
**CTS
AGREEMENT**

CUSTOMER NAME:
DATE OF SUBMISSION:

Wood Dale School District #7
March 21, 2019

TABLE OF CONTENTS

<u>ARTICLE</u>	<u>PAGE</u>
1. GENERAL PROVISIONS	1
2. CTS'S RESPONSIBILITIES	1
3. CUSTOMER'S RESPONSIBILITIES.....	4
4. SUBCONTRACTS.....	5
5. INSTALLATION AND ACCEPTANCE.....	5
6. PRICE AND PAYMENT	6
7. CHANGES IN THE PROJECT	7
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 March 21, 2019(the "Effective Date") by and between Control Technology & Solutions ("CTS"), a Missouri Corporation, with a principal place of business at 15933 Clayton Rd., Suite 110, Ellisville, MO 63011, and ("CUSTOMER") with a principal place of business at 543 North Wood Dale Road, Wood Dale, IL 60191 (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 This Agreement shall not be superseded by any provisions of the documents for construction and may be amended only by written instrument signed by both CUSTOMER and CTS.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.

1.7 CTS represents and warrants that it is a qualified provider of energy conservation and savings measures in accordance with Article 19b of the Illinois School Code, and that all work performed under this Contract constitutes energy conservation and savings measures under said Article 19b.

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.

2.1.3 CTS shall pay its employees' wages and benefits and shall comply in all respects with the Illinois Prevailing Wage Act (820 ILCS 130/1, et seq.), including but not limited to providing CUSTOMER with certified payroll records, and shall require all subcontractors to comply with all requirements of the Illinois Prevailing Wage Act, including but not limited to providing CTS with certified payroll records.

2.1.4 CTS shall pay for fingerprint-based criminal background checks for any person CTS assigns to perform the Work, including subcontractor employees, if such persons will be present when CUSTOMER'S students are in CUSTOMER'S school buildings. CUSTOMER shall obtain such background checks through the DuPage County Regional Office of Education. CTS shall be entitled to recover the cost of background checks required in this Section 2.1.4.

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 governing the execution of the Work. In the event that there are any changes to the law after the date of execution of the Agreement that impact the cost to perform the work, then CTS shall be entitled to a reasonable increase in the Contract Price for said increased costs, plus overhead and profit. 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 two (2) years 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 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.

2.5.2 CUSTOMER shall indemnify, defend, and hold CTS and its respective officers, directors, employees, agents and subcontractors (collectively the "Indemnified Parties"), harmless from, against, and in respect of any and all rights, claims, demands, liabilities, obligations, orders, assessments, interest, penalties, fines, settlement payments, costs, expenses and damages, including, without limitation, reasonable legal fees and out-of-pocket expenses ("Damages") imposed upon or incurred by any Indemnified Party and that arise from claims asserted by third parties or by CUSTOMER concerning any Hazardous Materials; provided that the Damages are not the direct result of any act or omission of CTS or its agents.

2.5.3 Unless prior to the execution of this Agreement, CTS received written notification from CUSTOMER of the existence of Hazardous Materials on the site, and said notice included a description of the Hazardous Materials, and the quantity and location of the Hazardous Materials, CUSTOMER is hereby representing to CTS that CUSTOMER is not aware of any Hazardous Materials present at the site.

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 minor 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, as to Section 3.3 and 3.4 above, 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.

3.8 CUSTOMER shall comply with all applicable federal, state and municipal laws and regulations governing occupational health and safety in the areas where CTS will perform services and/or perform the Work.

CUSTOMER represents and warrants that to the best of its knowledge, 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. Prior to engaging subcontractors, CTS shall disclose to CUSTOMER each subcontractor's identity. All subcontractors must agree to be bound by the terms of this Agreement, unless specifically exempted in a written agreement between CTS and CUSTOMER.

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.

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 ten (10) 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 one million, seven hundred twenty-two thousand and five hundred Dollars (\$1,722,500), 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. Additional costs due to the acts or omissions of CTS shall be the sole responsibility of CTS and shall not be the basis for any price adjustment.

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. Overtime will not be compensable to CTS if overtime is required due to CTS' actions or inactions, such as providing inadequate labor forces, in order for CTS to meet schedule deadlines.

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, shall be added to the Contract Price.

6.2 Payment

6.2.1 CUSTOMER shall pay or cause to be paid to CTS the full price for the Work in accordance with the Payment Schedule, Attachment C. All invoices shall be paid in accordance with the Illinois Local Government Prompt Payment Act. All invoices will be accompanied by a sworn statement from CTS regarding the identity and amounts of work performed by each subcontractor or material supplier and a schedule of values to various portions of the work completed, supported by such data to substantiate its accuracy as the CUSTOMER may require. All invoices shall also be accompanied by lien waivers from CTS, all subcontractors and material suppliers to the extent of the work for which payment is requested.

6.2.2 Payments due and unpaid shall bear interest from the date payment is due in accordance with the Illinois Local Government Prompt Payment Act. If a progress payment is overdue by more than fifteen (15) days, 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 **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 seven (7) 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.

7.4 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. Any change in the Price or the Installation Schedule resulting from such claim shall be authorized by Change Order. All Change Orders shall be in writing and executed by both CTS and CUSTOMER. In no event shall any Change Order cause the total contract price to exceed the total guaranteed savings amount reflected in Attachment E

7.5 **Emergencies**

In any emergency affecting the safety of persons or property, CTS shall act, at its 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.

7.6 **Minor Changes**

CTS shall, without CUSTOMER's approval, have the authority to make minor changes in the Work 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, board members, and employees harmless from all claims, damages, losses and expenses, including but not limited to attorneys' fees, for bodily injury and property damages [other than the Work itself and other property insured under Paragraph 8.4] resulting from or arising from CTS's negligent actions or omissions or willful misconduct, and that of its employees, agents, contractors, or subcontractors, in its performance of the Work or the Support Services. Except as otherwise provided herein, CTS's obligation, if any, to indemnify the CUSTOMER does not extend to losses sustained to the extent of the CUSTOMER's (or its agent's) negligent acts or omissions or willful misconduct. Additionally, CTS agrees to indemnify and hold harmless CUSTOMER from and against all claims for bodily injury from CTS' employees and waives any limitation of liability defense based on workers' compensation or benefits laws.

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 negligent actions or omissions or willful misconduct of CUSTOMER or CUSTOMER's contractors, consultants, agents or employees. Except as otherwise provided herein, CUSTOMER's obligation, if any, to indemnify CTS does not extend to losses sustained to the extent of the CTS's (or its agent's) negligent acts or omissions or willful misconduct.

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 and CUSTOMER from claims that may arise out of or result from CTS's operations under this Agreement. CTS shall cause such insurance to be primary to any coverage maintained by CUSTOMER.

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) **Commercial General Liability**

Combined Single Limit

\$ 1,000,000 Each Occurrence

\$ 2,000,000 Product & Completed Operations

Aggregate

\$ 2,000,000 General Aggregate

Other Than Products & Completed Operations

(b) **Commercial Automobile Liability** Combined Single Limit

\$ 1,000,000 Each Occurrence

(c) Umbrella Excess Liability over Primary Coverage: \$3,000,000

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 of Illinois.

8.2.5 CTS, by policy amendment or endorsement, shall name CUSTOMER, its Board members, employees, and agents as additional insured on all insurance policies required by Section 8.2.3, and will deliver certificates verifying the required amendment of endorsement to add the additional insureds and providing that such insurance policies will not be cancelled or materially changed except upon 30 days advanced written notice to CUSTOMER.

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. CTS will be given thirty (30) days notice of cancellation, non-renewal, or any endorsements restricting or reducing coverage.

8.5 Property Insurance Loss Adjustment

8.5.1 Any insured loss shall be adjusted with CUSTOMER and CTS and made payable to CUSTOMER and CTS as trustees for the insureds, as their interests may appear, subject to any applicable mortgagee clause.

8.5.2 Upon the occurrence of an insured loss, monies received will be deposited in a separate account and the trustees shall make distribution in accordance with the agreement of the parties in interest.

8.7 Limitation of Liability

8.7.1 In no event shall CTS 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. The CUSTOMER waives claims against CTS for consequential damages arising out of or relating to this Agreement. This waiver includes damages incurred by CUSTOMER 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 fifteen (15) business days, CUSTOMER may terminate this Agreement and take possession of the site together with all materials thereon, and move to complete the Work expeditiously. If the expense of finishing the Work exceeds the unpaid balance, CTS shall pay the difference to CUSTOMER.

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 fifteen (15) business 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 AND GOVERNING LAW

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, subject to Section 4.1 above.

10.2 This Agreement shall be governed by the laws of the State of Illinois. Exclusive venue for any litigation between the parties shall be in the circuit court of DuPage County, Illinois, or the United States District Court for the Northern District of Illinois, Eastern Division.

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 to the other for any disclosure or use of information, whether considered confidential or not, 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; or
- (d) is approved for release in writing by an authorized representative of the disclosing party; or
- (e) is required to be disclosed pursuant to state or federal law (including the Illinois Freedom of Information Act) , or court or administrative agency orders. If CTS requests that CUSTOMER assert any exemption under the Illinois Freedom of Information Act, CTS shall be solely responsible for all costs associated with asserting said exemption, including CUSTOMER'S reasonable attorney's fees, civil penalties, requester's attorney's fees which a court orders CUSTOMER to pay, and court costs.

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: Bob Bennett
15933 Clayton Rd., Suite 110
St. Louis, MO 63011

To CUSTOMER:

Wood Dale School District #7
Attention: Mr. Steve Wilt
543 North Wood Dale Road, Wood Dale, IL 60191

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.

11.14 CTS will execute the following certificates which will become part of the contract: (1) Sexual Harassment Policy and (2) Drug-Free Workplace.

ARTICLE 12

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 13

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 _____

Title _____

Date _____

Wood Dale School District #7

By _____

Name _____

Title _____

Date _____

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 Regional Superintendent Building 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 District's 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.

School District Responsibilities:

CUSTOMER is responsible for removing all existing items from the walls and windows in the classrooms, library and offices to allow CTS and their subcontractors quick and easy access for the renovations. The District will also be responsible for moving all furniture out of the way, so CTS and their subcontractors can have access to the spaces to expedite the renovations. CTS will not be responsible for any damage to equipment, furniture or materials left in rooms. CTS is willing to work and negotiate with the CUSTOMER to provide moving / storage services if so desired by the CUSTOMER.

Junior High School HVAC Upgrades

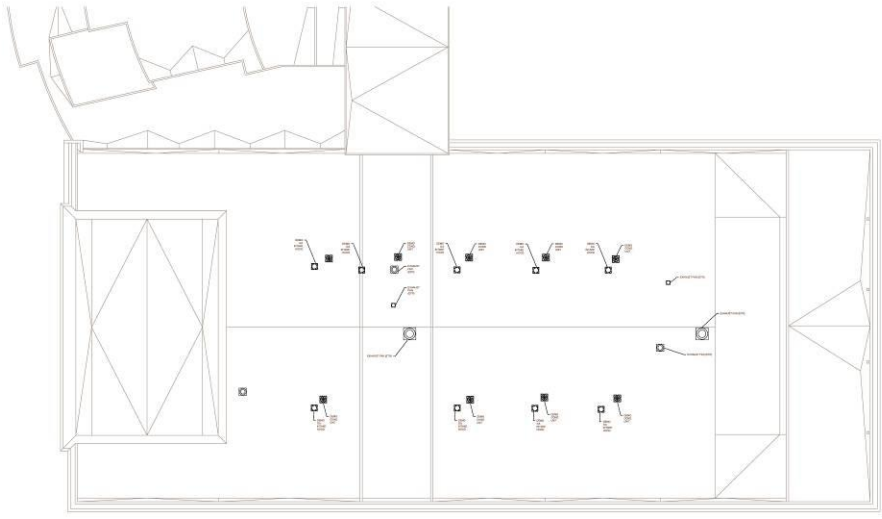
Scope of Services to include the following:

- CTS will provide and install nine (9) gas fired heating and DX cooling packaged rooftop units to be located on the roof as shown on the attached drawing. The nine (9) gas fired heating and DX Cooling packaged rooftop units will be serving the following classrooms, nurse's office, and library: 101, 103, 107, 201, 203, 205, Nurse's Office, & Library. Note that the library would be served by two (2) rooftop units.
- CTS will provide new ductwork, acoustical ceilings, and ceilings for the core area excluding the library which was recently renovated. CTS will demo existing ceiling mounted unit ventilators. No patch and/or paint allowance is included due to unit location. The following items will be coordinated by the CUSTOMER.
 - Window Blinds – Remove and replace or reinstall
 - Projectors and WiFi routers/repeaters – Remove and reinstall
 - Projector pull-down screens – Remove and reinstall
 - Smoke & Fire Alarms – Removed by Fire Alarm System Contractor and reinstalled
 - Speaker covers – Remove and reinstall
- All condensing units will be removed by CTS. CTS will patch roof, ceiling and areas used to route refrigerant lines to the roof mounted condensing units. CTS will provide interior paint and patching as necessary.
- CTS will provide a new Natural Gas service to the Junior High School with the capacity to convert all electric heating units to natural gas fired units. Piping will run on the roof and will be routed for current and future needs.
- New RTUs will be factory configured for vertical discharge, supply and return and will be provided with a factory roof curb. All necessary roof penetrations and flashing/sealing will be done in accordance to roofing manufacturers written instructions.
- Vibration isolation to RTUs will be provided to prevent sound transmission of vibration to the building structure. Vibration isolators will also be provided for all piping supports connected to and within 50ft. of the isolated equipment.

