29.8 | The Local Controller Software shall provide buffering capability of all data so that a temporary loss in communication does not result in a loss of real-time data being sent to central. | Mandatory | | X | | | Messages currently customized for MIST, can also be customized for KITS or KITS can upload 1/10th second Purdue Data. Standardized NTCIP buffers such as Vol/Occ are supported |

Attachment B – Scope of Services

1. Project Requirements

1.1 The Parties have compiled a comprehensive list of functional and technical requirements that Contractor shall provide. Those requirements are identified in the Requirements Traceability Matrix (“**RTM**”), attached hereto and incorporated herein for all purposes as **Attachment A**. The RTM provides an extensive list of functionality requirements that are identified as either “mandatory” or “desired”. Contractor shall provide each mandatory requirement indicated as “Available” in the RTM. Contractor shall provide each mandatory requirement indicated as “Available with Configuration” in the RTM if appropriate configuration is applied for the applicable requirement. The Parties intend to achieve as many of the desired requirements as possible while balancing cost with best value.

2. Support for National Transportation Communication for ITS Protocol (“NTCIP”)

2.1 General. The Software shall comply with all NTCIP standard documents. Compliance shall be to the current approved or recommended version(s) of the relevant NTCIP standards as of the date of the initial acceptance of the Software by the City. The Software must be able to implement nationally defined NTCIP messages as specified by the RTM.

2.2 Documentation. The Software shall be supplied with full documentation. Documentation shall include electronic and hard copies. The electronic copy shall be provided on a flash drive, DVD, or CD-ROM. The documentation shall include all NTCIP standard Management Information Bases (“**MIB**” or “**MIBs**”) and extensions, developer-specific MIBs, and all Simple Network Management Protocol (“**SNMP**”) and Simple Mail Transfer Protocol (“**SMTP**”) data elements. All MIBs shall be provided in American Standard Code for Information Exchange (“**ASCII**”) format using ASN.1 notation.

2.3 MIB Extensions. Contractor shall clearly define all MIB extensions. Primarily, all extensions shall be accomplished by the following methods:

2.3.1 Extending the capabilities of existing standard features.

2.3.2 Defining new data elements or features under a developer-specific MIB extension.

To the extent possible, the replacement of a partially complete feature with a complete custom feature shall be avoided.

2.4 Support of NTCIP Standards, Amendments and Revisions. Contractor shall address any proposed revisions or draft amendments to the required NTCIP MIBs available during the Beginning Stage and the impact on the proposed Software’s NTCIP compliance and/or ability to meet the functional requirements of this specification. The “Beginning Stage” begins upon the effective date of the Ordinance awarding the Agreement or date specified in the award letter, whichever is later, and ends on the one (1) year anniversary of the effective date.

2.5 Object Range Values. All objects required by these specifications shall support all values within their standardized ranges, unless otherwise approved by the City's Project Manager. A size, range, or enumerated listing indicated in the object's SYNTAX field or through descriptive text in the object's DESCRIPTION field of the relevant standard defines the standardized range. Contractor shall prepare a table of object range values for each object in NTCIP Standards 1201 and 1202 and identify any variances from the standard ranges that are required to meet this specification.

2.6 NTCIP Standards. Contractor shall define an entire NTCIP stack and identify the NTCIP or other standards that will be required at each level to meet the specifications contained in the Contract Documents. For each NTCIP standard, Contractor shall complete a profile implementation conformance statement ("PICS") identifying each required object. All mandatory objects identified in the standards shall be included in the PICS. At a minimum, the Software shall comply with the following standards:

General

- 2.6.1 NTCIP 1101 v01.12 - NTCIP Simple Transportation Management Framework
- 2.6.2 The Software shall comply with Conformance Level 2
- 2.6.3 NCTIP 1102: 2004 – NTCIP Octet Encoding Rules (OER)
- 2.6.4 NTCIP 1103 v01 - NTCIP Transportation Management Protocols (TMP)
- 2.6.5 The Software shall include support for the "Simple Fixed Message Protocol" (SFMP)
- 2.6.6 NTCIP 8004 v01 - NTCIP Structure and Identification of Management Information (SMI)

Information Level

- 2.6.7 NTCIP 1201v03 – NTCIP Global Objects (GO) Definitions
- 2.6.8 NTCIP 1202:2005 – NTCIP Object Definitions for ASC
- 2.6.9 The Software shall fully implement all mandatory objects of all mandatory and optional conformance groups defined in this standard

Application Level

- 2.6.10 NTCIP 2303:2001 v01.06 – NTCIP AP-FTP
- 2.6.11 NTCIP 2301: v02 - NTCIP AP-STMF

Transport Level

- 2.6.12 NTCIP 2201:2003 - NTCIP TP-Transportation Transport Profile
- 2.6.13 NTCIP 2202:2001 - NTCIP TP-Internet (UDP/IP) Transport Profile

Subnetwork Level

2.6.14 NTCIP 2101:2001 - NTCIP SP-PMPP/RS232

2.6.15 NTCIP 2104:2003 – NTCIP SP-Ethernet

Contractor shall identify and comply with any additional NTCIP or other standards necessary to meet the specifications of the Contract Documents.

3. Possible Database Conversions

3.1 The City may be interested in acquiring additional services for providing database conversions. There are three categories or classes of database conversions: simple, moderate, and complex. An example of an intersection with low complexity would be a 2 phase operation, such as the intersection of Blanco Road at Cadillac Way. An example of an intersection of medium complexity would be an eight phase operation, such as Babcock Road at Huebner Road. An example of an intersection of high complexity would be a diamond operation, such as Braun Road at Loop 1604.

4. City's Responsibilities

4.1 The City will be responsible for the following:

- 4.1.1 Providing single point of contact for all technical and operational issues.
- 4.1.2 Converting all controller databases from NextPhase to the new firmware except those controller databases that the contractor is being paid to convert.
- 4.1.3 Executing the Contract and all resulting delivery orders.
- 4.1.4 Testing the controller Software for acceptance before field deployment at the following milestones:
 - 4.1.4.1 Initial delivery of the Software.
 - 4.1.4.2 Final acceptance of Software which meet all minimum requirements.
 - 4.1.4.3 Upgrade testing conducted for all upgrades, and other milestones as required.
- 4.1.5 Reporting all suspected issues and concerns to Contractor.
- 4.1.6 Changing hardware, such as the 1C card or ATC controller, to complete the requirements of the Software.

