SERVICES AUTHORIZATION #II
ENGINEERING SERVICES CONTRACT

THIS SERVICES AUTHORIZATION is made and entered into this _____ day of _____, 20___, by and between the **City of Orlando, Florida**, a municipal corporation existing under the laws of the State of Florida (CITY), and **TLC Engineering for Architecture, Inc.,** doing business locally at 255 South Orange Avenue, Suite 1600, Orlando, Florida 32801-3463 (ENGINEER).

WHEREAS, the CITY and the CONSULTANT have previously entered into an agreement for the CONSULTANT's professional services (AGREEMENT) on April 8, 2014; and

WHEREAS, the CITY and the CONSULTANT shall refer to the AGREEMENT herein, and desire to have it incorporated by reference; and

WHEREAS, the CITY and the CONSULTANT now wish to memorialize their understanding for the CONSULTANT's revised and additional professional services for the City-Wide Energy Efficiency Improvements Project; and

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and given one to the other, the sufficiency of which is hereby acknowledged, the parties agree as follows:

I. SCOPE OF WORK

A revised scope of work for the Project set forth in the Agreement and Services Authorization #I, as well as certain other additional services, has been agreed to by the parties, and is attached hereto and incorporated herein by reference, as EXHIBIT I.

II. FEE

The revised lump sum fee of $1,582,640, plus such reimbursable expenses without markup as may be approved by the Fleet and Facilities Management Division Manager or designee, has been agreed to by the parties to the Project as set forth on EXHIBIT I.

III. TERM

CONSULTANT shall complete all work in accordance with the timeframes set forth in the scope of work, if any, provided however, that all work and the term of this SERVICES AUTHORIZATION shall be completed by the end of business (5:00 p.m.) on April 8, 2017. It is also agreed that the CITY shall have an option for extension of this SERVICES AUTHORIZATION, as necessary to complete the present scope of services (EXHIBIT I) or to provide additional services.

IV. ENTIRE AGREEMENT

This SERVICES AUTHORIZATION supersedes all previous authorizations, agreements, or representations, either verbal or written, heretofore in effect between the CITY and the CONSULTANT that may have concerned the matters covered herein, except that this SERVICES AUTHORIZATION shall in no way supersede or amend the AGREEMENT or other authorizations except as specifically provided herein. No additions, alterations, or variations to the terms of this SERVICES AUTHORIZATION shall be valid, nor can the provisions of this SERVICES AUTHORIZATION be waived by either party, unless such additions, alterations, or waivers are expressly set forth in writing in a document duly executed by the parties. CONSULTANT acknowledges and agrees that any proposals or proposed agreements from subconsultants attached to this SERVICES AUTHORIZATION are attached solely to reflect the scopes of work to be performed and the fees to be charged by such subconsultants. By executing this SERVICES AUTHORIZATION, the CITY does not become a party thereto or bound by the terms thereof.

IN WITNESS WHEREOF, the parties hereto have executed this Services Authorization on the day and year first written above.

City of Orlando, Florida

By:_____
David Billingsley CPSM, C.P.M.
Chief Procurement Officer

APPROVE AS TO FORM AND LEGALITY
for the use and reliance of the
City of Orlando, Florida, only.
_____, 20_____.

_____
Michael S. O'Dowd
Assistant City Attorney
Orlando, Florida

TLC Engineering for Architecture, Inc.

By:_____

_____
(Print Name)

Title:_____

STATE OF FLORIDA }

COUNTY OF _____}

PERSONALLY APPEARED before me, the undersigned authority,_____, [ ] well known to me or [ ] who has produced _____ as identification, and known by me to be the _____of the corporation named above, and acknowledged before me that he/she executed the foregoing instrument on behalf of said corporation as its true act and deed, and that he/she was duly authorized to do so.

WITNESS my hand and official seal this ____ day of _____, 20____.

_____
NOTARY PUBLIC
Print Name:_____
My Commission Expires:

ENGINEERING
FOR ARCHITECTURE

May 8, 2015

Mr. Nathaniel (Nate) Boyd EI, LEED AP
Energy Project Manager
City of Orlando, Office of Business and Financial Services
Fleet and Facilities Management Division
1010 S. Westmoreland Drive
Orlando, Florida 32805

Re: RQS13-0496, 55 Buildings, Energy Efficiency Improvements
TLC #113097
Professional Engineering Services Proposal (Revision 4)

Dear Mr. Boyd:

TLC Engineering for Architecture, Inc. (TLC) is pleased to submit the following revised fee proposal to provide professional engineering services for the referenced project. We look forward to and appreciate the opportunity to work with you and your team on this project.

This proposal is revised from that previously dated February 13, 2014 to reflect modifications to the original scope of work, additional services that have been performed, further planned additional services, revisions to the project schedule and liquidated damages should the accepted schedule milestones not be met. It is revised per Client direction from that dated March 23, 2015 to clarify sub-consultant fees, include sub-consultant proposals, and increase percentages of commissioning sampling. It is revised from that dated May 1, 2015 to reflect fee reduction discussed in our May 7th meeting.