Junior High School Areas Prepped for RTU Future Upgrades

- The following areas will be prepped for future installation of RTU's. All rooms except Room 100, will be sized for new Carrier 5 ton packaged rooftop units. (Rooms 102, 104, 106, 108, 110, 202, 204, 206, 208, and 210. Room 100 will be sized for two (2) 4 ton rooftop units. The Gymnasium will be sized for two 18 ton rooftop units.)
- This will include framing of RTUs for perimeter support.
- CTS will provide and install 12 insulated metal caps for future RTUs.
- CTS will furnish and install 3/4" conduit to rooms 100,102,104,106,110, 202, 204, 206, 208, 210 to prepare for the installation of roof top units in the future. Conduit will be routed from the classrooms to the existing electrical room that currently serve the unit vents. A total of three electrical rooms currently provide power to the unit ventilators identified above. Each new conduit will be labeled and routed to the ceiling of the electrical room for future tie into the electrical panel. New electrical disconnects will be required in the future to accommodate the reduced electrical consumption of a packaged natural gas fired roof top units.
- As part of the scope work, CTS will furnish and install ten (10) 3/4" rigid stubs with threaded knock out fillers to roof from new roof portals. Future roof top unit conduits will be connected to the rigid stubs and the stub will be capped to make water tight. All conduits will be empty but ready for wire to be pulled in the future.
- All insulated return and supply ductwork will be supplied for each area with the exception of the Gymnasium. Seal connections will be per code.
- CTS will provide four supply diffusers and two return grilles with insulated duct connections on each system with the exception of the Gymnasium.
- CTS will provide additional tees piped in for future.

Please refer to attached drawing set for demo, installation and equipment specifications.



1 MECHANICAL DEMOLITION - ROOF

GENERAL MECHANICAL DEMOLITION NOTES

A. XXXXXXX

KEYED MECHANICAL DEMOLITION SHEET NOTES

1. XXXXXXX

PRELIMINARY - NOT FOR CONSTRUCTION



ELARA
 30 N. Wolf Rd., Second Floor
 Hinsdale, IL 60142
 (708) 236-0300
 (708) 236-0300 FAX

NO.	DATE	DESCRIPTION

PROJECT:
 SD 7 - WOOD DALE JUNIOR HIGH
 SCHOOL - HVAC UPGRADES

300 N WOOD DALE RD
 WOOD DALE, IL 60191

DRAWING TITLE:
 MECHANICAL DEMOLITION
 PLAN - ROOF

DESIGNED BY: JSS
 DRAWN BY: JSS
 CHECKED BY: JSS
 PROJECT NO: 1948
 SCALE: 1/8" = 1'-0"
 SHEET NO:

MD1.02

ROOFTOP AIR CONDITIONING UNIT SCHEDULE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
GENERAL DATA				FAN DATA					HEATING DATA					COOLING DATA					REFRIGERANT DATA		ELECTRICAL DATA		FILTER DATA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
TAG	SERVICE	LOCATION	MANUFACTURER	MODEL NUMBER	SEER @ 85 F/ 47 F	SEER @ 95 F/ 47 F	SEER @ 100 F/ 47 F	SEER @ 105 F/ 47 F	SEER @ 110 F/ 47 F	SEER @ 115 F/ 47 F	SEER @ 120 F/ 47 F	SEER @ 125 F/ 47 F	SEER @ 130 F/ 47 F	SEER @ 135 F/ 47 F	SEER @ 140 F/ 47 F	SEER @ 145 F/ 47 F	SEER @ 150 F/ 47 F	SEER @ 155 F/ 47 F	SEER @ 160 F/ 47 F	SEER @ 165 F/ 47 F	SEER @ 170 F/ 47 F	SEER @ 175 F/ 47 F	SEER @ 180 F/ 47 F	SEER @ 185 F/ 47 F	SEER @ 190 F/ 47 F	SEER @ 195 F/ 47 F	SEER @ 200 F/ 47 F	SEER @ 205 F/ 47 F	SEER @ 210 F/ 47 F	SEER @ 215 F/ 47 F	SEER @ 220 F/ 47 F	SEER @ 225 F/ 47 F	SEER @ 230 F/ 47 F	SEER @ 235 F/ 47 F	SEER @ 240 F/ 47 F	SEER @ 245 F/ 47 F	SEER @ 250 F/ 47 F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	PTW002-201	ROOF	CARRIER	HSSGEMERDAM-GLST5	16	870	1,200	17	ERECT DRIVE	2008	1.00	2	82.110	80.100	473	118.9	4	13	7.0	39.37	26.2	81	87	93.7	98.2	103.6	109.0	114.4	119.8	125.2	130.6	136.0	141.4	146.8	152.2	157.6	163.0	168.4	173.8	179.2	184.6	190.0	195.4	200.8	206.2	211.6	217.0	222.4	227.8	233.2	238.6	244.0	249.4	254.8	260.2	265.6	271.0	276.4	281.8	287.2	292.6	298.0	303.4	308.8	314.2	319.6	325.0	330.4	335.8	341.2	346.6	352.0	357.4	362.8	368.2	373.6	379.0	384.4	389.8	395.2	400.6	406.0	411.4	416.8	422.2	427.6	433.0	438.4	443.8	449.2	454.6	460.0	465.4	470.8	476.2	481.6	487.0	492.4	497.8	503.2	508.6	514.0	519.4	524.8	530.2	535.6	541.0	546.4	551.8	557.2	562.6	568.0	573.4	578.8	584.2	589.6	595.0	600.4	605.8	611.2	616.6	622.0	627.4	632.8	638.2	643.6	649.0	654.4	659.8	665.2	670.6	676.0	681.4	686.8	692.2	697.6	703.0	708.4	713.8	719.2	724.6	730.0	735.4	740.8	746.2	751.6	757.0	762.4	767.8	773.2	778.6	784.0	789.4	794.8	800.2	805.6	811.0	816.4	821.8	827.2	832.6	838.0	843.4	848.8	854.2	859.6	865.0	870.4	875.8	881.2	886.6	892.0	897.4	902.8	908.2	913.6	919.0	924.4	929.8	935.2	940.6	946.0	951.4	956.8	962.2	967.6	973.0	978.4	983.8	989.2	994.6	1000.0	1005.4	1010.8	1016.2	1021.6	1027.0	1032.4	1037.8	1043.2	1048.6	1054.0	1059.4	1064.8	1070.2	1075.6	1081.0	1086.4	1091.8	1097.2	1102.6	1108.0	1113.4	1118.8	1124.2	1129.6	1135.0	1140.4	1145.8	1151.2	1156.6	1162.0	1167.4	1172.8	1178.2	1183.6	1189.0	1194.4	1199.8	1205.2	1210.6	1216.0	1221.4	1226.8	1232.2	1237.6	1243.0	1248.4	1253.8	1259.2	1264.6	1270.0	1275.4	1280.8	1286.2	1291.6	1297.0	1302.4	1307.8	1313.2	1318.6	1324.0	1329.4	1334.8	1340.2	1345.6	1351.0	1356.4	1361.8	1367.2	1372.6	1378.0	1383.4	1388.8	1394.2	1399.6	1405.0	1410.4	1415.8	1421.2	1426.6	1432.0	1437.4	1442.8	1448.2	1453.6	1459.0	1464.4	1469.8	1475.2	1480.6	1486.0	1491.4	1496.8	1502.2	1507.6	1513.0	1518.4	1523.8	1529.2	1534.6	1540.0	1545.4	1550.8	1556.2	1561.6	1567.0	1572.4	1577.8	1583.2	1588.6	1594.0	1599.4	1604.8	1610.2	1615.6	1621.0	1626.4	1631.8	1637.2	1642.6	1648.0	1653.4	1658.8	1664.2	1669.6	1675.0	1680.4	1685.8	1691.2	1696.6	1702.0	1707.4	1712.8	1718.2	1723.6	1729.0	1734.4	1739.8	1745.2	1750.6	1756.0	1761.4	1766.8	1772.2	1777.6	1783.0	1788.4	1793.8	1799.2	1804.6	1810.0	1815.4	1820.8	1826.2	1831.6	1837.0	1842.4	1847.8	1853.2	1858.6	1864.0	1869.4	1874.8	1880.2	1885.6	1891.0	1896.4	1901.8	1907.2	1912.6	1918.0	1923.4	1928.8	1934.2	1939.6	1945.0	1950.4	1955.8	1961.2	1966.6	1972.0	1977.4	1982.8	1988.2	1993.6	1999.0	2004.4	2009.8	2015.2	2020.6	2026.0	2031.4	2036.8	2042.2	2047.6	2053.0	2058.4	2063.8	2069.2	2074.6	2080.0	2085.4	2090.8	2096.2	2101.6	2107.0	2112.4	2117.8	2123.2	2128.6	2134.0	2139.4	2144.8	2150.2	2155.6	2161.0	2166.4	2171.8	2177.2	2182.6	2188.0	2193.4	2198.8	2204.2	2209.6	2215.0	2220.4	2225.8	2231.2	2236.6	2242.0	2247.4	2252.8	2258.2	2263.6	2269.0	2274.4	2279.8	2285.2	2290.6	2296.0	2301.4	2306.8	2312.2	2317.6	2323.0	2328.4	2333.8	2339.2	2344.6	2350.0	2355.4	2360.8	2366.2	2371.6	2377.0	2382.4	2387.8	2393.2	2398.6	2404.0	2409.4	2414.8	2420.2	2425.6	2431.0	2436.4	2441.8	2447.2	2452.6	2458.0	2463.4	2468.8	2474.2	2479.6	2485.0	2490.4	2495.8	2501.2	2506.6	2512.0	2517.4	2522.8	2528.2	2533.6	2539.0	2544.4	2549.8	2555.2	2560.6	2566.0	2571.4	2576.8	2582.2	2587.6	2593.0	2598.4	2603.8	2609.2	2614.6	2620.0	2625.4	2630.8	2636.2	2641.6	2647.0	2652.4	2657.8	2663.2	2668.6	2674.0	2679.4	2684.8	2690.2	2695.6	2701.0	2706.4	2711.8	2717.2	2722.6	2728.0	2733.4	2738.8	2744.2	2749.6	2755.0	2760.4	2765.8	2771.2	2776.6	2782.0	2787.4	2792.8	2798.2	2803.6	2809.0	2814.4	2819.8	2825.2	2830.6	2836.0	2841.4	2846.8	2852.2	2857.6	2863.0	2868.4	2873.8	2879.2	2884.6	2890.0	2895.4	2900.8	2906.2	2911.6	2917.0	2922.4	2927.8	2933.2	2938.6	2944.0	2949.4	2954.8	2960.2	2965.6	2971.0	2976.4	2981.8	2987.2	2992.6	2998.0	3003.4	3008.8	3014.2	3019.6	3025.0	3030.4	3035.8	3041.2	3046.6	3052.0	3057.4	3062.8	3068.2	3073.6	3079.0	3084.4	3089.8	3095.2	3100.6	3106.0	3111.4	3116.8	3122.2	3127.6	3133.0	3138.4	3143.8	3149.2	3154.6	3160.0	3165.4	3170.8	3176.2	3181.6	3187.0	3192.4	3197.8	3203.2	3208.6	3214.0	3219.4	3224.8	3230.2	3235.6	3241.0	3246.4	3251.8	3257.2	3262.6	3268.0	3273.4	3278.8	3284.2	3289.6	3295.0	3300.4	3305.8	3311.2	3316.6	3322.0	3327.4	3332.8	3338.2	3343.6	3349.0	3354.4	3359.8	3365.2	3370.6	3376.0	3381.4	3386.8	3392.2	3397.6	3403.0	3408.4	3413.8	3419.2	3424.6	3430.0	3435.4	3440.8	3446.2	3451.6	3457.0	3462.4	3467.8	3473.2	3478.6	3484.0	3489.4	3494.8	3500.2	3505.6	3511.0	3516.4	3521.8	3527.2	3532.6	3538.0	3543.4	3548.8	3554.2	3559.6	3565.0	3570.4	3575.8	3581.2	3586.6	3592.0	3597.4	3602.8	3608.2	3613.6	3619.0	3624.4	3629.8	3635.2	3640.6	3646.0	3651.4	3656.8	3662.2	3667.6	3673.0	3678.4	3683.8	3689.2	3694.6	3700.0	3705.4	3710.8	3716.2	3721.6	3727.0	3732.4	3737.8	3743.2	3748.6	3754.0	3759.4	3764.8	3770.2	3775.6	3781.0	3786.4	3791.8	3797.2	3802.6	3808.0	3813.4	3818.8	3824.2	3829.6	3835.0	3840.4	3845.8	3851.2	3856.6	3862.0	3867.4	3872.8	3878.2	3883.6	3889.0	3894.4	3899.8	3905.2	3910.6	3916.0	3921.4	3926.8	3932.2	3937.6	3943.0	3948.4	3953.8	3959.2	3964.6	3970.0	3975.4	3980.8	3986.2	3991.6	3997.0	4002.4	4007.8	4013.2	4018.6	4024.0	4029.4	4034.8	4040.2	4045.6	4051.0	4056.4	4061.8	4067.2	4072.6	4078.0	4083.4	4088.8	4094.2	4099.6	4105.0	4110.4	4115.8	4121.2	4126.6	4132.0	4137.4	4142.8	4148.2	4153.6	4159.0	4164.4	4169.8	4175.2	4180.6	4186.0	4191.4	4196.8	4202.2	4207.6	4213.0	4218.4	4223.8	4229.2	4234.6	4240.0	4245.4	4250.8	4256.2	4261.6	4267.0	4272.4	4277.8	4283.2	4288.6	4294.0	4299.4	4304.8	4310.2	4315.6	4321.0	4326.4	4331.8	4337.2	4342.6	4348.0	4353.4	4358.8	4364.2	4369.6	4375.0	4380.4	4385.8	4391.2	4396.6	4402.0	4407.4	4412.8	4418.2	4423.6	4429.0	4434.4	4439.8	4445.2	4450.6	4456.0	4461.4	4466.8	4472.2	4477.6	4483.0	4488.4	4493.8	4499.2	4504.6	4510.0	4515.4	4520.8	4526.2	4531.6	4537.0	4542.4	4547.8	4553.2	4558.6	4564.0	4569.4	4574.8	4580.2	4585.6	4591.0	4596.4	4601.8	4607.2	4612.6	4618.0	4623.4	4628.8	4634.2	4639.6	4645.0	4650.4	4655.8	4661.2	4666.6	4672.0	4677.4	4682.8	4688.2	4693.6	4699.0	4704.4	4709.8	4715.2	4720.6	4726.0	4731.4	4736.8	4742.2	4747.6	4753.0	4758.4	4763.8	4769.2	4774.6	4780.0	4785.4	4790.8	4796.2	4801.6	4807.0	4812.4	4817.8	4823.2	4828.6	4834.0	4839.4	4844.8	4850.2	4855.6	4861.0	4866.4	4871.8	4877.2	4882.6	4888.0	4893.4	4898.8	4904.2	4909.6	4915.0	4920.4	4925.8	4931.2	4936.6	4942.0	4947.4	4952.8	4958.2	4963.6	4969.0	4974.4	4979.8	4985.2	4990.6	4996.0	5001.4	5006.8	5012.2	5017.6	5023.0	5028.4	5033.8	5039.2	5044.6	5050.0	5055.4	5060.8	5066.2	5071.6	5077.0	5082.4	5087.8	5093.2	5098.6	5104.0	5109.4	5114.8	5120.2	5125.6	5131.0	5136.4	5141.8	5147.2	5152.6	5158.0	5163.4	5168.8	5174.2	5179.6	5185.0	5190.4	5195.8	5201.2	5206.6	5212.0	5217.4	5222.8	5228.2	5233.6	5239.0	5244.4	5249.8	5255.2