5. Contractor's Responsibilities

5.1 Contractor shall be responsible for the following:

- 5.1.1 Providing single point of contact for all technical and operational issues.
- 5.1.2 Providing Software license agreement.
- 5.1.3 Providing Software MIB.

- 5.1.4 Providing Software.
- 5.1.5 Providing Software user manual and other supporting documentation.
- 5.1.6 Providing specified Items.
- 5.1.7 Providing training and oversight of the conversion of the first 20 controller databases from NextPhase to the new firmware.
- 5.1.8 Converting controller databases requested by the City.
- 5.1.9 Working with Kimley-Horn (as identified below).
- 5.1.10 Supporting all tests conducted by the City.

6. Working with Kimley-Horn for Support in KITS

6.1 The City has a significant investment in the KITS software. Contractor of the supplied Software will play an important role in the advancement of traffic management and control. It is critical that all parties under contract to the City place mobility and congestion management as the number one priority. To that end, all parties shall uphold open communication and sharing of information, such as any changes in the Contractor's Software (subject to the stated technical requirements), shall be communicated immediately and openly to Kimley-Horn so that the KITS software can be modified accordingly for the life of the use of the software. Non-Disclosure Agreements may be utilized to protect Contractor's rights. The withholding of any critical information may be considered sufficient grounds for termination of this Agreement for material breach and possible litigation.

6.2 Kimley-Horn shall be responsible for the following:

- 6.2.1 Working with Contractor in the exchange of communication protocols for all objects.
- 6.2.1 Providing quick feedback to Contractor during testing to report on issues identified.
- 6.2.3 Cooperating with Contractor to ensure compliance.

7. Federal Funding

7.1 This Agreement will be supported in part with federal funds; therefore, federal laws and standards apply and are included in this Agreement.

8. Maintenance and Support

8.1 Contractor warrants the ATC Traffic Controller, subject to the listed exclusions and limitation of liability, as stated in Contractor's Statement of Warranty for ATC TRAFFIC CONTROLLER, attached hereto and incorporated herein for all purposes as **Exhibit A**.

8.2 Contractor warrants the 2070 1C - CPU, subject to the listed exclusions and limitation of liability, as stated in Contractor's Statement of Warranty for 2070 1C - CPU, attached hereto and incorporated herein for all purposes as **Exhibit B**.

8.3 Contractor warrants the Software, subject to the listed exclusions and limitations of liability, as stated in Contractor's Standard Warranty Software Products, attached hereto and incorporated herein for all purposes as **Exhibit C**.

8.4 The City may elect to extend the warranties identified in Sections 8.1, 8.2, and 8.3 above beyond the initial warranty periods or any extensions thereof, by executing an annual maintenance and support agreement with Contractor. Such maintenance and support agreement shall also extend all warranty provisions listed in **Exhibit A**, **Exhibit B**, and **Exhibit C** respectively for each warranted product.

8.5 Contractor shall provide a maintenance and support agreement that City may enter into at City's sole option. The maintenance and support agreement may be renewed at City's sole option on an annual basis and shall be paid according to the Price Schedule. At a minimum, the maintenance and support agreement shall include access to an Intelight on-call phone number with an appropriate staff member available between the hours of 7:00 a.m. to 7:00 p.m. CT. The maintenance and support agreement shall also include email, webinar, and on-site support for Software bug fixes, annual new releases, and other necessary preventative, diagnostic, replacement, and repair procedures.

8.6 If the City does not enter into a maintenance and support agreement with Contractor, or if the maintenance and support agreement expires and the City does not choose to renew, the City may purchase Software upgrades for a reduced price at any time.

9. Software Upgrades

9.1 During the initial warranty period and all subsequent maintenance and support agreement periods, the selected Contractor shall provide all Software upgrades at no cost to the City. Software upgrades shall include all maintenance, support, and functionality upgrades. New functionality upgrades shall include all upgrades to the Software regardless of the source of the new functionality.

9.2 Software upgrades shall include maintenance updates to correct defects in the Software or major upgrades that add new functional features to the Software.

9.3 Each upgrade shall be accompanied by a file describing the changes/revisions in the Software. Each upgrade shall include new documentation including the user manual, installation guide, and the MIB.

9.4 All upgrades shall maintain compatibility with the requirements presented in this contract including hardware, functionality, communications, and compliance to applicable standards.

10. Training

10.1 Contractor shall provide training on the Software prior to and during field deployment and implementation. Following deployment and implementation of the Software, and within the initial warranty period, Contractor shall provide an additional training annually as requested by the City. Contractor shall provide the quantity of hours recommended to adequately instruct the City signal technicians and engineers in the use of the proposed Software. Training shall be tailored for the specific audience (i.e. management, engineers, field technicians) to be trained. Prior to any training, Contractor shall provide to the City for review and approval, a training syllabus and all training materials of the training program.

10.2 Training Program. Intelight will provide training before, during, and after the MaxTime deployment so that users will be prepared for the incoming Software system, while also having the opportunity to receive a review and ask follow-up questions after some time using the deployed system. Intelight will facilitate a total of 48 hours of on-site training before and during deployment as shown below.

10.2.1 TRAINING CLASS TYPES AND ESTIMATED LENGTH (1 day = 8 hours including lunch and breaks):

- MaxTime Basic (1 Day) – This training will train City staff on the use of the traffic signal controller Software. Training will cover logging into the controller, working from the front panel, and the Web User Interface. The training will encompass all basic features required to program signal timings; troubleshooting field issues; database management, and as time permits, advanced features will be introduced;
- MaxTime Administration (1/2 day) – This training will train City staff on all administrative procedures, such as managing controller user accounts centrally, central and local firmware management, and management of the Application Programming Interface (API);
- MaxTime Maintenance (1/2 day) – This informal training will train City staff/technicians on working with the Software for maintenance and troubleshooting.
- MaxTime Advanced (1 day) – This training will train small groups of staff to give more individual and in-depth instruction tailored to the City staff user type; focusing on advanced user logic, transit priority, and other advanced MaxTime features and modules.

