

CLERK'S CONTRACT and AGREEMENT COVER PAGE

Legistar File ID#:

Innoprise Contract #:

Year: 2018

Amount:

Department: Public Works/Building Maintenance

Contract Type: Design-Build Master

Contractors Name: Control Technology & Solutions (CTS Group)

Contract Description: Design-Build Energy Performance Contracting-Phase II
2017-0918 - Lighting Fixture Conversions & Upgrades - CAC, PW, Rec
Admin, Centennial Park; OPHFC Pool Dehumid; SPLEX HVAC; SPLEX
gymnastics HVAV; SPLEX Boiler upgrade
2018-0112 - OPHFC Ceiling Painting
2018-0275 - T-12 upgrade additional



**CTS
AGREEMENT**

CUSTOMER NAME:
DATE OF SUBMISSION:

Village of Orland Park – Phase II
April 26, 2018

TABLE OF CONTENTS
ARTICLE

PAGE

1. GENERAL PROVISIONS	1
2. CTS'S RESPONSIBILITIES	1
3. CUSTOMER'S RESPONSIBILITIES.....	3
4. SUBCONTRACTS.....	4
5. INSTALLATION AND ACCEPTANCE.....	5
6. PRICE AND PAYMENT	6
7. CHANGES IN THE PROJECT	6
8. INSURANCE, INDEMNITY, WAIVER OF SUBROGATION, AND LIMITATION OF LIABILITY.....	7
9. TERMINATION OF THE AGREEMENT	10
10. ASSIGNMENT	10
11. MISCELLANEOUS PROVISIONS.....	10
12. LIMIT OF LIABILITY - FIRE AND/OR SECURITY SYSTEMS.....	11
13. ALLOCATION OF SECTION 179D DEDUCTION TO DESIGNER.....	12
<u>14. SUBSEQUENT PHASES OF WORK.....</u>	<u>12</u>

ATTACHMENT A	THE WORK (SCOPE-OF-WORK)
ATTACHMENT B	THE INSTALLATION SCHEDULE
ATTACHMENT C	PAYMENT SCHEDULE
ATTACHMENT D	ENERGY GUARANTEE
ATTACHMENT E	SCHEDULE OF SAVINGS
ATTACHMENT F	PROJECT ACCEPTANCE
ATTACHMENT G	FORM ALLOCATION OF SECTION 179D DEDUCTION

Note Regarding Modifications Made to this Agreement: Provisions in the printed document that are not to be included in the agreement may be deleted by striking through the word, sentence or paragraph to be omitted. It is recommended that unwanted provisions not be made illegible. The parties should be clearly aware of the material deleted from the standard form. **Do not make any modifications to this Agreement unless approval to do so has been granted. Changes may be made only by deletion as explained above, or, by addendum.**

ARTICLE 1

GENERAL PROVISIONS

1.1 This Agreement, including all Attachments, Exhibits, and Schedules referenced herein (hereinafter the "Agreement") dated April 26, 2018 (the "Effective Date") by and between Control Technology & Solutions, L.L.C. d/b/a CTS Group (hereinafter "CTS"), a Missouri limited liability company, with a principal place of business at 15933 Clayton Rd., Suite 110, Ellisville, MO 63011, and Village of Orland Park ("CUSTOMER") with a principal place of business at 14700 S. Ravinia Avenue, Orland Park, Illinois 60462.

(collectively the "Parties").

1.2 **EXTENT OF AGREEMENT:** This Agreement, including all attachments and exhibits hereto, represents the entire agreement between CUSTOMER and CTS and supersedes all prior negotiations, representations or agreements. This Agreement shall not be superseded by any provisions of the documents for construction and may be amended only by written instrument signed by both CUSTOMER and CTS. None of the provisions of this Agreement shall be modified, altered, changed or voided by any subsequent Purchase Order issued by CUSTOMER, which relates to the subject matter of this Agreement.

1.3 As used in this Agreement, the term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by CTS to fulfill CTS's obligations, as described in Attachment A and otherwise set forth in the Contract Documents. The Work may constitute the whole or a part of the Project. The Work specifically excludes certain design and construction, which are the subject of separate agreements between CUSTOMER and parties other than CTS.

1.4 The Project is the total construction of which the Work performed by CTS under this Agreement may be the whole or a part.

1.5 The Contract Documents consist of this Agreement, its attachments, exhibits, schedules, and addenda.

1.6 Installation Schedule means that schedule set out in Attachment B describing the Parties' intentions respecting the times by which the components or aspects of the Work therein set forth shall be installed and/or ready for acceptance or beneficial use by CUSTOMER.

ARTICLE 2

CTS'S RESPONSIBILITIES

2.1 CTS Services

2.1.1 CTS shall be responsible for construction of the Project.

2.1.2 CTS will assist in securing permits necessary for the Work. CUSTOMER shall pay such proper and legal fees to public officers and others as may be necessary to the due and faithful performance of the Work and which may arise incidental to the fulfilling of these specifications.

2.2 Responsibilities with Respect to the Work

2.2.1 CTS will provide construction supervision, inspection, labor, materials, tools, construction equipment and subcontracted items necessary for the execution and completion of the Work.

2.2.2 CTS shall keep the premises in an orderly fashion and free from unnecessary accumulation of waste materials or rubbish caused by its operations. If CTS damages property not needed for the Work, CTS shall repair the property to its pre-existing condition unless CUSTOMER directs otherwise. At the completion of the Work, CTS shall remove waste material supplied by CTS under this Agreement as well as all its tools, construction equipment, machinery and surplus material. CTS shall dispose of all waste materials or rubbish caused by its operations; provided, that unless otherwise specifically agreed to in this Agreement, CTS shall not be responsible for disposal of toxic or hazardous materials removed

from the facilities, such as fluorescent lights, potential polychlorinated biphenyl containing light ballasts and mercury-containing controls, but shall store those materials neatly at a location designated by CUSTOMER.

2.2.3 CTS shall give all notices and comply with all laws and ordinances legally enacted as of the date of execution of the Agreement governing the execution of the Work. Provided, however, that CTS shall not be responsible nor liable for the violation of any code, law or ordinance caused by CUSTOMER or existing in CUSTOMER's property prior to the commencement of the Work.

2.2.4 CTS shall comply with all applicable federal, state and municipal laws and regulations that regulate the health and safety of its workers while providing the Work, and shall take such measures as required by those laws and regulations to prevent injury and accidents to other persons on, about or adjacent to the site of the Work. It is understood and agreed, however, that CTS shall have no responsibility for elimination or abatement of health or safety hazards created or otherwise resulting from activities at the site of the Work carried on by persons not in a contractual relationship with CTS, including CUSTOMER, CUSTOMER's contractors or subcontractors, CUSTOMER's tenants or CUSTOMER's visitors. CUSTOMER agrees to cause its contractors, subcontractors and tenants to comply fully with all applicable federal, state and municipal laws and regulations governing health and safety and to comply with all reasonable requests and directions of CTS for the elimination or abatement of any such health or safety hazards at the site of the work.

2.3 Patent Indemnity

2.3.1 CTS shall, at its expense, defend or, at its option, settle any suit that may be instituted against CUSTOMER for alleged infringement of any United States patents related to the hardware manufactured and provided by CTS, provided that: 1. Such alleged infringement consists only in the use of such hardware by itself and not as part of, or in combination with, any other devices, parts or software not provided by CTS hereunder; 2. CUSTOMER gives CTS immediate notice in writing of any such suit and permits CTS, through counsel of its choice, to answer the charge of infringement and defend such suit; and 3. CUSTOMER gives CTS all needed information, assistance and authority, at CTS's expense, to enable CTS to defend such suit.

2.3.2 If such a suit has occurred, or in CTS's opinion is likely to occur, CTS may, at its election and expense: obtain for CUSTOMER the right to continue using such equipment; or replace, correct or modify it so that it is not infringing; or remove such equipment and grant CUSTOMER a credit therefore, as depreciated.

2.3.3 In the case of a final award of damages in any such suit, CTS will pay such award. CTS shall not, however, be responsible for any settlement made without its written consent.

2.3.4 This article states CTS's total liability and CUSTOMER's sole remedy for any actual or alleged infringement of any patent by the hardware manufactured and provided by CTS hereunder. In no event shall CTS be liable for any indirect, special or consequential damages resulting from any such actual or alleged infringement, except as set forth in this section 2.3.

2.4 Warranties and Completion

2.4.1 CTS warrants CUSTOMER good and clear title to all equipment and materials furnished to CUSTOMER pursuant to this Agreement free and clear of liens and encumbrances. CTS hereby warrants that all such equipment and materials shall be of good quality and shall be free from defects in materials and workmanship, including installation and setup, for a period of one (1) year from the date of beneficial use or substantial completion of the equipment or portion of the Work in question, provided that no repairs, substitutions, modifications, or additions have been made, except by CTS or with CTS's written permission, and provided that after delivery such equipment or materials have not been subjected by non-CTS personnel to accident, neglect, misuse, or use in violation of any instructions supplied by CTS. CTS's sole liability hereunder shall be to repair promptly or replace defective equipment or materials, at CTS's option and at CTS's expense. The limited warranty contained in this Section 2.4.1 shall constitute the exclusive remedy of CUSTOMER and the exclusive liability of CTS for any breach of any warranty related to the equipment and materials furnished by CTS pursuant to this Agreement.

2.4.2 In addition to the warranty set forth in Section 2.4.1 above, CTS shall, at CUSTOMER's request, assign to CUSTOMER any and all manufacturer's or installer's warranties for equipment or materials not manufactured by CTS and

provided as part of the Work, to the extent that such third-party warranties are assignable and extend beyond the one (1) year limited warranty set forth in Section 2.4.1.

2.4.3 The warranties set forth herein are exclusive, and CTS expressly disclaims all other warranties, whether written or oral, implied or statutory, including but not limited to, any warranties of merchantability with respect to equipment and materials provided hereunder. This waiver shall not waive the warranty of fitness for a particular purpose.

2.4.3 The warranties set forth herein are exclusive, and CTS expressly disclaims all other warranties, whether written or oral, implied or statutory, including but not limited to, any warranties of merchantability and fitness for a particular purpose, with respect to the equipment and materials provided hereunder. CTS shall not be liable for any special, indirect, incidental or consequential damages arising from, or relating to, this limited warranty or its breach.

2.4.4 CTS's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by CTS, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage.

2.5 Hazardous Materials

2.5.1 CTS and its subcontractors shall not be required to handle, remove, come into contact with, dispose of, or otherwise work with hazardous materials existing on the project site at the date of this Agreement or resulting, either directly or indirectly, from any acts or omissions of CUSTOMER, its employees, agents or assigns, or any of its other contractors or subcontractors. "Hazardous materials" as used herein includes all hazardous or toxic substances or materials as may be so designated by federal, state or local governmental entities. "Hazardous materials" shall also include fungus and mold. If, during the performance of the Work, the presence of hazardous materials is discovered or reasonably suspected, CTS shall notify CUSTOMER of such discovery or suspicion and shall be permitted to immediately cease all work which requires contact with or exposure to such hazardous materials, until the CUSTOMER has made arrangements for the removal of the same. CTS shall be entitled to an extension of the Contract Time for ceasing work pursuant to this Section.

2.5.4 If the structure(s) where the Contract Work is to be performed was built before 1978, CUSTOMER understands that it may contain lead paint. CUSTOMER also understands that the only way to know whether lead paint is present is to have one or more paint samples in the work area tested. CUSTOMER authorizes those tests to be done by CTS and agrees to pay CTS for the costs of those tests, in addition to the Contract Price. Alternatively, as a condition of accepting this Contract, CUSTOMER agrees to provide CTS with documentation demonstrating, to CTS's reasonable satisfaction, that: (1) the areas where the Contract Work is to be performed has been tested and determined to be lead free by a certified risk assessor, certified lead inspector or certified renovator; (2) the areas where the Contract Work is to be performed is paint free; and/or (3) the areas where the Contract Work is to be performed were built after 1977.

ARTICLE 3

CUSTOMER'S RESPONSIBILITIES

3.1 CUSTOMER shall provide CTS full information regarding the requirements for the Work.

3.2 CUSTOMER shall designate a representative who shall be fully acquainted with the Work, and who has authority to approve changes in the scope of the Work and render decisions promptly.

3.3 CUSTOMER shall furnish to CTS all information regarding legal limitations, utility locations and other information reasonably pertinent to this Agreement, the Work and the Project.

3.4 CUSTOMER shall secure and pay for all necessary approvals, easements, assessments, permits and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities, including charges for legal and auditing services.

3.5 If CUSTOMER becomes aware of any fault or defect in the Work, it shall give prompt written notice thereof to CTS and if such notice is not promptly given, CUSTOMER shall be responsible for any additional repair or remedial costs which could have been avoided if such notice had been promptly given.

3.6 The services and information required by the above paragraphs shall be furnished with reasonable promptness at CUSTOMER's expense and CTS shall be entitled to rely upon the accuracy and the completeness thereof.

3.7 Prior to the commencement of the Work and at such future times as CTS shall reasonably deem appropriate, CUSTOMER shall furnish evidence in a form satisfactory to CTS that sufficient funds are available and committed to pay for the Work. Unless such evidence is furnished, CTS is not required to commence or continue any Work. Further, if CUSTOMER does not provide such evidence, CTS may stop work upon fifteen (15) days notice to CUSTOMER. The failure of CTS to insist upon the providing of this evidence at any one time shall not be a waiver of CUSTOMER's obligation to make payments pursuant to this Agreement, nor shall it be a waiver of CTS's right to request or insist that such evidence be provided at a later date.

CUSTOMER represents and warrants that, except as otherwise disclosed in this Agreement, in the areas where CTS will undertake Work or provide services, there are no: (a) materials or substances classified as toxic or hazardous either (i) on or within the walls, floors, ceilings or other structural components, or (ii) otherwise located in the work area, including asbestos or presumed asbestos-containing materials, formaldehyde, containers or pipelines containing petroleum products or hazardous substances, etc.; (b) situations subject to special precautions or equipment required by federal, state or local health or safety regulations; or (c) unsafe working conditions. CUSTOMER shall notify CTS of any changes or updates that occur during the course of the Agreement. If any such materials, situations or conditions, whether disclosed or not, are in fact discovered by CTS or others and provide an unsafe condition for the performance of the Work or services, the discovery of the material, situation or condition shall constitute a cause beyond CTS's reasonable control and CTS shall have the right to cease or not commence the Work until the area has been made safe by CUSTOMER or CUSTOMER's representative, at CUSTOMER's expense.

To the fullest extent allowed by law, customer shall indemnify and hold CTS harmless from and against any and all claims and costs of whatever nature, including but not limited to, consultants' and attorneys' fees, damages for bodily injury and property damage, fines, penalties, cleanup costs and costs associated with delay or work stoppage, that in any way results from or arises under the breach of the representations and warranties in this section, the existence of mold or a hazardous substance at a site, or the occurrence or existence of the situations or conditions described in this section, whether or not customer provides CTS advance notice of the existence or occurrence and regardless of when the hazardous substance or occurrence is discovered or occurs. This indemnification shall survive termination of this agreement for whatever reason. Nothing in this section shall be construed to require that customer indemnify and hold harmless CTS from claims and costs resulting from the negligent use by CTS of any hazardous substance brought to the site by CTS (and customer acknowledges that CTS may bring to the site lubricants or other materials that are routinely used in performing maintenance and that may be classified as hazardous).

3.9 In addition to the price set forth in Article 6 of this Agreement, CUSTOMER shall pay any present and future taxes or any other governmental charges now or hereafter imposed by existing or future laws with respect to the sale, transfer, use, ownership or possession of the Work provided hereunder, excluding taxes on CTS's net income.

3.10 CTS shall be entitled to rely on the accuracy of the information furnished by CUSTOMER. The CUSTOMER shall furnish information and services required of CUSTOMER by the Contract Documents with reasonable promptness.

ARTICLE 4

SUBCONTRACTS

4.1 At its exclusive option, CTS may subcontract some or all of the Work.

4.2 A Subcontractor is a person or entity who has a direct contract with CTS to provide work, labor and materials in connection with the Work. The term Subcontractor does NOT include any separate contractors employed by CUSTOMER or such separate contractors' subcontractors.

4.3 For the purposes of this Agreement, no contractual relationship shall exist between CUSTOMER and any Subcontractor. CTS shall be responsible for the management of its Subcontractors in their performance of their Work.

4.4 CUSTOMER shall not hire any of CTS's Subcontractors without the prior written approval of CTS.

4.5 CTS shall comply with all local, state and federal statutes, ordinances, codes, rules, and regulations governing and applicable to the performance of CTS for the completion of the WORK, including but not limited to all of the applicable provisions of the Illinois Prevailing Wage Act (820 ILCS 130/1 et seq.) and the Illinois Human Rights Act (775 ILCS 5/1-01 et seq.) CTS shall obtain and preserve per the terms of the Document Retention Laws of the State of Illinois, certified payroll records for all work performed to complete the WORK, including that work performed by all those contractors subordinate to CTS or Subcontractor.

4.5.1 This Agreement calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/01 et seq. ("the Act"). The Act requires CTS and Subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website at: <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>. All contractors and Subcontractors rendering services under this Agreement must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties. CTS and Subcontractor participating on this project shall make and keep those records required under Section 5 of the Prevailing Wage Act (820 ILCS 130/5). In conformance with the Act, CTS and/or Subcontractor participating on this Project shall maintain records of all laborers, mechanics and other workers employed by them on this Project, including the following information on each worker: (1) name; (2) address; (3) telephone number when available; (4) social security number; (5) classification or classifications; (6) hourly wages paid in each pay period; (7) number of hours worked each day; and (8) starting and ending times of each day. These records shall be kept by CTS and Subcontractor for a period of not less than three (3) years. CTS and Subcontractor shall submit a monthly certified payroll to the Customer consisting of the above-referenced information as well as a statement signed by CTS or Subcontractor that certifies: (a) the records are true and accurate; (b) the hourly rates paid to each worker is not less than the general prevailing rate of hourly wages required under the Prevailing Wage Act; and (c) CTS or Subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.

4.5.2 Neither CTS nor its Subcontractors shall tolerate or engage in any prohibited form of discrimination in employment as defined in the Illinois Human Rights Act. CTS shall maintain, and require that its Subcontractors maintain, policies of equal employment opportunity which shall prohibit discrimination against any employee or applicant for employment on the basis of race, religion, color, sex, national origin, ancestry, citizenship status, age, marital status, physical or mental disability unrelated to the individual's ability to perform the essential functions of the job, association with a person with a disability, or unfavorable discharge from military service. Contractors and all Subcontractors shall comply with all requirements of the Act including maintaining a sexual harassment policy and of the Rules of the Illinois Department of Human Rights with regard to posting information on employees' rights under the Act. CTS and all Subcontractors shall place appropriate statements identifying their companies as equal opportunity employers in all advertisements for work to be performed under the Agreement.

ARTICLE 5

INSTALLATION AND ACCEPTANCE

5.1 The Work to be performed under this Agreement shall be commenced and substantially completed as set forth in the Installation Schedule attached hereto as Attachment B.

5.2 If CTS is delayed at any time in the progress of performing its obligations under this Agreement by any act of neglect of CUSTOMER or of any employee or agent of CUSTOMER or any contractor employed by CUSTOMER; or by changes ordered or requested by CUSTOMER in the Work performed pursuant to this Agreement; or by labor disputes, fire, unusual delay in transportation or deliveries, adverse weather conditions or other events or occurrences which could not be reasonably anticipated; or unavoidable casualties; or any other problem beyond CTS's reasonable control (an "Excusable Delay"), then the time for performance of the obligations affected by such Excusable Delay shall be extended by the period of any delay actually incurred as a result thereof. If any delay, or cumulative delays, within CUSTOMER's control, extends beyond ten (10) days, CUSTOMER shall reimburse CTS for all additional costs resulting therefrom.