Existing Multi-Purpose Room AHU

Mount and wire new DDC controller inside of new DDC controls enclosure cabinet. Install a new space temperature sensor in location of existing space thermostat. Install new discharge air temperature sensor, new current donut for fan status. Connect to the existing outside air damper actuator, to existing DX cooling and, electric reheat relays. Connect new communications bus to and from new DDC controller.

Existing VAV Air Handling Unit

Mount and wire new DDC controller inside of existing cabinet mounted in AHU room. Install a new discharge temperature sensor and mixed air temperature sensor. Install new current donut for fan status. Connect to the new outside air damper, return air and economized air dampers. Connect new communications bus to and from new DDC controller.

Six (6) Existing VAV Boxes

Install new DDC controller onto existing VAV box cabinet. Install new space temperature sensor. Existing wire between existing VAV box and space temperature sensor location to be reused. Install new discharge air temperature sensor. Install new 24vac from new transformer mounted at unit. Connect new communications bus to and from new DDC controller.

Eight (8) New Single Zone Rooftop Units

Mount and wire new DDC controller inside of new DDC controls enclosure cabinet mounted in ceiling above space temperature sensor. Install a new space temperature sensor in location of existing sensor location, reusing existing wire. Install new discharge air temperature sensor, new current donut for fan status. Connect to the new outside air damper actuator. Connect new communications bus to and from new DDC controller.

New VVT Rooftop Unit

Install new DDC controller inside of new multizone RTU cabinet mounted below unit in ceiling. Install new RTU control wire between RTU and control cabinet. Install new discharge air temperature sensor and new current donut for fan status. Connect new communications bus to and from new DDC controller.

Six (6) New VVT Zone Box

Install new DDC controller onto existing VVT box cabinet. Install new space temperature sensor. Existing wire between existing VAV box and space temperature sensor location to be reused. Install new discharge air temperature sensor. Install new 24vac from new transformer mounted at unit. Connect new communications bus to and from new DDC controller.

Training and Systems Support Provisions for the Tridium Building Automation System:

As a part of this contract CTS has included a three (3) year Remote System Support program for the Tridium Building Automation System at no additional cost to the Customer. This will assure that the new controls are operating at optimum performance and are maintaining a quality environment for the occupants. These support services are provided to insure that:

1. Employees become comfortable operating the new systems
2. Operations are monitored so that the energy savings projected with the new system become a reality
3. Retraining is accomplished as may be required for current or new employees
4. Technical assistance is available as needed which establishes a routine communications comfort level between your employees and the CTS support services personnel
5. Customer's specified HVAC service contractor is trained in the use of the system

The support services include:

1. Maintaining Monitoring Internet Interfaces: This enables remote operation of the new automation system and allows CTS software specialists to monitor operations to assure all parts of the system are operating properly.
2. Tuning Software Programs as Required: Remote support of the operating software in the system often needs initial "tuning" as we pass through the seasons.
3. Backup Up the System: CTS will maintain a copy of the currently configured software which will be held off site and in the CTS office.

4. Training of Personnel: Our help desk is available for your operating staff as required until they are comfortable with the system. This also includes training for new employees.
5. Training of HVAC Contractor: Training the customer's specified HVAC service contractor in the use of the system for troubleshooting is included in this contract.

Operation Monitoring for Energy Savings: The software discipline in your new system is designed to provide a good environment as well as achieve energy cost savings. Although these efforts usually work in harmony, they can occasionally work at odds with each other. CTS will remotely monitor your operating program to uncover changes that may have been made that could frustrate these objectives and communicate corrective recommendations to you.

Lighting Upgrades

The lighting scope of work for Oak Brook Elementary is presented below:

Current & Proposed Lighting Design

Totals:	CURRENT						PROPOSED						
	Fixture	Qty	Watts	Annual Hours	kW Demand	kWh	Fixture	Qty	Watts	Controls	Annual Hours	kW Demand	kWh
		409			44	103,880		379				14	29,821
Location	Fixture	Qty	Watts	Annual Hours	kW Demand	kWh	Fixture	Qty	Watts	Controls	Annual Hours	kW Demand	kWh
Interior	0	0	0	0	0.000	0	0	0	0	0	0	0.000	0
129 Classroom	2X4 GT 4-32 DL PR	18	118	2,100	2.124	4,460	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
129 Classroom Closet	60W INC	1	60	700	0.060	42	R-9.5W LED A19-CR	1	10	0	700	0.010	7
129 Classroom Restroom	10W LED PAR 20	1	10	1,050	0.010	11	No Change	1	10	0	1,050	0.010	11
134 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
127 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
132 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
125 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
130 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
123 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
128 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
126 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
Boy's Restroom	2X4 GT 4-32 DL PR	3	118	2,500	0.354	885	F-24 39W LED FP-LTH	3	39	0	2,500	0.117	293
Men's Restroom	1X4 WM-D 2-32	1	59	1,188	0.059	70	R-2-10LED 4'	1	26	0	1,188	0.026	31
Men's Restroom	6 RC DC 60W INC	1	60	1,188	0.060	71	R-6RRC 13WLED SY-T-MI	1	13	0	1,188	0.013	15
Girl's Restroom (NE)	2X4 GT 4-32 DL PR	3	118	2,500	0.354	885	F-24 39W LED FP-LTH	3	39	0	2,500	0.117	293
Women's Restroom	1X4 WM-D 2-32	1	59	1,188	0.059	70	R-2-10LED 4'	1	26	0	1,188	0.026	31
Women's Restroom	6 RC DC 60W INC	1	60	1,188	0.060	71	R-6RRC 13WLED SY-T-MI	1	13	0	1,188	0.013	15
124 Conference/Workroom	2X4 GT 4-32 DL PR	4	118	2,375	0.472	1,121	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371
120 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
118 Main Office/Reception	2X4 GT 4-32 DL PR	6	118	2,375	0.708	1,682	F-24 39W LED FP-LTH	6	39	0	2,375	0.234	556
118 UM Storage Room 1	75W INC	1	75	594	0.075	45	R-9.5W LED A19-CR	1	10	0	594	0.010	6
118 UM Storage Room 2	75W INC	1	75	594	0.075	45	R-9.5W LED A19-CR	1	10	0	594	0.010	6
122 Principal's Office	2X4 GT 4-32 DL PR	4	118	2,375	0.472	1,121	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371
122 Principal's Restroom	1X2 VN 2-17	1	33	594	0.033	20	R-2-7LED 2'	1	19	0	594	0.019	11
122 Principal's Restroom	6 RC DC 60W INC	1	60	594	0.060	36	R-6RRC 13WLED SY-T-MI	1	13	0	594	0.013	8
116 Multi Purpose/Gym	2X4 GT 40W LED TP-FP	18	40	3,000	0.720	2,160	No Change	18	40	0	3,000	0.720	2,160
116A Multi Purpose/Office	2X4 GT 4-32 PR	3	118	2,375	0.354	841	F-24 39W LED FP-LTH	3	39	0	2,375	0.117	278
116B Multi Purpose/Food Service	2X4 GT 2-U32 DL PR	2	118	2,600	0.236	614	F-24 39W LED FP-LTH	2	39	0	2,600	0.078	203
114 Storage (Active)	2X4 GT 4-32 DL PR	2	118	1,300	0.236	307	R-4-10LED 4'	2	52	0	1,300	0.104	135
114A Mechanical/Boiler	1X4 ST 2-32	5	59	1,300	0.295	384	R-2-10LED 4'	5	26	0	1,300	0.130	169
112 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
113 Media Center	2X4 GT 4-32 PAR	44	118	2,600	5.192	13,499	F-24 39W LED FP-LTH	44	39	3DM	2,080	1.716	3,569
113 Media Center	2X2 GT 2-U32 PAR	7	59	2,600	0.413	1,074	F-22 31W LED FP-LTH	7	31	0	2,600	0.217	564
113 Media Center - 108 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
113 Media Center - Temp Classroom	1X4 WR 2-32	4	59	2,100	0.236	496	R-2-10LED 4'	4	26	0	2,100	0.104	218
113A Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
111 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
111 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
110 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
110 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
106 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
106 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
109 Boy's Restroom	2X4 GT 4-32 DL PR	2	118	2,500	0.236	590	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Staff Restroom	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46
107 Girl's Restroom	2X4 GT 4-32 DL PR	2	118	2,500	0.236	590	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Staff Restroom	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46
104 Teacher's Lounge	2X4 GT 4-32 DL PR	11	118	2,375	1.298	3,083	F-24 39W LED FP-LTH	11	39	DM	1,900	0.429	815
104 Teacher's Lounge	2X2 GT 2-U32 DL PR	1	59	2,375	0.059	140	F-22 31W LED FP-LTH	1	31	DM	1,900	0.031	59
105 Storage	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	R-4-10LED 4'	1	52	0	1,188	0.052	62
105 Storage	2X4 GT 4-32 PR	1	118	1,188	0.118	140	R-4-10LED 4'	1	52	0	1,188	0.052	62
102 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
102 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
100 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
100 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
103 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
103 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
101 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
101 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52
Common Areas	0	0	0	0	0.000	0	0	0	0	0	0	0.000	0
Hall (134-118)	2X4 GT 4-32 DL PR	20	118	3,120	2.360	7,363	F-24 39W LED FP-LTH	20	39	0	3,120	0.780	2,434
Hall (100-113)	2X4 GT 4-32 DL PR	19	118	3,120	2.242	6,995	F-24 39W LED FP-LTH	19	39	0	3,120	0.741	2,312
Hall (100-113)	2X2 GT 2-U32 DL PR	1	59	3,120	0.059	184	F-22 31W LED FP-LTH	1	31	0	3,120	0.031	97
Main Lobby	2X4 GT 4-32 DL PR	10	118	3,120	1.180	3,682	F-24 39W LED FP-LTH	10	39	0	3,120	0.390	1,217
Main Entry Vestibule	1X1 GT-CNP 100W HID	2	123	3,120	0.246	768	RRC15WLED-TR-K (HC)	2	15	0	3,120	0.030	94
100 Vestibule	2X4 GT 4-32 DL PR	1	118	3,120	0.118	368	F-24 39W LED FP-LTH	1	39	0	3,120	0.039	122
134 Vestibule	1X1 GT-CNP 100W HID	1	123	3,120	0.123	384	RRC15WLED-TR-K (HC)	1	15	0	3,120	0.015	47
110 Vestibule	2X2 GT 2-U32 DL PR	1	59	3,120	0.059	184	F-22 31W LED FP-LTH	1	31	0	3,120	0.031	97
Exit Signs - Gym (Recessed)	F-20W-INC EX	3	20	8,760	0.060	526	F-5W-LED EX DS	3	5	0	8,760	0.015	131
Hallway Additional	2X4 GT 4-32 DL PR	10	118	2,100	1.180	2,478	F-24 39W LED FP-LTH	10	39	0	2,100	0.390	819