10.2.2 PROPOSED TRAINING PROGRAM

10.2.2.1 Prior to Field Deployment:

- MaxTime Basic
- MaxTime Admin

- MaxTime Maintenance

10.2.2.2 During Field Deployment (After ~25 controllers have been deployed):

- MaxTime Basic
- MaxTime Advanced
- MaxTime Maintenance

10.2.2.3 Post Field Deployment (After 90% of all controllers have been upgraded):

- MaxTime Advanced
- MaxTime Maintenance

10.3 Training Location and Equipment. Training will be performed at the City of San Antonio's designated facilities and will be presented in English. Intelight will cater training to be delivered utilizing the equipment provided by the City (projectors, screens, etc.), and will request the equipment from the City with ample time to prepare. If additional non-standard equipment is required, Intelight will provide said equipment as needed. Intelight will provide ten (10) copies of the training manuals to the City for each course. Additionally, all materials and updates to the materials will be provided electronically. The training courses will be designed to be interactive and hands on. The training will utilize virtual or 2070 controllers, as well as the MaxTime web interface on trainee's electronic devices (laptops, tablets, etc.). The necessary Software for training will be provided by Intelight.

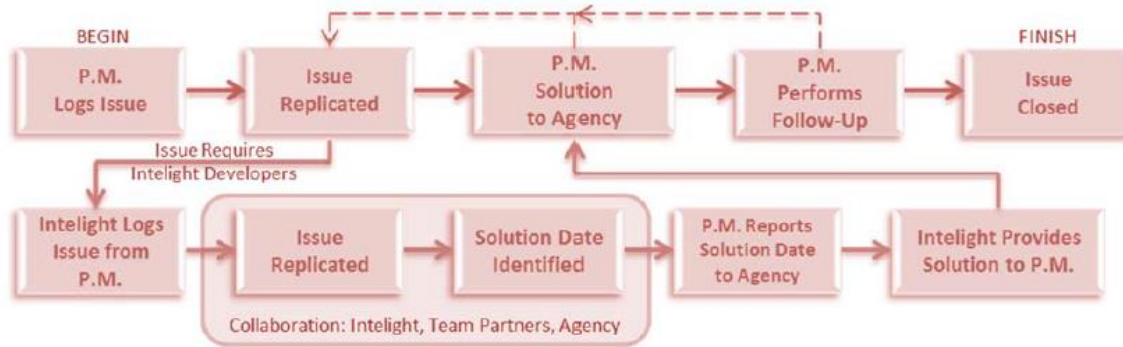
11. Support Team

11.1 Contract shall maintain an expert team of traffic signal timing engineers, field support staff, and technicians during the Term and any renewals or extensions of this Agreement.

12. Support Work-Flow

12.1 If a Software issue is found, the City may notify Contractor by calling Contractor's Project Manager or logging a ticket on Contractor's website at the following address: <https://support.inteligh-its.com/>. Regardless of the reporting mechanism, Contractor will immediately open a web-ticket for each issue reported. Throughout the resolution process for each issue, Contractor shall timely notate status updates on the issue's web-ticket so that the City may view updates to their request on Contractor's website.

12.2 The figure below reflects Contractor's issue resolution process.



13. Value-added Propositions

13.1 Contractor's Representations. Contractor acknowledges and agrees that it has made the representations below to the City, and the City has reasonably relied on such representations in entering into this Agreement. Contractor shall, at a minimum, provide the following:

13.1.1 On-Board Performance Metrics. Contractor's Software package contains on-controller signal performance metrics to aid field staff in troubleshooting and managing signal operations. The City shall have access to visualizations of the past 24-hours of high resolution data collected and stored directly on the controller. Current reports include the following:

- (i) Phase Termination Report – The report provides a visualization of phase terminations as colored dots plotted over time. Users can quickly look at the density of dot colors and determine if a phase is gapping out, forcing off, or maxing out frequently. Comparing the terminations with other phase terminations may quickly indicate phase in need of split time and those who have time to spare.
- (ii) Coordination Report – The report plots the values of the controller's master and local cycle timers and offsets over time. From this report, users can quickly see how often the controller is transitioning and how much the controller needs to transition. When operating in free the report provides a running timeline of the signal's natural cycle length.
- (iii) Service Time Report – Split Monitor with dynamic views allowing the user to display line-graphs, bar charts, add/remove phases from the report, etc.
- (iv) Detailed Event Report – Provides a custom report that users can query the raw 1/10 second data stored on the controller. Using a web-browser, users can run advanced, custom queries on the controller's high resolution data while directly connected to the controller.

13.1.2 On-Board Status Replay. In addition to performance reports, Contractor's Software is the only local controller software to include an on-board, on-demand "Status Replay." Status replay allows a user to replay the past 3-4 hours of controller activity directly from the high resolution data event log. Status replay will replay phase, ped and overlap states, detector calls, phase and overlap timers, and show the split logs in corresponding time and 1/10th second resolution. Replay controls include:

- (i) Fast Forward;
- (ii) Rewind;
- (iii) "Jump to time" slider bar;
- (iv) Play/Pause;
- (v) Slow motion (-10x speed);
- (vi) Fast motion (>10x speed); and
- (vii) Jump to last stored failure (Caches all data leading up to a flash event).

13.1.3 Mass Deployed Software Updates Without Restart. Software updates may be mass/centrally scheduled and deployed using Contractor's included Software application manager or locally deployed at the intersection using a USB or laptop. Overall, Software updates take approximately five minutes. Previous version of the Software are stored on the controller so the users may "roll-back" the controller to a previous version of the Software after an update.

- (i) To update the controller's Software locally, the user places the Software installer file on a flash drive, inserts the flash drive into the controller's USB hub, and, via the ATC API, runs Contractor's "Application Manager" to install the update. The user may select to install the update on a live intersection without requiring a power cycle or controller reboot. Once the update is complete, the controller will verify that the new version of the Software is safe to run the intersection and will switch from the existing Software version to the updated version during an all red period.
- (ii) Using the included Software application manager, system administrators may schedule, and mass deploy Software updates to field connected devices. The application manager monitors the Software update process for each device and alerts the user of successful and failed updates, if any. Users may also run system-wide reports to query deployed Software versions and the dates the controllers were updated.