PROJECT DESCRIPTION:

The City of Orlando (the City) has embarked on a program to improve the energy efficiency of City owned and operated buildings with a goal of reducing power consumption and improving the City's carbon footprint. TLC is providing audit, design, and construction phase engineering services for the City's Energy Efficiency Improvement Project. In addition to defining and implementing specific energy conservation measures, the project includes the integration of all Building Automation Systems (BAS), Lighting Control Systems (LCS), plug load Energy Management Systems (EMS), and public access front-end display of energy and environmental impact results of the City's energy efficiency efforts into one native BACnet web-based access point.

This effort will be delivered in several distinct phases:

A. ASHRAE Level Two energy audit as prescribed and outlined in the ASHRAE publication "Procedures for Commercial Building Energy Audits, 2nd Edition" (and further delineated below).
B. Preparation of design documents for the installation of upgrades to the affected HVAC, lighting, and control systems and infrastructure. This will be implemented in several separate bid packages. This phase includes preparation of performance-based bid packages to implement lighting upgrades at a few select/specialized facilities.
C. Construction project oversight.
D. Commissioning of the implemented upgrades to the affected HVAC, lighting, and control systems.
E. Recommissioning: Where existing equipment/systems are to remain, recently installed and previously commissioned equipment/systems may be recommissioned for improved function and/or energy efficiency.
F. Implementation of the ASHRAE Building Energy Quotient (bEQ) building energy labeling program on approximately 50 selected City facilities.

The overall program includes a portfolio of approximately 110 locations plus City Hall (by a separate project); covering fire and police stations, parks, community centers, administrative and support facilities,

and critical infrastructure facilities. The overall program budget is approximately $16,000,000 (including City Hall), and the City has budgeted a resulting projected savings of $2.4M which it needs to meet. The City prefers the overall project scope payback to fall within a seven (7) year timeframe.

Increase in Size

From our meeting with you on December 23, 2013, we understood that the City's anticipated construction budget for the initial portfolio was approximately $5.7M, and that was the basis of our original fee proposal.

However, in actuality the scope and budget of the first group of facilities has become far larger. Almost all of the overall program budget will be utilized by the first group of facilities, since they consume over 90% of the energy costs for the portfolio. With the City Hall project now projected at $5.7M (including the elevator work), that leaves approximately $9.3M that will be utilized by the first group of sites, an increase of 63%. That is a very significant increase in the size of the project, and thus has affected our man-power expended to date and will continue to do so. In accordance with Sections 4.6 and 5.8 of our Contract, our team needs to be compensated for such a large increase in the size and complexity of the project.

Below is the original Scope of Services, with clarifications and other additional services identified, unrelated to the size increase discussed above.

SCOPE OF SERVICES:

A. Assessment, Modeling and Audit Phase

The Scope of Services for the initial work on the Project is limited to the basic services, tasks and deliverables described below:

1. Work with the City to obtain and compile the available record documents of the 55 buildings. The required documents consist of the original as-built drawings, plus subsequent documentation of building modifications undertaken after original construction.
   Additional services: Since starting this work, it was found that necessary documents were not available for every site, resulting in significantly increased efforts of the teams.
2. Review the available construction and/or as-built documents of each facility to determine the general original design parameters and intended operation.
   Additional services: Since starting this work, it was found that necessary documents were not available for every site, resulting in significantly increased efforts of the teams.
3. Conduct a field survey to perform the following:
   - Perform a condition assessment of the existing HVAC systems and equipment. This shall include all air-handling units (AHUs), and a representative sampling of VAV terminals and ductwork (where accessible).
   - Obtain existing HVAC cooling and heating load data.
   - Assess the existing lighting systems with regard to type, condition, control and zoning.
   - Assess the building glazing system.
   - **Scope deletion:** Measurement of building pressure has been deleted, due to inconsistencies in building construction tightness.
   - Obtain photographic documentation of notable conditions.
4. (Air balance calculations moved to design period efforts.)
5. (Outdoor air quantity review moved to design period efforts.)
6. (Cooling and heating load calculations moved to design period efforts.)
7. Develop a baseline energy model of the existing facility with which to compare potential performance upgrades.
   Clarification: Not all buildings will be computer-modeled in VE Pro or eQuest. "Modeling" includes usage of Excel spreadsheets where applicable, as permitted by ASHRAE publication "Procedures for Commercial Building Energy Audits, 2nd Edition".
8. Conduct energy audits in accordance with the ASHRAE publication "Procedures for Commercial Building Energy Audits, 2nd Edition", which include the evaluation of current facility equipment, lighting, and maintenance practices. TLC will use its knowledge of economics and environment in HVAC and building systems to recommend quality, maximum

payback solutions. Audit findings and recommended energy conservation measures (ECMs) will be presented to the City using the forms and procedures outlined in the above-noted ASHRAE publication.