5.3 CTS shall provide Delivery and Acceptance Certificates in a form acceptable to CUSTOMER and CTS (the "Delivery and Acceptance Certificates") for the Work provided pursuant to the Schedule identified in Attachment F. Upon

receipt of each Delivery and Acceptance Certificate, CUSTOMER shall promptly inspect the Work performed by CTS identified therein and execute each such Delivery and Acceptance Certificate as soon as reasonably possible, but in no event later than twenty-one (21) days after delivery of the same by CTS, unless CUSTOMER provides CTS with a written statement identifying specific material performance deficiencies that it wishes CTS to correct. CTS will use reasonably diligent efforts to correct all such material deficiencies and will give written notice to CUSTOMER when all such items have been corrected. The Parties intend that a final Delivery and Acceptance Certificate will be executed for the Work as soon as all Work is installed and operating. Execution and delivery by CUSTOMER of such final Delivery and Acceptance Certificate with respect to the Work shall constitute "Final Acceptance" of such Work performed by CTS pursuant to the Installation Schedule.

ARTICLE 6

PRICE AND PAYMENT

6.1 Price

6.1.1 The price for the Work is seven hundred sixty-seven thousand, and fifty-one dollars Dollars (\$767,251.00), subject to the adjustments set forth in Articles 5 and 7.

6.1.2 The price is based upon laws, codes and regulations in existence as of the date this Agreement is executed. Any changes in or to applicable laws, codes and regulations affecting the cost of the Work shall be the responsibility of CUSTOMER and shall entitle CTS to an equitable adjustment in the price and schedule.

6.1.3 The price will be modified for delays caused by CUSTOMER and for Changes in the Work, all pursuant to Article 7.

6.1.4 The license fees for all licensed software are included in the price to be paid by CUSTOMER as identified in this Article 6.

6.1.5 If, at any time, CUSTOMER requests overtime work which requires overtime or premium pay, CTS shall be entitled to add such premium or overtime pay to the Contract Price, plus CTS's overhead and profit at a rate of 15%.

6.1.6 The Contract Price does not include the items of work specifically excluded in Attachment A. If CUSTOMER requests CTS to perform any of the work expressly excluded in said Attachment, the cost for this additional work, plus CTS's overhead and profit at a rate of 15%, shall be added to the Contract Price.

6.2 Payment

6.2.1 Upon execution of this Agreement, CUSTOMER shall pay or cause to be paid to CTS the full price for the Work, in accordance with the Payment Schedule, Attachment C. Payment shall be made in accordance with the provisions of the Illinois Local Government Prompt Payment Act.

6.2.2 Payments due and unpaid shall bear interest from the date payment is due at the rate set forth in the Illinois Local Government Prompt Payment Act. In the event that Customer failed to pay CTS any sums due, Customer shall pay CTS all attorney's fees incurred by CTS in collecting amounts owed to CTS under this Agreement. If a progress payment is not paid by the due date, CTS reserves the right (without further notice) to immediately stop work until the progress payment then due is made, increased by the amount of CTS' costs of shutdown, delay and startup and, in such event, CTS will not be liable or responsible for any damages, costs or delays whatsoever due to such work stoppage. CTS reserves the right (without further notice) to terminate this Agreement altogether if work is stopped for thirty (30) or more days (whether or not consecutive days) because of a failure to make progress payments, and, in such event, also reserves the right to recover payment for all work executed and losses from stoppage of the work including reasonable overhead and profit.

ARTICLE 7

CHANGES IN THE PROJECT

7.1 A Change Order is a written order signed by CUSTOMER and CTS authorizing a change in the Work or adjustment in the price, or a change to the Installation Schedule described in Attachment B. Each Change Order shall describe the change in the work, the amount of adjustment, if any, to the Contract Price, and the extent of any adjustment to the completion date.

7.2 CUSTOMER may request CTS to submit proposals for changes in the Work. Unless otherwise specifically agreed to in writing by both parties, if CTS submits a proposal pursuant to such request but CUSTOMER chooses not to proceed, CUSTOMER shall issue a Change Order to reimburse CTS for any and all costs incurred in preparing the proposal.

7.3 All changes in the Work must be approved by the Village in a written document. Any change order or series of change orders that increase or decrease the Contract Sum by a total of \$10,000 or more or that increase or decrease the Contract Time by thirty (30) days or more must be accompanied by a written determination signed by the Customer or its designee finding that the change was not reasonably foreseeable at the time the Agreement was signed, the change is germane to the Agreement or the change is in the best interest of the Customer.

7.4 Claims for Concealed or Unknown Conditions

The Contract Price has been based on normal site conditions, without allowance for any additional work that might be caused by unanticipated site conditions. If conditions are encountered at the site that are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than twenty-one (21) days after first observance of the conditions, and, if appropriate, an equitable adjustment to the Contract Price and Installation Schedule shall be made by a Change Order. Said adjustment in Contract Price shall include CTS's overhead and profit. If agreement cannot be reached by the Parties, the party seeking an adjustment in the Price or Installation Schedule may assert a claim in accordance with Paragraph 7.4.

7.5 If CTS wishes to make a claim for an increase in the Contract Price or an extension in the Installation Schedule it shall give CUSTOMER written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by CTS before proceeding to execute the Work, except in an emergency endangering life or property, in which case CTS shall have the authority to act, in its discretion, to prevent threatened damage, injury or loss. Claims arising from delay shall be made within a reasonable time after the delay. Increases based upon design and estimating costs with respect to possible changes requested by CUSTOMER shall be made within a reasonable time after the decision is made not to proceed with the change. No such claim shall be valid unless so made. If CUSTOMER and CTS cannot agree on the amount of the adjustment in the Price, or the Installation Schedule, it shall be determined pursuant to the provisions of Article 12. Any change in the Price or the Installation Schedule resulting from such claim shall be authorized by Change Order.

7.6 Emergencies

In any emergency affecting the safety of persons or property, CTS shall act, at its commercially reasonable discretion, to prevent threatened damage, injury or loss. Any increase in the Price or extension of time claimed by CTS on account of emergency work shall be determined as provided in Section 7.4.

7.7 Minor Changes

CTS shall, without CUSTOMER's approval, have the authority to make minor changes in the Work resulting in equal or better products and/or workmanship so long as they do not result in a material alteration or modification or cause an adjustment to the Contract Price or an extension of the Contract Time.

ARTICLE 8

INSURANCE, INDEMNITY, WAIVER OF SUBROGATION, AND LIMITATION OF LIABILITY

8.1 Indemnity

8.1.1 CTS agrees to indemnify and hold CUSTOMER, and CUSTOMER's consultants, agents and employees harmless from all claims for bodily injury and property damages [other than the Work itself and other property insured under Paragraph 8.4] to the extent such claims result from or arise under CTS's negligent actions or omissions or willful misconduct in its performance of the Work, nothing in this article shall be construed or understood to alter the limitations of liability contained in this article, article 2, or the indemnification contained in section 3.8. Except as otherwise provided herein, CTS's obligation, if any, to indemnify the CUSTOMER does not extend to losses sustained as a result of the CUSTOMER's (or its agent's) acts or omissions.

8.1.2 CUSTOMER shall indemnify and hold harmless CTS and CTS's consultants, agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of, or resulting from, any act or omission of CUSTOMER or CUSTOMER's contractors, consultants, agents or employees.

8.1.3 CUSTOMER shall require any other contractor who may have a contract on this project with CUSTOMER to perform work in the areas where Work will be performed under this Agreement to agree to indemnify CUSTOMER and CTS and hold them harmless from all claims for bodily injury and property damage [other than property insured under Paragraph 8.4] that may arise from that contractor's operations. Such provisions shall be in a form satisfactory to CTS.

8.2 Contractor's Liability Insurance

8.2.1 CTS shall purchase and maintain such insurance as will protect it from claims that may arise out of or result from CTS's operations under this Agreement.

8.2.2 The Commercial General Liability Insurance shall include premises-operations (including explosion, collapse and underground coverage), elevators, independent contractors, completed operations, and blanket contractual liability on all written contracts, all including broad form property damage coverage.

8.2.3 CTS's Commercial General and Automobile Liability Insurance, as required by Subparagraphs 8.2.1 and 8.2.2, shall be written for not less than limits of liability as follows:

(a)

WORKERS COMPENSATION & EMPLOYER LIABILITY

STATUTORY coverage for all persons whom the CONTRACTOR may employ directly or through subcontractors in carrying out the WORK under this CONTRACT. Such insurance shall hold the VILLAGE free and harmless of all personal injuries of all persons whom the CONTRACTOR may employ directly or through Subcontractors

\$500,000 – Each Accident \$500,000 – Policy Limit

\$500,000 – Each Employee

Waiver of Subrogation in favor of the Village of Orland Park

AUTOMOBILE LIABILITY

\$1,000,000 – Combined Single Limit

Additional Insured Endorsement in favor of the Village of Orland Park

GENERAL LIABILITY (Occurrence basis)

\$1,000,000 – Each Occurrence \$2,000,000 – General Aggregate Limit

\$1,000,000 – Personal & Advertising Injury

\$2,000,000 – Products/Completed Operations Aggregate

Additional Insured Endorsement & Waiver of Subrogation in favor of the Village of Orland Park

EXCESS LIABILITY (Umbrella-Follow Form Policy)

\$2,000,000 – Each Occurrence \$2,000,000 – Aggregate

EXCESS MUST COVER: General Liability, Automobile Liability, Workers Compensation

8.2.4 CTS shall maintain at all times during the performance of the Work and Services hereunder, Workman's Compensation Insurance in accordance with the laws of the State in which the Work is performed.

8.3. CUSTOMER's Liability Insurance

8.3.1 CUSTOMER shall be responsible for purchasing and maintaining its own liability insurance and, at its option, may purchase and maintain such insurance as will protect it against claims that may arise from operations under this Agreement.

8.4 Insurance to Protect Project

8.4.1 CUSTOMER shall purchase and maintain all risk full cost replacement property insurance in a form acceptable to CTS for the length of time to complete the Project. This insurance shall include as named additional insureds CTS and CTS's Subcontractors and Sub-subcontractors and shall include, at a minimum, coverage for fire, windstorm, flood, earthquake, theft, vandalism, malicious mischief, transit, collapse, testing, and damage resulting from defective design, workmanship, or material. CUSTOMER will increase limits of coverage, if necessary, to reflect estimated replacement costs. CUSTOMER will be responsible for any co-insurance penalties or deductibles. If the Work covers an addition to or is adjacent to an existing building, CTS and its Subcontractors and Sub-subcontractors shall be named additional insureds under CUSTOMER's Property Insurance covering such building and its contents.

8.4.1.1 If CUSTOMER finds it necessary to occupy or use a portion or portions of the Facilities prior to Substantial Completion thereof, such occupancy shall not commence prior to a time mutually agreed to by CUSTOMER and CTS and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. This insurance shall not be canceled or lapsed on account of such partial occupancy. Consent of CTS and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.

8.4.2 CUSTOMER shall purchase and maintain such insurance as will protect CUSTOMER and CTS against loss of use of CUSTOMER's property due to those perils insured pursuant to Subparagraph 8.4.1. Such policy will provide coverage for expenses of expediting materials, continuing overhead of CUSTOMER and CTS, necessary labor expense including overtime, loss of income by CUSTOMER and other determined exposures. Exposures of CUSTOMER and CTS shall be determined by mutual agreement and separate limits of coverage fixed for each item.

8.4.3 CUSTOMER shall provide Certificate(s) of Insurance to CTS before work on the Project begins. All insurance coverage(s) must be with a carrier rated A or better by one of the National Insurance Rating Agencies such as A.M. Best. CTS will be given sixty (60) days notice of cancellation, non-renewal, or any endorsements restricting or reducing coverage.

8.5 Property Insurance Loss Adjustment

8.5.1 Upon the occurrence of an insured loss to the Work during the course of the Work, monies received as a result of any insurance claim shall be used to pay for the repair and/or reconstruction of the Work so long as it is practically and economically reasonable to do so, to the extent necessary to restore it to its pre-loss condition. CTS shall be entitled to a change order to repair or replace any Work that was damaged as a result of any insured loss.

8.6 Waiver of Subrogation

8.6.1 CUSTOMER and CTS waive all rights against each other, Architects and Engineers, Subcontractors and Sub-subcontractors for damages caused by perils covered by insurance provided under Paragraph 8.4, except such rights as they may have to the proceeds of such insurance held by CUSTOMER and CTS as trustees. CTS may require similar waivers from all Subcontractors and Sub-subcontractors.

8.6.2 CUSTOMER and CTS waive all rights against each other, Architects and Engineers, Subcontractor and Sub-subcontractors for loss or damage to any equipment used in connection with the Project, which loss is covered by any property insurance. CTS may require similar waivers from all Subcontractors and Sub-subcontractors.

8.6.3 CUSTOMER waives subrogation against CTS, Subcontractors and Sub-subcontractors on all property and consequential loss policies carried by CUSTOMER on adjacent properties and under property and consequential loss policies purchased for the Project after its completion.

8.6.4 If the policies of insurance referred to in this Paragraph 8.6 require an endorsement to provide for continued coverage where there is a waiver of subrogation, the owners of such policies will cause them to be so endorsed.

8.7. Limitation of Liability

8.7.1 In no event shall either party be liable for any special, incidental, indirect, speculative, remote, or consequential damages arising from, relating to, or connected with the work, equipment, materials, or any goods or services provided hereunder. Each party waives claims against the other party for consequential damages arising out of or relating to this Agreement. This waiver includes damages incurred by each party for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons.

ARTICLE 9

TERMINATION OF THE AGREEMENT

9.1 If CTS defaults in, or fails or neglects to carry forward the Work in accordance with this Agreement, CUSTOMER may provide notice in writing of its intention to terminate this Agreement to CTS. If CTS, following receipt of such written notice, neglects to cure or correct the identified deficiencies within thirty (30) business days, CUSTOMER may provide a second written notice. If CTS has not, within thirty (30) business days after receipt of such notice, acted to remedy and make good such deficiencies, CUSTOMER may terminate this Agreement and take possession of the site together with all materials thereon, and move to complete the Work itself expediently. If the unpaid balance of the contract sum exceeds the expense of finishing the Work, the excess shall be paid to CTS, but if the expense exceeds the unpaid balance, CTS shall pay the difference to CUSTOMER. CUSTOMER, for its convenience, may terminate this Contract with thirty (30) days prior written notice and payment to CTS any amounts due for work/materials supplied up to the date of termination, for costs incurred by CTS for materials, tools, construction equipment and machinery, and reasonable overhead and profit for the Project.

9.2 If CUSTOMER fails to make payments as they become due, or otherwise defaults or breaches its obligations under this Agreement, CTS may give written notice to CUSTOMER of CTS's intention to terminate this Agreement. If, within seven (7) days following receipt of such notice, CUSTOMER fails to make the payments then due, or otherwise fails to cure or perform its obligations, CTS may, by written notice to CUSTOMER, terminate this Agreement and recover from CUSTOMER payment for Work executed and for losses sustained for materials, tools, construction equipment and machinery, including but not limited to, reasonable overhead, profit and applicable damages.

ARTICLE 10

ASSIGNMENT

10.1 Neither party to the Agreement shall assign this Agreement or sublet it as a whole without the written consent of the other party. Such consent shall not be reasonably withheld, except that CTS may assign to another party the right to receive payments due under this Agreement. CTS may enter into subcontracts for the Work without obtaining CUSTOMER's consent.

ARTICLE 11

MISCELLANEOUS PROVISIONS

11.1 The Table of Contents and headings in this Agreement are for information and convenience only and do not modify the obligations of this Agreement.

11.2 **Confidentiality.** As used herein, the term "CONFIDENTIAL INFORMATION" shall mean any information in readable form or in machine readable form, including software supplied to CUSTOMER by CTS that has been identified or labeled as "Confidential" and/or "Proprietary" or with words of similar import. CONFIDENTIAL INFORMATION

shall also mean any information that is disclosed orally and is designated as "Confidential" and/or "Proprietary" or with words of similar import at the time of disclosure and is reduced to writing, marked as "Confidential" and/or "Proprietary" or with words of similar import, and supplied to the receiving party within ten (10) days of disclosure.

All rights in and to CONFIDENTIAL INFORMATION and to any proprietary and/or novel features contained in CONFIDENTIAL INFORMATION disclosed are reserved by the disclosing party; and the party receiving such disclosure will not use the CONFIDENTIAL INFORMATION for any purpose except in the performance of this Agreement and will not disclose any of the CONFIDENTIAL INFORMATION to benefit itself or to damage the disclosing party. This prohibition includes any business information (strategic plans, etc.) that may become known to either party.

Each party shall, upon request of the other party or upon completion or earlier termination of this Agreement, return the other party's CONFIDENTIAL INFORMATION and all copies thereof.

Notwithstanding the foregoing provisions, neither party shall be liable for any disclosure or use of information disclosed or communicated by the other party if the information:

- (a) is publicly available at the time of disclosure or later becomes publicly available other than through breach of this Agreement; or
- (b) is known to the receiving party at the time of disclosure; or
- (c) is subsequently rightfully obtained from a third party on an unrestricted basis;
- (d) is approved for release in writing by an authorized representative of the disclosing party;
- (e) is disclosed in response to a Freedom of Information Act request.

Customer shall provide CTS with reasonably prompt notice of any documents requested pursuant to a Freedom of Information Act request.

The obligation of this Article shall survive any expiration, cancellation or termination of this Agreement.

11.3 If any provision is held illegal, invalid or unenforceable, the remaining provisions of this Agreement shall be construed and interpreted to achieve the purposes of the Parties.

11.4 Risk of loss for all equipment and materials provided by CTS hereunder shall transfer to CUSTOMER upon delivery to CUSTOMER's Facilities from CTS or its Subcontractor and title shall pass upon final acceptance or final payment by CUSTOMER to CTS, whichever occurs later.

11.5 Final notice or other communications required or permitted hereunder shall be sufficiently given if personally delivered to the person specified below, or if sent by registered or certified mail, return receipt requested, postage prepaid, addressed as follows:

To CTS:

CTS

Attention: Robert Bennett

15933 Clayton Rd., Suite 110

St. Louis, MO 63011

To CUSTOMER:

Village of Orland Park

Attention: Denise Domalewski, Purchasing & Contract Administrator

14700 S. Ravinia Avenue

Orland Park, IL 60462_____

11.6 **Waiver.** CTS's failure to insist upon the performance or fulfillment of any of CUSTOMER's obligations under this Agreement shall not be deemed or construed as a waiver or relinquishment of the future performance of any such right or obligation hereunder.

11.7 If any provision of this Agreement or the application thereof to any circumstances shall be held to be invalid or unenforceable, then the remaining provisions of this Agreement or the application thereof to other circumstances shall not be affected hereby and shall be valid and enforceable to the fullest extent permitted by law.

11.8 Performance/Payment Bond. CTS shall furnish a performance bond and payment bond covering the construction of the work in an amount equal to the contract price prior to commencement of work in a form acceptable to CUSTOMER.

11.9 This bond covers only the performance and payment exposure associated with the performance of the construction portion of the work. The energy savings, additional savings, guaranteed savings, savings shortfalls are not under any circumstances covered under this bond or an obligation that the surety is responsible for.

11.10 Ambiguities. The parties have each had the opportunity to review and negotiate the terms of this Agreement, and any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement.

11.11 Headings. The section headings contained herein are intended for convenience and reference only, and are not a part of this Agreement.