13.1.4 Misc. Unique Functionality. Contractor's Software includes a suite of basic and advanced operations to provide numerous unique, value-add features. These features include, but are not limited to, the following:

- (i) Onboard web server - Monitor and configure timings wirelessly from a laptop, tablet, or smart-phone without database editor or 3rd party software
- (ii) Runs Exclusively on Linux O/S
- (iii) Supports Serial and/or Ethernet Communications
- (iv) 40 Phases, 16 Rings, 20 Sequences, 32 Overlaps
- (v) 32 Phase Tables, 10 Detector Tables, 10 Overlap Tables (Select by TOD)
- (vi) Built-In Master/Closed Loop Functionality (Included)
- (vii) Peer-to-Peer communications (Included)
- (viii) Transit Prioritor (Included)
- (ix) Full NTCIP MIB Supplied to City for support of MAXTIME in the City's central system
- (x) Preconfigured or User Defined Cabinet Support (DFW 332, DFW 336, DFW 337, CalTrans 332, 336, TS-1, TS-2, ITS, ATCC)
- (xi) Intuitive and advanced user logic programming
- (xii) Monitor and modify timings from Windows and Apple computers, IPAD, Tablets, Smart Phone without special software
- (xiii) Store and switch between hundreds of timing databases on controller
- (xiv) Easy, automated Software updates via Network or USB flash drive (no need for terminal servers or proprietary installer programs)
- (xv) Individual user accounts with customized home screen, change tracking, roaming profiles, and menu based view/edit permissions
- (xvi) Advanced transition algorithm and options; and
- (xvii) COTS Feature philosophy (User logic should not be considered a tool to meet standard feature requirements).

Exhibit A – Statement of Warranty for ATC TRAFFIC CONTROLLER

(attached as a separate document)

Statement of Warranty for ATC TRAFFIC CONTROLLER

Warranty

Intelight Inc. warrants the ATC TRAFFIC CONTROLLER product to be free of defects in material and workmanship for a period of TWO YEARS from the original date of purchase. Should such a defect occur in a product covered by this warranty and during the warranty period, Intelight Inc. will repair, or if repair is not possible, replace the covered product.

Exclusions

This warranty does not cover loss or theft, nor does coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage conditions, improper installation, lightning strike, flood, or other natural disaster. Repair by any party other than Intelight must be pre-authorized or the modification will void the warranty for the entire assembly.

Remedy

All claims under this warranty must be made promptly in writing to Intelight Inc and a return authorization (RMA) must be obtained. Upon issuance of a return authorization Intelight Inc. will, at its option, repair or replace any parts found to be defective on examination by Intelight Inc. after receipt of the product from the purchaser. All transportation costs associated with the repair or replacement of covered product at a repair facility designated by Intelight Inc. are the responsibility of the purchaser.

Limitation of Liability

Intelight Inc. will not be held liable to the purchaser or any other party for any incidental or consequential damage or loss resulting from the failure of the covered product. The total liability of Intelight Inc. shall not exceed the amount of the purchase price of the covered product. The sole remedy of the purchaser shall be repair or replacement of the covered product as described above.

Intelight, Inc.

3801 East 34th Street, Suite 105, Tucson, Arizona 85713
Tel: +1 (520) 795-8808, Fax: +1 (520) 795-8811

Exhibit B – Statement of Warranty for 2070 1C – CPU

(attached as a separate document)

Statement of Warranty for 2070 1C - CPU

Warranty

Intelight Inc. warrants the 2070 1C - CPU product to be free of defects in material and workmanship for a period of TWO YEARS from the original date of purchase. Should such a defect occur in a product covered by this warranty and during the warranty period, Intelight Inc. will repair, or if repair is not possible, replace the covered product.

Exclusions

This warranty does not cover loss or theft, nor does coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage conditions, improper installation, lightning strike, flood, or other natural disaster. Repair by any party other than Intelight must be pre-authorized or the modification will void the warranty for the entire assembly.

Remedy

All claims under this warranty must be made promptly in writing to Intelight Inc and a return authorization (RMA) must be obtained. Upon issuance of a return authorization Intelight Inc. will, at its option, repair or replace any parts found to be defective on examination by Intelight Inc. after receipt of the product from the purchaser. All transportation costs associated with the repair or replacement of covered product at a repair facility designated by Intelight Inc. are the responsibility of the purchaser.

Limitation of Liability

Intelight Inc. will not be held liable to the purchaser or any other party for any incidental or consequential damage or loss resulting from the failure of the covered product. The total liability of Intelight Inc. shall not exceed the amount of the purchase price of the covered product. The sole remedy of the purchaser shall be repair or replacement of the covered product as described above.

Intelight, Inc.

3801 East 34th Street, Suite 105, Tucson, Arizona 85713
Tel: +1 (520) 795-8808, Fax: +1 (520) 795-8811

Exhibit C – Standard Warranty Software Products

(attached as a separate document)

STANDARD WARRANTY SOFTWARE PRODUCTS

WARRANTY

Intelight warrants that this Software product will perform substantially in accordance with the accompanying written materials for a minimum period of 2 years from the date of receipt.

Intelight does not warrant that the operation of the Software will be uninterrupted or error free, and any support services provided by Intelight shall be substantially as described in applicable written materials provided to Licensee by Intelight, and Intelight support engineers will make commercially reasonable efforts to solve any problems. In the event that this software product fails to execute its programming instructions, Licensee's exclusive remedy shall be to return the software to Intelight obtain replacement(s).

LIMITATION OF WARRANTY

To the extent permitted by applicable statutory law, Intelight makes no other warranty, either expressed or implied, with respect to this Software product.

SUPPORT HELPDESK

Intelight will make available for the term of this Warranty, during normal business hours of 8AM to 8PM EST Monday to Friday, a telephone and email helpdesk facility for the purposes of:

- (a) assisting the Customer with the proper use of the Software;
- (b) determining the causes of errors in the Software; and/or
- (c) fixing errors in the Software as reasonably possible.

RESPONSE AND RESOLUTION TIMES

Intelight will use all reasonable endeavours to respond to requests for Services made through the helpdesk for the duration of this Warranty; and use all reasonable endeavours to resolve issues raised by the Customer, promptly and in accordance with the response time matrix presented in Figure 1.

All claims under this Warranty must be made in writing to Intelight and a support ticket number (SN) must be obtained. Upon issuance of a support ticket Intelight support engineers will make commercially reasonable efforts as describe above to resolve the issue.

| Severity | Examples | Response Time | Resolution Time |
|----------|---|---------------|------------------------------------|
| Critical | System is unavailable and users cannot log in. Multiple acceptance test cases fail. | 4 hr | 3 business days Hotfix Release |
| Serious | Intersection polling fails repeatedly throughout a 24-hour period or product crashes during commonly used scenarios and acceptance test case fails. | 6 hr | 5 business days Hotfix Release |
| Moderate | Product crashes or does not function as expected during edge case or rarely used scenarios but some acceptance test cases fail. | 24 hr | 10 business days Hotfix Release |
| Minor | Product occasionally does not work as expected during edge case scenarios that to not block core acceptance test cases. | 24 hr | 3-6 months Next Major Release |

Figure 1: Response Time Matrix

All claims under this Warranty must be made in writing to Intelight and a support ticket number (SN) must be obtained. Upon issuance of a support ticket Intelight support engineers will make commercially reasonable efforts as describe above to resolve the issue.