a. **Additional services:** Sort the City's utility billing information to obtain needed data for the audits. This has been provided in the form of 60 large Excel files, in lieu of actual billing statements. This has resulted in significantly increased effort.
b. Preliminary Energy-Use Analysis (PEA):
   - Analyze utility bills and summarize them for at least a one year period: Analyze use, peak demand, and cost. Review for opportunities to lower costs. Review the monthly patterns for irregularities.
   - Develop the Energy Cost Index (ECI) of the building (expressed in dollars per floor area per year) and the Energy Utilization Index (EUI) of the building (expressed in kBtu/ft2 per year) for each fuel or demand type and their combined total.
   - Compare the ECI and EUI with those of buildings having similar characteristics. The ENERGY STAR Portfolio Manager of the U.S. Environmental Protection Agency (EPA) will be utilized.
c. Level 2, Energy Survey and Engineering Analysis
   - Review mechanical and electrical system design, installed condition, maintenance practices, and operating methods.
   - Describe and analyze the energy-using systems of the building, resulting from on-site observation, measurement, and engineering calculations. Document the building systems.
   - List possible modifications to equipment and operations that will save energy (energy conservation measures, ECMs). Select those that might be considered practical by the owner/operator. Perform preliminary cost and savings estimates for each.
   - Review the list of ECMs with the owner/operator and select those that will be analyzed further.
   - For each ECM, estimate the potential savings in energy costs and the implementation cost of each.
   - Review the impact of the ECMs on building operations, maintenance costs, and non-energy operating costs.

9. Provide a final report for each facility summarizing our findings and recommendations with respect to energy conservation measures, and to correct identified issues and upgrade the HVAC systems for improved performance and service life. Reports will be provided electronically (PDF files).
   a. Description of the building characteristics and energy use summary.
   b. Discussion of irregularities found in the monthly energy use patterns, with suggestions about their possible causes.
   c. Discussion of the EUIs of similar buildings, the target EUI of this building and the method used to develop the target index.
   d. A summary of special problems or needs identified during the walk-through survey.
   e. A listing of identified low-cost/no-cost changes with estimated savings.
   f. A description of the building, including typical floor plans and inventories of major energy-using equipment. (This information may be included as an appendix.)
   g. For each ECM, provide
      - a discussion of the existing situation and how excess energy is being consumed;
      - a description of the measure;
      - non energy benefits, especially improvements to health, safety, and environment, and decreases in equipment runtime and labor hours.
   h. A table listing the estimated costs for all ECMs, the savings, and simple payback period.
   i. Overall project economic evaluation.
10. Meet with the City to review the final reports and our recommendations.
11. **Additional services:** Review the second set of facilities in the portfolio to determine whether any may be better candidates to generate energy savings, for substitution into the first set of facilities. Perform the PEA on up to 10 potential facilities for comparison.

B. Design Phase

The Scope of Services for the Design Phase of the project is limited to the basic services, tasks and deliverables described below:

1. Generate architectural CAD plans of the facilities, as necessary to utilize as the basis of construction drawings.
2. Provide the mechanical, electrical, plumbing design, as well as related incidental architectural and structural design, for the implemented facility improvements. This will consist of
   - Cooling and heating load calculations based on existing building envelope construction parameters, current equipment loads and current occupancy of the facility, for "right-sizing" of new equipment.
   - Equipment sizing and selection
   - Ductwork cleaning and replacement parameters
   - Building air balance calculations to determine the required operation of the HVAC equipment, including the outside and exhaust air volumes, for proper building air balance and pressurization.
   - Control system modifications and replacement parameters to upgrade remaining thermostatic, modem access, and non BACnet HVAC Controls and BAS systems to one (1) native BACnet web-based control system access point, and integrate the lighting and plug load EMS systems through an enterprise level portal with remote accessibility
   - IESNA photometric modeling and lighting replacement parameters
   - Incorporate the same approach to lighting and plug load monitoring and control systems that are presently stand alone and not configured in a BAS, so that they become a component of the BAS control.
3. Develop construction documents (drawings and specifications) providing for the work to implemented. Interim deliverables will be provided at appropriate design completion levels.
4. Meet with the Client for design review once per facility and resolve review comments before completing the design.
5. Prepare reports in support of the City's bond or other efforts.
6. Attend meetings with City staff, proposers, regulatory agencies and the public.
7. Furnish final contract documents as follows: Electronic (PDF) files of the construction documents, six (6) sets of signed and sealed drawings and specifications for permitting, and a final estimate of probable construction cost.
8. Assist in the resolution of the Permitting Authority's review comments and provide revised drawings and specifications as required. (Submission of documents to the Permitting Authority and payment of associated fees shall be by others.)
9. Assist in the preparation of performance-based bid packages to implement lighting upgrades at a few select/specialized facilities.

C. Construction Phase

The Scope of Services for the Construction Phase of the project is limited to the basic services, tasks and deliverables described below:

1. Assist the Client with the Bidding process.
2. Attend one (1) pre-bid meeting per facility to provide a general overview of the project and assist the City with questions from the bidders.
3. Assist the City in responding to Contractor pre-bid questions and provide an Addendum if required.
4. Attend one (1) pre-construction meeting per facility.
5. Provide the City with limited consultation during the construction process, and assist in resolving construction issues, providing sketches as applicable. Assist the City in claims negotiation and dispute resolution, and assist with the review and preparation of change orders.
6. Answer Contractor Requests for Information (RFI's).
7. Review the Contractor's submittals.
8. Assist the Client in the review of the Contractor's pay requests and make recommendations regarding the amount of pay due.