Below is the lighting scope of work for Wood Dale Jr HS:

Current & Proposed Lighting Design

Totals:	CURRENT						PROPOSED						
		1028		86	182,753		1010		44	80,370			
Location	Fixture	Qty	Watts	Annual Hours	kW Demand	kWh	Fixture	Qty	Watts	Controls	Annual Hours	kW Demand	kWh
Interior		0	0	0	0.000	0		0	0	0	0	0.000	0
212 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
211 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
211 Classroom Storage	2X4 GT 4-32 PR	3	118	1,050	0.354	372	R-2-10LED 4'	3	26	0	1,050	0.078	82
209 Classroom	2X4 GT 4-32 PR	9	118	2,100	1,062	2,230	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
210 Classroom	2X4 GT 4-32 PR	9	118	2,100	1,062	2,230	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
208 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
206 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
207 Teacher's Lounge	2X4 GT 4-32 PR	6	118	2,375	0.708	1,682	F-24 39W LED FP-LTH	6	39	0	2,375	0.234	556
205 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
204 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
203 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
202 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
203 Classroom	2X4 GT 4-32 DL PR	38	118	2,600	4.484	11,658	F-24 39W LED FP-LTH	38	39	3DM	2,080	1.482	3,083
Library	HNG PND 10W LED SB	8	10	2,600	0.080	208	No Change	8	10	0	2,600	0.080	208
Library Server Room	2X4 GT 4-32 DL PR	2	118	650	0.236	153	R-2-10LED 4'	2	26	0	650	0.052	34
Library Video Room	2X4 GT 4-32 PR	2	118	1,300	0.236	307	F-24 39W LED FP-LTH	2	39	0	1,300	0.078	101
103 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721
102 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
104 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
107 Classroom (Small)	2X4 GT 4-32 PR	6	118	2,100	0.708	1,487	F-24 39W LED FP-LTH	6	39	DM	1,680	0.234	393
106 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
108 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
110 Classroom	2X4 GT 4-32 PR	8	118	2,100	0.944	1,982	F-24 39W LED FP-LTH	8	39	DM	1,680	0.312	524
110 Classroom	2X4 GT 4-32 DL PR	1	118	2,100	0.118	248	F-24 39W LED FP-LTH	1	39	DM	1,680	0.039	66
109 Classroom	2X4 GT 4-32 PR	9	118	2,100	1.062	2,230	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590
112 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
111 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
111 Classroom Storage	2X4 GT 4-32 PR	2	118	1,050	0.236	248	R-2-10LED 4'	2	26	0	1,050	0.052	55
111 Classroom Mechanical	1X4 ST 2-32 WG	2	59	525	0.118	62	R-2-10LED 4'	2	26	0	525	0.052	27
Boy's Restroom	2X4 GT 2-32 PR	2	59	2,500	0.118	295	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Girl's Restroom (NE)	2X4 GT 2-32 PR	2	59	2,500	0.118	295	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Janitor's Storage	2X4 GT 2-32 PR	2	59	525	0.118	62	R-2-10LED 4'	2	26	0	525	0.052	27
100 Classroom	2X4 GT 4-32 PR	24	118	2,100	2.832	5,947	F-24 39W LED FP-LTH	24	39	DM	1,680	0.936	1,572
101 Classroom	2X4 GT 4-32 PR	12	118	2,100	1,416	2,974	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786
Office (Main)	2X4 GT 4-32 DL PR	4	118	2,375	0.472	1,121	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371
Office - Principal (NE)	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
Office (Main Hall)	2X4 GT 4-32 PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
Women's Restroom	1X4 VN 2-32	1	59	1,188	0.059	70	R-2-10LED 4'	1	26	0	1,188	0.026	31
Men's Restroom	1X4 VN 2-32	1	59	1,188	0.059	70	R-2-10LED 4'	1	26	0	1,188	0.026	31
Conference Room	2X4 GT 4-32 PR	4	118	1,188	0.472	561	F-24 39W LED FP-LTH	4	39	0	1,188	0.156	185
Nurses Office	2X4 GT 4-32 PR	4	118	2,375	0.472	1,121	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371
Copy Room	2X4 GT 2-32 PR	2	59	2,375	0.118	280	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
Office	2X4 GT 4-32 PR	1	118	2,375	0.118	280	F-24 39W LED FP-LTH	1	39	0	2,375	0.039	93
201 Storage (Former Classroom)	2X4 GT 4-32 PR	14	118	1,050	1.652	1,735	F-24 39W LED FP-LTH	14	39	DM	840	0.546	459
101/201 Storage (Shared)	2X4 GT 4-32 PR	7	118	525	0.826	434	R-2-10LED 4'	7	26	0	525	0.182	96
101/201 Storage (Shared)	2X4 GT 4-32 DL PR	3	118	525	0.354	186	R-2-10LED 4'	3	26	0	525	0.078	41
Electrical Supply Room/Office	1X4 WR 2-32	8	59	2,375	0.472	1,121	R-2-10LED 4'	8	26	0	2,375	0.208	494
200 Classroom (Art)	2X4 GT 3-26 TS CB	18	78	1,680	1.404	2,359	F-24 39W LED FP-LTH	18	39	DM	1,344	0.702	943
Gymnasium (Main)	2X4 GT 40W LED TP-FP	16	40	3,000	0.640	1,920	No Change	16	40	0	3,000	0.640	1,920
Gymnasium (Storage)	2X4 GT 2-32 PR	8	59	750	0.472	354	R-2-10LED 4'	8	26	0	750	0.208	156
Gymnasium (Bleachers)	1X4 SM 32W LED TP-FP	17	32	3,000	0.544	1,632	No Change	17	32	0	3,000	0.544	1,632
Gymnasium (Entry)	2X4 GT 3-32 DL PR	3	90	3,000	0.270	810	F-24 39W LED FP-LTH	3	39	0	3,000	0.117	351
Gymnasium (Girl's Lockers)	1X4 WR 1-32	19	30	3,000	0.570	1,710	F-14 39W LED FP-LTH	10	39	0	3,000	0.390	1,170
Gymnasium (Girl's Lockers)	1X4 VT 2-32	5	59	3,000	0.295	885	R-2-10LED 4'	5	26	0	3,000	0.130	390
Gymnasium (Girl's Locker Office)	1X4 SMBX 2-32 PR	2	59	2,375	0.118	280	F-14 39W LED FP-LTH	2	39	0	2,375	0.078	185
Gymnasium (Storage)	1X4 ST 1-32	4	30	750	0.120	90	R-1-10LED 4'	4	13	0	750	0.052	39
Gymnasium (Storage)	1X4 ST 1-32	5	30	750	0.150	113	R-1-10LED 4'	5	13	0	750	0.065	49
Gymnasium (Boy's Lockers)	1X4 WR 1-32	19	30	3,000	0.570	1,710	F-14 39W LED FP-LTH	10	39	0	3,000	0.390	1,170
Gymnasium (Boy's Lockers)	1X4 VT 2-32	5	59	3,000	0.295	885	R-2-10LED 4'	5	26	0	3,000	0.130	390
Gymnasium (Boy's Locker Office)	1X4 SMBX 2-32 PR	2	59	2,375	0.118	280	F-14 39W LED FP-LTH	2	39	0	2,375	0.078	185
Girl's Restroom	2X4 GT 2-32 PR	2	59	2,500	0.118	295	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Boy's Restroom	2X4 GT 2-32 PR	2	59	2,500	0.118	295	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195
Office (NE)	2X4 GT 4-32 DL PR	1	118	2,375	0.118	280	F-24 39W LED FP-LTH	1	39	0	2,375	0.039	93
Conference Room (NE)	2X4 GT 3-32 PR	1	90	1,188	0.090	107	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46
UM Office	2X4 GT 4-32 PR	2	118	2,375	0.236	561	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185
Kitchen	1X4 GT 2-32 PR	12	59	2,600	0.708	1,841	F-14 39W LED FP-LTH	12	39	0	2,600	0.468	1,217
Kitchen Hoods	1X4 GT 2-32 PR	2	59	1,300	0.118	153	R-2-10LED 4'	2	26	0	1,300	0.052	68
Abor Room/Office (Storage)	2X4 GT 2-32 PR	3	59	2,375	0.177	420	R-2-10LED 4'	3	26	0	2,375	0.078	185
Abor Room/Storage/Freezer	LED A-Lamp	1	10	650	0.010	7	No Change	1	10	0	650	0.010	7
Multi Purpose Room	2X4 GT 40W LED TP-FP	40	40	2,600	1.600	4,160	No Change	40	40	0	2,600	1.600	4,160
Multi Purpose Room Storage	2X4 GT 4-32 PR	1	118	2,600	0.118	307	R-2-10LED 4'	1	26	0	2,600	0.026	68
Men's Restroom (Auditorium Wing)	8 RC HC 32W CFLV-PB	3	32	1,188	0.096	114	R-6RRC 13W LED SV-T-MI	3	13	0	1,188	0.039	46
Women's Restroom (Auditorium Wing)	1X4 WM-D-2-32	4	59	1,188	0.236	280	R-2-10LED 4'	4	26	0	1,188	0.104	124
Women's Restroom (Auditorium W)	8 RC HC 32W CFLV-PB	3	32	1,188	0.096	114	R-6RRC 13W LED SV-T-MI	3	13	0	1,188	0.039	46
Women's Restroom (Auditorium W)	1X4 WM-D-2-32	4	59	1,188	0.236	280	R-2-10LED 4'	4	26	0	1,188	0.104	124
Server/Janitor Storage	2X4 GT 2-32 PR	1	59	525	0.059	31	R-2-10LED 4'	1	26	0	525	0.026	14
UM Room (NE)	2X4 GT 2-32 PR	2	59	1,050	0.118	124	F-24 39W LED FP-LTH	2	39	0	1,050	0.078	82
Auditorium (Main)	10 RC HC 150W MH	25	180	1,500	4.500	6,750	No Change	25	180	0	1,500	4.500	6,750
Auditorium (Main)	10 RC HC 150W MH	32	180	1,500	5.760	8,640	No Change	32	180	0	1,500	5.760	8,640
Auditorium (Main)	WS 150W HLG	6	150	1,500	0.900	1,350	No Change	6	150	0	1,500		

Hazardous Materials:

Since these buildings were constructed before 1978 it is assumed that there is lead based paint present. CTS will be responsible for following Repair, Renovate, Painting (RRP) guidelines during this renovation. CTS will supply their firms RRP certification number and attach a copy of the certificate with submitted documentation. CTS will be responsible for loading and unloading all material for this work and staging on site.

ATTACHMENT B

INSTALLATION SCHEDULE

CTS will provide to the Wood Dale School District #7 a Construction Implementation Schedule. The Project Team will mobilize in June 2019. We understand that the last day of school is scheduled for June 4, 2019 and that students return for the 2018-2019 school year on August 19, 2019. Our preliminary construction schedule includes a substantial completion date of August 1, 2019, with final completion by September 2019. With our substantial completion date the spaces will be ready for staff to clean and set up accordingly (furniture, computers, desks, etc.) for students return to classes on August 19th, 2019. Mobilization and installation of projects are not to be interruptive to the School activities. It is also CTS's intent to not hinder the preparation of the building for the start of school.

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

- Timely decisions on the part of the school district
- 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 School District.

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 paid in accordance with the Illinois Local Government Prompt Payment Act.

Ten percent (10%) of the contract price will be paid to CTS within five (5) business days of the execution of the contract for mobilization purposes.

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 is 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. Please note that the ECM-1 (Junior High HVAC) will not be stipulated and accepted upon the date of final Project Acceptance, but only after the year one (1) M & V that will be performed utilizing Electric Verification Method B as stated in section 1.4.1 of attachment E.

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 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.

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. These savings were estimated by CTS and reviewed and agreed upon by the District.