HOTFIX RELEASE

For the lifetime of the product, when needed to address product defects Intelight will

- Provide copies of all such software Hotfix Release to the Customer promptly following the general release of the relevant Hotfix Patches to the customers; and,
- Apply such Hotfix Release to the Software promptly following the general release of the relevant Hotfix Release to the customers of the Supplier through remote access

If the hardware or operating system in use by the Customer is deemed not to be sufficient for installation of the Hotfix Release, then the Customer shall be responsible for the cost of any new hardware or software as may be required.

MAJOR RELEASE UPGRADES

Intelight will for the term of this Warranty,

- give to the Customer reasonable prior notification of the general release of an Upgrade of the covered software products.
- provide copies of all such software Upgrades to the Customer promptly following the general release of the relevant Upgrade to the customers; and,
- apply such Upgrades to the Software promptly following the general release of the relevant Upgrade to the customers of the Supplier through remote access or on-site support if required.

If the hardware or operating system in use by the Customer is deemed not to be sufficient for installation of the Upgrade release, then the Customer shall be responsible for the cost of any new hardware or software as may be required.

LIMITS OF COVERAGE

Intelight will not be held liable to the purchaser or any other party for any incidental or consequential damage or loss resulting from the failure of the covered product. The total liability of Intelight Inc. shall not exceed the amount of the purchase price of the covered product. The sole remedy of the purchaser shall be repair or replacement of the covered product as described above.

Intelight, Inc.

3801 E. 34th Street, Suite 105, Tucson, Arizona 85713
Tel: +1 (520) 795-8808, Fax: +1 (520) 795-8811

This Agreement does not include repair services due to damage caused by rain, fire, flood, lightning, tornado, windstorm, hail, earthquake, explosion, smoke, aircraft, motor vehicle, collapse of building, strike, riot, power failure or fluctuation, or other case originating by reason of other than normal operation of the software, or the Customers negligence or misuse of the software.

This Agreement does not cover support, repair or warranty of any hardware or 3rd party software installed as part of the Software.

Attachment C – The City of San Antonio Data Security Policy

(attached as a separate document)

CITY OF SAN ANTONIO



| | |
|---------------------------------|---|
| Administrative Directive | 7.3a Data Security |
| Procedural Guidelines | Regarding the use of public and confidential data |
| Department/Division | Information Technology Services Department (ITSD) |
| Revision Date(s) | April 1, 2014; September 13, 2019 |
| Last Reviewed | N/A |
| Owner | Chief Security Officer |

Purpose

This Administrative Directive (“AD”) provides guidance for compliance, confidentiality, privacy, security, and the associate governance for the City of San Antonio’s (“COSA” or the “City”) three data categories: (1) public, (2) agency-sensitive, and (3) confidential. Data must be classified into one of these three categories when stored, processed, or transmitted on COSA resources or other resources where COSA business occurs. This AD establishes and identifies responsibility for such data and provides a framework for maintaining compliance with applicable laws, regulations, and standards. Security standards, which define these security controls, may include: document marking/labeling, release procedures, privacy, transmission requirements, printing protection, computer display protections, storage requirements, destruction methods, physical security requirements, access controls, backup requirements, transport procedures, encryption requirements, and incident reporting procedures.

Policy

This directive establishes guidance for developing, maintaining, publishing, and administering comprehensive data governance and information technology system security. This directive references applicable local, state, and federal law.

Departmental Data Owners are responsible for the classification and protection of data under this directive. Precautions shall be taken to reasonably assure the confidentiality, integrity and availability of the protected data. Access to protected data shall be based on legitimate business need. COSA data shall be disseminated in accordance with this directive.

Open Data accessible by the public in accordance with Foundations for Evidence-Based Policymaking Act ("Evidence Act") will be identified, reviewed, and prioritized prior to being published by or on behalf of COSA via the Open Data Portal.

This directive applies to:

1. All data processed, stored, and/or transmitted by a COSA Information Technology System(s).
2. All COSA data processed, stored and/or transmitted on personally-owned devices also referred to as Bring Your Own Device (“BYOD”).
3. All data collected or maintained on a COSA owned and managed Network or authorized/contracted cloud platform by or on behalf of COSA in any form (electronic or hardcopy).

Policy Applies To

| | |
|--|--|
| <input checked="" type="checkbox"/> External & Internal Applicants | <input checked="" type="checkbox"/> Temporary Employees |
| <input checked="" type="checkbox"/> Full-Time Employees | <input checked="" type="checkbox"/> Volunteers |
| <input checked="" type="checkbox"/> Part-Time Employees | <input checked="" type="checkbox"/> Grant-Funded Employees |
| <input checked="" type="checkbox"/> Paid and Unpaid Interns | <input checked="" type="checkbox"/> Police and Fire Academy Trainees |
| <input checked="" type="checkbox"/> Uniformed Employees Under Collective Bargaining Agreements | |