11.12 Authority to Enter into this Contract. The persons signing the Agreement on behalf of the parties are authorized to execute and accept contracts of this nature.

11.13 CUSTOMER Representations. To the extent applicable, the CUSTOMER warrants that it has the necessary power and authority to enter into this Agreement and this Agreement has been duly authorized by its duly elected representatives. This Agreement is a legal, valid and binding obligation of the CUSTOMER.

ARTICLE 13
ALLOCATION OF SECTION 179D DEDUCTION
TO DESIGNER

13.1 CUSTOMER acknowledges and represents that the project site where CTS's Work is to be performed and all building and improvements located on the same are "government-owned buildings" as CUSTOMER is a political subdivision and CUSTOMER owns said property, building and other improvements where the Work is to be performed. CUSTOMER hereby allocates to CTS any and all Section 179D deductions for the Work. CUSTOMER further acknowledges that CTS is the entity that has created and is primarily responsible for the technical specifications for installation of energy efficient work at CUSTOMER's commercial building property, as described herein. CUSTOMER agrees to complete and execute the "Form for Allocation of Section 179D Deduction", which is attached hereto as Schedule G and incorporated herein by reference. CUSTOMER also agrees to participate in any analysis, inspection and/or certification required by statute or otherwise deemed necessary by CTS to ensure that CTS receives the Section 179D deduction.

ARTICLE 14
SUBSEQUENT PHASES OF WORK


14.1 Additions and modifications to this Agreement may be made upon the mutual agreement of both parties in writing. The parties contemplate that such modifications may include but are not limited to the installation of additional improvement measures, energy conservation measures, facility improvement measures and operational efficiency improvements or furnishing of additional services within the identified facilities, as well as other facilities owned and operated by the Customer.

If the Work is divided into phases or individual projects for which individual prices have been negotiated, then separate Commencement Dates shall apply to each phase or individual project. These projects, modifications, and modifications to the original scope of Work or Services and may be included as addendums to the Master Agreement.

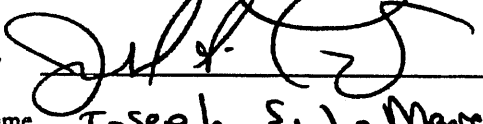
APPROVALS:

The parties hereby execute this Agreement as of the date first set forth herein by the signatures of their duly authorized representatives:

Control Technology & Solutions

By 
Name Robert L. Bennett
Title managing Partner
Date 5-21-18

Village of Orland Park

By 
Name Joseph S. LaMare
Title Village Manager
Date 5/14/18

ATTACHMENT A

SCOPE OF WORK

CTS has completed the initial design services and solicited pricing from contracting trades for the projects included within the Scope of Work below.

CTS will provide final As-Built drawings and facilitate all Occupancy Permits which require stamped documents by an engineer or architect registered in State of Illinois.

The Scope of Work will be installed in a neat and workmanlike manner in accordance with local codes and ASHRAE standards.

General Requirements:

CTS will meet the Village intention to have a complete turnkey installation. The bond provided for the construction of the project only covers the performance of materials and workmanship for the completion of said construction work, not the energy guarantee. As-built drawings and O&M manuals will be prepared and submitted before final payment. CTS will provide Owner Training on systems installed.

Lighting Upgrades

Scope of Services to include the following:

CTS has included replacement of the T-12 lighting with LED fixtures in the facilities listed below to improve lighting levels, reduce energy consumption and reduce maintenance costs throughout the Village:

- Centennial Park
- Cultural Center
- Public Works Building
- Recreation Administration Building

CTS has also included the replacement of the exterior lighting fixtures at the Cultural Center to improve reliability, reduce energy consumption and reduce maintenance costs.

See the attached table identifying the lighting being replaced in each facility listed above.

T-12 Lighting Upgrades

Ref. #	Bldg.	LOCATION	EXISTING FIXTURE	QTY	NEW FIXTURE/RETROFIT	WATTS EACH	TOTAL KW	PRE OP HOUR	TOTAL KWH	WATTS EACH	TOTAL KW	POST OP HOUR	TOTAL KWH	SEN. QTY	CONTROL DESCRIPTION	OFF %	SENS. KWH SAVINGS
1	Cent. Park	CENTENNIAL PARK, MEN'S PLUMBING CLOSET	Standard Strip Fixture, 1' x 4', 2x F40T12, 34W, Mag ES Ballast, 120/277V	3	FIXTURE, LED, 40W, 4,517 LUMEN, RADIAL LENS STRIP, 1' X 4", SURFACE MOUNTED, 0-10V DIM, 6000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.223	938	208.236	40	0.120	938	112.56	0		2%	0

2	Cent. Park	CENTRAL PARK OLD PUMP BUILDING	Industrial Hooded Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Wavy Guard, Hard Piped Conduit	6	RECE. LED, 20W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', 4.25" CHANNEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	140	0.050	930	622.944	76	0.456	930	437.720	0	0%	0
3	Cent. Park	CENTRAL PARK OLD PUMP BUILDING	Industrial Hooded Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	1	Fixture, LED, 40W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	930	44.432	40	0.040	930	27.52	0	0%	0
4	Cent. Park	CENTRAL PARK OLD PUMP BUILDING - ELECTRIC ROOM	Industrial Hooded Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Hard Piped Conduit	1	Fixture, LED, 40W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	930	44.432	40	0.040	930	27.52	0	0%	0
5	Cent. Park	CENTRAL PARK WATER HEATER	Standard Trip Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	2	Fixture, LED, 40W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.148	930	118.864	40	0.080	930	75.04	0	0%	0
6	Cent. Park	CENTRAL PARK WATER HEATER	Industrial Hooded Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	1	Fixture, LED, 40W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	930	44.432	40	0.040	930	27.52	0	0%	0
7	Cultural Center	FIRST FLOOR - ART STUDIO STORAGE, PH 951	Flange End Troffer, 2' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Pneumatic Lens	1	Fixture, LED, 20W, 4.517 LUMEN, FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	527	16.915	30	0.029	527	20.553	0	0%	0
8	Cultural Center	FIRST FLOOR - ART STUDIO WEST WALL, PH 950	Flange End Troffer, 2' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Pneumatic Lens	1	Fixture, LED, 20W, 4.517 LUMEN, FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	25.36	195.064	27	0.027	25.36	71.172	0	0%	0
9	Cultural Center	FIRST FLOOR - ART STUDIO, PH 957	Grid Troffer, 2' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Pneumatic Lens	32	Fixture, LED, 20W, 4.517 LUMEN, FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	140	1.726	1977	2511.952	34	0.408	1977	826.616	0	0%	0
10	Cultural Center	FIRST FLOOR - ART STUDIO, PH 956	Grid Troffer, 2' x 2', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Pneumatic Lens	4	Fixture, LED, 20W, 4.517 LUMEN, FLAT PANEL TROFFER, 1' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.294	1977	565.192	27	0.126	1977	213.528	0	0%	0
11	Cultural Center	FIRST FLOOR - CORRIDORS, PH 953	Wrap Around Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	8	Fixture, LED, 40W, 4.517 LUMEN, WRAP AROUND, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	140	1.164	25.36	3121.04	48	0.184	25.36	1812.224	0	0%	0
12	Cultural Center	FIRST FLOOR - CORRIDORS, PH 954	Flange End Troffer, 2' x 2', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Pneumatic Lens	8	Fixture, LED, 20W, 4.517 LUMEN, FLAT PANEL TROFFER, 1' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.992	25.36	1960.912	27	0.216	25.36	1479.376	0	0%	0
13	Cultural Center	FIRST FLOOR - DANCE ROOM, PH 954	Wrap Around Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	4	Fixture, LED, 40W, 4.517 LUMEN, WRAP AROUND, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	140	0.052	1977	1170.384	48	0.192	1977	129.568	0	0%	0
14	Cultural Center	FIRST FLOOR - DANCE ROOM, PH 955	Wrap Around Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	8	Fixture, LED, 40W, 4.517 LUMEN, WRAP AROUND, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.192	1977	1170.384	48	0.288	1977	759.168	0	0%	0
15	Cultural Center	FIRST FLOOR - DANCE ROOM, PH 955	Wrap Around Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V, Emergency Back-up	1	Fixture, LED, 40W, 4.517 LUMEN, WRAP AROUND, 1' x 4', SURFACE MOUNTED, 0-10V DIM, EMERGENCY BACK-UP KIT, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	1977	346.796	48	0.048	1977	94.896	0	0%	0
16	Cultural Center	FIRST FLOOR - ELECTRICAL CONTROL OFF W/ ENTRANCE HALL, PH 951	Industrial Hooded Fixture, 1' x 4', 2x F8T12, 30W, Mag 15 Ballast, 120/277V	1	Fixture, LED, 40W, 4.517 LUMEN, RADIAL LENS STOP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	74	0.074	527	22.998	40	0.040	527	21.08	0	0%	0

17	Cultural Center	FIRST FLOOR - ELEVATOR CLOSET, PH 920	Wall-Mounted Picture, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	1	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.036	527	28 999	40	0.046	527	71.08	0	0%	0
18	Cultural Center	FIRST FLOOR - HALLWAY, PH 929	Grid Troffer, 2' x 2', 2x F8T12-48, 82W, Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 25W, 3.430 LUMEN FLAT PANEL TROFFER, 2' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.148	26.36	280 128	27	0.254	26.36	342.864	0	0%	0
19	Cultural Center	FIRST FLOOR - EXHIBIT HALL BALCONY, PH 941	Wall-Mounted Picture, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	4	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	47	0.128	527	98 076	40	0.160	527	86.32	0	0%	0
20	Cultural Center	FIRST FLOOR - EXHIBIT HALL BALCONY, PH 942	Wall-Mounted Picture, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	1	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	37	0.037	527	18 499	24	0.034	527	32.848	0	0%	0
21	Cultural Center	FIRST FLOOR - EXHIBIT HALL WEST STORAGE ROOM, PH 952	Fluorescent Grid Troffer, 1' x 4', 2x F8T12, (80W), Mag ES Ballast, 120/277V, Pneumatic Lens	5	PICTURE, LED, 30W, 4.102 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.170	527	194 99	39	0.195	527	102.765	0	0%	0
22	Cultural Center	FIRST FLOOR - EXHIBIT HALL WEST, PH 951	Fluorescent Grid Troffer, 1' x 4', 2x F8T12, (80W), Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 30W, 4.102 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.148	26.36	280 128	28	0.078	26.36	205.608	0	0%	0
23	Cultural Center	FIRST FLOOR - EXHIBIT HALL, PH 956	Grid Troffer, 2' x 2', 2x F8T12-48, 82W, Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 25W, 3.430 LUMEN FLAT PANEL TROFFER, 2' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.148	26.36	280 128	27	0.094	26.36	142.864	0	0%	0
24	Cultural Center	FIRST FLOOR - EXHIBIT HALL, PH 967	High Bay Floodlight, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	6	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.464	26.36	1170 384	40	0.228	26.36	759.158	0	0%	0
25	Cultural Center	FIRST FLOOR - EXHIBIT HALL, PH 969	Wall-Mounted Picture, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	20	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	1.480	26.36	3801.28	40	0.800	26.36	2108.8	0	0%	0
26	Cultural Center	FIRST FLOOR - GARAGE STORAGE, PH 968	Grid Troffer, 1' x 4', 2x F8T12, (80W), Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 30W, 4.102 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.148	527	77 996	39	0.078	527	41.106	0	0%	0
27	Cultural Center	FIRST FLOOR - GARAGE, PH 963	Grid Troffer, 1' x 4', 2x F8T12, (80W), Mag ES Ballast, 120/277V, Pneumatic Lens	6	PICTURE, LED, 30W, 4.102 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.464	527	221 928	39	0.236	527	123.318	0	0%	0
28	Cultural Center	FIRST FLOOR - LOUNGE, PH 917	Grid Troffer, 1' x 4', 2x F8T12, Mag ES Ballast, 120/277V, Pneumatic Lens	5	PICTURE, LED, 30W, 4.134 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	143	0.368	26.36	1950.64	34	0.170	26.36	448.12	0	0%	0
29	Cultural Center	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 928	Standard Strip Picture, 1' x 4', 2x F8T12, 80W, Mag ES Ballast, 120/277V	8	PICTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.562	26.36	1560.512	40	0.320	26.36	843.52	0	0%	0
30	Cultural Center	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 929	Grid Troffer, 2' x 2', 2x F8T12, Mag ES Ballast, 120/277V, Pneumatic Lens	6	PICTURE, LED, 30W, 4.134 LUMEN FLAT PANEL TROFFER, 2' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	143	0.888	26.36	2360.768	34	0.220	26.36	117.366	0	0%	0
31	Cultural Center	FIRST FLOOR - MAIN LOBBY OFFICE, PH 933	Grid Troffer, 2' x 4', 2x F8T12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	PICTURE, LED, 40W, 4.517 LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.296	2172	701.112	34	0.066	2172	161.296	0	0%	0

63	Cultural Center	FIRST FLOOR - MEN'S RESTROOM 67 (ELEVATOR, PHN #21)	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	1	0.074	2108	155.992	48	0.048	2108	101.184	0	0%	0
63	Cultural Center	FIRST FLOOR - MEN'S RESTROOM 67 (ELEVATOR, PHN #21)	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	1	0.074	2108	155.992	48	0.048	2108	101.184	0	0%	0
64	Cultural Center	FIRST FLOOR - MEN'S RESTROOM 67 (ELEVATOR, PHN #21)	Flanged Grid Troffer, 2' x 4', 2x F34T12, (30W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	118	0.118	2108	248.744	34	0.034	2108	71.472	0	0%	0
65	Cultural Center	FIRST FLOOR - ROOM 101 STORAGE 2, PHN #65	Flanged Grid Troffer, 2' x 4', 2x F34T12, (30W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	34	0.034	527	28.738	39	0.039	527	20.553	0	0%	0
66	Cultural Center	FIRST FLOOR - ROOM 101 STORAGE, PHN #66	Flanged Grid Troffer, 2' x 4', 2x F34T12, (30W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	34	0.034	527	28.738	39	0.039	527	20.553	0	0%	0
67	Cultural Center	FIRST FLOOR - ROOM 102, PHN #67	Flanged Grid Troffer, 2' x 4', 2x F34T12, (30W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	14	0.022	1977	436.894	35	0.117	1977	211.809	0	0%	0
68	Cultural Center	FIRST FLOOR - ROOM 102, PHN #72	Standard Strip Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	18	34	0.111	1977	2633.364	40	0.720	1977	5423.44	0	0%	0
69	Cultural Center	FIRST FLOOR - MEN'S RESTROOM, PHN #13	Industrial Handed Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	3	34	0.022	527	116.944	40	0.120	527	61.26	0	0%	0
70	Cultural Center	FIRST FLOOR - W/ L200V RESTROOM HALLWAY, PHN #10	Flanged Grid Troffer, 2' x 2', 2x F34T12-UB, 30W, Mag ES Ballast, 120/277V, Pneumatic Lens	5	34	0.020	2636	975.82	27	0.120	2636	355.65	0	0%	0
71	Cultural Center	FIRST FLOOR - WAITING AREA, PHN #11	Grid Troffer, 2' x 4', 2x F34T12, Mag ES Ballast, 120/277V, Pneumatic Lens, Emergency Back-up	3	140	0.444	8760	2896.44	14	0.182	8760	891.53	0	0%	0
71	Cultural Center	FIRST FLOOR - WAITING AREA, PHN #14	Grid Troffer, 2' x 4', 2x F34T12, Mag ES Ballast, 120/277V, Pneumatic Lens	10	140	0.440	2636	2901.28	14	0.340	2636	896.34	0	0%	0
73	Cultural Center	FIRST FLOOR - WAITING AREA, PHN #15	Grid Troffer, 2' x 2', 2x F34T12-UB, 30W, Mag ES Ballast, 120/277V, Pneumatic Lens	6	34	0.444	2636	1170.284	27	0.182	2636	427.252	0	0%	0
74	Cultural Center	FIRST FLOOR - WOMEN'S RESTROOM 69 (ELEVATOR, PHN #22)	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	34	0.074	2108	155.992	48	0.048	2108	101.184	0	0%	0
75	Cultural Center	FIRST FLOOR - WOMEN'S RESTROOM 69 (ELEVATOR, PHN #22)	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	34	0.074	2108	155.992	48	0.048	2108	101.184	0	0%	0
76	Cultural Center	FIRST FLOOR - WOMEN'S RESTROOM 69 (ELEVATOR, PHN #22)	Flanged Grid Troffer, 2' x 4', 2x F34T12, (30W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	118	0.118	2108	248.744	34	0.034	2108	71.472	0	0%	0

47	Cultural Center	SECOND FLOOR - 1 STORAGE, PHN #61	Industrial Hooped Fixture, 1' x 4', 2x F84T12, 80W, Mag ES Ballast, 120/277V	1	PICTURE, LED, 80W, 4.517 LUMEN RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.024	527	35.998	40	0.046	527	21.08	0	0%	0
48	Cultural Center	SECOND FLOOR - 232 PRIVATE OFFICE, PHN #63	Grid Troffer, 2' x 4', 2x F84T12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	548	0.296	2372	702.132	34	0.068	2372	162.296	0	0%	0
49	Cultural Center	SECOND FLOOR - 233-231 STORAGE, PHN #64	Undercabinet Strip Fixture, 1' x 4', 2x F84T12, 20W Mag ES Ballast, 120/277V	4	PICTURE, LED, 80W, 2.895 LUMEN RADIAL LENS STRIP, 1' x 2', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	47	0.128	527	96.076	34	0.096	527	10.192	0	0%	0
50	Cultural Center	SECOND FLOOR - 233-231 STORAGE, PHN #69	Flanged Grid Troffer, 2' x 2', 2x F84T12-44, 12W, Mag ES Ballast, 120/277V, Pneumatic Lens	1	PICTURE, LED, 25W, 3.430 LUMEN FLAT PANEL TROFFER, 2' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.148	527	77.998	27	0.054	527	28.458	0	0%	0
51	Cultural Center	SECOND FLOOR - MECHANICAL HEATING COOLING, PHN #99	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.148	527	77.998	39	0.078	527	61.126	0	0%	0
52	Cultural Center	SECOND FLOOR - MEN'S RESTROOM BY 301, PHN #62	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.148	527	646.24	39	0.039	527	341.64	0	0%	0
53	Cultural Center	SECOND FLOOR - ROOM 223 OFFICE HALLWAY, PHN #78	Flanged Grid Troffer, 2' x 2', 2x F84T12-44, 12W, Mag ES Ballast, 120/277V, Pneumatic Lens	9	PICTURE, LED, 25W, 3.430 LUMEN FLAT PANEL TROFFER, 2' x 2', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.884	2636	1755.576	27	0.243	2636	642.546	0	0%	0
54	Cultural Center	SECOND FLOOR - ROOM 208 OFFICE HALLWAY, PHN #81	Standard Strip Fixture, 1' x 4', 2x F84T12, 80W, Mag ES Ballast, 120/277V	1	PICTURE, LED, 80W, 4.517 LUMEN RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	47	0.017	2636	123.857	40	0.040	2636	125.44	0	0%	0
55	Cultural Center	SECOND FLOOR - ROOM 203, PHN #75	Flanged Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	12	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	1.628	1977	6219.556	39	0.058	1977	1046.284	0	0%	0
56	Cultural Center	SECOND FLOOR - ROOM 204 RECORDING ROOM - NO ACCESS, PHN #72	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.148	264	91.072	23	0.078	264	25.562	0	0%	0
57	Cultural Center	SECOND FLOOR - STAFF STAIRWELL, PHN #120	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	4	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.296	8780	2542.96	39	0.156	8780	1384.56	0	0%	0
58	Cultural Center	SECOND FLOOR - STAFFS ACROSS FROM 201, PHN #65	Flanged Grid Troffer, 2' x 4', 2x F84T12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	348	0.296	8780	2542.96	39	0.046	8780	945.68	0	0%	0
59	Cultural Center	SECOND FLOOR - STORAGE 203, PHN #65	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.024	527	35.998	39	0.039	527	20.553	0	0%	0
60	Cultural Center	SECOND FLOOR - WOMEN'S RESTROOM BY 201, PHN #63	Grid Troffer, 1' x 4', 2x F84T12, (20W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	PICTURE, LED, 80W, 4.517 LUMEN FLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.024	8780	646.24	39	0.039	8780	341.64	0	0%	0
61	Public Works	PUBLIC WORKS 151, ROOM #1 - VESTIBUL	Grid Troffer, 2' x 4', 4x F84T12, 20W, Dim Mermaid Power Ballast, 120/277V, Parabolic Lens	1	PICTURE, LED, 30W, 4.517 LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.132	8780	961.12	34	0.034	8780	297.84	0	0%	0