9. Provide technical staff to attend scheduled construction meetings and provide construction observation (including written field observation reports) throughout the course of active construction.
10. Make one (1) Substantial Completion observation and provide a report for each facility.
11. Make one (1) Final Completion observation and provide a report for each facility.
12. Incorporate contractor red-line mark-ups into the original construction drawings for Record Drawings.

D. Commissioning Services

TLC will provide Fundamental (Construction) Commissioning of the project limited to the basic services, tasks and deliverables described below:

1. TLC will designate an individual as the Commissioning Authority (CxA) to lead, review and oversee the completion of the Cx process activities. The CxA will report results, findings, and recommendations directly to the City.
2. The CxA will develop and implement the Commissioning Plan. An initial preliminary Commissioning Plan will be developed during the design phase. It will be reviewed with the design and construction team to achieve buy-in from all team members. The Commissioning Plan will be updated throughout the course of design and construction phases.
3. The CxA will conduct a design review of the design documents at 90% completion state and will back-check the review comments in the subsequent design submission.
4. Coordinate and integrate Cx activities into the project's construction schedule with the assistance of the contractor.
5. Lead a Cx kickoff meeting to discuss Cx procedures, roles and responsibilities and purposes of the Cx process and activities.
6. Review contractor submittals applicable to systems being commissioned. This review shall be concurrent with Architect/Engineer (A/E) reviews and submitted to the design team and the City.
7. Conduct and lead periodic Cx meetings with the O/A/E/C team. In general, these meetings will be held on the same day as regularly scheduled construction meetings, so as not to cause excessive numbers of additional meetings for the team. The number of meetings for each facility will be commensurate with the scope of work for each facility.
8. Conduct periodic site observation visits to review the installation of systems being commissioned and witness some equipment start up. The number of site visits for each facility will be commensurate with the scope of work for each facility. A report will be issued to the City after each visit.
9. Develop and maintain an issues log to document outstanding deficiencies and action items stemming from the construction and acceptance phases. The issues log will be issued to the City and the construction team at least monthly.
10. Verify the contractor develops and implements equipment start-up procedures and system verification checklists (Pre-Functional Tests) for each piece of equipment. TLC will ensure these checklists are completed and will document the procedure as part of the final Cx report and binder as described in the Post Occupancy Phase below.
11. Verify the controls contractor carries out point-to-point control checks, and documents the results on checkout sheets. These checks confirm that all control-point wiring has been correctly installed and terminated, sensors have been calibrated, and field devices operate correctly. TLC will review, comment as necessary and include this document in the final Cx binder developed following substantial completion
12. Review the final air and hydronic (where applicable) test and balance (T&B) report completed by the T&B contractor. TLC will field verify 10% of T&B information with the T&B contractor.
13. The CxA will lead the team in the functional performance testing and will verify the installation and performance of the each of the systems to be commissioned. In accordance with the sampling rates outlined below, TLC shall develop and complete the functional performance testing for each piece of equipment and system to measure discrete operations and the interoperability of systems and components, to verify all systems are operating in compliance with the construction documents, and the Cx plan. As part of the functional

testing phase, TLC will verify setup of appropriate trending logs. Trend logs will be reviewed for compliance with proper system operation.

14. The CxA will work with the contractor and design team to assist in the development of systems manuals that provide future operating staff the information needed to understand and optimally operate the commissioned systems.
15. The CxA will verify that the requirements for training operating personnel and building occupants are completed in accordance with the design documentation. Verification will be accomplished through review of Training agendas, sign-in sheets and video.
16. The CxA will return to the site to review building operation within 10 months after substantial completion with O&M staff and occupants. The CxA will assist in a plan for resolution of outstanding commissioning-related issues.
17. Conduct one (1) off-season site visit to perform functional performance tests (FPT) to ensure proper heating season operation in accordance with the design documents.
18. Produce and distribute a final Cx report and binder to document the results of the Cx process. The report shall include an executive summary, list of outstanding issues, completed system verification checklists and functional performance test forms as well as all ductwork leakage testing checklists, test and balance report and start-up and system verification checklists developed by the contractor.
19. SYSTEMS TO BE COMMISSIONED: The Commissioning process activities shall be completed for the following energy-related systems, at the quantity listed (as applicable to each facility).