Definitions

| | |
|---|--|
| Bring Your Own Device (“BYOD”) | The practice of allowing the employees of an organization to use their own computers, smartphones, or other devices for work purposes. |
| City-administered information technology system(s) | Any technology or equipment that is used and/or managed by COSA even if COSA does not own the technology or equipment. COSA-managed information technology system(s) includes technology or equipment owned by COSA, on loan to COSA, funded by grants, or leased by COSA. |
| Criminal Justice Information Services (“CJIS”) Security Policy | CJIS Security Policy represents the shared responsibility between Federal Bureau of Investigation (FBI) CJIS and the CJIS Systems Agency and State Department of Public Safety. |
| Data Owner | The data originator or entity that can authorize or deny access to the data. The Data Owner can create, edit, modify, share, and determine access restrictions to the data and data dictionary they control. They are responsible for the accuracy of the data and the purpose for which it is collected. |
| Data Steward | COSA’s Information Technology Services Department is the Data Steward responsible for data management and will establish appropriate governance and procedures required to ensure overall data integrity and reliability. |
| Network | A group of two or more computers linked together to facilitate communication, data sharing, and processing among other computer-based activities. |
| Open Data | Data identified as public that is freely available to the public to be republished, manipulated, or used in any way without restriction. The data will be machine-readable and formatted according to national technical standards. |
| Open Data Portal | A web portal maintained by or on behalf of COSA that will be the repository for COSA’s Open Data. The portal provides access to standardized data that can be easily retrieved, downloaded, sorted, searched, analyzed, redistributed and re-used by the public |
| Personally Identifiable Information (“PII”) | Any information that permits the identity of an individual to be directly or indirectly inferred, including any information that is linked or linkable to that individual, regardless of whether the individual is a U.S. citizen, lawful permanent resident, visitor to the U.S., or employee or contractor to the Department. Personally Identifiable Information by itself is not necessarily sensitive in nature and may in certain instances be treated as public data. For example, the name of each City Council member and the final record of voting on all City Council proceedings are public and subject to disclosure to the public |
| Record Retention Period | The minimum time that must pass after the creation, recording or receipt of a record or the fulfillment of certain actions associated with a record, before it is eligible for destruction pursuant to the Local Government Record Retention Schedules issued by the Texas State Library and Archives Commission under the authority of Subchapter J, Chapter 441 of the Texas Government Code. |

| | |
|---|---|
| Records Management Program | Established pursuant to Section 203.026 of the Texas Local Government Code and administered by COSA's Records Management Officer. |
| Sensitive Personally Identifiable Information ("SPII") | SPII is any combination of information or data when not encrypted that permits the identity of an individual to be directly or indirectly inferred, traceable, linked and/or linkable to a specific individual and is generally not subject to public disclosure. For example, social security numbers of living individuals; military discharge records; and credit card, debit card, charge card and access device numbers are exempt from public disclosure, regardless of whether the individual is a U.S. citizen, lawful permanent resident, or visitor to the U.S. |

Policy Guidelines

Adherence to this directive will help reasonably assure the confidentiality, integrity, and availability of COSA data:

1. COSA has adopted the National Institute of Standards and Technology ("NIST") Cyber Security Framework ("CSF") using 800-53A Security and Privacy Controls to provide a data protection framework for maintaining the confidentiality, integrity and availability of data.
2. Baseline security controls for COSA information systems shall be based on the Data Owner's data classification as governed by this directive.
3. COSA data shall be classified as public, agency-sensitive, or confidential.
4. The statutes and laws of the state of Texas and/or the state where the individual whose SPII was or is reasonably believed to have been acquired by an unauthorized person is a resident apply. Where statutes from another state conflict, the statutes of Texas and federal government shall take precedence.

Data Classification and Open Records

All data shall be classified as public, agency-sensitive, or confidential for the purpose of establishing dissemination guidelines and protective security measures. AD 1.31 Open Records (Texas Public Information Act) places responsibility for developing and updating the Municipal Open Records Policy with the City Attorney's Office. This requirement includes any response to an Open Records Request ("ORR") whether or not the records are public under the Texas Public Information Act. All open records shall be reviewed by the department Data Owners prior to dissemination to reasonably assure that open records do not contain confidential data or SPII.

Confidential Data

Confidential data is information maintained by COSA, the release of which is prohibited under the provisions of the Texas Public Information Act and other state and federal law. Accidental or intentional disclosure of this type of data could cause damage and/or serious harm to COSA and/or its citizens.

- Examples of "confidential" data may include, but are not limited to, data types identified in Chapter 521 of the Texas Business and Commerce Code. For example, an individual's first name or first initial and last name in combination with unencrypted personal identifying information, such as a social security number, driver's license number, or government-issued identification number, is not subject to public disclosure.

Below is a list of data that is always SPII if not encrypted:

1. Social Security Numbers
2. Alien Registration Numbers (A-numbers)
3. Passport Numbers

- 4.Driver's license Numbers or state identification numbers
- 5.Biometric Identifiers (fingerprint, iris scan, voice print)
- 6.Genetic data Network
- 7.Physically secure hardcopy protected data in a locked drawer, file cabinet, desk, and/or safe.

The following data, if not encrypted, is classified as SPII when linked with the person's name or other unique identifier, such as an address or phone number:

1. Citizenship or Immigration status
2. Criminal History
3. Medical Information
4. Bank Account or Routing/Transit Numbers
5. Credit Card Numbers
6. Income Tax Records
7. Full Date of Birth
8. Financial or Bank Account Numbers
9. Fingerprint Identification Number ("FIN") or Student and Exchange

Agency-Sensitive Data

This is data maintained by COSA that is not necessarily confidential but must be treated with special precautions or procedures to ensure integrity. Agency-sensitive data may be subject to disclosure or release under the Texas Public Information Act.

- Examples of "agency-sensitive" data may include but are not limited to:
 1. COSA operational information
 2. COSA personnel records
 3. COSA information security configurations, data, and procedures
 4. Vendor bids and/or contract cost estimates among other sensitive data types

Public Data

Public data is all data not classified as confidential or agency-sensitive and may be released to the public. This information may be the subject of an ORR or it may be posted on COSA's Open Data Portal. ORR fees have been established for extracting and delivering this type of data.

Protection of Confidential Data & Personally Identifiable Information

All departmental Data Owners must:

1. Implement cost effective internal controls, safeguards, and/or countermeasures to protect data. All preventative, detective, and/or corrective controls shall be risk based. The cost of all management, operational, and/or technical controls shall be commensurate with the value of the data.
2. Preserve citizen privacy and respect an individual's choice to consent when collecting, using, sharing, and/or disclosing of customer, partner, or employee personal information.
3. Limit the use and storage of confidential data and SPII to what is only necessary.
4. Not store confidential and/or sensitive data longer than is absolutely necessary past the established Record Retention Period.
5. Only collect data when COSA has the legal authority to do so and, if required, have a Privacy Act System of Records Notice ("SORN") in place that describes the information.
6. Minimize the distribution and proliferation of protected data.
7. Not store agency-sensitive, confidential, or business-related information in email, on personal devices, personal cloud storage, or any other non-COSA sanctioned storage.

8. Keep protected data relevant, accurate, timely, and not excessive in relation to the purpose such data is processed, stored, and/or transmitted.
9. Departments handling hardcopy or electronic Protected Health Information (“PHI”) will establish departmental procedures in accordance with AD 4.7 Healthcare Data Protection Administrative Authority for HIPAA.