62	Public Works	PUBLIC WORKS - 1ST, ROOM B2 - WAITING ROOM	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	3470	276.64	34	0.034	3470	63.98	0	0%	0
63	Public Works	PUBLIC WORKS - 1ST, ROOM B2 - WAITING ROOM	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	8760	561.12	34	0.034	8760	297.94	0	0%	0
64	Public Works	PUBLIC WORKS - 1ST, ROOM B3 - WOMEN'S RESTROOM	Vanity Mount Fixture, 1' x 4', 2x F3471.3, 14W, 840 Mag 85 Ballast, 120/277V	1	FIGURE, LED, 40W, 4.517 LUMEN RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	78	0.078	3470	182.78	40	0.040	3470	98.8	0	0%	0
65	Public Works	PUBLIC WORKS - 1ST, ROOM B4 - MEN'S RESTROOM	Vanity Mount Fixture, 1' x 4', 2x F3471.3, 14W, 840 Mag 85 Ballast, 120/277V	1	FIGURE, LED, 40W, 4.517 LUMEN RADIAL LENS STRIP, 1' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	78	0.078	3470	182.78	40	0.040	3470	98.8	0	0%	0
66	Public Works	PUBLIC WORKS - 1ST, ROOM B5 - CORRIDOR	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	8760	561.12	34	0.034	8760	297.94	0	0%	0
67	Public Works	PUBLIC WORKS - 1ST, ROOM 08A - PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	3	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	3470	829.92	34	0.102	3470	251.94	1	41%	105.8148
68	Public Works	PUBLIC WORKS - 1ST, ROOM 08A - PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	8760	561.12	34	0.034	8760	297.94	0	0%	0
69	Public Works	PUBLIC WORKS - 1ST, ROOM 08B - PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	2	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	558.28	34	0.068	3470	167.96	1	41%	70.5412
70	Public Works	PUBLIC WORKS - 1ST, ROOM 09 - OPEN OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	23	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	2.576	3470	6362.72	34	0.782	3470	2913.54	0	0%	0
71	Public Works	PUBLIC WORKS - 1ST, ROOM 07 - OPEN OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	6	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.648	8760	3934.88	34	0.136	8760	1161.36	0	0%	0
72	Public Works	PUBLIC WORKS - 1ST, ROOM 06 - OPEN OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	3	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.336	3470	829.92	34	0.102	3470	251.94	1	23%	62.985
73	Public Works	PUBLIC WORKS - 1ST, ROOM 05 - SECRETARY PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	3	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.336	3470	829.92	34	0.102	3470	251.94	1	41%	105.8148
74	Public Works	PUBLIC WORKS - 1ST, ROOM 04 - SECRETARY PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	8760	561.12	34	0.034	8760	297.94	0	0%	0
75	Public Works	PUBLIC WORKS - 1ST, ROOM 03 - DIRECTOR PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	2	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	561.12	34	0.068	3470	167.96	1	41%	70.5412
76	Public Works	PUBLIC WORKS - 1ST, ROOM 02 - WORK ROOM	Grid Troffer, 2' x 4', 4x F3278, 32W, 12x Normal Power Ballast, 120/277V, Parabolic Lens	1	FIGURE, LED, 32W, 4.33M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	3470	276.64	34	0.034	3470	63.98	0	0%	0

77	Public Works	PUBLIC WORKS - 151, ROOM 14 - ACQUISITION ANALYST PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
78	Public Works	PUBLIC WORKS - 151, ROOM 15 - OPERATIONS OFFICE PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
79	Public Works	PUBLIC WORKS - 151, ROOM 16 - VESTIBULE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	1	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	6760	981.12	34	0.034	6760	297.84	0		0%	0
80	Public Works	PUBLIC WORKS - 151, ROOM 17 - UTILITIES PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
81	Public Works	PUBLIC WORKS - 151, ROOM 18 - STREET PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
82	Public Works	PUBLIC WORKS - 151, ROOM 19 - PLATS PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
83	Public Works	PUBLIC WORKS - 151, ROOM 20 - CORRIDOR	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	5	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.136	3470	625.92	34	0.163	3470	251.94	0		0%	0
84	Public Works	PUBLIC WORKS - 151, ROOM 20 - CORRIDOR	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	4	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.448	6760	2934.48	34	0.136	6760	1191.36	0		0%	0
85	Public Works	PUBLIC WORKS - 151, ROOM 21 - COMMAND CENTER PRIVATE OFFICE	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	42%	70 54.12
86	Public Works	PUBLIC WORKS - 151, ROOM 22 - PLANNING WORKS ROOM	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	7	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.784	3470	2336.48	34	0.228	3470	567.88	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	25%	146 965
87	Public Works	PUBLIC WORKS - 151, ROOM 22 - PLANNING WORKS ROOM	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	1	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	6760	981.12	34	0.034	6760	297.84	0		0%	0
88	Public Works	PUBLIC WORKS - 151, ROOM 23 - WORKMEN'S RESTROOM	Standard Strip Fixture, 2' x 4', 2x F14T12, 80W, Mtg 15 Ballast, 120/277V	1	FIXTURE, LED, 80W, 4.517 LUMEN/FT ² RACIAL LENS STRIP, 2' x 4', SURFACE MOUNTED, 0-120V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.222	3470	548.84	40	0.120	3470	296.4	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-27' Radial Coverage, Low Voltage 120/277V	80%	88 92
89	Public Works	PUBLIC WORKS - 151, ROOM 24 - CORRIDOR	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	3470	554.23	34	0.068	3470	167.96	0		0%	0
90	Public Works	PUBLIC WORKS - 151, ROOM 24 - CORRIDOR	Grid Troffer, 2' x 4', 40 F12T8, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	2	FIXTURE, LED, 32W, 4.334 LUMEN/FT ² FLAT PANEL TROFFER, 2' x 4', 0-120V DIM, EMERGENCY BACK-UP, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.224	6760	1962.24	34	0.068	6760	991.68	0		0%	0
91	Public Works	PUBLIC WORKS - 151, ROOM 25 - JANITORS CLOSET	Standard Strip Fixture, 2' x 4', 2x F14T12, 80W, Mtg 15 Ballast, 120/277V	1	FIXTURE, LED, 80W, 4.517 LUMEN/FT ² RACIAL LENS STRIP, 2' x 4', SURFACE MOUNTED, 0-120V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	34	0.024	3470	162.78	40	0.040	3470	98.8	0		0%	0

92	Public Works	PUBLIC WORKS - 1ST, ROOM 26 - WOMEN'S LOCKER ROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens	2	1	1	0.340	3470	365.56	20	0.078	3470	132.66	0	0%	0
93	Public Works	PUBLIC WORKS - 1ST, ROOM 26 - WOMEN'S LOCKER ROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens, Emergency Back-up	1	1	1	0.076	8760	642.24	10	0.039	8760	341.84	0	0%	0
94	Public Works	PUBLIC WORKS - 1ST, ROOM 27 - CORRIDOR	Grid Troffer, 2' x 4', 4x F32T8, 12W, Cdn Normal Power Ballast, 120/277V, Parabolic Lens	2	2	2	0.216	3470	555.28	16	0.068	3470	167.96	0	0%	0
95	Public Works	PUBLIC WORKS - 1ST, ROOM 27 - CORRIDOR	Grid Troffer, 2' x 4', 4x F32T8, 12W, Cdn Normal Power Ballast, 120/277V, Parabolic Lens	2	2	2	0.226	8760	2167.24	16	0.056	8760	595.68	0	0%	0
96	Public Works	PUBLIC WORKS - 1ST, ROOM 29 - UTILITIES WORK ROOM	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V	9	9	9	1.197	3470	2956.91	80	0.720	3470	1728.4	0	0%	0
97	Public Works	PUBLIC WORKS - 1ST, ROOM 30 - STREET'S WORK ROOM	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V	8	8	8	1.064	3470	2628.08	80	0.640	3470	1580.8	0	0%	0
98	Public Works	PUBLIC WORKS - 1ST, ROOM 31 - MEN'S RESTROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens	1	1	1	0.076	3470	132.78	89	0.039	3470	96.33	1	30%	28 899
99	Public Works	PUBLIC WORKS - 1ST, ROOM 31 - MEN'S RESTROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens, Emergency Back-up	2	2	2	0.348	8760	2796.48	16	0.078	8760	663.28	1	30%	254 981
100	Public Works	PUBLIC WORKS - 1ST, ROOM 32 - MEN'S LOCKER ROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens	2	2	2	0.348	3470	365.56	20	0.078	3470	132.66	0	0%	0
101	Public Works	PUBLIC WORKS - 1ST, ROOM 33 - MEN'S LOCKER ROOM	Standard Vtg Fixture, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V	1	1	1	0.227	3470	548.34	40	0.120	3470	296.4	0	0%	0
102	Public Works	PUBLIC WORKS - 1ST, ROOM 33 - MEN'S LOCKER ROOM	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag E5 Ballast, 120/277V, Parabolic Lens, Emergency Back-up	1	1	1	0.076	8760	642.24	10	0.039	8760	341.84	0	0%	0
103	Public Works	PUBLIC WORKS - 1ST, ROOM 34 - MEZZANINE STORAGE	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V	12	12	12	1.996	780	1346.88	80	0.980	780	748.8	0	0%	0
104	Public Works	PUBLIC WORKS - 1ST, ROOM 34 - MEZZANINE STORAGE	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V, Emergency Back-up	2	2	2	0.296	8760	2330.16	80	0.150	8760	1401.6	0	0%	0
105	Public Works	PUBLIC WORKS - 1ST, ROOM 35 - PARKS DEPT. WORK ROOM	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V	7	7	7	0.911	3470	2799.17	80	0.580	3470	1183.2	0	0%	0
106	Public Works	PUBLIC WORKS - 1ST, ROOM 35 - PARKS DEPT. WORK ROOM	Industrial Housed Fixture, 2' x 8', 2x P60T12/ES, 75W, Mag E5 Ballast, 120/277V, Emergency Back-up	3	3	3	0.286	8760	2330.16	80	0.180	8760	1407.6	0	0%	0

107	Public Works	PUBLIC WORKS - 1ST, ROOM 15 - AUTO PARTS STORAGE	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	2	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.268	2470	657.02	80	0.140	2470	395.2	0	0%	0
108	Public Works	PUBLIC WORKS - 1ST, ROOM 17 - TRUCK PARTS STORAGE	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	3	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.399	2470	965.13	80	0.240	2470	592.8	0	0%	0
109	Public Works	PUBLIC WORKS - 1ST, ROOM 18 - EQUIPMENT STORAGE	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	1	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.133	2470	328.51	80	0.080	2470	127.6	0	0%	0
110	Public Works	PUBLIC WORKS - 1ST, ROOM 19 - LUBRICANT STORAGE	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	2	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.256	2470	637.62	80	0.160	2470	395.2	0	0%	0
111	Public Works	PUBLIC WORKS - 1ST, ROOM 40 - WASH BAY	Yapco Tight Fixture, 1' x 8', 2x P6712/HQ/VS, 110W, Mag Ballast, 120/277V	6	FIXTURE, LED, 95W, 12.750 LUMEN, VAPOR TIGHT, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	1.500	2470	3705	95	0.570	2470	1407.9	0	0%	0
112	Public Works	PUBLIC WORKS - 1ST, ROOM 42 - ELECTRICAL ROOM	Standard Strip Fixture, 1' x 4', 2x P6712, 30W, Mag ES Ballast, 120/277V	1	FIXTURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 1' x 4", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.074	2470	183.79	40	0.040	2470	98.8	0	0%	0
113	Public Works	PUBLIC WORKS - 1ST, ROOM 44 - VEHICLE SUPER PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F1278, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	1	FIXTURE, LED, 30W, 4.518 LUMEN, PLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	2470	276.64	36	0.036	2470	83.98	1	42%	75.2716
114	Public Works	PUBLIC WORKS - 1ST, ROOM 44 - VEHICLE SUPER PRIVATE OFFICE	Grid Troffer, 2' x 4', 4x F1278, 32W, Dim Normal Power Ballast, 120/277V, Parabolic Lens	1	FIXTURE, LED, 30W, 4.518 LUMEN, PLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	112	0.112	2760	281.12	36	0.036	2760	297.89	0	0%	0
115	Public Works	PUBLIC WORKS - 1ST, ROOM 45 - SINKER ALCOVE	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	1	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.112	2470	328.51	80	0.080	2470	127.6	0	0%	0
116	Public Works	PUBLIC WORKS - 1ST, ROOM 46 - CORRIDOR	Industrial Hooded Fixture, 1' x 8', 2x P6712/VS, 75W, Mag ES Ballast, 120/277V	3	FIXTURE, LED, 80W, 9.036 LUMEN, RADIAL LENS STRIP, 1' x 8", SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	113	0.399	2470	965.13	80	0.240	2470	592.8	0	0%	0
117	Public Works	PUBLIC WORKS - 1ST, ROOM 48 - STORAGE	Grid Troffer, 1' x 4', 2x F1278, 30W, Mag ES Ballast, 120/277V, Parabolic Lens	1	FIXTURE, LED, 30W, 4.518 LUMEN, PLAT PANEL TROFFER, 1' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	76	0.074	780	57.72	36	0.036	780	33.42	0	0%	0
118	Public Works	PUBLIC WORKS, PARKS GARAGE	Standard Strip Fixture, 1' x 4', 2x P6712/HQ/VS, 110W, Mag Ballast, 120/277V, Hard Piped Control	20	RETRO, LED, 70W, 9.534 LUMEN, RADIAL LENS STRIP, 1' x 4', 4-25" CHAIRS MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	5.000	2470	12250	76	1.520	2470	2756.4	22	40%	1761.74
119	Public Works	PUBLIC WORKS, PARKS GARAGE - BREAK ROOM	Grid Troffer, 2' x 4', 2x F1278, 32W, Mag ES Ballast, 120/277V, Parabolic Lens	4	FIXTURE, LED, 30W, 4.518 LUMEN, PLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.592	2470	1462.34	36	0.136	2470	325.82	1	23%	77.2616
120	Public Works	PUBLIC WORKS, PARKS GARAGE - PORTSMOUTH PRIVATE OFFICE	Grid Troffer, 2' x 4', 2x F1278, 32W, Mag ES Ballast, 120/277V, Parabolic Lens	3	FIXTURE, LED, 30W, 4.518 LUMEN, PLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.444	2470	1296.46	36	0.132	2470	251.94	1	42%	105.8148
121	Public Works	PUBLIC WORKS, PARKS GARAGE - MEZZAINE	Standard Strip Fixture, 1' x 4', 2x P6712/HQ/VS, 110W, Mag Ballast, 120/277V	4	RETRO, LED, 30W, 6.438 LUMEN, RADIAL LENS STRIP, 1' x 4', 4-25" CHAIRS MOUNTED, 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	1.000	2470	2470	53	0.212	2470	313.84	0	0%	0

122	Public Works	PUBLIC WORKS, PARKS GARAGE - RESTROOM	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.644	2470	1296.68	34	0.102	2470	251.34	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-20' Radial Coverage, Line Voltage 120/277V	0%	75.142
123	Public Works	PUBLIC WORKS, PARKS GARAGE - SECURITY LIGHTS	Standard Strip Fixture, 1' x 4', 2x P64T12/HV/ES, 110W, Mag Ballast, 120/277V, Hard Piped Conduit	9	RETRO, LED, 70W, 9.556 LUMEN, RADIAL LENS STRIP, 2' x 4', 4-25" CHARMEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	1.000	8760	12140	76	0.456	8760	2994.56	0		0%	0
124	Public Works	PUBLIC WORKS, PARKS GARAGE - TOOL ROOM	Hardwired Linear Fixture (See Remarks), 2' x 4', 2x F4T12, 30W, Mag ES Ballast, 120/277V	7	FIGURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 2' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	24	0.518	2470	1278.46	43	0.283	2470	881.6	1	Wall Mount, Passive Indirect, Line Voltage 120/277V, Polly Automatic, Ivory Color	25%	242.06
125	Public Works	PUBLIC WORKS, STREET GARAGE	Standard Strip Fixture, 1' x 4', 2x P64T12/HV/ES, 110W, Mag Ballast, 120/277V, Hard Piped Conduit	30	RETRO, LED, 70W, 9.556 LUMEN, RADIAL LENS STRIP, 2' x 4', 4-25" CHARMEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	1.008	2470	12210	76	1.520	2470	3754.4	20	Fixture Mount Box, 800' Low Bay, Passive Indirect, 8-15' Mtg Hgt, 10-20' Radial Coverage, Line Voltage 120/277V	40%	1501.78
126	Public Works	PUBLIC WORKS, STREET GARAGE - FORESTRY CAGE	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	4	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.592	2470	1482.34	34	0.118	2470	375.92	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-20' Radial Coverage, Line Voltage 120/277V	25%	117.572
127	Public Works	PUBLIC WORKS, STREET GARAGE - LAUNDRY ROOM	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	4	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.592	2470	1482.34	34	0.118	2470	325.92	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-20' Radial Coverage, Line Voltage 120/277V	25%	117.572
128	Public Works	PUBLIC WORKS, STREET GARAGE - MEZZARINE	Standard Strip Fixture, 1' x 4', 2x P64T12/HV/ES, 110W, Mag Ballast, 120/277V	3	RETRO, LED, 70W, 9.556 LUMEN, RADIAL LENS STRIP, 2' x 4', 4-25" CHARMEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	0.748	2470	1652.5	63	0.199	2470	392.75	8		0%	0
129	Public Works	PUBLIC WORKS, STREET GARAGE - SECURITY LIGHTS	Standard Strip Fixture, 1' x 4', 2x P64T12/HV/ES, 110W, Mag Ballast, 120/277V, Hard Piped Conduit	4	RETRO, LED, 70W, 9.556 LUMEN, RADIAL LENS STRIP, 2' x 4', 4-25" CHARMEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	1.000	8760	8760	76	0.304	8760	2464.08	0		0%	0
130	Public Works	PUBLIC WORKS, STREET GARAGE - TOOL ROOM	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	4	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.592	2470	1482.34	34	0.118	2470	325.92	1	Ceiling Mount, Passive Indirect, Standard Range, 8-15' Mtg Hgt, 10-20' Radial Coverage, Line Voltage 120/277V	25%	117.572
131	Public Works	PUBLIC WORKS, STREET GARAGE - TRUCK PARKING	Standard Strip Fixture, 1' x 4', 2x P64T12/HV/ES, 110W, Mag Ballast, 120/277V	31	RETRO, LED, 70W, 9.556 LUMEN, RADIAL LENS STRIP, 2' x 4', 4-25" CHARMEL MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	250	7.750	2470	20142.5	76	2.256	2470	5819.82	0		0%	0
132	Rec Admin	REC ADMIN BUILDING, ROOM 202 - LOBBY	Grand Trunk, 2' x 4', 2x F4T12, 30W, Mag ES Ballast, 120/277V, Pneumatic Lens	10	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	24	0.788	2470	1827.8	39	0.288	2470	964.3	0		0%	0
133	Rec Admin	REC ADMIN BUILDING, ROOM 202 - LOBBY	Grand Trunk, 2' x 4', 2x F4T12, 30W, Mag ES Ballast, 120/277V, Pneumatic Lens, Emergency Back up	8	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, EMERGENCY BACK UP, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	24	0.548	8760	1796.48	38	0.078	8760	683.28	0		0%	0
134	Rec Admin	REC ADMIN BUILDING, ROOM 202 - LOBBY TROFFER CAGE	Standard Strip Fixture, 1' x 4', 2x F4T12, 30W, Mag ES Ballast, 120/277V	1	FIGURE, LED, 40W, 4.517 LUMEN, RADIAL LENS STRIP, 2' x 4', SURFACE MOUNTED, 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	24	0.078	8760	648.24	40	0.040	8760	250.4	0		0%	0
135	Rec Admin	REC ADMIN BUILDING, ROOM 218 - CORRIDOR	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	6	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.888	2470	2193.36	34	0.294	2470	563.68	0		0%	0
136	Rec Admin	REC ADMIN BUILDING, ROOM 218 - CORRIDOR	Grand Trunk, 2' x 4', 2x F4T12, Mag ES Ballast, 120/277V, Pneumatic Lens	18	FIGURE, LED, 10W, 4.13M LUMEN, FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 80000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	2.664	2470	6520.08	34	0.832	2470	1511.64	0		0%	0