Systems and Major Equipment	Included in Cx Scope of Work?	Quantity to be Commissioned
Mechanical Equipment		
Air Handling Units, Fan Coil Units, Heat Pumps	Yes	Facility has 1-10: 100% Facility has 11-20: 50% Facility has >20: 25%
Terminal Units (VAV)	Yes	25% at each facility
Unit Heaters	Yes	25% at each facility
Central Plant Heating Equipment (Includes boilers, pumps, piping systems)	Yes	100%
Central Plant Cooling Equipment (includes chillers, pumps, cooling tower)	Yes	100%
Exhaust Fans	Yes	25%
HVAC Controls (representative sequences)	Yes	***100% (increased from 25%)***
HVAC Controls (sensor and feedback data)	Yes	***100% (increased from 25%)***
TAB Services (recheck of measured data)	Yes	***25% (increased from 10%)***
Electrical Equipment		
Interior Building Lighting Controls	Yes	100%
Exterior Building Lighting Controls (not inc. parking lot lighting)	Yes	100%
Renewable Electrical Energy Systems	Yes	100%
Plumbing Systems		
Water Heaters	Yes	100%
Hot Water Pumps	Yes	100%
Domestic Water Booster Pumps	Yes	100%
Solar Thermal Hot Water Systems	Yes	100%

Notes:
1. Only exhaust fans larger than 2 HP will be included with the Cx effort.
2. Controls system operation will be primarily verified through data trending using the existing controls front-end system. If necessary, functional testing would occur during investigation phase to examine specific issues of concern.
3. Review of TAB activities will be done with spot checking of measured values in TAB Report. Spot checking to be performed by the TAB contractor, using the measurement devices used in the initial report, and witnessed by the CxA.

4. Electrical testing services for grounding or power quality are not currently included as part of the initial scope of work.
5. Electrical systems not included in scope of work include emergency generators, power quality, security systems, UPS, fire alarm.
6. Mechanical systems not included in commissioning activities include ductwork, fire and smoke dampers (except to the extent the FPTs check safety interfaces between these and the HVAC control system), and equipment sound & vibration measurements.
7. The contractor and subcontractor will perform all tests and TLC shall witness tests as indicated above.
8. The contractor shall be responsible for any damages resulting from equipment start-up or testing.

E. Retro-Commissioning / Re-Commissioning

TLC will provide retro-commissioning / re-commissioning as **Additional Services.** Recently installed and previously commissioned equipment/systems will be re-commissioned for improved function and/or energy efficiency. Examples of such sites include the Amway Center, and the "repeat" sites that were part of the 2010 energy upgrades project.

1. For the Amway Center, the major HVAC equipment and related controls (AHU's, chillers, pumps) will be reviewed for potential modifications and will be re-commissioned for energy efficiency.
2. The major energy consuming equipment and systems at the 19 "repeat" sites originally a part of the 2010 energy upgrades project will be reviewed for potential modifications and will be re-commissioned. This will include the following as installed as a part of the 2010 project: AHU's, chillers, pumps, and condensing units; water heating equipment; and lighting controls.
   The sites include Water Conserv II, Wastewater Administration, Primrose Plaza, Streets and Stormwater Administration, L. Claudia Allen Senior Center, Colonialtown Neighborhood Center, Fleet & Facilities Management, Mennello Museum, Solid Waste Management, Fire EMS Training, and Fire Stations 3, 4, 5, 6, 7, 8, 10, 11, & 13.

F. ASHRAE Building Energy Quotient (bEQ) Program

The City desires to implement the ASHRAE Building Energy Quotient (bEQ) building energy labeling program on approximately 32 selected City facilities. bEQ is a building energy rating program that provides information on a building's energy use. Two (2) separate "workbooks", one evaluating As Designed potential and the other assessing In Operation performance, form the foundation of bEQ.

TLC sub-consultant, Milan Engineering, will perform these **Additional Services**. The scope of work is to perform the necessary tasks to complete and file an ASHRAE Building Energy Quotient (bEQ) As-Designed and In-Operation assessment per designated site. The As-Designed evaluation will determine the building's potential energy efficiency and the In-Operation will identify areas for potential improvement in performance and energy efficiency. For each site, the scope of work includes the initial data collection, sortation, and analysis of building information relevant for the completion of both the As-Designed and In-Operation forms. A site visit will be necessary to complete an interview with the Building Representative of each site, as well as collecting measurements for the In-Operation assessment. Energy calculations will be required for any designated site that will be undergoing the completion of the As-Designed forms. Energy calculations will utilize eQUEST version 3.65, build 7163 unless otherwise noted. Lastly, both As-Designed and In-Operation assessment sites will require final completion, review and submission of all forms to ASHRAE headquarters for review.

QUALIFICATIONS:

Our Scope of Services shall be limited by the following Qualifications:

1. We assume that accurate architectural and HVAC construction or as-built drawings of the existing facility are available from the Client for our use. It is very important that this information be available for our use. If it becomes evident that complete documents are not available, TLC's Fee Proposal may require revision, as we would have to expend significant additional effort determining existing layouts, construction parameters, etc.

2. Bulk or air sampling, monitoring and/or analysis of microbial and/or chemical contamination have not been included in our basic services. Should these services be required, TLC can provide them as additional services.
3. It is assumed that there is sufficient electrical capacity at each facility for all new equipment, and thus design of new electrical services has not been included.
4. Drawing reproduction will be by others. Any reproduction costs (except as necessary for in-house coordination) incurred by TLC shall be treated as a reimbursable expense at direct cost.
5. Assistance in evaluating bids, checking contractors' references, preparing bid tabulations, etc., are not included and shall be considered additional services.
6. Our review of the Contractor's submittals is limited to one (1) complete initial submittal package and one (1) complete resubmittal. Review of subsequent resubmittals, or submittals not in accordance with the Engineer's specified requirements, shall be considered additional services.
7. Construction Phase Services are limited to reviewing Submittals and Shop Drawings and observing the work (limited to the frequency described above) to determine in general, if the work is being performed in a manner that will be in accordance with the contract documents, when completed. Frequent, exhaustive, and/or corrective site visits to check the quality or quantity of the work are excluded from basic services. Corrective work or site visits for modifications or repairs due to contractor or subcontractor errors or omissions are excluded from basic services, including additional drawings, calculations or modifications that may be required by the building official.