The Data Steward must:

1. Establish overall policies and procedures for dissemination of data in compliance with AD 1.31 (Open Records (Texas Public Information Act)), including establish and enforce departmental procedures that comply with this Directive and AD 1.31.
2. Determine encryption requirements based on regulatory requirements.
3. Periodically review data protection procedures, controls, and safeguards to reasonably assure that internal controls, countermeasures, and/or safeguards are working as intended. Ensure that at least once a year, COSA employees who have access to a COSA information system or database are identified and required those employees and COSA elected officials to complete a cyber security training program certified under Section 2054.519 of the Texas Government Code or offered under Section 2054.519(f) of the Texas Government Code. Requirement made by HB3834, takes effect September 1, 2019. Verify and report on the completion of a cybersecurity training program by required COSA employees.
4. Ensure that periodic audits are performed to ensure compliance with the cybersecurity training required by Section 2054.5191 of the Texas Government Code.

All COSA information systems must:

1. Use security controls to protect against unauthorized access, disclosure, modification, and destruction to reasonably assure the confidentiality, integrity, and availability of data.
2. Follow NIST encryption and security protocol standards for protected data as required.

Employee and third parties must:

1. Safeguard COSA’s data resources and comply with the provisions of relevant COSA Security ADs.
2. Comply with all COSA procedures regarding protected data.
3. Receive written approval from his/her department Director to store sensitive data.
4. Report suspected violations to supervisor or manager, department head, and COSA Privacy Officer.
5. Only store protected data on COSA owned device(s) and/or device(s) managed by COSA even if COSA does not own the technology or equipment.
6. Ensure personal devices and personal accounts are not used to store, process, and/or transmit unencrypted protected data.
7. Not store agency-sensitive, confidential, or business-related information in email, on personal devices, personal cloud storage, or any other non-COSA sanctioned storage.
8. Ensure unencrypted confidential data and SPII is not transmitted outside of COSA.
9. At least once a year, if required, complete a cyber security training program selected by COSA.

Data Laws and Standards

Regulation and industry standards that protect confidential and sensitive data include, but are not limited to:

1. The Privacy Act of 1974
2. The Electronic Communications Privacy Act of 1986 (“ECPA”)
3. The Texas Public Information Act (“TPIA”)

4. The Health Insurance Portability and Accountability Act of 1996 (“HIPAA”)
5. Health Information Technology for Economic and Clinical Health (“HITECH”)
6. The Texas Medical Privacy Act (“TMPA”)
7. The Payment Card Industry Security Standards (“PCI”)
8. The Criminal Justice Information Services (“CJIS”) Security Policy
9. City of San Antonio Ordinance 70508 (11-02-1989), naming the City Clerk as the City’s Records Management Officer
10. City of San Antonio Ordinance 72054 (08-09-1990), establishing the City’s Records Management Program
11. The Family Educational Rights and Privacy Act (“FERPA”)

Data Destruction

Electronic records shall be destroyed in accordance with Section 441.185 of the Texas Government Code and COSA Record Retention policies set out in AD 1.34 Records Management for Physical Electronic Records.. All data storage device(s) and/or information system(s) containing protected data shall be sanitized or the storage device destroyed. COSA shall arrange for destruction of protected data by shredding, degaussing, erasing, and/or otherwise modifying the sensitive data in the records to make the information unreadable or indecipherable. Additional information on sanitization tools and methods of destruction based on Department of Defense 5220.22-M data destruction standards (available at <http://www.dir.state.tx.us>). Documentation shall also be maintained that documents the data, description of device, data destruction process, and sanitization tools used to remove or destroy data.

Roles & Responsibilities

| | |
|---------------------------|---|
| <u>Employees</u> | Adhering to all guidance provided in this directive. |
| <u>Departments</u> | COSA departmental Data Owners are responsible for data classification and identification of data protection requirements. |
| <u>ITSD</u> | COSA Information Technology Services Department fulfills the role of the Data Steward and is responsible for publishing, disseminating, and maintaining this directive. |

Breach of Security of Computerized Data

In this section, “breach of system security” means the unauthorized acquisition of computerized data that compromises the security, confidentiality, or integrity of sensitive personal information maintained by COSA, including data that is encrypted if the person accessing the data has the key required to decrypt the data.

1. Report of Breach of System Security

Departmental Data Owners that discover a breach of system security must immediately contact COSA’s Privacy Officer, the Director of the Information Technology Services Department, and the Administrator of the Office of the City Attorney.

2. Notice to individuals whose sensitive personal information is disclosed in breach of system security

The Privacy Officer must notify individuals whose sensitive personal information is disclosed in a breach of system security without unreasonable delay and not later than the 60th day after the date on which COSA determines that the breach occurred; except that COSA may delay providing notice at the request of a law enforcement agency that determines that the notification will impede a criminal investigation.

3. Notice to the Texas Attorney General

If the Privacy Officer is required to notify individuals of breach of system security and the breach involves at least 250 Texas residents, the Privacy Officer must also notify the Texas Attorney General of that breach not later than the 60th day after the date on which COSA determines that the breach occurred.

All breach of system security notices must comply with the notification requirements set out in Section 521.053 of the Texas Business and Commerce Code.

This directive supersedes all previous correspondence on this subject. Information and/or clarification may be obtained by contacting the Information Technology Services Department at 207-8888.

Attachment D - Price Schedule
(attached as a separate document)

City of San Antonio Transportation & Capital Improvements
Traffic Managment Controller Software/Firmware
RFCSP 2019-009 ATTACHMENT E - PRICING SCHEDULE

All Respondents must use the Price Schedule in the exact format as shown below. Any deviations or exceptions, such as the inclusion of contingent price increases, will result in the rejection of the proposal from consideration. Respondent

Enter all one-time, re-occurring and ala carte costs that are associated with proposed solution. Respondent only needs to complete items that apply to proposed solution. If there are no costs associated with those listed below, enter a value of 0. If costs are based on a named user or concurrent user fee, indicate it in the notes column. If concurrent user indicate the ratio. i.e. 1 concurrent user = 10 users.