137	Rec. Admin	REC. ADMIN BUILDING, ROOM 219 - STAFFWELL K1	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	143	0.444	8760	2229.44	34	0.147	8760	893.52	0		0%	0
138	Rec. Admin	REC. ADMIN BUILDING, ROOM 220 - PRIVATE OFFICE	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.296	2470	731.12	34	0.084	2470	187.96	0		0%	0
139	Rec. Admin	REC. ADMIN BUILDING, ROOM 221 - PRIVATE OFFICE	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.296	2470	731.12	34	0.084	2470	187.96	0		0%	0
140	Rec. Admin	REC. ADMIN BUILDING, ROOM 222 - PRIVATE OFFICE	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.296	2470	731.12	34	0.084	2470	187.96	0		0%	0
141	Rec. Admin	REC. ADMIN BUILDING, ROOM 223 - STORAGE	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.148	780	115.44	34	0.034	780	26.52	0		0%	0
142	Rec. Admin	REC. ADMIN BUILDING, ROOM 224 - STORAGE	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.148	780	115.44	34	0.034	780	26.52	0		0%	0
143	Rec. Admin	REC. ADMIN BUILDING, ROOM 225 - ROLL CALL	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	15	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	2.220	2470	5463.4	34	0.510	2470	1256.7	0		0%	0
144	Rec. Admin	REC. ADMIN BUILDING, ROOM 225 - ROLL CALL	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	7	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	1.036	2470	2546.92	34	0.238	2470	187.96	0		0%	0
145	Rec. Admin	REC. ADMIN BUILDING, ROOM 226 - MEN'S RESTROOM	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	3	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.444	2470	1276.68	34	0.152	2470	251.96	1	Ceiling Mount, Passive Infrared, Standard Range, 0-15' Mtg Hgt, 15-20' Beamed Coverage, Line Voltage 120/277V	32%	75.542
146	Rec. Admin	REC. ADMIN BUILDING, ROOM 226 - MEN'S RESTROOM	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.148	2470	365.56	34	0.034	2470	82.98	1	Fixed in with sensor on another line	32%	25.194
147	Rec. Admin	REC. ADMIN BUILDING, ROOM 227 - WOMEN'S RESTROOM	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	3	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.296	2470	731.12	34	0.084	2470	187.96	1	Ceiling Mount, Passive Infrared, Standard Range, 0-15' Mtg Hgt, 15-20' Beamed Coverage, Line Voltage 120/277V	32%	90.186
148	Rec. Admin	REC. ADMIN BUILDING, ROOM 228 - JANITOR'S CLOSET	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	1	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.148	2470	365.56	34	0.034	2470	82.98	0		0%	0
149	Rec. Admin	REC. ADMIN BUILDING, ROOM 229 - GOLD LIBRARY/ HEARING TEST CENTER	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	7	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	1.036	2470	2546.92	34	0.238	2470	187.96	0		0%	0
150	Rec. Admin	REC. ADMIN BUILDING, ROOM 230 - GOLD RECORD STORAGE/ HEARING TEST CENTER	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	25	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	14	1.850	2470	4569.5	39	0.975	2470	2408.25	0		0%	0
151	Rec. Admin	REC. ADMIN BUILDING, ROOM 231 - STAFFWELL K2	Grid Troffer, 2' x 4', 2x FMT12, Mag ES Ballast, 120/277V, Pneumatic Lens	3	FIGURE, LED, 30W, 4.3M LUMEN FLAT PANEL TROFFER, 2' x 4', 0-10V DIM, 4000K, 120-277V, 60000 HOUR RATED LIFE, 5-YEAR WARRANTY	148	0.444	8760	2229.44	34	0.152	8760	893.52	0		0%	0

Cultural Center Interior & Exterior Lighting Upgrades

Row #	BUILDING	LOCATION	EXISTING FEATURE	QTY	NEW FEATURE/RENOV	WATTS EACH	TOTAL KW	FEET SQ HOUR	TOTAL KW/H	WATTS EACH	TOTAL KW	FEET SQ HOUR	TOTAL KW/H
1	INTERIOR	FIRST FLOOR - WEST ENTRANCE LOBBY, PH 01	Wall Sconce, Compact Fluorescent, 2 Pin trim tube, 2x 12W, 120/277V	4	RETRO, LED, 2x 5W, 560 LUMEN PL 2PIN LAMP, LINE VOLTAGE, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	20	0.120	25.68	4.24.48	10	0.060	25.68	158.16
2	INTERIOR	FIRST FLOOR - WEST ENTRANCE LOBBY, PH 02	Wall Sconce, Compact Fluorescent, 2-Pin trim tube, 2x 12W, 120/277V	1	RETRO, LED, 2x 5W, 560 LUMEN PL 2PIN LAMP, LINE VOLTAGE, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	20	0.090	25.29	237.36	20	0.030	25.68	79.08
3	INTERIOR	FIRST FLOOR - WEST ENTRANCE LOBBY, PH 03	Exit Sign, CW, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FUTURE, LED, 2W LED EXIT SIGN, WHITE, RECHARGE BATTERY BACK-UP, 120-277V, 65000 HOUR RATED LIFE, 2-YEAR WARRANTY	4	0.004	8760	25.04	2	0.002	8760	17.12
4	INTERIOR	FIRST FLOOR - WEST ENTRANCE LOBBY, PH 04	Recessed Can 4", Compact Fluorescent, 2-Pin trim tube, 2x 12W, 120/277V	2	RETRO, LED, 2x 5W, 560 LUMEN PL 2PIN LAMP, LINE VOLTAGE, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.050	25.35	121.8	10	0.020	25.68	52.72
5	INTERIOR	FIRST FLOOR - W ENTRANCE VESTIBULE, PH 05	Recessed Can 4", Compact Fluorescent, 2-Pin trim tube, 2x 12W, 120/277V	2	RETRO, LED, 2x 5W, 560 LUMEN PL 2PIN LAMP, LINE VOLTAGE, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.060	25.29	121.8	10	0.020	25.68	52.72
6	INTERIOR	FIRST FLOOR - WOMEN'S RA OFF W LOBBY, PH 07	Vanity Mount Fixture, 1' x 4', 2x F34T12, 34W, Mag 15 Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	2106	0	0	0.000	2106	0
7	INTERIOR	FIRST FLOOR - W LOBBY RESTROOM HALLWAY, PH 08	Recessed Can 4", Compact Fluorescent, 2-Pin trim tube, 2x 12W, 120/277V	2	RETRO, LED, 2x 5W, 560 LUMEN PL 2PIN LAMP, LINE VOLTAGE, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.075	25.15	127.7	10	0.030	25.68	79.08
8	INTERIOR	FIRST FLOOR - W LOBBY RESTROOM HALLWAY, PH 09	Exit Sign, CW, LED 120/277V, Battery Back-up, White Face & Red Letters	2	FUTURE, LED, 2W LED EXIT SIGN, WHITE, RECHARGE BATTERY BACK-UP, 120-277V, 65000 HOUR RATED LIFE, 2-YEAR WARRANTY	4	0.008	8760	70.08	2	0.004	8760	15.04
9	INTERIOR	FIRST FLOOR - W LOBBY RESTROOM HALLWAY, PH 10	Hunged Grid Troffer, 2' x 2', 2x F34T12-48, 32W, Mag 15 Ballast, 120/277V, Prismatic Lens	5	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
10	INTERIOR	FIRST FLOOR ELECTRICAL CLOSET OFF W ENTRANCE HALL, PH 11	Industrial Handed Fixture, 1' x 4', 2x F34T12, 34W, Mag 15 Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
11	INTERIOR	FIRST FLOOR - ELECTRICAL CLOSET 2 OFF W ENTRANCE HALL, PH 12	Pendant Track, Incandescent, 60W 120V, Full Choke Switch/Operation	1	RETRO, LED, 1x 9W, 800 LUMEN A19 LAMP, WHITE FRIM, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	66	0.060	527	21.62	9	0.009	527	4.363
12	INTERIOR	FIRST FLOOR WAITING AREA, PH 13	Grid Troffer, 2' x 4', 2x F34T12, Mag 15 Ballast, 120/277V, Prismatic Lens, Emergency Back-up	1	Included in T12 Linear Project	0	0.000	8760	0	0	0.000	8760	0
13	INTERIOR	FIRST FLOOR WAITING AREA, PH 14	Grid Troffer, 2' x 4', 2x F34T12, Mag 15 Ballast, 120/277V, Prismatic Lens	10	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
14	INTERIOR	FIRST FLOOR - WAITING AREA, PH 15	Grid Troffer, 2' x 2', 2x F34T12-24, 32W, Mag 15 Ballast, 120/277V, Prismatic Lens	6	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0

15	INTERIOR	FIRST FLOOR - WAITING AREA, PH 416	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	PICTURE, LED, 4W LED EXT 140W, 6 INCH BEIGE VERY LIGHT COLORED, WHITE, HEAD BATTERY BACK-UP, 1000K, 120V, 277V, 6000 HOUR RATED LIFE, 3 YEAR WARRANTY	4	0.004	8760	25.08	4	0.004	8760	25.04
16	INTERIOR	FIRST FLOOR - LOBBY, PH 417	Grid Troffer, 2' x 4', 2x F34T12, Mag ES Ballast, 120/277V, Prismatic Lens	5	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
17	INTERIOR	FIRST FLOOR - SPOCKLEB ROOM, PH 418	Industrial Handed Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
18	INTERIOR	FIRST FLOOR - ELEVATOR HALLWAY, PH 419	Grid Troffer, 2' x 2', 2x F34T12-UL, 12W, Mag ES Ballast, 120/277V, Prismatic Lens	2	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
19	INTERIOR	FIRST FLOOR - ELEVATOR CLOSET, PH 420	Industrial Handed Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
20	INTERIOR	FIRST FLOOR - MEN'S RESTROOM BY ELEVATOR, PH 421	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	1108	0	0	0.000	1108	0
21	INTERIOR	FIRST FLOOR - WOMEN'S RESTROOM BY ELEVATOR, PH 422	Wrap Around Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	2108	0	0	0.000	2108	0
22	INTERIOR	FIRST FLOOR - COMMONS, PH 423	Wrap Around Fixture, 1' x 4', 4x F34T12, 30W, Mag ES Ballast, 120/277V	8	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
23	INTERIOR	FIRST FLOOR - COMMONS, PH 424	Recessed Can 8", Halogen, 75W, 120V, Mini Can Base	5	RETRO, LED, 1X 9W, 450 LUMEN BRID LAMP, WHITE FROST, 4100K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	75	0.175	2636	985.5	0	0.045	2636	118.62
24	INTERIOR	FIRST FLOOR - COMMONS, PH 425	Track Light Head, CF, 150W, 120V	6	RETRO, LED, 1X 9W, 450 LUMEN BRID LAMP, WHITE FROST, 4100K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	15	0.120	2636	336.32	0	0.072	2636	108.762
25	INTERIOR	FIRST FLOOR - COMMONS, PH 426	Flanged Grid Troffer, 2' x 2', 2x F34T12-UL, 12W, Mag ES Ballast, 120/277V, Prismatic Lens	8	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
26	INTERIOR	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 427	Recessed Can 8", Incandescent, 65W BR30, 120V	18	RETRO, LED, 1X 9W, 450 LUMEN BRID LAMP, WHITE FROST, 4100K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	65	1.170	2636	3084.12	0	0.142	2636	417.032
27	INTERIOR	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 428	Standard Strip Fixture, 1' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V	8	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
28	INTERIOR	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 429	Grid Troffer, 2' x 4', 2x F34T12, 30W, Mag ES Ballast, 120/277V, Prismatic Lens	6	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
29	INTERIOR	FIRST FLOOR - MAIN LOBBY FRONT ENTRANCE, PH 430	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	PICTURE, LED, 4W LED EXT 140W, WHITE, HEAD BATTERY BACK-UP, 1000K, 120-277V, 6000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.004	8760	25.04	2	0.002	8760	17.52

10	OUTERIOR	FIRST FLOOR - FRONT ENTRANCE VESTIBULE, PH# 011	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FUTURE, LED, 2W LED EXIT SIGN, WHITE, RECAD BATTERY BACK-UP, 5000H, 120-277V, 65000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.004	8760	35.04	2	0.002	8760	17.52
11	INTERIOR	FIRST FLOOR - FRONT ENTRANCE VESTIBULE, PH# 012	Recessed Can 4", Incandescent, 65W 840K, 120V	2	RETRO, LED, 15 9W, 850 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	30	0.180	2636	342.66	9	0.018	2636	41.648
12	INTERIOR	FIRST FLOOR - MAINT LOBBY OFFICE, PH# 013	Grid Troffer, 2' x 4', 2x F34T12, Mag F5 Ballast, 120/277V, Fluorescent, Low	2	Included in T12 Linear Project	0	0.000	2172	0	0	0.000	2172	0
13	INTERIOR	FIRST FLOOR - MEN'S RESTROOM OFF EXHIBIT HALL, PH# 016	Recessed Square Fixture, Approx 10" Opening, Screw in, Incandescent, 60W, 120/277V	4	RETRO, LED, 15 9W, 800 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.360	2108	545.92	9	0.036	2108	75.828
14	INTERIOR	FIRST FLOOR - WOMEN'S RESTROOM OFF EXHIBIT HALL - NO ACCESS, PH# 015	Recessed Square Fixture, Approx 10" Opening, Screw in, Incandescent, 60W, 120/277V	4	RETRO, LED, 15 9W, 800 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.360	2108	545.92	9	0.036	2108	75.828
15	INTERIOR	FIRST FLOOR - EXHIBIT HALL RESTROOM HALLWAY, PH# 016	Recessed Square Fixture, Approx 10" Opening, Screw in, Incandescent, 60W, 120/277V	4	RETRO, LED, 15 9W, 800 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.360	2108	545.92	9	0.036	2108	75.828
16	INTERIOR	FIRST FLOOR - EXHIBIT HALL STAIRS, PH# 017	Recessed Square Fixture, Approx 10" Opening, Screw in, Incandescent, 60W, 120/277V	5	RETRO, LED, 15 9W, 800 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.360	8760	2628	9	0.045	8760	384.2
17	INTERIOR	FIRST FLOOR - EXHIBIT HALL STAIRS, PH# 018	Pericolum Socket, Incandescent, 60W, 640 120V	10	RETRO, LED, 15 9W, 800 LUMEN A19 LAMP, WHITE FINISH, 3000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.780	8760	6632.8	9	0.117	8760	3636.12
18	OUTERIOR	FIRST FLOOR - EXHIBIT HALL STAIRS, PH# 019	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FUTURE, LED, 2W LED EXIT SIGN, WHITE, RECAD BATTERY BACK-UP, 5000H, 120-277V, 65000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.004	8760	35.04	2	0.002	8760	17.52
19	INTERIOR	FIRST FLOOR - EXHIBIT HALL BALCONY, PH# 020	Track Lighting, Incandescent A75 Lamp, 60W, 120/277V	1	REMOVE. From Service and Electric power	60	0.060	527	21.62	0	0.000	527	0
20	INTERIOR	FIRST FLOOR - EXHIBIT HALL BALCONY, PH# 021	Wall Mounted Fixture, 1' x 4', 2x F34T12, 30W, Mag F5 Ballast, 120/277V	4	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
21	INTERIOR	FIRST FLOOR - EXHIBIT HALL BALCONY, PH# 022	Wall Mounted Fixture, 1' x 4', 2x F34T12, 30W, Mag F5 Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
22	OUTERIOR	FIRST FLOOR - EXHIBIT HALL, PH# 023	Rim, Pendant Mounted, Metal Housse, 250W, 120/277V	9	RETRO, LED, 90W, 8400 LUMEN RETROFIT, 840 DEGREE COVERAGE, 8 1/2" MOD, DEC LATED, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	228	2.942	2636	6632.512	10	0.010	2636	2235.16
23	INTERIOR	FIRST FLOOR - EXHIBIT HALL, PH# 026	Grid Troffer, 2' x 2', 2x F34T12, 4W, 12W, Mag F5 Ballast, 120/277V, Fluorescent, Low	2	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
24	INTERIOR	FIRST FLOOR - EXHIBIT HALL, PH# 027	Wall Mounted Fixture, 1' x 4', 2x F34T12, 30W, Mag F5 Ballast, 120/277V	6	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0