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 \$2,293,681.41 as defined in the following:

Annual Reconciliation and Savings Allocation				
Year	Avoided Utility Savings from Existing Baseline	Secured Grants and Utility Incentives	Long Term Operating Costs Savings	Guaranteed Savings
1	\$ 22,411.00	TBD	\$ 1,521,821.00	\$1,544,232.00
2	\$ 22,859.22	\$ -	\$9,136	\$31,995.36
3	\$ 23,316.40	\$ -	\$9,319	\$32,635.27
4	\$ 23,782.73	\$ -	\$9,598	\$33,381.16
5	\$ 24,258.39	\$ -	\$9,886	\$34,144.77
6	\$ 24,743.55	\$ -	\$10,183	\$34,926.53
7	\$ 25,238.43	\$ -	\$10,488	\$35,726.89
8	\$ 25,743.19	\$ -	\$10,803	\$36,546.31
9	\$ 26,258.06	\$ -	\$11,127	\$37,385.27
10	\$ 26,783.22	\$ -	\$11,461	\$38,244.25
11	\$ 27,318.88	\$ -	\$11,805	\$39,123.74
12	\$ 27,865.26	\$ -	\$12,159	\$40,024.26
13	\$ 28,422.57	\$ -	\$12,524	\$40,946.34
14	\$ 28,991.02	\$ -	\$12,899	\$41,890.50
15	\$ 29,570.84	\$ -	\$13,286	\$42,857.31
16	\$ 30,162.26	\$ -	\$13,685	\$43,847.32
17	\$ 30,765.50	\$ -	\$14,096	\$44,861.12
18	\$ 31,380.81	\$ -	\$14,518	\$45,899.30
19	\$ 32,008.43	\$ -	\$14,954	\$46,962.47
20	\$ 32,648.60	\$ -	\$15,403	\$48,051.26
Total	\$ 544,528.35	\$ -	\$ 1,749,153	\$ 2,293,681.41

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 20 years from the date of Final Project Acceptance

The Baseline Period is defined as to June 2017 to May 2018 for the electrical baseline.

CTS and the customer agree that the energy savings for each will be based on a 2% 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 2% 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 Upgrade Junior High School HVAC – Nine (9) New gas fired heating and cooling rooftop units (RTUs) will be provided to replace the existing nine (9) unit ventilators and condensing units. Existing unit ventilators are equipped with electric heaters with DX cooling. This ECM will reduce utility cost by switching the fuel source during the heating season, implementing night setbacks and improved cooling efficiency. Existing electric units will be taken out of service and replaced by natural gas fired RTUs. The difference between the existing Electric and Natural Gas proposed utility cost will provide the calculated savings in section 1.4.3. The new RTU’s will have an Energy Efficiency Ratio (EER) of 13 and will operate in occupied mode from 6am to 8pm, Monday through Friday.

ECM-2 Lighting Upgrades – As part of the improvements, CTS will upgrade current lighting at both the Oakbrook Elementary and Wood Dale Junior High School with LED lighting. The difference in electrical consumption of the existing T-8 fixtures with LED 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.

1.2 Operational Cost Savings. The annual guarantee of operational cost avoidance strategies are 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 district’s building and grounds. The annual operating costs savings are identified below, are mutually agreed by the CUSTOMER and CTS and are achieved upon project completion.

Annual operating costs savings for LED Lighting Upgrades: \$8,957

Annual Operating costs savings for Lighting have been calculated based on avoidance of T-8 lamp replacements over the life of the LED lamps. Please see calculations below for Oakbrook Elementary School and Wood Dale Junior High School.

OakBrook Elementary Maintenance and Product Savings

														Labor Cost \$30			Annual \$2,085.09	
Current							Proposed							Calculations			Current	
Location	Fixture	Count	Hours of Operation	Rated Life	Life in Years	Labor Time	Product Cost	Fixture	Count	Hours of Operation	Rated Life	Life in Years	Proposal /Current	Labor Cost	Product Cost	Total Replacement & Maintenance	Over a period of:	
Interior		0	0	0	0	0	0		0	0	0	0	0.0	0.0	0.0	0.0	0.0 years	
129 Classroom	2X4 GT 4-32 DLPR	18	2100	15000	7.1429	10.8	180	R-2-10LED 4'	18	2100	70000	33.333	4.7	1512.0	840.0	2352.0	33.3 years	
129 Classroom Closet	60W INC	1	700	500	0.7143	0.2	1	R-9.5W LED A19-CR	1	700	25000	35.714	50.0	300.0	50.0	350.0	35.7 years	
129 Classroom Restroom	10W LED PAR 20	1	1050	25000	23.81	0.2	5	No Change	1	1050	0	0	0.0	0.0	0.0	0.0	0.0 years	
134 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
127 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
132 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
125 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
130 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
123 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
128 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
126 Classroom	2X4 GT 4-32 DLPR	12	2100	15000	7.1429	7.2	120	R-2-10LED 4'	12	2100	70000	33.333	4.7	1008.0	560.0	1568.0	33.3 years	
Boy's Restroom	2X4 GT 4-32 DLPR	3	2500	15000	6	1.8	30	R-2-10LED 4'	3	2500	70000	28	4.7	252.0	140.0	392.0	28.0 years	
Men's Restroom	1X4 WM-D 2-32	1	1187.5	15000	12.632	0.4	5	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	56.0	23.3	79.3	58.9 years	
Men's Restroom	6 RC DC 60W INC	1	1187.5	500	0.4211	0.2	1	R-6RRC 13WLED SY-T-MP	1	1187.5	50000	42.105	100.0	600.0	100.0	700.0	42.1 years	
Men's Restroom (NE)	2X4 GT 4-32 DLPR	3	2500	15000	6	1.8	30	R-2-10LED 4'	3	2500	70000	28	4.7	252.0	140.0	392.0	28.0 years	
Women's Restroom	1X4 WM-D 2-32	1	1187.5	15000	12.632	0.4	5	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	56.0	23.3	79.3	58.9 years	
Women's Restroom	6 RC DC 60W INC	1	1187.5	500	0.4211	0.2	1	R-6RRC 13WLED SY-T-MP	1	1187.5	50000	42.105	100.0	600.0	100.0	700.0	42.1 years	
124 Conference/Workroom	2X4 GT 4-32 DLPR	4	2375	15000	6.3158	2.4	40	R-2-10LED 4'	4	2375	70000	29.474	4.7	336.0	186.7	522.7	29.5 years	
120 Office	2X4 GT 4-32 DLPR	2	2375	15000	6.3158	1.2	20	R-2-10LED 4'	2	2375	70000	29.474	4.7	168.0	93.3	261.3	29.5 years	
118 Main Office/Reception	2X4 GT 4-32 DLPR	6	2375	15000	6.3158	3.6	60	R-2-10LED 4'	6	2375	70000	29.474	4.7	504.0	280.0	784.0	29.5 years	
118 UM Storage Room 1	75W INC	1	593.75	500	0.8421	0.2	1	R-9.5W LED A19-CR	1	593.75	25000	42.105	50.0	300.0	50.0	350.0	42.1 years	
118 UM Storage Room 2	75W INC	1	593.75	500	0.8421	0.2	1	R-9.5W LED A19-CR	1	593.75	25000	42.105	50.0	300.0	50.0	350.0	42.1 years	
122 Principal's Office	2X4 GT 4-32 DLPR	4	2375	15000	6.3158	2.4	40	R-2-10LED 4'	4	2375	70000	29.474	4.7	336.0	186.7	522.7	29.5 years	
122 Principal's Restroom	1X2 VN 2-17	1	593.75	15000	25.263	0.3	5	R-7LED 2'	1	593.75	50000	84.211	3.3	30.0	16.7	46.7	84.2 years	
122 Principal's Restroom	6 RC DC 60W INC	1	593.75	500	0.8421	0.2	1	R-6RRC 13WLED SY-T-MP	1	593.75	50000	84.211	100.0	600.0	100.0	700.0	84.2 years	
116 Multi Purpose/Gym	2X4 GT 40W LED TP-F	18	3000	50000	16.667	10.8	1350	No Change	18	3000	0	0	0.0	0.0	0.0	0.0	0.0 years	
116A Multi Purpose/Office	2X4 GT 4-32 PR	3	2375	15000	6.3158	1.8	30	R-2-10LED 4'	3	2375	70000	29.474	4.7	252.0	140.0	392.0	29.5 years	
116B Multi Purpose/Food Serv	2X4 GT 4-32 PR	2	2600	15000	5.7692	1.2	20	R-4-10LED 4'	2	2600	70000	26.923	4.7	168.0	93.3	261.3	26.9 years	
114 Storage (Active)	2X4 GT 4-32 DLPR	2	1300	15000	11.538	1.2	20	R-2-10LED 4'	2	1300	70000	53.846	4.7	168.0	93.3	261.3	53.8 years	
114 Mechanical/Boiler	1X4 ST 2-32	5	1300	15000	11.538	2	25	R-2-10LED 4'	5	1300	70000	53.846	4.7	280.0	116.7	396.7	53.8 years	
112 Office	2X4 GT 4-32 DLPR	2	2375	15000	6.3158	1.2	20	R-2-10LED 4'	2	2375	70000	29.474	4.7	168.0	93.3	261.3	29.5 years	
113 Media Center	2X4 GT 4-32 PAR	44	2600	15000	5.7692	26.4	440	R-4-10LED 4'	44	2600	70000	26.923	4.7	3696.0	2053.3	5749.3	26.9 years	
113 Media Center	2X2 GT 2-U32 PAR	7	2600	15000	5.7692	2.8	35	K-22WRD1-27LED 2'	7	2600	70000	26.923	4.7	392.0	163.3	555.3	26.9 years	
113 Media Center - 108 Office	2X4 GT 4-32 DLPR	2	2375	15000	6.3158	1.2	20	R-2-10LED 4'	2	2375	70000	29.474	4.7	168.0	93.3	261.3	29.5 years	
113 Media Center - Temp Clsm	1X4 WR 2-32	4	2100	15000	7.1429	1.6	20	R-2-10LED 4'	4	2100	70000	33.333	4.7	224.0	93.3	317.3	33.3 years	
113A Office	2X4 GT 4-32 DLPR	2	2375	15000	6.3158	1.2	20	R-2-10LED 4'	2	2375	70000	29.474	4.7	168.0	93.3	261.3	29.5 years	
111 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
111 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
110 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
110 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
106 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
106 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
109 Boy's Restroom	2X4 GT 4-32 DLPR	2	2500	15000	6	1.2	20	R-2-10LED 4'	2	2500	70000	28	4.7	168.0	93.3	261.3	28.0 years	
Staff Restroom	2X4 GT 4-32 DLPR	1	1187.5	15000	12.632	0.6	10	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	84.0	46.7	130.7	58.9 years	
107 Girl's Restroom	2X4 GT 4-32 DLPR	2	2500	15000	6	1.2	20	R-2-10LED 4'	2	2500	70000	28	4.7	168.0	93.3	261.3	28.0 years	
Staff Restroom	2X4 GT 4-32 DLPR	1	1187.5	15000	12.632	0.6	10	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	84.0	46.7	130.7	58.9 years	
104 Teacher's Lounge	2X4 GT 4-32 DLPR	11	2375	15000	6.3158	6.6	110	R-2-10LED 4'	11	2375	70000	29.474	4.7	924.0	513.3	1437.3	29.5 years	
104 Teacher's Lounge	2X2 GT 2-U32 DLPR	1	2375	15000	6.3158	0.4	5	K-22WRD1-27LED 2'	1	2375	70000	29.474	4.7	56.0	23.3	79.3	29.5 years	
105 Storage	2X4 GT 4-32 DLPR	1	1187.5	15000	12.632	0.6	10	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	84.0	46.7	130.7	58.9 years	
105 Storage	2X4 GT 4-32 PR	1	1187.5	15000	12.632	0.6	10	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	84.0	46.7	130.7	58.9 years	
102 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
102 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
100 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
100 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
103 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
103 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
101 Classroom	2X4 GT 4-32 DLPR	11	2100	15000	7.1429	6.6	110	R-2-10LED 4'	11	2100	70000	33.333	4.7	924.0	513.3	1437.3	33.3 years	
101 Classroom	2X2 GT 2-U32 DLPR	1	2100	15000	7.1429	0.4	5	K-22WRD1-27LED 2'	1	2100	70000	33.333	4.7	56.0	23.3	79.3	33.3 years	
Common Areas		0	0	0	0	0	0		0	0	0	0	0.0	0.0	0.0	0.0	0.0 years	
Hall (134-118)	2X4 GT 4-32 DLPR	20	3120	15000	4.8077	12	200	R-2-10LED 4'	20	3120	70000	22.436	4.7	1680.0	933.3	2613.3	22.4 years	