CHARGES FOR SERVICES

We propose to provide the above-described Scope of Services for a **lump sum fee** broken down as follows:

Phase / Service	Original Fee (based on $5.7M)	Fee Increase for Size Increase to $9.3M	Additional Services for NEW scope not previously included	New Total – After Budget Increase and New Scope Added
Assessment, Modeling and Audit Phase	$155,500 – TLC $69,500 – Milan	$70,000 – TLC $31,300 – Milan	$55,000 – TLC	**$280,500 – TLC** **$100,800 – Milan** ($381,300 subtotal)
Design Phase	$36,500 – TLC $165,000 – Milan $29,400 – R+B $44,100 – MCG	$103,800 – TLC $69,208 – Milan		**$140,300 – TLC** **$234,208 – Milan** **$29,400 – R+B** **$44,100 – MCG** ($448,000 subtotal)
Construction Phase	$25,500 – TLC $59,500 – Milan	$32,100 – TLC $21,400 – Milan		**$57,600 – TLC** **$80,900 – Milan** ($138,500 subtotal)
Commissioning Services	$150,000 – TLC	$94,500 – TLC	$30,200 – TLC	**$274,700 – TLC**
Re-Commissioning of existing unmodified systems			$121,000 – TLC	**$121,000 – TLC**
ASHRAE Building Energy Quotient (bEQ) Program			$19,900 – TLC $199,232 – Milan	**$19,900 – TLC** **$199,232 – Milan** ($219,132 subtotal)
TOTAL LUMP SUM FEE	**$367,500 – TLC** **$294,000 – Milan** **$29,400 – R+B** **$44,100 – MCG** **$735,000 original**	**$300,400 – TLC** **$121,908 – Milan** **$422,308 add'l**	**$226,100 – TLC** **$199,232 – Milan** **$425,332 add'l**	**$894,000 – TLC** **$615,140 – Milan** **$29,400 – R+B** **$44,100 – MCG** **$1,582,640 Total**

See attached Sub-Consultant proposals.

Additionally, project expenses shall be reimbursed at direct cost. Reimbursable expenses shall include all out-of-county travel-related costs, (TLC's Orlando office to be considered point-of-origin for all trips), reprographics/bulk printing (except as required for in-house coordination), courier services, shipping and express mail.

Similarly, costs associated with submission of the BEQ data to ASHRAE shall be treated as reimbursable expense at direct cost. It is estimated these associated will not exceed $24,000.

Additional Services not listed in the Scope of Services above may be provided by a negotiated additional lump sum fee.

Billings will be monthly and will be based upon percentage of services completed and expenses incurred at the time of billing. Each month, invoicing will be broken down into the categories indicated above, with a "percent complete" indicated for each of the categories. (For example, 35% of assessment, 5% of design, 0% of construction, etc.)

PROJECT SCHEDULE AND LIQUIDATED DAMAGES

The City of Orlando has previously expressed that it is amenable to adjusting the project fee to more accurately reflect the larger and more intensive scope of work. It has also expressed concern about the need to establish and meet schedule milestone deadlines. The City expressed a desire to add a provision for financial penalties (liquidated damages) for failure to meet established milestone deadlines.

As a part of this proposed Amendment to the Contract, TLC can accept financial penalties (liquidated damages) for failure to meet established milestone deadlines as described in the table below in the amount of $250 per business day.

However, in consideration of the increase in project size, scope and complexity, the contract term must also be extended to permit time for reasonable completion of the work. The Contract term currently terminates on April 8, 2016. We propose the term be extended one (1) year to terminate on April 8, 2017, as previously discussed.

Provided this proposed amendment is approved by May 15, 2015, following is the proposed schedule:

Audit Phase – Completion of assessments and audits, including reports and ASHRAE PCBEA forms.	September 31, 2015
Design/Bid Documents Phase – Completion of design documents and/or performance specification bid documents for each site.	February 28, 2016
ASHRAE BEQ – Completion of the ASHRAE BEQ process and submission to ASHRAE.	December 31, 2016
Retro-Commissioning – The retro-commissioning of existing systems at applicable sites is complete.	December 31, 2016

In accordance with Section 4.5 of our Contract, if TLC is delayed in completing its Services through no fault or negligence of its own (such as City delays, force majeure, etc.), and, as a result, will be unable to complete performance fully and satisfactorily by the above schedule, then, TLC shall be granted an extension of its schedule equal to the period it was actually and necessarily delayed.