45	INTERIOR	FIRST FLOOR - CORRIDOR HALL, PH 948	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	2	EXITURE, LED, 2W LED EXIT SIGN, WHITE, BROAD BATTERY BACK-UP, 5000H, 120-277V, 65000 HOUR RATED LIFE, 2-YEAR WARRANTY	4	0.008	8760	70.08	2	0.004	8760	23.04
46	INTERIOR	FIRST FLOOR - EXHIBIT HALL, PH 949	Wall Mount Picture, 1' x 4', 2x F34T12, 34W, Mag ES Ballast, 120/277V	20	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
47	INTERIOR	FIRST FLOOR - EXHIBIT HALL, PH 950	Track Lighting, Halogen MR16 Lamp, 50W, 120V	9	RETRAC, LED, 7W, 500 (LUMEN MR16 LAMP, CLEAR LENS, 1500K, 120V, 20000 HOUR RATED LIFE, 5-YEAR WARRANTY	50	0.410	2636	138.2	7	0.043	2636	134.068
48	INTERIOR	FIRST FLOOR - EXHIBIT HALL WEST, PH 951	Flanged Grid Troffer, 1' x 4', 2x F34T12, (34W), Mag ES Ballast, 120/277V, Premature Lene	2	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
49	INTERIOR	FIRST FLOOR - EXHIBIT HALL WEST STORAGE ROOM, PH 952	Flanged Grid Troffer, 1' x 4', 2x F34T12, (34W), Mag ES Ballast, 120/277V, Premature Lene	5	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
50	INTERIOR	FIRST FLOOR - ROOM 202, PH 953	Flanged Grid Troffer, 1' x 4', 2x F34T12, (34W), Mag ES Ballast, 120/277V, Premature Lene	2	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
51	INTERIOR	FIRST FLOOR - DANCE ROOM, PH 954	Wrap Around Picture, 1' x 4', 2x F34T12, 34W, Mag ES Ballast, 120/277V	4	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
52	INTERIOR	FIRST FLOOR - DANCE ROOM, PH 955	Wrap Around Picture, 1' x 4', 2x F34T12, 34W, Mag ES Ballast, 120/277V	9	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
53	INTERIOR	FIRST FLOOR - DANCE ROOM, PH 956	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	EXITURE, LED, 2W LED EXIT SIGN, WHITE, BROAD BATTERY BACK-UP, 5000H, 120-277V, 65000 HOUR RATED LIFE, 2-YEAR WARRANTY	4	0.004	8760	23.04	2	0.002	8760	23.04
54	INTERIOR	FIRST FLOOR - ART STUDIO, PH 957	Grid Troffer, 2' x 4', 2x F34T12, Mag ES Ballast, 120/277V, Premature Lene	12	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
55	INTERIOR	FIRST FLOOR - ART STUDIO, PH 958	Grid Troffer, 2' x 2', 2x F34T12-LB, 12W, Mag ES Ballast, 120/277V, Premature Lene	4	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
56	INTERIOR	FIRST FLOOR - ART STUDIO, PH 959	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	2	EXITURE, LED, 2W LED EXIT SIGN, WHITE, BROAD BATTERY BACK-UP, 5000H, 120-277V, 65000 HOUR RATED LIFE, 2-YEAR WARRANTY	4	0.008	8760	70.08	2	0.004	8760	23.04
57	INTERIOR	FIRST FLOOR - ART STUDIO VESTIBULE, PH 960	Flanged Grid Troffer, 2' x 2', 2x F34T12-LB, 12W, Mag ES Ballast, 120/277V, Premature Lene	1	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
58	INTERIOR	FIRST FLOOR - ART STUDIO STORAGE, PH 961	Flanged Grid Troffer, 1' x 4', 2x F34T12, (34W), Mag ES Ballast, 120/277V, Premature Lene	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
59	INTERIOR	FIRST FLOOR - GARAGE, PH 962	Grid Troffer, 1' x 4', 2x F34T12, (34W), Mag ES Ballast, 120/277V, Premature Lene	6	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0

60	INTERIOR	FIRST FLOOR - GARAGE, PIN 963	Exit Sign, 2x 12W, Incandescent, 120V, AC Only, White Face & Red Letters	1	FOXTUNE, LED, 2W LED EXIT SIGN, WHITE, REAR BATTERY BACK-UP, 5000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	40	0.040	8760	250.4	2	0.002	8760	17.52
61	INTERIOR	FIRST FLOOR - GARAGE STORAGE, PIN 964	Grid Troffer, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V, Prismatic Lens	3	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
62	INTERIOR	FIRST FLOOR - ROOM 101, PIN 965	Box, Pendant Mounted, Metal Hubs, 250W, 120/277V	0	RETRO, LED, 10W, 650 LUMEN PL, 277V, 360 DEGREE COVER, 8" MOD, CEC LISTED, 4000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	228	2.204	1977	4555.008	90	0.702	1977	5428.44
63	INTERIOR	FIRST FLOOR - ROOM 101, PIN 966	Exit Sign Emergency Combin, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	2	FOXTUNE, LED, 4W LED EXIT SIGN & EMERGENCY LIGHT (COMBO), WHITE, REAR BATTERY BACK-UP, 5000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	4	0.004	8760	75.08	4	0.004	8760	76.88
64	INTERIOR	FIRST FLOOR - ROOM 101, PIN 967	Recessed Can 6", Compact Fluorescent, 3 Pin base bulb, 2x 13W, 120/277V	0	RETRO, LED, 2x 3W, 560 LUMEN PL, 277V LAMP, LINE VOLTAGE, 4000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.075	1977	543.275	10	0.030	1977	54.82
65	INTERIOR	FIRST FLOOR - ROOM 101 STORAGE, PIN 968	Flanged Grid Troffer, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V, Prismatic Lens	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
66	INTERIOR	FIRST FLOOR - ROOM 101 STORAGE 2, PIN 969	Flanged Grid Troffer, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V, Prismatic Lens	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
67	INTERIOR	FIRST FLOOR - CENTER STAIRS TO 2ND FLOOR, PIN 970	Recessed Can 6", Compact Fluorescent, 3 Pin base bulb, 2x 13W, 120/277V	2	RETRO, LED, 2x 3W, 560 LUMEN PL, 277V LAMP, LINE VOLTAGE, 4000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.050	8760	438	10	0.030	8760	175.2
68	INTERIOR	SECOND FLOOR - ROOM 4 TOP OF STAIRS, PIN 971	Track Lighting, Incandescent A19 Lamp, 100W, 120/277V	2	RETRO, LED, 1x 9W, 650 LUMEN BR30 LAMP, WHITE FINISH, 4000H, 120V, 26000 HOUR RATED LIFE, 5-YEAR WARRANTY	300	0.300	7636	517.2	9	0.018	7636	47.648
69	INTERIOR	FIRST FLOOR - ROOM 102, PIN 972	Recessed Can 6", Incandescent, 100W BR30, 120V	2	RETRO, LED, 1x 9W, 650 LUMEN BR30 LAMP, WHITE FINISH, 4000H, 120V, 26000 HOUR RATED LIFE, 5-YEAR WARRANTY	65	0.195	1977	825.515	9	0.017	1977	51.378
70	OUTDOOR	SECOND FLOOR - ROOM 208 RECEPTION ROOM - NO ACCESS, PIN 973	Grid Troffer, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V, Prismatic Lens	2	Included in T12 Linear Project	0	0.000	294	0	0	0.000	294	0
71	INTERIOR	FIRST FLOOR - ROOM 102, PIN 974	Standard Strip Fixture, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V	18	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
72	INTERIOR	SECOND FLOOR - CORRIDOR OUTSIDE 208 OPEN TO LOBBY & LEVEL, PIN 975	Recessed Can 6", Compact Fluorescent, 3 Pin base bulb, 2x 13W, 120/277V	4	RETRO, LED, 2x 3W, 560 LUMEN PL, 277V LAMP, LINE VOLTAGE, 4000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	25	0.100	7636	263.6	10	0.040	7636	106.44
73	INTERIOR	FIRST FLOOR - WOMEN'S TOILET W/ LOCKER, PIN 976	Flanged Grid Troffer, 2' x 4', 2x F34T12, (4W), Mag ES Ballast, 120/277V, Prismatic Lens	1	Included in T12 Linear Project	0	0.000	2308	0	0	0.000	2308	0
74	OUTDOOR	SECOND FLOOR - CORRIDOR OUTSIDE 208 OPEN TO LOBBY & LEVEL, PIN 976	Exit Sign, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FOXTUNE, LED, 2W LED EXIT SIGN, WHITE, REAR BATTERY BACK-UP, 5000H, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	4	0.004	8760	23.04	2	0.002	8760	17.52

75	INTERIOR	SECOND FLOOR - ROOM 202, P08 075	Flanged Grid Troffer, 1' x 4', 2x F30T12, 140W, Mag ES Ballast, 120/277V, Fluorescent Lamp	27	Included in T12 Linear Project	0	0.000	1977	0	0	0.000	1977	0
76	INTERIOR	SECOND FLOOR - ROOM 203, P08 076	Rea, Pendant Mounted, Metal Hobbles, 250W, 120/277V	6	RETRO, LED, 18 W, 600 LUMEN RETROFIT, 360 DEGREE COVERAGE, 6" INCH, DLC LISTED, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	228	1.728	1977	3416.256	10	0.340	1977	1067.58
77	INTERIOR	SECOND FLOOR - ROOM 203, P08 077	Exit Sign Emergency Combo, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FITURE, LED, 4W LED EXT SIGN & EMERGENCY LIGHT COMBO, WHITE, REAR BATTERY BACK-UP, 5000K, 120-277V, 60000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.004	8760	23.04	4	0.004	8760	23.04
78	INTERIOR	SECOND FLOOR - ROOM 203 OFFICE HALLWAY, P08 078	Flanged Grid Troffer, 2' x 2', 2x F30T12 4W, 12W, Mag ES Ballast, 120/277V, Fluorescent Lamp	9	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
79	INTERIOR	SECOND FLOOR - ROOM 203 OFFICE HALLWAY, P08 079	Recessed Can 8", Incandescent, 65W BR35, 120V	4	RETRO, LED, 18 W, 600 LUMEN BR35 LAMP, WHITE FINISH, 4000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	65	0.260	2636	525.36	9	0.036	2636	94.896
80	INTERIOR	SECOND FLOOR - ROOM 203 OFFICE HALLWAY, P08 080	Exit Sign Emergency Combo, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	1	FITURE, LED, 4W LED EXT SIGN & EMERGENCY LIGHT COMBO, WHITE, REAR BATTERY BACK-UP, 5000K, 120-277V, 60000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.004	8760	23.04	4	0.004	8760	23.04
81	INTERIOR	SECOND FLOOR - ROOM 203 OFFICE HALLWAY, P08 081	Standard Strip Fixture, 1' x 4', 1x F30T12, 90W, Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	2636	0	0	0.000	2636	0
82	INTERIOR	SECOND FLOOR - 203 MECHANICAL WATER HEATER, P08 082	Perfection Trackbar, Incandescent, 60W, 120V	1	RETRO, LED, 18 W, 600 LUMEN A19 LAMP, WHITE FINISH, 4000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.060	527	31.62	9	0.009	527	4.748
83	INTERIOR	SECOND FLOOR - 202 PRIVATE OFFICE, P08 083	Grid Troffer, 2' x 4', 2x F30T12, Mag ES Ballast, 120/277V, Fluorescent Lamp	2	Included in T12 Linear Project	0	0.000	2372	0	0	0.000	2372	0
84	INTERIOR	SECOND FLOOR - 203- 203 STORAGE, P08 084	Undercabinet Strip Fixture, 1' x 2', 1x F30T12, 90W Mag ES Ballast, 120/277V	4	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
85	INTERIOR	SECOND FLOOR - ROOM 201, P08 085	Pendant Mounted Decorative Round, Glass Light, Fluorescent Lamp, Metal Hobbles, 90W, 120/277V	5	RETRO, LED, 18 W, 600 LUMEN RETROFIT, 360 DEGREE COVERAGE, 6" INCH, DLC LISTED, 4000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	91	0.455	1977	899.525	53	0.265	1977	523.905
86	INTERIOR	SECOND FLOOR - ROOM 201, P08 086	Recessed Can 8", Incandescent, 65W BR35, 120V	24	RETRO, LED, 18 W, 600 LUMEN BR35 LAMP, WHITE FINISH, 4000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	65	1.340	1977	2086.12	9	0.216	1977	437.822
87	INTERIOR	SECOND FLOOR - ROOM 201, P08 087	Track Lighting, Incandescent A19 Lamp, 75W, 120/277V	4	RETRO, LED, 18 W, 600 LUMEN BR35 LAMP, WHITE FINISH, 4000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	75	0.300	1977	963.1	9	0.036	1977	75.172
88	INTERIOR	SECOND FLOOR - ROOM 201, P08 088	Exit Sign Emergency Combo, 4W, LED 120/277V, Battery Back-up, White Face & Red Letters	2	FITURE, LED, 4W LED EXT SIGN & EMERGENCY LIGHT COMBO, WHITE, REAR BATTERY BACK-UP, 5000K, 120-277V, 60000 HOUR RATED LIFE, 3-YEAR WARRANTY	4	0.008	8760	23.08	4	0.008	8760	23.08
89	INTERIOR	SECOND FLOOR - 203- 203 STORAGE, P08 089	Flanged Grid Troffer, 2' x 2', 2x F30T12 4W, 12W, Mag ES Ballast, 120/277V, Fluorescent Lamp	2	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0

90	INTERIOR	SECOND FLOOR - 203-201 STORAGE, PM #90	Exit Sign Emergency Combo, 4W, LED 120/277V, Battery Back up, White Face & Red Letters	1	FIXTURE, LED, 4W LED EXIT SIGN & EMERGENCY LIGHT COMBO, WHITE, HICAD BATTERY BACK UP, 4000K, 120-277V, 40000 HOUR RATED LIFE, 3-YEAR WARRANTY	6	0.004	6760	25.04	4	0.004	6760	25.04
91	INTERIOR	SECOND FLOOR - 1 STORAGE, PM #91	Industrial Pendant Fixture, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
92	INTERIOR	SECOND FLOOR MEN RESTROOM BY 201, PM #92	Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	Included in T12 Linear Project	0	0.000	6760	0	0	0.000	6760	0
93	INTERIOR	SECOND FLOOR WOMEN'S RESTROOM BY 201, PM #93	Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	Included in T12 Linear Project	0	0.000	6760	0	0	0.000	6760	0
94	INTERIOR	SECOND FLOOR STORAGE AT END OF 201 HALLWAY, PM #94	Pendant Fixture, Incandescent, 60W, 120V	2	RETRO, LED, 14 W, 800 LUMEN A19 LAMP, WHITE FINISH, 4000K, 120V, 25000 HOUR RATED LIFE, 3-YEAR WARRANTY	60	0.120	2636	216.32	9	0.018	2636	47.648
95	INTERIOR	SECOND FLOOR STAIRS ACROSS FROM 201, PM #95	Hanged Grid Troffer, 2' x 4', 2x F34T12, Mag ES Ballast, 120/277V, Pneumatic Lens	2	Included in T12 Linear Project	0	0.000	6760	0	0	0.000	6760	0
96	INTERIOR	SECOND FLOOR STAIRS ACROSS FROM 201, PM #96	Decorative Surface Mount, 3x Directional Halogen MR16 Lamps, 50W, 120V	3	FOOTCUB, LED, 15W, 800 LUMEN 1" SQUARE SQUARE LIGHT, WHITE FINISH, 4000K, 120-277V, 50000 HOUR RATED LIFE, 3-YEAR WARRANTY	150	0.450	6760	8642	15	0.045	6760	864.2
97	INTERIOR	SECOND FLOOR STAIRS ACROSS FROM 201, PM #97	Recessed Can 4", Incandescent, 60W BR32, 120V	1	RETRO, LED, 14 W, 800 LUMEN BR32 LAMP, WHITE FINISH, 4000K, 120-277V, 50000 HOUR RATED LIFE, 3-YEAR WARRANTY	65	0.095	6760	560.4	5	0.009	6760	78.84
98	INTERIOR	SECOND FLOOR STORAGE 201, PM #98	Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
99	INTERIOR	SECOND FLOOR - MECHANICAL HEATING COOLING, PM #99	Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	2	Included in T12 Linear Project	0	0.000	527	0	0	0.000	527	0
100	INTERIOR	SECOND FLOOR - STAFF STAIRWELL, PM #100	Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	4	Included in T12 Linear Project	0	0.000	6760	0	0	0.000	6760	0
101	INTERIOR	FIRST FLOOR - MEN'S RE OFF W LOBBY, PM #101	Vanity Mount Fixture, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V	1	Included in T12 Linear Project	0	0.000	2108	0	0	0.000	2108	0
102	INTERIOR	FIRST FLOOR - MEN'S RE OFF W LOBBY, PM #102	Hanged Grid Troffer, 2' x 4', 2x F34T12, (40W), Mag ES Ballast, 120/277V, Pneumatic Lens	1	Included in T12 Linear Project	0	0.000	2108	0	0	0.000	2108	0
103	EXTERIOR	NORTH PARKING LOT	Outdoor, Cobra Head, High Pressure Sodium, 250W, 120/277V	2	FOXTURE, LED, 100W, 11,000 LUMEN AREA LIGHT, TYPE B BRONZE FINISH, SLIPSTEEL MOUNTING, 4000K, 120-277V, 50000 HOUR RATED LIFE, 3-YEAR WARRANTY	195	0.390	4380	1708.2	100	0.200	4380	876
104	EXTERIOR	NORTH PARKING LOT	Outdoor, Cobra Head, High Pressure Sodium, 250W, 120/277V	2	FOXTURE, LED, 100W, 11,000 LUMEN AREA LIGHT, TYPE B BRONZE FINISH, SLIPSTEEL MOUNTING, 4000K, 120-277V, 50000 HOUR RATED LIFE, 3-YEAR WARRANTY	195	0.390	4380	1708.2	100	0.200	4380	876

125	EXTERIOR	NORTH PARKING LOT	Outdoor, Cobra Head, High Pressure Sodium, 150W, 120/277V	1	FIXTURE, LED, 150W, 11,100 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	195	0.195	4.380	854.1	300	0.100	4.380	4.18
126	EXTERIOR	NORTH PARKING LOT	Outdoor, Cobra Head, High Pressure Sodium, 150W, 120/277V	1	FIXTURE, LED, 150W, 11,100 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	195	0.195	4.380	854.1	300	0.100	4.380	4.18
127	EXTERIOR	FRONT ENTRANCE	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	4	FIXTURE, LED, 150W, 7,700 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	195	0.762	4.380	3416.4	60	0.340	4.380	1031.2
128	EXTERIOR	WEST PARKING LOT	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	2	FIXTURE, LED, 150W, 17,300 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	295	0.590	4.380	2584.2	150	0.300	4.380	1.814
129	EXTERIOR	WEST PARKING LOT	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	2	FIXTURE, LED, 150W, 17,300 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	295	0.590	4.380	2584.2	150	0.300	4.380	1.814
110	EXTERIOR	WEST PARKING LOT	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	2	FIXTURE, LED, 150W, 17,300 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	295	0.590	4.380	2584.2	150	0.300	4.380	1.814
111	EXTERIOR	SOUTH PARKING LOT	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	2	FIXTURE, LED, 150W, 17,300 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	295	0.590	4.380	2584.2	150	0.300	4.380	1.814
112	EXTERIOR	SOUTH PARKING LOT	Outdoor, Show Box Area Light, High Pressure Sodium, 150W, 120/277V	2	FIXTURE, LED, 150W, 17,300 LUMEN AREA LIGHT, TYPE A BRONZE FINISH, SLIP/OTTER MOUNTED, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	295	0.590	4.380	2584.2	150	0.300	4.380	1.814
113	EXTERIOR	AT GARAGE DOOR	Outdoor, Wolfpack Fixture, Metal Halide, 250W, 120/277V	1	FIXTURE, LED, 60W, 6,120 LUMEN WALL PACK, TYPE A BRONZE FINISH, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	228	0.228	4.380	1761.44	60	0.060	4.380	267.8
114	EXTERIOR	ABOVE AC UNITS	Outdoor, Wolfpack Fixture, Metal Halide, 250W, 120/277V, On-board Photo Cell	1	FIXTURE, LED, 60W, 6,120 LUMEN WALL PACK, TYPE A BRONZE FINISH, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	228	0.228	4.380	1761.44	60	0.060	4.380	267.8
115	EXTERIOR	SW CORNER FLAG LIGHT	Outdoor Flood Light, Quartz Halogen, 500W, 120/277V	1	FIXTURE, LED, 30W, 3,000 LUMEN FLOOD LIGHT, STANDARD OPTIC, BRONZE FINISH, BRUCKER MOUNT, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	500	0.500	4.380	2190	30	0.030	4.380	131.4
116	EXTERIOR	MAIN ENTRANCE	Recessed Square 11", Incandescent, 60W, 120V	1	RETRO, LED, 12 1/2W, 1,100 LUMEN A19 LAMP, WHITE FINISH, 5000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	60	0.060	4.380	267.8	11	0.011	4.380	48.18
117	EXTERIOR	MAIN ENTRANCE	Recessed Can 8", Compact Fluorescent, 80/30, 23in, 120V	8	RETRO, LED, 12 1/2W, 1,100 LUMEN A19 LAMP, WHITE FINISH, 5000K, 120V, 25000 HOUR RATED LIFE, 5-YEAR WARRANTY	72	0.090	4.380	302.22	9	0.027	4.380	118.26
118	EXTERIOR	WEST ENTRANCE	8" Recessed Can, High Pressure Sodium, 50W, 120/277V	2	RETRO, LED, 12W, 1,100 LUMEN RECESSED CAN RETROFIT, 5000K, 120-277V, 20000 HOUR RATED LIFE, 5-YEAR WARRANTY	80	0.160	4.380	700.8	16	0.016	4.380	157.68
119	EXTERIOR	COURTYARD	Outdoor Flood Light, Metal Halide, 70W, 1/2" Quartz Mount, 120-277V	1	FIXTURE, LED, 30W, 3,000 LUMEN FLOOD LIGHT, STANDARD OPTIC, BRONZE FINISH, BRUCKER MOUNT, 5000K, 120-277V, 50000 HOUR RATED LIFE, 5-YEAR WARRANTY	91	0.091	4.380	398.58	30	0.030	4.380	131.4