Wood Dale Junior High Maintenance and Product Savings

														Labor Cost \$30			Annual \$6,871.74					
Current														Proposed				Calculations			Current	
Location	Fixture	Count	Hours of Operation	Rated Life	Life in Years	Labor Time	Product Cost	Fixture	Count	Hours of Operation	Rated Life	Life in Years	Proposal /Current	Labor Cost	Product Cost	Total Replacement & Maintenance	Over a period of:					
Interior		0	0	0	0	0	0		0	0	0	0	0.0	0.0	0.0	0.0	0.0 years					
212 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
211 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
211 Classroom Storage	2X4 GT 4-32 PR	3	1050	15000	14.286	1.8	30	R-2-10LED 4'	3	1050	70000	66.667	4.7	252.0	140.0	392.0	66.7 years					
209 Classroom	2X4 GT 4-32 PR	9	2100	15000	7.1429	5.4	90	F-R-24 24W LED BLTR-S	9	2100	60000	28.571	4.0	648.0	360.0	1008.0	28.6 years					
210 Classroom	2X4 GT 4-32 PR	9	2100	15000	7.1429	5.4	90	F-R-24 24W LED BLTR-S	9	2100	60000	28.571	4.0	648.0	360.0	1008.0	28.6 years					
208 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
206 Classroom	2X4 GT 4-32 DL PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
207 Teacher's Lounge	2X4 GT 4-32 PR	6	2375	15000	6.3158	3.6	60	F-R-24 24W LED BLTR-S	6	2375	60000	25.263	4.0	432.0	240.0	672.0	25.3 years					
205 Classroom	2X4 GT 4-32 DL PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
204 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
202 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
203 Classroom	2X4 GT 4-32 DL PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
Library	2X4 GT 4-32 DL PR	38	2600	15000	5.7692	22.8	380	F-R-24 24W LED BLTR-S	38	2600	60000	23.077	4.0	2736.0	1520.0	4256.0	23.1 years					
Library	HNG PND 10W LED SE	8	2600	25000	9.6154	1.6	40	No Change	8	2600	0	0	0.0	0.0	0.0	0.0	0.0 years					
Library Server Room	2X4 GT 4-32 DL PR	2	650	15000	23.077	1.2	20	R-2-10LED 4'	2	650	70000	107.69	4.7	168.0	93.3	261.3	107.7 years					
Library Video Room	2X4 GT 4-32 PR	2	1300	15000	11.538	1.2	20	F-R-24 24W LED BLTR-S	2	1300	60000	46.154	4.0	144.0	80.0	224.0	46.2 years					
103 Classroom	2X4 GT 4-32 DL PR	11	2100	15000	7.1429	6.6	110	F-R-24 24W LED BLTR-S	11	2100	60000	28.571	4.0	792.0	400.0	1232.0	28.6 years					
102 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
104 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
107 Classroom (Small)	2X4 GT 4-32 PR	6	2100	15000	7.1429	3.6	60	F-R-24 24W LED BLTR-S	6	2100	60000	28.571	4.0	432.0	240.0	672.0	28.6 years					
106 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
108 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
110 Classroom	2X4 GT 4-32 PR	8	2100	15000	7.1429	4.8	80	F-R-24 24W LED BLTR-S	8	2100	60000	28.571	4.0	576.0	320.0	896.0	28.6 years					
110 Classroom	2X4 GT 4-32 DL PR	1	2100	15000	7.1429	0.6	10	F-R-24 24W LED BLTR-S	1	2100	60000	28.571	4.0	72.0	40.0	112.0	28.6 years					
109 Classroom	2X4 GT 4-32 PR	9	2100	15000	7.1429	5.4	90	F-R-24 24W LED BLTR-S	9	2100	60000	28.571	4.0	648.0	360.0	1008.0	28.6 years					
112 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
111 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
111 Classroom Storage	2X4 GT 4-32 PR	2	1050	15000	14.286	1.2	20	R-2-10LED 4'	2	1050	70000	66.667	4.7	168.0	93.3	261.3	66.7 years					
111 Classroom Mech.	1X4 ST 2-32 WG	2	525	15000	28.571	0.8	10	R-2-10LED 4'	2	525	70000	133.33	4.7	112.0	46.7	158.7	133.3 years					
Boy's Restroom	2X4 GT 2-32 PR	2	2500	15000	6	0.8	10	F-R-24 17.5W LED BLTR-L	2	2500	60000	24	4.0	96.0	40.0	136.0	24.0 years					
Girl's Restroom (NE)	2X4 GT 2-32 PR	2	2500	15000	6	0.8	10	F-R-24 17.5W LED BLTR-L	2	2500	60000	24	4.0	96.0	40.0	136.0	24.0 years					
Janitor's Storage	2X4 GT 2-32 PR	2	525	15000	28.571	0.8	10	R-2-10LED 4'	2	525	70000	133.33	4.7	112.0	46.7	158.7	133.3 years					
100 Classroom	2X4 GT 4-32 PR	24	2100	15000	7.1429	14.4	240	F-R-24 24W LED BLTR-S	24	2100	60000	28.571	4.0	1728.0	960.0	2688.0	28.6 years					
101 Classroom	2X4 GT 4-32 PR	12	2100	15000	7.1429	7.2	120	F-R-24 24W LED BLTR-S	12	2100	60000	28.571	4.0	864.0	480.0	1344.0	28.6 years					
Office (Main)	2X4 GT 4-32 DL PR	4	2375	15000	6.3158	2.4	40	F-R-24 24W LED BLTR-S	4	2375	60000	25.263	4.0	288.0	160.0	448.0	25.3 years					
Office - Principal (NE)	2X4 GT 4-32 DL PR	2	2375	15000	6.3158	1.2	20	F-R-24 24W LED BLTR-S	2	2375	60000	25.263	4.0	144.0	80.0	224.0	25.3 years					
Office (Main Hall)	2X4 GT 4-32 PR	2	2375	15000	6.3158	1.2	20	F-R-24 24W LED BLTR-S	2	2375	60000	25.263	4.0	144.0	80.0	224.0	25.3 years					
Women's Restroom	1X4 VN 2-32	1	1187.5	15000	12.632	0.4	5	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	56.0	23.3	79.3	58.9 years					
Men's Restroom	1X4 VN 2-32	1	1187.5	15000	12.632	0.4	5	R-2-10LED 4'	1	1187.5	70000	58.947	4.7	56.0	23.3	79.3	58.9 years					
Conference Room	2X4 GT 4-32 PR	4	1187.5	15000	12.632	2.4	40	F-R-24 24W LED BLTR-S	4	1187.5	60000	50.526	4.0	288.0	160.0	448.0	50.5 years					
Nurses Office	2X4 GT 4-32 PR	4	2375	15000	6.3158	2.4	40	F-R-24 24W LED BLTR-S	4	2375	60000	25.263	4.0	288.0	160.0	448.0	25.3 years					
Copy Room	2X4 GT 2-32 PR	2	2375	15000	6.3158	0.8	10	F-R-24 24W LED BLTR-S	2	2375	60000	25.263	4.0	96.0	40.0	136.0	25.3 years					
Office	2X4 GT 4-32 PR	1	2375	15000	6.3158	0.6	10	F-R-24 24W LED BLTR-S	1	2375	60000	25.263	4.0	72.0	40.0	112.0	25.3 years					
201 Storage (Former Class)	2X4 GT 4-32 PR	14	1050	15000	14.286	8.4	140	F-R-24 24W LED BLTR-S	14	1050	60000	57.143	4.0	1008.0	560.0	1568.0	57.1 years					
101/201 Storage (Shared)	2X4 GT 4-32 PR	7	525	15000	28.571	4.2	70	R-2-10LED 4'	7	525	70000	133.33	4.7	588.0	326.7	914.7	133.3 years					
101/201 Storage (Shared)	2X4 GT 4-32 DL PR	3	525	15000	28.571	1.8	30	R-2-10LED 4'	3	525	70000	133.33	4.7	252.0	140.0	392.0	133.3 years					
Electrical Supply Room/O	1X4 WR 2-32	8	2375	15000	6.3158	3.2	40	R-2-10LED 4'	8	2375	70000	29.474	4.7	448.0	186.7	634.7	29.5 years					
200 Classroom (Art)	2X4 GT 3-26 T5 CB	18	1680	10000	5.9524	7.2	144	F-R-24 24W LED BLTR-S	18	1680	60000	35.714	6.0	1296.0	864.0	2160.0	35.7 years					
Gymnasium (Main)	2X4 GT 40W LED TP-F	16	3000	50000	16.667	9.6	1200	No Change	16	3000	0	0	0.0	0.0	0.0	0.0	0.0 years					
Gymnasium (Storage)	2X4 GT 2-32 PR	8	750	15000	20	3.2	40	R-2-10LED 4'	8	750	70000	93.333	4.7	448.0	186.7	634.7	93.3 years					
Gymnasium (Bleachers)	1X4 SM 32W LED TP-F	17	3000	50000	16.667	10.2	1275	No Change	17	3000	0	0	0.0	0.0	0.0	0.0	0.0 years					
Gymnasium (Entry)	2X4 GT 3-32 DL PR	3	3000	15000	5	1.8	22.5	F-R-24 24W LED BLTR-S	3	3000	60000	20	4.0	216.0	90.0	306.0	20.0 years					
Gymnasium (Girl's Locker)	1X4 WR 1-32	19	3000	15000	5	5.7	47.5	F-24 17.5W LED BLT-L	10	3000	60000	20	4.0	684.0	190.0	874.0	20.0 years					
Gymnasium (Girl's Locker)	1X4 VT 2-32	5	3000	15000	5	2	25	R-2-10LED 4'	5	3000	70000	23.333	4.7	280.0	116.7	396.7	23.3 years					
Gymnasium (Girl's Locker)	1X4 SMBX 2-32 PR	2	2375	15000	6.3158	0.8	10	F-24 17.5W LED BLT-L	2	2375	60000	25.263	4.0	96.0	40.0	136.0	25.3 years					
Gymnasium (Storage)	1X4 ST 1-32	4	750	15000	20	1.2	10	R-1-10LED 4'	4	750	70000	93.333	4.7	168.0	46.7	214.7	93.3 years					
Gymnasium (Storage)	1X4 ST 1-32	5	750	15000	20	1.5	12.5	R-1-10LED 4'	5	750	70000	93.333	4.7	210.0	58.3	268.3	93.3 years					
Gymnasium (Boy's Locker)	1X4 WR 1-32	19	3000	15000	5	5.7	47.5	F-24 17.5W LED BLT-L	10	3000	60000	20	4.0	684.0	190.0	874.0	20.0 years					
Gymnasium (Boy's Locker)	1X4 VT 2-32	5	3000	15000	5	2	25	R-2-10LED 4'	5	3000	70000	23.333	4.7	280.0	116.7	396.7	23.3 years					
Gymnasium (Boy's Locker)	1X4 SMBX 2-32 PR	2	2375	15000	6.3158	0.8	10	F-24 17.5W LED BLT-L	2	2375												

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 data 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 **Steve Wilt**.

Baseline Operating Parameters:

Wood Dale Jr. HS Electrical Data

Provider:	Engie	Account #	0474238009	Meter #
Electric Meter				
Date	Consumption	Demand	\$/kWh	Total \$
6/27/17	89740.0	284.0	\$0.092	\$8,290.20
7/27/17	68101.0	211.2	\$0.097	\$6,593.70
8/25/17	75679.0	290.6	\$0.099	\$7,470.70
9/25/17	94951.0	280.2	\$0.089	\$8,454.46
10/24/17	80123.0	302.7	\$0.082	\$6,569.01
11/22/17	109882.0	302.4	\$0.083	\$9,080.75
12/27/17	170105.0	446.9	\$0.080	\$13,528.97
1/29/18	198491.0	466.4	\$0.077	\$15,362.93
2/27/18	145742.0	459.4	\$0.083	\$12,140.45
3/28/18	118534.0	317.7	\$0.083	\$9,884.80
4/26/18	109897.0	307.3	\$0.085	\$9,375.44
5/25/18	91769.0	266.3	\$0.089	\$8,204.27
Total	1,353,014			\$114,955.68

Oak Brook Elementary Electrical Data

Provider:	Engie	Account #	57662060003	Meter #
Electric Meter				
Date	Consumption	Demand	\$/kWh	Total \$
6/27/17	36134.0	110.8	\$0.100	\$3,599.78
7/27/17	28204.0	101.7	\$0.110	\$3,091.35
8/25/17	33682.0	113.9	\$0.101	\$3,412.23
9/25/17	33587.0	124.6	\$0.106	\$3,545.60
10/24/17	30791.0	123.9	\$0.093	\$2,873.64
11/22/17	28296.0	87.3	\$0.105	\$2,961.66
12/27/17	29124.0	67.0	\$0.105	\$3,053.34
1/29/18	25360.0	68.0	\$0.112	\$2,842.91
2/27/18	24415.0	68.9	\$0.107	\$2,623.03

3/28/18	24646.0	68.3	\$0.107	\$2,636.99
4/26/18	24707.0	81.2	\$0.110	\$2,720.81
5/25/18	40014.0	120.4	\$0.094	\$3,752.27
Total	358,960			\$37,113.61

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:

The equipment and building automation to be installed will allow for efficient operation and control. The occupied hours of operation shall be 6:00 am – 8:00 pm, Monday-Friday during the school calendar year. The operating temperature of the building shall be kept at 70°F (winter) and 72°F (summer) during occupied hours. System setbacks during unoccupied periods shall not exceed 10 degree differentials. Summer operation of the cooling system when school is not in session shall be kept to a minimum providing cooling to offices and other areas on an as needed basis only. The CUSTOMER will have the flexibility to maintain desired temperatures for critical spaces (for example: computer labs and media centers).

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 the ceiling, insulation, and mechanical equipment systems that are beyond its 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.

Installation Cost Summer 2019:			\$1,360,000
Future Planned Expenditures (Inflation factor 3%)			\$1,512,864
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 HVAC Upgrades	Option B	N/A	N/A
ECM-2 Lighting Upgrades	Option A	N/A	N/A

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 Upgrade Junior High School HVAC – The annual energy cost avoidance will be measured utilizing the FEMP Option B for electric savings resulting from the installation of nine (9) New gas fired heating and cooling RTUs. This auditing option will use the calculations for energy savings for RTUs operating in during heating season, night setbacks and improved cooling efficiency as stated in Section 1.4.3. After the verification period of the first twelve months, the audit indicates that the electrical savings has been achieved, the savings guarantee shall be considered fulfilled for each subsequent year.