TLC does NOT agree to expose itself to potential "liquidated damages" for a set construction schedule, since TLC has no reasonable or contractual control over the speed at which the City can bid and contract the work, or the Contractors' means and methods, speed of operations, or ability to complete the work. Similarly, since the schedule of commissioning new work relies heavily upon the contractors' ability to complete their work, and the readiness of that work for

functional testing, TLC does NOT agree to expose itself to potential "liquidated damages" for a set schedule of commissioning the contractors' new work.

If this proposal is acceptable, please issue an Amendment to our Contract for execution.

Please give us a call with any questions or comments.

Sincerely,

TLC ENGINEERING FOR ARCHITECTURE, INC.

Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate / Senior Mechanical Engineer

Wayne E. Allred, PE, LEED AP BD+C
Principal / Division Director

MILAN
ENGINEERING

Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate & Senior Mechanical Engineer
Orlando Division / Energy, Cx & Existing Building Services

TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801-3463

02/12/14

Re: **City of Orlando – Energy Efficiency Upgrades Project**

As requested, the following is our information regarding personnel hourly rates for the subject project. These rates will be used throughout the duration of the contract.

Individual classification personnel hourly rates are as follows:

Classification	Hourly Rate
Principal Engineer	$151.25
Engineer	$82.50
Designer	$62.78
Administrative	$41.25

Sincerely,

Mitesh K. Smart, P.E., President

MILAN
ENGINEERING

Professional Services Proposal

Client Information:
(hereinafter called "client)

Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate & Senior Mechanical Engineer
Orlando Division / Energy, Cx & Existing Building Services
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801-3463

Date: **May 7, 2015**

Project Description: **Engineering services as described in TLCs' Prime Agreement with the CITY dated 4/8/2015, and as delineated by the "City of Orlando, Responsibilities and Fee Splits" matric dated 5/9/2014.**

DESCRIPTION OF SCOPE

ASSESSMENT & AUDITING PHASE

1. Perform site visits to determine existing components and condition of MEP energy consuming systems associated with each assigned building
2. Complete ASHRAE PCBEA forms for assigned facilities
3. Develop CAD backgrounds for assigned facilities

DESIGN PHASE

1. Perform site visits to determines existing MEP related systems associated with each building
2. Attend owner review meetings and team coordination meetings
3. Create Construction Documents

CONSTRUCTION ADMINISTRATION PHASE

1. Review and respond to contractor submittals, shop drawings and RFIs' for assigned facilities
2. Attend construction phase meetings.
3. Provide field observation visits including written reports.
4. Final completion and verification report.

DELIVERABLES

1. PDF of completed forms/drawings/specifications/reports
2. Construction Administration: PDF of reports

The original project has undergone a significant increase in size and complexity, which has affected our man-power expended to date and ongoing. Following is the summary of our original 2014 compensation schedule and our additional services fee, with resulting phase totals.

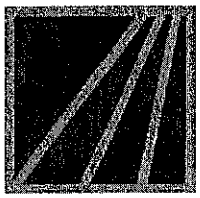
Original 2014 Fee	**$294,000**
Additional Services	**$121,908**
New Total	**$415,908**

The above fee schedule does NOT include the ASHRAE BEQ work, which is provided for under separate proposal.

Milan Representative:

(Signature)

Mitesh K. Smart, President



MONTGOMERY
CONSULTING GROUP

PLANNING | ENVIRONMENTAL | ENGINEERING: TRANSPORTATION | AVIATION | INFRASTRUCTURE

February 12, 2014

Mr. Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate & Senior Mechanical Engineer
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801-3463

Reference: Proposed Hourly Billing Rate Schedule
City of Orlando – Energy Efficiency Projects

Dear Mr. Hartley:

Montgomery Consulting Group, Inc. is pleased to provide services and rates to support TLC's Engineering for Architecture contract for the City of Orlando – Energy Efficiency Projects.

These following labor rates are proposed for the duration of the contract:

Category	Billable Rate ($/hour)
Project Manager	$ 160.00
Senior Cost Estimator	$146.61
Scheduler	$ 94.95
CAD or GIS Technician	$ 94.95
Contract Administrator	$ 87.27
Project Administrator	$ 69.81

We look forward to working with TLC on these contracts. Should you have any questions, please advise.

Yours very truly,

Monty Gettys
President

501 S. New York Avenue | Suite 210 | Winter Park, FL 32789 | tel 407.539.7030 | fax 407.539.7035 | www.mcgi-us.com

MONTGOMERY
CONSULTING GROUP

PLANNING | ENVIRONMENTAL | ENGINEERING: TRANSPORTATION | AVIATION | INFRASTRUCTURE

April 24, 2015

Mr. Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate & Senior Mechanical Engineer
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801-3463

Reference: **Proposal for Cost Estimating Services**
City of Orlando – 55 Buildings Project

Dear Mr. Hartley:

We are pleased to provide this proposal for cost estimating support services to TLC Engineering for Architecture (TLC) for the City of Orlando – 55 Building project. We propose to provide a review of budgetary construction cost figures for multiple bid packages for this project. The total proposed lump sum fee for these services is $44,100. We have attached Exhibit I detailing our proposed labor rates and Exhibit II providing a breakdown of proposed fees per labor category.