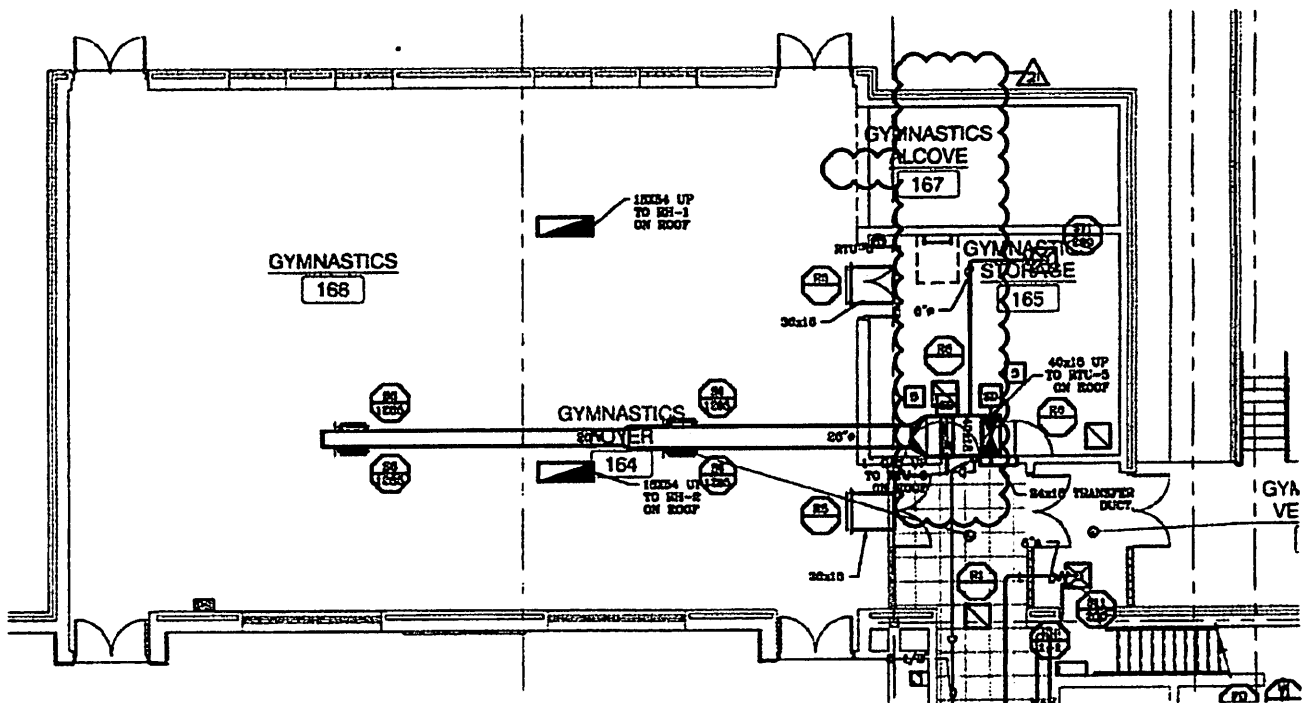
Sportsplex Gym RTU Replacement

CTS will upgrade the existing system that serves the Gymnastics Alcove. This is a standalone unit serving only this space and has reached the end of its service life.

Scope of Services to include the following:

Replace AHU-5 (Gymnastics Unit)

- Demo and remove existing unit and associated materials from the roof.
- Install new gas pressure regulator and roof gas line piping as required.
- Line voltage electrical service disconnection and reconnection included.
- Install new AHU-5 to serve the gymnastics area on a new roof curb.
- 5400 CFM, 875 CFM OA, 180 MBH DX cooling, 350 MBH natural gas heating.
- Tie-in new system to existing temperature controls to display real-time status.
- Provide start up and commissioning of new system.



Orland Park Health and Fitness Center Install Galvanized Spiral Ductwork

Scope of Work:

The existing air sox distribution ductwork currently serving the Pool Area is to be replaced due to age and condition. CTS will replace the existing air sox with painted galvanized spiral ductwork with sealed seams approved for the pool area.

The scope of work is as follows;

- Disconnect and remove the existing air sox and its supporting hangars
- Furnish and install new galvanized spiral ductwork
- Seal the seams of the ductwork with duct sealant approved for the pool area
- Spiral duct will be degreased and painted
- All work is to be completed during standard business hours

Orland Park Health and Fitness Center Pool Area Painting

The existing Health and Fitness Center pool area will be reconditioned as outlined in the scope of work below:

- Power Washing, scraping, and spot priming approximately 8,000 sq. ft. of ceiling
- Painting two (2) coats of Sherwin Williams, Dryfall Flat.
- Painting of seven (7) metal columns
- Pool service protection will be provided during painting.
- All sprinkler heads in the area will also be covered.
- Drop cloths, tools, and ladders to be placed in location (determined by customer) for safety.
- Only time clean-up is not completed in full is if the customer has agreed to allow painter to leave the room in a certain state so as to allow for more efficient production.
- All work is to be completed during standard business hours
- Client will remove all small and movable furniture prior to painting

Items Excluded:

- Premium time
- Client will remove all small and movable furniture prior to painting.

Orland Park Sportsplex Boiler Upgrade

CTS has provided the engineering and selection of the following boiler units that will serve the Sportsplex facility. Units have been selected to reduce energy, meet capacity requirements, and provide ease of maintenance for the Village staff.

CTS will provide the following boilers for the Village of Orland Park. The Village of Orland Park will install the units with their staff.

- CTS will provide two (2) new Lochinvar KBN 400 boilers complete with intake and exhaust venting material delivered to the second floor mechanical room.
- Include the piping material from the new boiler to the agreed connection points
- CTS will provide the new boiler start-up and commissioning
- One (1) Year parts warranty included

Items Excluded:

- Equipment Handling
- Setting and Installation of Boilers
- Electrical Installation
- System Balancing & Controls Programming
- Gas Piping & Metering
- Disposal of Existing Boilers
- Premium Time
- Temporary Heating

Orland Park Sportsplex HVAC Evaluation

CTS will evaluate the design of the existing HVAC equipment to verify the systems are operating properly and provide occupant comfort as required. We will also work with the staff to identify areas that may be improved upon and provide recommendations to the Village.

Scope of Services to include the following:

- Review the existing mechanical systems for design intent
- Perform HVAC system inspections
- Design plan for recommendations based on Village feedback
- Provide recommendations for revisions/replacements to existing systems
- Provide schematic design drawings (as necessary) for the recommendations

ATTACHMENT B

INSTALLATION SCHEDULE

CTS will provide to the Village of Orland Park a Construction Implementation Schedule. The Project Team will mobilize in May 2018. Our preliminary construction schedule includes a final completion and customer acceptance by December 31st, 2018 for all of the Facility Improvement Measures (FIM's).

Project completion date is contingent upon many factors including but not limited to:

- Timely decisions on the part of the Village.
- Timely delivery schedules
- Season change over from cooling to heating season

A detailed project schedule will be completed by the CTS Project Manager in collaboration with the Village.

ATTACHMENT C

PAYMENT SCHEDULE

1. The following is the payment schedule for the project.

Construction of the Project

The project shall be invoiced on a monthly basis for the work completed and equipment ordered for the project. These progress invoices shall be submitted on the last day of each month. All invoices shall be billed as net thirty (30) days.

A mobilization fee will be due upon contract execution for 10% of the contract price.

ATTACHMENT D
ENERGY GUARANTEE

1. DEFINITIONS

When used in this Agreement, the following capitalized words shall have the meanings ascribed to them below:

"Baseline Period" is the period of time which defines the Baseline Usage and is representative of the facilities' operations, consumption, and usage that is used as the benchmark for determining cost avoidance.

"Baseline Usage or Demand" the calculated or measured energy usage (demand) by a piece of equipment or a site prior to the implementation of the ECMs. Baseline physical conditions, such as equipment counts, nameplate date, and control strategies, will typically be determined through surveys, inspections, and/or metering at the site.

"Energy and Operational Cost Avoidance Guarantee Practices" are those practices identified in Attachment E, intended to achieve avoided costs in energy and/or operating expenses.

"Energy Costs" may include the cost of electricity and fuels to operate HVAC equipment, facility mechanical and lighting systems, and energy management systems, and the cost of water and sewer usage, as applicable.

"ECM" the Energy Conservation Measure (ECM) is the installation of equipment or systems, or modification of equipment or systems as described in Attachment A.

"Facilities" shall mean those buildings where the energy and operational cost savings will be realized.

"F.E.M.P." shall mean the Federal Energy Management Program of the U.S. Department of Energy and its Measurement and Verification Guidelines for Federal Energy Projects (DOE/GO-10096-248, February 1996, or later versions). The F.E.M.P. guidelines classify measurement and verification approaches as Option A, Option B, Option C, and Option D. The F.E.M.P. guidelines are based on the International Performance Measurement and Verification Protocol (I.P.M.V.P.) and was written to be fully consistent with it. It is intended to be used by Federal procurement teams consisting of contracting and technical specialists. The focus of F.E.M.P. guidelines is on choosing the M&V option and method most appropriate for specific projects.

"Financing Document" refers to that document executed between CUSTOMER and a third-party financing entity providing for payments from CUSTOMER third-party financing entity.

"Final Project Acceptance" refers to the CUSTOMER acceptance of the installation of the ECMs as described in Attachment A.

"First Guarantee Year" is defined as the period beginning on the first (1st) day of the month following the date of Final Retrofit Acceptance of the Work installed and ending on the day prior to the first (1st) anniversary thereof.

"Guarantee Period" is defined as the period beginning on the first (1st) day of the First Guarantee Year and ending on the last day of the final Guarantee Year.

"Guarantee Year" is defined as the First Guarantee Year and each of the successive twelve (12) month periods commencing on the anniversary of the commencement of the First Guarantee Year throughout the Term of this Agreement.

"Guaranteed Savings" is defined as the amount of avoided Energy and Operational Costs necessary to pay for the cost of the Work incurred by CUSTOMER in each Guarantee Year (as identified in Section 3.1 hereof).

"I.P.M.V.P." International Performance Measurement and Verification Protocol (July 1997, or later version) provides an overview of current best practice techniques available for measurement and verification of performance contracts. This document is the basis for the F.E.M.P. protocol and is fully consistent with it. The techniques are classified as Option A, Option B, Option C, and Option D.

"Measurement and Verification Plan" (M&V Plan) is defined as the plan providing details on how the Guarantee Savings will be verified.

"Operational Costs" shall include the cost of operating and maintaining the facilities, such as, but not limited to, the cost of inside and outside labor to repair and maintain Covered Systems and Equipment, the cost of custodial supplies, the cost of replacement parts, the cost of deferred maintenance, the cost of lamp and ballast disposal, and the cost of new capital equipment.

"Option A" is a verification approach that is designed for projects in which the potential to perform needs to be verified, but the actual performance can be stipulated based on the results of the "potential to perform and generate savings" verification and engineering calculations. Option A involves procedures for verifying that:

- Baseline conditions have been properly defined; and
- The equipment and/or systems that were contracted to be installed have been installed; and
- The installed equipment components or systems meet the specifications of the contract in terms of quantity, quality, and rating; and
- The installed equipment is operating and performing in accordance with the specifications in the contract and meeting all functional tests; and
- The installed equipment components or systems *continue, during the term of the contract*, to meet the specifications of the contract in terms of quantity, quality and rating, and operation and functional performance.

"Option B" is for projects in which the potential to perform and generate Savings needs to be verified; and actual performance during the term of the contract needs to be measured (verified). Option B involves procedures for verifying the same items as Option A plus verifying actual achieved energy savings during the term of the contract. Performance verification techniques involve engineering calculations with metering and monitoring.

"Option C" is also for projects in which the potential to perform needs to be verified and actual performance during the term of the contract needs to be verified. Option C involves procedures for verifying the same items as Option A plus verifying actual achieved energy savings during the term of the contract. Performance verification techniques involve utility whole building meter analysis and/or computer simulation calibrated with utility billing data.

"Option D" is a verification technique where calibrated simulations of the baseline energy use and/or calibrated simulations of the post-installation energy consumption are used to measure Savings for the Energy Conservation Measures. Option D can involve measurements of energy use both before and after the Retrofit for specific equipment or energy end use as needed to calibrate the simulation program. Periodic inspections of the equipment may also be warranted. Energy consumption is calculated by developing calibrated hourly simulation models of whole-building energy use, or equipment sub-systems in the baseline mode and in the post-installation mode and comparing the simulated annual differences for either an average year or for conditions that correspond to the specific year during either the baseline or post-installation period.

"Retrofit" is the work provided by CTS as defined by the "ECMs".

"Savings" is defined as avoided, defrayed, or reallocated costs.

"Term" shall have the meaning as defined in Section 2 hereof.

"Total Guarantee Year Savings" is defined as the summation of avoided Energy and Operational Costs realized by facilities in each Guarantee Year as a result of the Retrofit provided by CTS as well as Excess Savings, if any, carried forward from previous years.

2. TERM AND TERMINATION

2.1 Guarantee Term. The Term of this Guarantee Period shall commence on the first (1st) day of the month following the date of Final Project Acceptance of the Work installed pursuant to this agreement and shall terminate at the end of the Guarantee Period unless terminated earlier as provided for herein. The Term of this Guarantee Period is defined in Section 1 of Attachment E.

2.2 Guarantee Termination. Should this Agreement be terminated in whole or in part for any reason prior to the end of the Term, the Guaranteed Savings for the Guarantee Year in which such termination becomes effective shall be prorated as of the effective date of such termination, with a reasonable adjustment for seasonal fluctuations in Energy and Operational Costs, and the Guaranteed Savings for all subsequent Guarantee Years shall be null and void.

3. SAVINGS GUARANTEE

3.1 Guaranteed Savings. CTS guarantees to CUSTOMER that the identified Facilities will realize the total energy and operational cost avoidance through the combined value of all ECMs over the Term of the contract as defined in Section 1 of Attachment E. In no event shall the savings guarantee provided herein exceed the total installation, maintenance, and financing costs for the Work under this Agreement. Notwithstanding any other provision of this Agreement required savings reconciliation or verification, the Total Guarantee Year Savings in each Guarantee Year are stipulated and agreed to by both parties to this Agreement to equal the Energy Costs and Operational Cost Avoidance amounts set forth in Attachment E (Schedule of Savings), and shall be deemed realized upon the date of final Project Acceptance.

3.1.1 Additional Savings. Additional energy and/or operational cost avoidance that can be demonstrated as a result of CTS's efforts that result in no additional costs to CUSTOMER beyond the costs identified in this Agreement will be included in the guarantee savings reconciliation report for the applicable Guarantee Years(s).

3.1.2 Savings Prior to Final Retrofit Acceptance. All energy and operational cost avoidance realized by CUSTOMER that result from activities undertaken by CTS prior to Final Project Acceptance, including any utility rebates or other incentives earned as a direct result of the installed Energy Conservation Measures provided by CTS, will be applied toward the Guaranteed Savings for the First Guarantee Year.

3.1.3 Cumulation of Savings. The Guaranteed Savings in each Guarantee Year are considered satisfied if the Total Guarantee Year Savings for such Guarantee Year equals or exceeds the Retrofit and Support Costs for such Guarantee Year or the amount identified in Section 1 of Attachment E hereto.

3.1.4 Excess Savings. In the event that the Total Guarantee Year Savings in any Guarantee Year exceed the Guaranteed Savings required for that Guarantee Year, such Excess Savings shall be billed to CUSTOMER (up to any amounts previously paid by CTS for a Guaranteed Savings shortfall pursuant to Section 3.1.5), which amount shall be payable within thirty (30) days after the amount of such Total Guarantee Year Savings has been determined and any remaining Excess Savings shall be carried forward and applied against Guaranteed Savings shortfalls in any future Guarantee Year.

3.1.5 Savings Shortfalls. In the event that the Total Guarantee Year Savings in any Guarantee Year is less than the Guaranteed Savings required for that Guarantee Year, after giving credit for any Excess Savings carried forward from previous Guarantee Years pursuant to Section 3.1.4. CTS shall, upon receipt of written demand from CUSTOMER, compensate CUSTOMER the amount of any such shortfall, limited by the value of the guarantee, within thirty (30) days. Resulting compensation shall be CTS's sole liability for any short fall in the Guaranteed Savings.

3.2 Savings Reconciliation Documentation. CTS will provide CUSTOMER with a guarantee savings reconciliation report after the first Guarantee Year. CUSTOMER will assist CTS in generating the savings reconciliation report by providing CTS with copies of all bills pertaining to Energy Costs within two (2) weeks following the CUSTOMER's receipt thereof, together with access to relevant records relating to such Energy Costs. CUSTOMER will also assist CTS by permitting access to any maintenance records, drawings, or other data deemed necessary by CTS to generate the said report. Data and calculations utilized by CTS in the preparation of its guarantee cost savings reconciliation report will be made available to CUSTOMER along with such explanations and clarifications as CUSTOMER may reasonably request.

3.2.1 Acceptance of Guarantee Reconciliation. At the end of the first Guarantee Year the CUSTOMER will have forty-five (45) days to review the guarantee savings reconciliation report and provide written notice to CTS of non-acceptance of the Guarantee Savings for that Guarantee Year. Failure to provide written notice within forty-five (45) days of the receipt of the guarantee savings reconciliation report will deem it accepted by CUSTOMER. If the annual guarantee savings have been met after the first year, the guarantee will be deemed realized for the entire guarantee term.

3.2.2 Guarantee Savings Reconciliation. Guarantee Savings will be determined in accordance with the methodology(s), operating parameters, formulas, and constants as described below and/or defined in Attachment E and/or additional methodologies defined by CTS that may be negotiated with CUSTOMER at any time.

For reconciliation of Guarantee Savings employing the method of utility bill analysis consistent with F.E.M.P. Option C.

Energy usage for the Facilities for such Guarantee Year will be summarized and compared with the adjusted Baseline Period energy usage for the Facilities through the use of energy accounting software. The difference between the adjusted Baseline Period energy usage and the Guarantee Year energy usage will be multiplied by the applicable energy rate as defined in Attachment E, to calculate the Energy Cost avoidance. Energy Cost avoidance may also include, but are not limited to, Savings from demand charges, power factor correction, taxes, ratchet charges, rate changes and other utility tariff charges that are reduced as a result of the CTS involvement. A Baseline Period will be specified (Section 1 of Attachment E) for the purpose of utility bill analysis.