ECM-2 Lighting Upgrades – 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 each subsequent year 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.

For the pre and post measurement, spot lighting Measurements were taken using approved light meter to measure the footcandle levels at various location of the facility to ensure the post installation light output will meet the Illuminating Engineering Society of North America's (IESNA) standards for various applications and facility usage group.

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 – Upgrade Junior High School HVAC -

Existing unit ventilators are equipped with an electric heater and a DX condenser and coil for heating and cooling the associated classroom. The following calculation was used to determine the cost difference from switching to a natural gas fired unit to serve the classrooms during the heating season.

Blended Electrical Rate = \$0.085/kWh

Natural Gas Rate = \$0.40 /therm (rate is estimated at this time)

Client: Wood Dale SD 7 3/17/19
 Project: Wood Dale Jr HS

Inputs:

Square Feet (affected by this ECM)	10,143
\$ per Therm	\$ -
\$ per kWh (blended annual)	\$ 0.085
\$ per kW (annual average)	\$ -
Existing Boiler Thermal Efficiency	90%
Existing Heating Plant Efficiency	90%
Existing kW/ton Equipment	1.50
Existing kW/ton System	1.50
AHU Supply Air CFM	12,750
Existing Ventilation (CFM)	4,115

Electrical Fan Power Savings from Cycling the Fans at night:

Calculate Design Brake Horsepower

Fan Brake Horsepower	
$bhp = \text{design CFM} \times \text{Pressure (In. W.C.)} / 6356 \times \text{Fan efficiency}$	
CFM design =	12,750.00
Pressure design (In. W.C.) =	2.00
Fan Eff. =	80%
bhp =	8.05

Existing Conditions:

Annual Energy (kWh):	
$kWh = (bhp \times 0.746 \text{ kW/HP} \times \text{hours}) / \% \text{ efficiency}$	
bhp =	8.05
Motor Efficiency =	82.5%
hours =	8,760 hours used =24/7
kWh =	63,759

Proposed Conditions:

Annual Energy (kWh):	
$kWh = (bhp \times 0.746 \text{ kW/HP} \times \text{Load Factor} \times \text{hours}) / \% \text{ efficiency}$	
bhp =	8.05
Motor Efficiency =	82.5%
hours =	6,132 6AM - 8PM 365 days/ year +20% night
kWh =	44,632

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

Savings (kWh) = 19,128

2. Electric Cooling Savings from Ventilation Reduction: (hours and/or cfm)

Existing Conditions:

Annual Energy (kWh):	
$kWh = \text{ton-hrs/cfm} \times \text{cfm} \times \text{kW/ton}$	
(ton-hrs/cfm = TMY-2 data analyzed hourly)	
ton-hrs/cfm =	5.60 hours included = 8760/year
Existing Ventilation (cfm) =	4,115
kWh =	34,567

Proposed Conditions:

Annual Energy (kWh):	
$kWh = \text{ton-hrs/cfm} \times \text{cfm} \times \text{kW/ton}$	
(ton-hrs/cfm = TMY-2 data analyzed hourly)	
ton-hrs/cfm =	3.61 hours included = 6AM - 8PM 365 days/ year
Proposed Ventilation (cfm) =	4,115
kWh =	22,284

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

Savings (kWh) = 12,284

Total Energy Savings

Total Electrical COOLING & FAN Savings = Cooling NSB + Cooling Vent Savings	
Energy Savings (kWh) =	12,284 Cooling NSB + Cooling Vent Savings
Energy Savings (kWh) =	19,128 Fan Savings
Total Electric Energy Savings (kWh) =	31,412
Energy Savings (Annual \$) =	\$ 1,625
Total Energy Savings (Annual \$) =	\$ 2,669 Total savings for ECM

Replacing the existing unit ventilators will with higher efficiency RTUs will reduce the electrical energy consumption for the areas currently served by ceiling mounted unit ventilators.

Improved Cooling Efficiency	
Savings due to higher efficiency air conditioning equipment.	
<i>Inputs:</i>	
Square Feet (affected by this ECM)	10,143
\$ per Therm	\$ -
\$ per kWh (blended annual)	\$ 0.085
\$ per kW (annual average)	\$ -
Existing kW/ton Equipment	1.50
Existing kW/ton System	1.50
Electric Savings from Improved Cooling Efficiency	
<i>Existing Conditions:</i>	
kWh/Sq Ft=	0.630 (existing) From utility bill analysis
SF Area Affected by ECM=	10,143
Existing annual cooling kWh=	6,390
<i>Proposed Conditions:</i>	
1. Calculate Equipment Savings due to Equipment Efficiency Increase.	
<i>Annual Energy Equipment Savings (therms):</i>	
proposed kWh= annual cooling kWh x [(proposed kW/ton) / (existing kW/ton)]	
Existing Efficiency(kW/ton)=	1.50
Proposed Efficiency(kW/ton)=	0.92 EER=13
Proposed annual cooling kWh=	3,919
Annual Energy Savings (kWh) = Existing kWh - Proposed kWh	
Savings (kWh) =	2,471
Total Energy Savings: (adjusted to eliminate compounding savings of multiple ECMs)	
Total Energy Savings =Electrical savings from improved cooling system efficiency x CCCF	
Cooling Compounding Correction Factor (CCCF) =	100%
Energy Savings (kWh) =	2,460
Energy Savings (Annual \$) =	\$ 275

ECM – 2 Lighting Upgrades (Oakbrook Elementary & Wood Dale Junior High)

Measurement of existing KW consumption from existing lighting fixtures compared to the KW consumption of the new or retrofitted fixtures: ((Existing KW – New KW) x hours of use) x \$/KWH = KWH Savings

The table below summarizes the electrical consumption savings from the line by line table that will follow.

Oakbrook Elementary School	
LED Flat Panels	
Current kWh	103,880
Current Demand	44.4
Current Energy Costs	\$ 11,219.00
Projected kWh	29,821
Projected Demand	14.2
Projected Energy Costs	\$ 3,220.69
kWh Savings	74,058
kw Demand Savings	30.2
Energy Savings	\$ 7,998.31

Totals:	CURRENT							PROPOSED							
	409	44			103,880	\$11,219.00		379	14			29,821	\$3,220.69		
Location	Fixture	Qty	Watts	Annual Hours	kW Demand	kWh	Annual Cost	Fixture	Qty	Watts	Controls	Annual Hours	kW Demand	kWh	Annual Cost
Interior	0	0	0	0	0.000	0	\$0.00	0	0	0	0	0	0.000	0	\$0.00
129 Classroom	2X4 GT 4-32 DL PR	18	118	2,100	2.124	4,460	\$481.72	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$84.91
129 Classroom Closet	60W INC	1	60	700	0.060	42	\$4.54	R-9.5W LED A19-CR	1	10	0	700	0.010	7	\$0.72
129 Classroom Restroom	10W LED PAR 20	1	10	1,050	0.010	11	\$1.13	No Change	1	10	0	1,050	0.010	11	\$1.13
134 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
127 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
132 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
125 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
130 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
123 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
128 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
126 Classroom	2X4 GT 4-32 DL PR	12	118	2,100	1.416	2,974	\$321.15	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$63.69
Boy's Restroom	2X4 GT 4-32 DL PR	3	118	2,500	0.354	885	\$95.58	F-24 39W LED FP-LTH	3	39	0	2,500	0.117	293	\$31.59
Men's Restroom	1X4 WM-D 2-32	1	59	1,188	0.059	70	\$7.57	R-2-10LED 4'	1	26	0	1,188	0.026	31	\$3.33
Men's Restroom	6 RCDC 60W INC	1	60	1,188	0.060	71	\$7.70	R-6RRC 13WLED SY-T-MI	1	13	0	1,188	0.013	15	\$1.67
Girl's Restroom (NE)	2X4 GT 4-32 DL PR	3	118	2,500	0.354	885	\$95.58	F-24 39W LED FP-LTH	3	39	0	2,500	0.117	293	\$31.59
Women's Restroom	1X4 WM-D 2-32	1	59	1,188	0.059	70	\$7.57	R-2-10LED 4'	1	26	0	1,188	0.026	31	\$3.33
Women's Restroom	6 RCDC 60W INC	1	60	1,188	0.060	71	\$7.70	R-6RRC 13WLED SY-T-MI	1	13	0	1,188	0.013	15	\$1.67
124 Conference/Workroom	2X4 GT 4-32 DL PR	4	118	2,375	0.472	1,121	\$121.07	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371	\$40.01
120 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	\$60.53	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$20.01
118 Main Office/Reception	2X4 GT 4-32 DL PR	6	118	2,375	0.708	1,682	\$181.60	F-24 39W LED FP-LTH	6	39	0	2,375	0.234	556	\$60.02
118 UM Storage Room 1	75W INC	1	75	594	0.075	45	\$4.81	R-9.5W LED A19-CR	1	10	0	594	0.010	6	\$0.61
118 UM Storage Room 2	75W INC	1	75	594	0.075	45	\$4.81	R-9.5W LED A19-CR	1	10	0	594	0.010	6	\$0.61
122 Principal's Office	2X4 GT 4-32 DL PR	4	118	2,375	0.472	1,121	\$121.07	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371	\$40.01
122 Principal's Restroom	1X2 VN 2-17	1	33	594	0.033	20	\$2.12	R-2-7LED 2'	1	19	0	594	0.019	11	\$1.22
122 Principal's Restroom	6 RCDC 60W INC	1	60	594	0.060	36	\$3.85	R-6RRC 13WLED SY-T-MI	1	13	0	594	0.013	8	\$0.83
116 Multi Purpose/Gym	2X4 GT 40W LED TP-FP	18	40	3,000	0.720	2,160	\$233.28	No Change	18	40	0	3,000	0.720	2,160	\$233.28
116A Multi Purpose/Office	2X4 GT 4-32 PR	3	118	2,375	0.354	841	\$90.80	F-24 39W LED FP-LTH	3	39	0	2,375	0.117	278	\$30.01
116B Multi Purpose/Food Service	2X4 GT 4-32 PR	2	118	2,600	0.236	614	\$66.27	F-24 39W LED FP-LTH	2	39	0	2,600	0.078	203	\$21.90
114 Storage (Active)	2X4 GT 4-32 DL PR	2	118	1,300	0.236	307	\$33.13	R-4-10LED 4'	2	52	0	1,300	0.104	135	\$14.60
114A Mechanical/Boiler	1X4 ST2-32	5	59	1,300	0.295	384	\$41.42	R-2-10LED 4'	5	26	0	1,300	0.130	169	\$18.25
112 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	\$60.53	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$20.01
113 Media Center	2X4 GT 4-32 PAR	44	118	2,600	5.192	13,499	\$1,457.91	F-24 39W LED FP-LTH	44	39	3DM	2,080	1.716	3,569	\$385.48
113 Media Center	2X2 GT 2-U32 PAR	7	59	2,600	0.413	1,074	\$115.97	F-22 31W LED FP-LTH	7	31	0	2,600	0.217	564	\$60.93
113 Media Center - 108 Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	\$60.53	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$20.01
113 Media Center - Temp Classroom	1X4 WR 2-32	4	59	2,100	0.236	496	\$53.52	R-2-10LED 4'	4	26	0	2,100	0.104	218	\$23.59
113A Office	2X4 GT 4-32 DL PR	2	118	2,375	0.236	561	\$60.53	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$20.01
111 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
111 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
110 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
110 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
106 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
106 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
109 Boy's Restroom	2X4 GT 4-32 DL PR	2	118	2,500	0.236	590	\$63.72	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195	\$21.06
Staff Restroom	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	\$15.13	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46	\$5.00
107 Girl's Restroom	2X4 GT 4-32 DL PR	2	118	2,500	0.236	590	\$63.72	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195	\$21.06
Staff Restroom	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	\$15.13	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46	\$5.00
104 Teacher's Lounge	2X4 GT 4-32 DL PR	11	118	2,375	1.298	3,083	\$332.94	F-24 39W LED FP-LTH	11	39	DM	1,900	0.429	815	\$88.03
104 Teacher's Lounge	2X2 GT 2-U32 DL PR	1	59	2,375	0.059	140	\$15.13	F-22 31W LED FP-LTH	1	31	DM	1,900	0.031	59	\$6.36
105 Storage	2X4 GT 4-32 DL PR	1	118	1,188	0.118	140	\$15.13	R-4-10LED 4'	1	52	0	1,188	0.052	62	\$6.67
105 Storage	2X4 GT 4-32 PR	1	118	1,188	0.118	140	\$15.13	R-4-10LED 4'	1	52	0	1,188	0.052	62	\$6.67
102 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
102 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
100 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
100 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
103 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
103 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
101 Classroom	2X4 GT 4-32 DL PR	11	118	2,100	1.298	2,726	\$294.39	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$77.84
101 Classroom	2X2 GT 2-U32 DL PR	1	59	2,100	0.059	124	\$13.38	F-22 31W LED FP-LTH	1	31	DM	1,680	0.031	52	\$5.62
Common Areas	0	0	0	0	0.000	0	\$0.00	0	0	0	0	0	0.000	0	\$0.00
Hall (134-118)	2X4 GT 4-32 DL PR	20	118	3,120	2.360	7,363	\$795.23	F-24 39W LED FP-LTH	20	39	0	3,120	0.780	2,434	\$262.83
Hall (100-113)	2X4 GT 4-32 DL PR	19	118	3,120	2.242	6,995	\$755.46	F-24 39W LED FP-LTH	19	39	0	3,120	0.741	2,312	\$249.69
Hall (100-113)	2X2 GT 2-U32 DL PR	1	59	3,120	0.059	184	\$19.88	F-22 31W LED FP-LTH	1	31	0	3,120	0.031	97	\$10.45
Main Lobby	2X4 GT 4-32 DL PR	10	118	3,120	1.180	3,682	\$397.61	F-24 39W LED FP-LTH	10	39	0	3,120	0.390	1,217	\$131.41
Main Entry Vestibule	1X1 GT-CNP 100W HID	2	123	3,120	0.246	768	\$82.89	RRC15WLED-TR-K (HC)	2	15	0	3,120	0.030	94	\$10.11
100 Vestibule	2X4 GT 4-32 DL PR	1	118	3,120	0.118	368	\$39.76	F-24 39W LED FP-LTH	1	39	0	3,120	0.039	122	\$13.14
134 Vestibule	1X1 GT-CNP 100W HID	1	123	3,120	0.123	384	\$41.45	RRC15WLED-TR-K (HC)	1	15	0	3,120	0.015	47	\$5.05
110 Vestibule	2X2 GT 2-U32 DL PR	1	59	3,120	0.059	184	\$19.88	F-22 31W LED FP-LTH	1	31	0	3,120	0.031	97	\$10.45
Exit Signs - Gym (Recessed)	F-20W-INC EX	3	20	8,760	0.060	526	\$56.76	F-5W-LED EX DS	3	5	0	8,760	0.015	131	\$14.19
Hallway Additional	2X4 GT 4-32 DL PR	10	118	2,100	1.180	2,478	\$267.62	F-24 39W LED FP-LTH	10	39	0	2,100	0.390	819	\$88.45