We have assumed our reviews will be transmitted electronically (no hard copies will be provided) to TLC, and TLC will provide electronic copies in PDF format and/or paper-copies for each Bid Package we are reviewing for our use.

We look forward to the opportunity to work with TLC on this project. Should you have any questions, please do not hesitate to contact me at the office or on my mobile at 407-620-5787.

Yours truly,

Monty Gettys
President

Attachments:

- Exhibit I – Contract Rates
- Exhibit II – Fee Detail

rhodes + brito
ARCHITECTS

February 13, 2014

Michael R. Hartley, PE, CIAQP, LEED AP, CxA
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801

RE: City of Orlando

As requested, the following is personnel hourly rate schedule for this project:

Classification	Billable Rate
Principal	$177.00
Senior Project Manager	$147.50
Project Manager	$132.75
Project Architect	$115.05
Project Coordinator	$92.93
Architect Intern	$53.10
Construction Administrator	$109.15
Clerical	$45.73

Under penalty of perjury, I declare that I have read the foregoing and the facts stated in it are true. False statements may result in criminal prosecution for a felony of the third degree as provided for in Section 92.525 (3), Florida Statutes.

Ruffin Rhodes, AIA
Principal

605 E. Robinson Street • Suite 750 • Orlando, FL 32801 • 407.648.7800

rhodes+brito
ARCHITECTS

April 28, 2015

Michael Hartley, PE
Associate, Senior Mechanical Engineer
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600

Re: RQS13-0496, 55 Buildings, Energy Efficiency Improvements
TLC #113097

Dear Mike,

Thank you for the opportunity to support TLC for the referenced project for the City of Orlando.

Per our discussion, Rhodes+Brito shall provide architectural design and extended staff in support of TLC in undertaking energy audits and developing construction documents for the RQS13-0496, 55 Buildings, Energy Efficiency Improvements project.

Our proposed fee for the effort is Twenty-Nine Thousand, Four-Hundred dollars ($29,400.00). Our labor rates are as follows, per our overall agreement:

Classification	Billable Rate
Principal	$177.00
Senior Project Manager	$147.50
Project Manager	$132.75
Project Architect	$115.05
Project Coordinator	$92.93
Architect Intern	$53.10
Construction Administrator	$109.15
Clerical	$45.73

Should you have any questions or comments, please do not hesitate to contact us.

Sincerely,
RHODES+BRITO ARCHITECTS INC.

Project Manager

MILAN
ENGINEERING

Professional Services Proposal & Agreement

Client Information:
(hereinafter called "client)

Michael R. Hartley, PE, CIAQP, LEED AP, CxA
Associate & Senior Mechanical Engineer
TLC Engineering for Architecture
255 South Orange Avenue, Suite 1600
Orlando, FL 32801-3463

Date: **April 27, 2015**

Project Name: **COO ASHRAE BEQ (32 buildings')**

Project Description/Scope: This scope of work will perform the necessary tasks to complete and file an ASHRAE Building Energy Quotient (bEQ) As-Designed and In-Operation assessment per designated site. The As-Designed evaluation will determine the building's potential energy efficiency and the In-Operation will identify areas for potential improvement in performance and energy efficiency. For each site, the scope of work will include the initial data collection, sortation, and analysis of building information relevant for the completion of both the As-Designed and In-Operation forms. A site visit will be necessary to complete an interview with the Building Representative of each site, as well as collecting measurements for the In-Operation assessment. Energy calculations will be required for any designated site that will be undergoing the completion of the As-Designed forms. Energy calculations will utilize eQUEST version 3.65, build 7163 unless otherwise noted. Lastly, both As-Designed and In-Operation assessment sites will require final completion, review and submission of all forms to ASHRAE headquarters for review. Once the forms have been submitted to ASHRAE, it will take approximately 4-6 weeks for processing of final documentation.

DESCRIPTION OF SCOPE

Milan shall provide client with the following services:

1. Perform engineering services in order to file ASHRAE BEQ (Building Energy Quotient) paper work with ASHRAE.
2. In operation + as-designed forms filled out and filed.

In Operation

- Review the plans/specifications
- Review the Initial Data and Utilities bills
- Form Population
- Site visits
  - Photos
  - IEQ Measurements
- Final submission Report

As Designed

- Review the plans/specifications
- Review the Initial Data and Utilities bills
- Form Population
- Energy Model Input and Outputs
- Site visits
- Final submission Report

Reimbursable Expenses

- *Not to exceed expense of $750 per building for filing of ASHRAE BEQ forms with ASHRAE.*

DELIVERABLES

- Prior to final submission to ASHRAE a meeting with the building owner to review completed form, copy of the complaint processors and the terms and condition.
- Completed copy of the In Operation and As Designed workbooks.
- After ASHRAE final review and acceptance of the completed forms the building owner will receive a certificate with the As Design and In Operation building rating.

FEE SCHEDULE

Design Phase	**$199,232.00**
Reimbursable Expenses	**$24,000 (Not to exceed)**

Milan Representative:

Mitesh K. Smart, President

925 S Semoran Blvd | Suite 100
Winter Park, Fl 32792
t: 407.678.2055 f. 407.678.2088