AND/OR for those energy audits employing the method consistent with I.P.M.V.P. and/or F.E.M.P. Options A and/or B:

For each ECM, CTS will employ an M&V Plan which may be comprised of any or all of the following elements:

1. Pre-retrofit model of energy consumption or demand
2. Post-retrofit measured energy consumption
3. Post-retrofit measured demand and time-of-use
4. Post-retrofit energy and demand charges
5. Sampling plan
6. Stipulated Values

The value of the energy savings will be derived from the measured data and engineering formulae included herein, and the applicable energy charges during each Guarantee Year. In some cases, energy usage and/or demand will be calculated from measured variables that directly relate to energy consumption, demand or cost, such as, but not limited to, measured flow, temperature, current, voltage, enthalpy or pressure.

AND/OR for those energy audits employing the method consistent with I.P.M.V.P. and/or F.E.M.P. Option D:

For each Energy Conservation measure, CTS will employ an M&V Plan which may be comprised of any or all of the following elements:

1. Pre-retrofit model of energy consumption or demand
2. Post-retrofit model of energy consumption or demand
3. Post-retrofit measured energy consumption
4. Post-retrofit measured demand and time-of-use
5. Post-retrofit energy and demand charges
6. Sampling Plan
7. Stipulated values

The value of the energy savings will be derived from a calibrated simulation of either the whole building or of sub-systems in the building to determine the difference in the performance of the specific equipment being replaced. This method may entail as needed one-time measurements of the performance of the energy consuming systems in the building in order to calibrate the simulation model. Energy usage for the Facilities for such Guarantee Year will be derived through the use of simulation programs.

3.3 Operational Cost Avoidance. The agreed-upon Operational Cost Avoidance as described in Attachment E (Schedule of Savings) will be deemed realized upon execution of this Agreement and will begin to accrue on the date of the completion and acceptance of each Retrofit improvement. These Savings are representative of information provided by the CUSTOMER consisting of either whole or partial budgeted operational costs and as such, it is hereby understood and agreed that the CUSTOMER is wholly responsible for assuring that these budgeted Operational Costs are accurate and achievable.

3.4 Base Year Adjustments. Baseline Period shall be adjusted to reflect: changes in occupied square footage; changes in energy-consuming equipment; changes in the Facilities; changes in Energy and Operational Cost Avoidance Guarantee Practices adversely affecting energy consumption and/or demonstrated operational changes; changes in weather between the Baseline Period and the Guarantee Year; and documented or otherwise conclusively established metering errors for the Baseline Period and/or any Guarantee Year adversely affecting energy usage measurement.

3.4.1 Facility Operational Changes. Except in the case of emergencies CUSTOMER agrees it will not, without the consent of an Authorized Representative of CTS: make any significant deviations from the applicable Energy and Operational Cost Avoidance Guarantee Practices; put any system or item of equipment in a permanent "on" position, if the same would constitute a deviation from the applicable Energy and Operational Cost Avoidance Guarantee Practices; or assume manual control of any energy management system or item of equipment, if the same would constitute a deviation from the applicable Energy and Operational Cost Avoidance Guarantee Practices.

3.4.2 Hours and Practices. To achieve these energy savings, CTS and CUSTOMER agree upon the operating practices listed in Attachment E.

3.4.3 Activities and Events Adversely Impacting Savings. CUSTOMER shall promptly notify CTS of any activities known to CUSTOMER which adversely impact: CTS's ability to realize the Guaranteed Savings and CTS shall be entitled to reduce its Guaranteed Savings by the amount of any such adverse impact to the extent that such adverse impact is beyond CTS's reasonable control.

3.5 Guarantee Adjustment. CTS's Guaranteed Savings obligations under this Agreement are contingent upon: (1) CUSTOMER following the Energy and Operational Cost Avoidance Guarantee Practices set forth herein and in Attachment E; (2) no alterations or additions being made by CUSTOMER to any of the Covered systems and Equipment without prior notice to and agreement by CTS; (3) CUSTOMER sending all current utility bills to CTS within two (2) weeks after receipt by CUSTOMER, if CUSTOMER fails to provide current utility bills for a period of time in excess of six (6) months CTS may, at its sole discretion, deem the Guarantee Savings obligation met during that period and any successive periods, and (4) CTS's ability to render services not being impaired by circumstances beyond its control. To the extent CUSTOMER defaults in or fails to perform fully any of its obligations under this Agreement, CTS may, in its sole discretion, adjust its Guaranteed Savings obligation; provided, however, that no adjustment hereunder shall be effective unless CTS has first provided CUSTOMER with written notice of CUSTOMER's default(s) or failure(s) to perform and CUSTOMER has failed to cure its default(s) to perform within thirty (30) days after the date of such notice.

The bond provided for the construction of the project only covers the performance of materials and workmanship for the completion of said construction work, not the energy guarantee.

ATTACHMENT E
SCHEDULE OF SAVINGS

1. Schedule of Savings

The total energy and operational cost avoidance over the Term of the contract is equal to or greater than \$936,162.84 as defined in the following:

Annual Reconciliation and Savings Allocation				
Year	Avoided Utility Savings from Existing Baseline (FEMP A)	Secured Grants and Utility Incentives	Long Term Operating Costs Savings	Guaranteed Savings
1	\$ 687.00	TBD	\$ 859,811.53	\$860,498.53
2	\$ 707.61	\$ -	\$6,740	\$7,447.93
3	\$ 728.84	\$ -	\$6,943	\$7,671.37
4	\$ 750.70	\$ -	\$7,151	\$7,901.51
5	\$ 773.22	\$ -	\$7,365	\$8,138.55
6	\$ 796.42	\$ -	\$7,586	\$8,382.71
7	\$ 820.31	\$ -	\$7,814	\$8,634.19
8	\$ 844.92	\$ -	\$8,048	\$8,893.22
9	\$ 870.27	\$ -	\$8,290	\$9,160.01
10	\$ 896.38	\$ -	\$8,538	\$9,434.81
Total	\$ 7,875.69	\$ -	\$ 928,287	\$ 936,162.84

or the sum of the Retrofit and Support Costs for such Guarantee Year, whichever is less. Provided further, in no event shall the savings guarantee provided herein exceed the total installation, maintenance, and financing costs for the Work under this Agreement.

The Term of this contract is for 10 years from the date of Final Project Acceptance

The Baseline Period is defined as to December 2016 to November 2017.

CTS and the customer agree that the energy savings for each will be based on a 3% escalation factor for the costs of utilities. The utility rates for the audit reports will be based on an annual escalation of not less than 3% or the actual utility rate in the current year whichever is higher.

1.1 Energy Savings. The annual guarantee of energy cost avoidance is the sum of the below listed ECMs. The savings are based on the listed Energy and operational Cost Avoidance Guarantee Practices contained in Section 1.3 herein.

ECM Description

ECM-1: Lighting Upgrades: The existing T-12 lighting fixtures located in the Centennial Park, Cultural Center, Public Works, and Recreation Administration Buildings will be upgraded to LED lighting fixtures per the schedule located in 'Attachment A'. The Cultural Center existing interior non-T12 and exterior fixtures will be upgraded per the schedule located in 'Attachment A' The difference in electrical consumption of the existing lamp fixtures and the new fixtures in these spaces

will reduce the overall electrical energy consumption of the lighting system. The calculated savings for this ECM are below in section 1.4.3.

ECM-2: Gymnastics RTU: CTS install one (1) rooftop air handling unit that serves the Gymnastics room. This is a standalone unit serving only this space and has reached the end of its service life. The difference in the existing cooling efficiency and the new higher cooling efficiency will reduce the overall electrical consumption of the rooftop air handling unit. The calculated savings for this ECM is listed below in section 1.4.3.

ECM-3: Orland Park Health and Fitness Center Install Galvanized Spiral Ductwork:

The existing air sox distribution ductwork currently serving the Pool Area is to be replaced due to age and condition. CTS will replace the existing air sox with painted galvanized spiral ductwork with sealed seams approved for the pool area.

ECM-4: Orland Park Sportsplex Boiler Upgrade

CTS has provided the sizing and selection of the following boiler units that will serve the Sportsplex facility. Units have been selected to reduce energy, meet capacity requirements, and provide ease of maintenance for the Village staff. CTS will provide the following boilers for the Village of Orland Park. The Village of Orland Park will install the units with their staff.

1.2 Operational Cost Savings. The annual guarantee of operational cost avoidance strategies is listed below. The Savings are based on the listed Energy and Operational Cost Avoidance Guarantee practices contained in Section 1.3 herein. The operational cost savings identified below are deemed satisfied upon contract execution.

Operational Savings Description

The proposed system upgrades within the scope of work of this agreement will cost less to maintain for the Village building and grounds. The annual operating costs are identified below, are mutually agreed by the CUSTOMER and CTS and are achieved upon project completion.

Annual operating costs \$6,544

Lighting Maintenance Saving:	\$5,470
Boiler System Maintenance Savings:	\$ 461
RTU-2 (Gymnastics Unit) Savings:	\$ 613

Annual Operating costs include comprehensive service costs on mechanical systems, lighting, incidental inventory, tools, parts, and supplies, training, etc.

1.3 Energy and Operational Cost Avoidance Guarantee Practices:

1.3.1 BASELINE Operating Parameters: are the facility(s) and system(s) operations measured and/or observed before commencement of the Work. The date summarized will be used in the calculation of the baseline energy consumption and/or demand and for calculating baseline adjustments for changes in facility operation that occur during the Guarantee Period. CTS and CUSTOMER agree that the operating parameters specified in this section are representative of equipment operating characteristics during the Base Year specified in this Agreement. The following data was collected with the assistance of Village personnel.

Baseline Operating Parameters:

Customer Name: Village of Orland Park - Sportsplex

Utility Type Electric

Utility Co: Dynegy

Acct# 858025028

Meter #

Date	Usage (kWh)	Supply	Delivery	Total \$ (kWh)
12/26/2016	157572	9493.71	2935.4	\$12,429.11
1/26/2017	148100	8923.03	3065.36	\$11,988.39
2/26/2017	150445	9064.31	3443.91	\$12,508.22
3/27/2017	139605	8411.2	3343.01	\$11,754.21
4/25/2017	156976	9457.81	3923.61	\$13,381.42
5/24/2017	165506	9971.74	3952.04	\$13,923.78
6/25/2017	219212	12705.54	4940.36	\$17,645.90
7/25/2017	230592	13365.11	4966.41	\$18,331.52
8/23/2017	213159	12354.7	4641.16	\$16,995.86
9/21/2017	188532	10927.31	4537.29	\$15,464.60
10/22/2017	196139	11368.23	1611.85	\$12,980.08
11/20/2017	129643	7514.11	3066.09	\$10,580.20

Customer Name: Village of Orland Park - Sportsplex

Utility Type Gas

Utility Co: Nicor

Acct# 5855051000

Meter # 3891315

Date	Usage (Therms)	Total \$
11/28/2017	6420.85	2800.83
10/28/2017	2334.67	1089.3
9/27/2017	2110.91	1108.63
8/29/2017	2155.17	1212.14
7/28/2017	2496.68	1299.93
6/30/2017	2246.08	1296.28
5/30/2017	3897.46	2080.43
4/28/2017	3689.08	1904.76
3/29/2017	7116.03	3556.84
2/28/2017	5682.58	2979.82
1/27/2017	9512.12	4904.47
12/29/2016	9722.65	4383.85

1.3.2 PROPOSED Operating Parameters of the facility(s) and system(s) after completion of Work. The data summarized will be used in the calculation of the post-retrofit energy consumption and/or demand. CTS and CUSTOMER agree that the proposed operating parameters specified in this section are representative of equipment operating characteristics during the Guarantee Period specified in this Agreement.

Proposed Operating Parameters on which each ECM will rely for achieving energy savings:

Consumption of the Building System = 57,384 Therms (December 2016 – November 2017 Consumption)

1.3.3 Operational Cost Avoidance. The following methodologies and/or calculations were used in determining the Operational Costs and/or avoided costs due to the Retrofit implementation. This section is to document standard formulas and/or a brief explanation of how the Operational Cost Savings is supposed to be generated.

Replacement of mechanical equipment systems that are beyond it's useful life will provide the district with cost avoidance of the future replacement of these systems during the term of the agreement. These cost avoidances are equal to the costs of the system or systems replacement and shall be considered fulfilled upon contract execution. The total operational costs avoidance has been included in the schedule of savings.

Mechanical System Installation Cost Summer 2018:			\$767,051
Future Planned Expenditures			\$853,268
Includes A & E & Construction Management of 8%			

1.3.4 Other energy and operating savings measures taken include the following:

1.4 Guarantee Savings Measurement and Verification Plan

1.4.1 Measurement and Verification Methodology(s)

Energy Conservation Measure	Electric Savings Verification Method	Fuel Savings Verification Method	Other Utility Savings Verification Method
ECM-1: Lighting Upgrades	Option A	N/A	N/A
ECM-2: Gymnastics RTU	N/A	Option B	N/A

"Option A" is a verification approach that is designed for projects in which the potential to perform needs to be verified, but the actual performance can be stipulated based on the results of the "potential to perform and generate savings" verification and engineering calculations.

"Option B" is for projects in which the potential to perform and generate Savings needs to be verified; and actual performance during the term of the contract needs to be measured (verified). Option B involves procedures for verifying the same items as Option A plus verifying actual achieved energy savings during the term of the contract. Performance verification techniques involve engineering calculations with metering and monitoring.

1.4.2 Energy Cost Avoidance: The following describes the Measurement and Verification procedures, formulas, and stipulated values which may be used in the calculation of the energy cost avoidance. The calculation of energy cost avoidance is based upon the utility rate paid during the Guarantee Year, or the Baseline Period utility rate, whichever is higher and/or as defined heretofore. Energy cost avoidance may also include, but is not limited to, Savings from demand charges, power factor correction, taxes, ratchet charges, rate changes and other utility tariff charges that are reduced as a result of the CTS involvement.

M&V Plan:

ECM-1 Lighting Upgrades – The lighting fixtures will be upgraded as indicated in the space list in the scope of work section of the contract. The annual energy cost avoidance will be measured utilizing the FEMP Option A for electric savings resulting from the retrofits. The Option A verification will be performed immediately after the retrofit is complete, and if savings are verified as per Option A guidelines, then the savings obligation will be considered satisfied for the full ten-year term of the agreement. The attached lighting schedule that is part of the contract scope of work shows the operating hours for each fixture as well as the retrofit included in the contract. Upon the signing of this contract the customer agrees to the hours and the retrofit and therefore the savings are deemed achieved.

ECM-2 Gymnastics RTU Upgrade – The annual energy cost avoidance will be measured utilizing the FEMP Option B for electric savings resulting from the installation of one (1) new rooftop air handling unit (RTU). This auditing option will use the calculations for energy savings for RTU cooling efficiency, as stated in Section 1.4.3. After the verification period of the first twelve months, the audit indicates that the electric savings has been achieved, the savings guarantee shall be considered fulfilled for each subsequent year.

1.4.3 Constants: The following constants and/or stipulated values are agreed to be reasonable and may be used in the calculation of the energy cost avoidance.

ECM 1 – Lighting Upgrades –

Measurement of existing KW consumption from existing lighting fixtures compared to the KW consumption of the new or retrofitted fixtures:

$((\text{Existing KW} - \text{New KW}) \times \text{hours of use}) \times \$/\text{KWH} = \text{KWH Savings}$

$(\text{Existing KW} - \text{New KW}) \times \$/\text{KW} = \text{Demand Savings}$

$\text{KWH Savings} + \text{Demand Savings} = \text{Total Lighting Savings}$

Hours of use based on the spreadsheet in room by room schedule.

Building	kW Reduction	Annual kWh Reduction	Annual Electrical Consumption Savings (\$)
Centennial Park T12 Upgrade	0.704	660	464.64
Cultural Center T-12 upgrade	12.297	32,019	N/A
Cultural Center non-T-12 upgrade (Interior/Exterior)	15.310	52,110	N/A
Public Works T12 Upgrade	30.248	99,224	N/A
Recreation Admin T-12 Upgrade	9.796	28,84	N/A

Total Savings \$ 464.64

ECM 2 – Gymnastics RTU Upgrade -

The savings for the gymnastics RTU upgrade are provided by the improved cooling system efficiency between the two rooftop units.

Existing System Cooling Efficiency (kW/ton) = 1.5

Consumption of Existing System = 2,095,481 kWh (December 2016 – November 2017 Consumption)

Proposed System Efficiency (kW/ton) = 0.92

To calculate the difference in electrical consumption of the existing system vs. the new system we will first need to calculate the amount of energy needed without energy efficiency losses. This is done by multiplying system efficiency by the square footage of the area.

Electric Savings from Improved Cooling Efficiency

Existing Conditions:

kWh/Sq Ft=	1.500
SF Area Affected by ECM=	4,500
Existing annual cooling kWh=	6,750

Annual Energy Equipment Savings (kWh):

proposed kWh= annual cooling kWh x [(proposed kW/ton) / (existing kW/ton)]

Existing Efficiency(kW/ton)=	1.50
Proposed Efficiency(kW/ton)=	0.92
Proposed annual cooling kWh=	4,140

Annual Energy Savings (kWh) = Existing kWh - Proposed kWh

Savings (kWh) = 6,750 – 4,140 = 2,610

The kWh savings are multiplied by the blended kWh rate of 0.0855 / kWh to provide the Energy Savings.

Energy Savings (Annual \$) = 2,610 x 0.0855 = \$223

ATTACHMENT F

FINAL DELIVERY AND ACCEPTANCE CERTIFICATE

Project Name _____

Agreement Effective Date: _____

Scope-of-Work (SOW) Item/Energy Conservation Measure (ECM): _____

To: CTS

Reference is made to the above listed Agreement between the undersigned and CTS and to the Scope of Work as defined in Attachment A herein. In connection therewith, we confirm to you the following:

1. The Scope of Work (SOW) Item/ Energy Conservation Measure (ECM) referenced above and also listed in Attachment A of the Agreement has been demonstrated to the satisfaction of the Owner's Representative as being substantially complete, including all punch list items generated during the Project Acceptance Procedure.
2. All of the Work has been delivered to and received by the undersigned and that said Work has been examined and /or tested and is in good operating order and condition and is in all respects satisfactory to the undersigned and as represented, and that said Work has been accepted by the undersigned and complies with all terms of the Agreement. Consequently, you are hereby authorized to invoice for the Final Payment, as defined in Attachment C, The Payment Schedule.

Owner Name: _____

By: _____
(Authorized Signature)

(Printed Name and Title)

(Date)

ATTACHMENT G

FORM ALLOCATION OF SECTION 179D DEDUCTION

ADDRESS OF GOVERNMENT-OWNED BUILDING: Project Name: _____ Project Street: _____ Project City, State & Zip Code: _____	
AUTHORIZED REPRESENTATIVE OF THE OWNER OF THE GOVERNMENT-OWNED BUILDING: Owner Name: _____ Representative Name: _____ Representative Title: _____ Representative Street Address: _____ Representative City, State & Zip: _____ Representative Phone Number: _____	
AUTHORIZED REPRESENTATIVE OF DESIGNER RECEIVING THE ALLOCATION OF THE SECTION 179D DEDUCTION: Designer Name: _____ Representative Name: _____ Representative Title: _____ Representative Street Address: _____ Representative City, State & Zip: _____ Representative Phone Number: _____	
PROJECT COST: _____	
DATE PROJECT PLACED IN SERVICE: _____	
AMOUNT OF SECTION 179D DEDUCTION ALLOCATED TO THE DESIGNER: Building Envelope: _____ Lighting System: _____ HVAC System: _____ TOTAL: _____	

Under penalties of perjury, I declare that I have examined this allocation, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this allocation are true, correct and complete.

**AUTHORIZED REPRESENTATIVE OF
OWNER OF GOVERNMENT-OWNED BUILDING:**

By: _____
Dated: _____

**AUTHORIZED REPRESENTATIVE OF
DESIGNER:**

By: _____
Dated: _____