| Year 1 | QUANTITY | Total | Notes |
|---|----------|------------------------|--|
| Software | | | |
| Local controller software license fee: | | | |
| <i>if purchased individually</i> | 1,400 | \$ 560,000.00 | \$400 per Intersection; Number of individual intersections at which point the site license becomes active: 1400 |
| <i>if purchased City-wide (Enterprise License)</i> | 1 | \$ 532,000.00 | City-wide Enterprise License provides unlimited, perpetual MAXTIME license for all signal controllers operated by and within the City of San |
| Training, per 8 hr. day Respondent may expand as necessary to provide clarity—attach pricing schedule to this form) | 3 | \$ 4,500.00 | \$1,500 per one day course; Extended Pricing per RFP Training Request Attached |
| Maintenance and Support Year 1 | | | |
| <i>if license fee purchased individually</i> | 1,400 | \$ 42,000.00 | \$30 per Intersection |
| <i>if license fee purchased City-wide (Enterprise License)</i> | 1 | \$ 42,000.00 | City-wide Enterprise License rate |
| Hardware | | | |
| Model 2070 (Linux operating system, 64 MB SDRAM, 16 MB Flash Memory, 8x40 LCD display) | 100 | \$ 199,500.00 | \$1,995 per 2070 LC Controller |
| Model 2070 1C card, with controller software installed, and includes: (Compliant to ATC 5.2b, ATC 6.1 (or latest), open Linux operating system, 3.3v datakey socket, 2 10/100 RJ45 Ethernet ports, TEES compliant D Type 25 pin C125 port, 1 USB port, 64 MB SDRAM, 16 MB Flash memory, 400 MH core speed) | 1,300 | \$ 936,000.00 | \$720 per 1C CPU; Does NOT include MAXTIME local controller license |
| Services | | | |
| Database conversion per instance, low complexity | 250 | \$ 47,500.00 | \$190 per intersection |
| Database conversion per instance, medium complexity | 100 | \$ 37,000.00 | \$370 per intersection |
| Database conversion per instance, high complexity | 50 | \$ 35,750.00 | \$715 per Intersection |
| Field installation of controller | 300 | \$ 142,500.00 | \$475 per intersection |
| Misc. Traffic or Software Engineering / Support (Hourly) | 1 | \$ 175.00 | Misc. work performed under separate work/task orders. |
| TOTAL ONE-TIME COSTS (Including maintenance & support) | | \$ 2,004,925.00 | |
| (SUBTOTAL A) if individual licenses | | | |
| TOTAL ONE-TIME COSTS (Including maintenance & support) | | \$ 1,976,925.00 | |
| (SUBTOTAL A) if Enterprise License | | | |
| RECURRING ANNUAL COST: | | | |
| | | | Notes |
| Recurring Maintenance & Support Year 2 | Annual | \$ 42,840.00 | |
| Recurring Maintenance & Support Year 3 | Annual | \$ 43,696.80 | |
| Recurring Maintenance & Support Year 4 | Annual | \$ 44,570.74 | |
| Recurring Maintenance & Support Year 5 | Annual | \$ 45,462.15 | |
| Other Costs: (List) | | | Not Applicable |
| TOTAL ANNUAL COSTS Years 2-5 | | \$ 176,569.69 | |
| (SUBTOTAL B) | | | |
| TOTAL PROPOSAL COST | | | |
| (Subtotal A + Subtotal B) if individual licenses | \$ | 2,181,494.69 | |
| TOTAL PROPOSAL COST | | | |
| (Subtotal A + Subtotal B) if Enterprise License | \$ | 2,153,494.69 | |

Attachment E - Travel and Related Expense Forms

(attached as a separate document)



SAP Trip#: _____
(For Acctg Use Only)

Information

*First Name: _____ M.I.: _____ *Last Name: _____ Suffix: _____ *SAP Emp #: _____

*Department: _____ Section: _____

*Work Location: _____

*Miles Round Trip Home to Work: _____

[illegible]

*Signature of Employee / Traveler:

Attach to the Travel & Miscellaneous Expense Report if needed or forward to manager for approval if complete.

* Department Approver:

GR.1050-58.PER.CLAIM,Personal Vehicle Mileage Record-2014-Ref. AD 8.31
Rev.2014-5 05/14/14 (Form Owner: Finance Dept.)



City of San Antonio

Travel & Miscellaneous Expense Report

Traveler Information

- ☐ Travel Expense Report
☐ Out-of-Pocket Expense

Trip #: _____
(From Authorization Form--Attach Copy)
Trip #: _____
(For Accounting Use Only)

*SAP Employee #: _____ *Department: _____
*First Name: _____ M.I.: _____ *Last Name: _____ Suffix: _____
*Start Date: _____ *End Date: _____
*Reason for Trip: _____ *Region: _____
*Cost Center or Internal Order No.: _____ *G/L: _____

Travel Expenses

Car Mileage: Total mileage traveled: _____ X \$0.560 per mile. (Effective 01/01/14 \$0.56) \$ 0.00

Meals: Daily per diem rate: _____ X # of Breakfasts X 33% = \$0.00
X # of Lunches X 33% = \$0.00
X # of Dinners X 34% = \$0.00 \$ 0.00

GSA per diem rates - <http://www.gsa.gov/portal/category/21287>

Transportation: ☐ Airfare ☐ Bus ☐ Rail ☐ Prepaid \$ _____

Other Transportation and Incidentals: (taxi, bus, shuttle, parking, rental car, copying, faxing, etc.)

| Date | Vendor | Expense Item / Explanation | Amount | Add |
|------|--------|----------------------------|--------|--------|
| | | | \$ | Delete |

Lodging: Hotel Name: _____ ☐ Prepaid \$ _____

Registration / Tuition / Conference Fees: G/L _____ ☐ Prepaid \$ _____

Total Travel Expenses: \$ 0.00

Amount of Travel Advance: \$ _____



City of San Antonio Travel & Miscellaneous Expense Report

Out-of-Pocket Expenses (not travel)

| Date | Vendor | Expense Item / Explanation | Cost Center / IO G/L to charge | Amount | Add |
|------|--------|----------------------------|-----------------------------------|--------|--------|
| | | | | \$ | Delete |

Total Out-of-Pocket: \$ _____

Total Expense Report: \$ 0.00

☐ Due City: \$ 0.00

☐ Due Traveler: \$ 0.00

Acknowledgements

I certify that these expenses were actually incurred by me in the performance of official City business as documented with the attached receipts and request reimbursement.

Signature of Traveler /
Employee: _____

Date: _____

Signature of Approval
Authority: _____

Date: _____

When complete, use the **Print** button provided.
Attach receipts and submit this form to your manager for approval and further processing.