Wood Dale Junior High School	
LED Flat Panels	
Current kWh	182,753
Current Demand	85.9
Current Energy Costs	\$ 15,716.79
Projected kWh	80,370
Projected Demand	43.5
Projected Energy Costs	\$ 6,911.81
kWh Savings	102,383
kw Demand Savings	42.4
Energy Savings	\$ 8,804.98
Annual Energy Cost Savings	\$ 8,804.98

Totals:	CURRENT							PROPOSED							
	1028	86	182,753	\$15,716.79	1010	44	80,370	\$6,911.81							
Location	Fixture	Qty	Watts	Annual Hours	kW Demand	kWh	Annual Cost	Fixture	Qty	Watts	Controls	Annual Hours	kW Demand	kWh	Annual Cost
Interior	0	0	0	0.000	0	\$0.00	0	0	0	0	0	0	0.000	0	\$0.00
212 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
211 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
211 Classroom Storage	2X4 GT-4-32 PR	3	118	1,050	0.354	372	\$31.97	R-2-10LED 4'	3	26	0	1,050	0.078	82	\$7.04
209 Classroom	2X4 GT-4-32 PR	9	118	2,100	1.062	2,230	\$191.80	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$50.71
210 Classroom	2X4 GT-4-32 PR	9	118	2,100	1.062	2,230	\$191.80	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$50.71
208 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
206 Classroom	2X4 GT-4-32 DL PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
207 Teacher's Lounge	2X4 GT-4-32 PR	6	118	2,375	0.708	1,682	\$144.61	F-24 39W LED FP-LTH	6	39	0	2,375	0.234	556	\$47.79
205 Classroom	2X4 GT-4-32 DL PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
204 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
202 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
203 Classroom	2X4 GT-4-32 DL PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
Library	2X4 GT-4-32 DL PR	38	118	2,600	4.484	11,658	\$1,002.62	F-24 39W LED FP-LTH	38	39	3DM	2,080	1.482	3,083	\$265.10
Library	HNG PND 10W LED SB	8	10	2,600	0.080	208	\$17.89	No Change	8	10	0	2,600	0.080	208	\$17.89
Library Server Room	2X4 GT-4-32 DL PR	2	118	650	0.236	153	\$13.19	R-2-10LED 4'	2	26	0	650	0.052	34	\$2.91
Library Video Room	2X4 GT-4-32 PR	2	118	1,300	0.236	307	\$26.38	F-24 39W LED FP-LTH	2	39	0	1,300	0.078	101	\$8.72
103 Classroom	2X4 GT-4-32 DL PR	11	118	2,100	1.298	2,726	\$234.42	F-24 39W LED FP-LTH	11	39	DM	1,680	0.429	721	\$61.98
102 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
104 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
107 Classroom (Small)	2X4 GT-4-32 PR	6	118	2,100	0.708	1,487	\$127.86	F-24 39W LED FP-LTH	6	39	DM	1,680	0.234	393	\$33.81
106 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
108 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
110 Classroom	2X4 GT-4-32 PR	8	118	2,100	0.944	1,982	\$170.49	F-24 39W LED FP-LTH	8	39	DM	1,680	0.312	524	\$45.08
110 Classroom	2X4 GT-4-32 DL PR	1	118	2,100	0.118	248	\$21.31	F-24 39W LED FP-LTH	1	39	DM	1,680	0.039	66	\$5.63
109 Classroom	2X4 GT-4-32 PR	9	118	2,100	1.062	2,230	\$191.80	F-24 39W LED FP-LTH	9	39	DM	1,680	0.351	590	\$50.71
112 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
111 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
111 Classroom Storage	2X4 GT-4-32 PR	2	118	1,050	0.236	248	\$21.31	R-2-10LED 4'	2	26	0	1,050	0.052	55	\$4.70
111 Classroom Mechanical	1X4 ST-2-32 WG	2	59	525	0.118	62	\$5.33	R-2-10LED 4'	2	26	0	525	0.052	27	\$2.35
Boy's Restroom	2X4 GT-2-32 PR	2	59	2,500	0.118	295	\$25.37	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195	\$16.77
Girl's Restroom (NE)	2X4 GT-2-32 PR	2	59	2,500	0.118	295	\$25.37	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195	\$16.77
Janitor's Storage	2X4 GT-2-32 PR	2	59	525	0.118	62	\$5.33	R-2-10LED 4'	2	26	0	525	0.052	27	\$2.35
100 Classroom	2X4 GT-4-32 PR	24	118	2,100	2.832	5,947	\$511.46	F-24 39W LED FP-LTH	24	39	DM	1,680	0.936	1,572	\$135.23
101 Classroom	2X4 GT-4-32 PR	12	118	2,100	1.416	2,974	\$255.73	F-24 39W LED FP-LTH	12	39	DM	1,680	0.468	786	\$67.62
Office (Main)	2X4 GT-4-32 DL PR	4	118	2,375	0.472	1,121	\$96.41	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371	\$31.86
Office - Principal (NE)	2X4 GT-4-32 DL PR	2	118	2,375	0.236	561	\$48.20	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Office (Main Hall)	2X4 GT-4-32 PR	2	118	2,375	0.236	561	\$48.20	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Women's Restroom	1X4 VN-2-32	1	59	1,188	0.059	70	\$6.03	R-2-10LED 4'	1	26	0	1,188	0.026	31	\$2.66
Men's Restroom	1X4 VN-2-32	1	59	1,188	0.059	70	\$6.03	R-2-10LED 4'	1	26	0	1,188	0.026	31	\$2.66
Conference Room	2X4 GT-4-32 PR	4	118	1,188	0.472	561	\$48.20	F-24 39W LED FP-LTH	4	39	0	1,188	0.156	185	\$15.93
Nurses Office	2X4 GT-4-32 PR	4	118	2,375	0.472	1,121	\$96.41	F-24 39W LED FP-LTH	4	39	0	2,375	0.156	371	\$31.86
Copy Room	2X4 GT-2-32 PR	2	59	2,375	0.118	280	\$24.10	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Office	2X4 GT-4-32 PR	1	118	2,375	0.118	280	\$24.10	F-24 39W LED FP-LTH	1	39	0	2,375	0.039	93	\$7.97
201 Storage (Former Classroom)	2X4 GT-4-32 PR	14	118	1,050	1.652	1,735	\$149.18	F-24 39W LED FP-LTH	14	39	DM	840	0.546	459	\$39.44
101/201 Storage (Shared)	2X4 GT-4-32 PR	7	118	525	0.826	434	\$37.29	R-2-10LED 4'	7	26	0	525	0.182	96	\$8.22
101/201 Storage (Shared)	2X4 GT-4-32 DL PR	3	118	525	0.354	186	\$15.98	R-2-10LED 4'	3	26	0	525	0.078	41	\$3.52
Electrical Supply Room/Office	1X4 WR-2-32	8	59	2,375	0.472	1,121	\$96.41	R-2-10LED 4'	8	26	0	2,375	0.208	494	\$42.48
200 Classroom (Art)	2X4 GT-2-32 TS CB	18	78	1,680	1.404	2,359	\$202.85	F-24 39W LED FP-LTH	18	39	DM	1,344	0.702	943	\$81.14
Gymnasium (Main)	2X4 GT-40W LED TP-FP	16	40	3,000	0.640	1,920	\$165.12	No Change	16	40	0	3,000	0.640	1,920	\$165.12
Gymnasium (Storage)	2X4 GT-2-32 PR	8	59	750	0.472	354	\$30.44	R-2-10LED 4'	8	26	0	750	0.208	156	\$13.42
Gymnasium (bleachers)	1X4 SM-32W LED TP-FP	17	32	3,000	0.544	1,632	\$140.35	No Change	17	32	0	3,000	0.544	1,632	\$140.35
Gymnasium (Entry)	2X4 GT-3-32 DL PR	3	90	3,000	0.270	810	\$69.66	F-24 39W LED FP-LTH	3	39	0	3,000	0.117	351	\$30.19
Gymnasium (Girl's Lockers)	1X4 WR-1-32	19	30	3,000	0.570	1,710	\$147.06	F-14 39W LED FP-LTH	10	39	0	3,000	0.390	1,170	\$100.62
Gymnasium (Girl's Locker Office)	1X4 VT-2-32	5	59	3,000	0.295	885	\$76.11	R-2-10LED 4'	5	26	0	3,000	0.130	395	\$33.54
Gymnasium (Storage)	1X4 SMBX-2-32 PR	2	59	2,375	0.118	280	\$24.10	F-14 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Gymnasium (Storage)	1X4 ST-1-32	4	30	750	0.120	90	\$7.74	R-1-10LED 4'	4	13	0	750	0.052	39	\$3.35
Gymnasium (Boy's Lockers)	1X4 ST-1-32	5	30	750	0.150	113	\$9.68	R-1-10LED 4'	5	13	0	750	0.065	49	\$4.19
Gymnasium (Boy's Lockers)	1X4 WR-1-32	19	30	3,000	0.570	1,710	\$147.06	F-14 39W LED FP-LTH	10	39	0	3,000	0.390	1,170	\$100.62
Gymnasium (Boy's Locker Office)	1X4 VT-2-32	5	59	3,000	0.295	885	\$76.11	R-2-10LED 4'	5	26	0	3,000	0.130	395	\$33.54
Girl's Restroom	1X4 SMBX-2-32 PR	2	59	2,375	0.118	280	\$24.10	F-14 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Boy's Restroom	2X4 GT-2-32 PR	2	59	2,500	0.118	295	\$25.37	F-24 39W LED FP-LTH	2	39	0	2,500	0.078	195	\$16.77
Office (NE)	2X4 GT-4-32 DL PR	1	118	2,375	0.118	280	\$24.10	F-24 39W LED FP-LTH	1	39	0	2,375	0.039	93	\$7.97
Conference Room (NE)	2X4 GT-3-32 PR	1	90	1,188	0.090	107	\$9.19	F-24 39W LED FP-LTH	1	39	0	1,188	0.039	46	\$3.98
UM Office	2X4 GT-4-32 PR	2	118	2,375	0.236	561	\$48.20	F-24 39W LED FP-LTH	2	39	0	2,375	0.078	185	\$15.93
Kitchen	1X4 GT-2-32 PR	12	59	2,600	0.708	1,841	\$158.31	F-14 39W LED FP-LTH	12	39	0	2,600	0.468	1,217	\$104.64
Kitchen Hoods	1X4 GT-2-32 PR	2	59	1,300	0.118	153	\$13.19	R-2-10LED 4'	2	26	0	1,300	0.052	68	\$5.81
Abor Room/Office (Storage)	2X4 GT-2-32 PR	3	59	2,375	0.177	420	\$36.15	R-2-10LED 4'	3	26	0	2,375	0.078	185	\$15.93
Abor Room/Storage/Freezer	LED A-Lamp	1	10	650	0.010	7	\$0.56	No Change	1	10	0	650	0.010	7	\$0.56
Multi Purpose Room	2X4 GT-40W LED TP-FP	40	40	2,600	1.600	4,160	\$357.76	No Change	40	40	0	2,600	1.600	4,160	\$357.76
Multi Purpose Room Storage	2X4 GT-4-32 PR	1	118	2,600											

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:

AUTHORIZED REPRESENTATIVE OF
DESIGNER:

By: _____
Dated: _____

By: _____
Dated: _____